

Findings of the Canadian Vehicle Fuel Pilot Survey

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Findings of the Canadian Vehicle Fuel Pilot Survey

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1. Introduction

The Canadian Vehicle Fuel Survey pilot is being conducted by Statistics Canada on behalf of Transport Canada and Natural Resources Canada. The purpose of this pilot is to measure the response rates to proposed survey instruments. The survey measures fuel consumption of on-road vehicles registered in Canada. Buses, motorcycles, heavy construction equipment and road maintenance equipment, such as snow plows are excluded from the pilot.

Statistics Canada currently conducts a survey of vehicle use in Canada through its quarterly Canadian Vehicle Survey (CVS). This survey collects information, such as distance traveled, time of day, the number and age of passengers and the trip purpose, by vehicle trip. Collecting fuel use information via the CVS or in tandem with it would make use of the existing data elements collected by the CVS, many of which are required by the National Energy Use Database Initiative (NEUD).

The Fuel pilot survey consists of a computer assisted telephone interview (CATI) and a fuel and/or trip log. If vehicle owners can not be contacted by phone for the CATI, they may still be mailed a log. The type of log that is mailed depends on the log option of the sample they are in.

There were a total of five log options tested in the Fuel pilot. They include;

- Option 1 Fuel1 Log
- Option 2 Fuel2 Log
- Option 3 CVS Trip log followed by Fuel1 log
- Option 4 Fuel1 log followed by CVS Trip log
- Option 5 Combined Trip and Fuel log

Option 1 consists of the Fuell log which includes the fuel gauge reading before and after each fuel purchase. Some data variables include; quantity purchased, price per liter, amount spent and type of fuel.

Option 2 consists of the Fuel2 log which includes a fill-up indicator after each fuel purchase. The fuel gauge reading is recorded at the time the log is received and before returning it. Some data variables include; quantity purchased, price per liter, amount spent and type of fuel.

Option 3 consists of first sending out the current Canadian Vehicle Survey (CVS) Light (L) and Heavy (H) Trip log followed by the Fuell log. The Fuell log is mailed out after sufficient time has passed. This also includes Short Forms (SF) and Postcards (PC) associated with the CVS survey.

Option 4 consists of first sending out the Fuell log followed by the current CVS Light (L) and Heavy (H) Trip log.

Option 5 consists of a combined Fuel and Trip log. This includes the current CVS Light and Heavy log with the Fuel1 portion at the end of the log.

For a copy of the fuel logs and fuel and trip log please see Appendix H.

This report presents information on the response rates from the CATI calls, the distribution of the mail out, and the return rates of logs in the pilot survey. This report also includes a detailed analysis of the response rates and data quality of the five options. The information contained in this report will be used to determine the most appropriate option, costs, and recommendations for conducting CVS – Fuel and CVS - Trip surveys.

2. Description of the Pilot Survey

Target Population, Survey Population and Frame

The CVS frame was used for the pilot survey as both surveys have the same target population and may both be run at the same time. This also permits savings in time and resources as the procedures and systems are already in place.

Originally, the target population for the pilot survey was supposed to include vehicles in Ontario and Quebec. When approval from Quebec came too late for sample selection, the target population was then changed to all active motor vehicles in Ontario and New Brunswick, except trailers, motorcycles, buses, off-road vehicles like snowmobiles, dune buggies and amphibious vehicles, and special equipment like cranes, street cleaners, snow plows and backhoes, etc. The target population for the pilot survey is thus the same as for the CVS for these two provinces, with the additional exclusion of buses.

The survey population, or the frame, for the pilot is all active vehicles belonging to the target population that are on the two provincial motor vehicle registration files (Ontario and New Brunswick). The information contained in these files permits the identification and contacting of in-scope vehicle owners based on characteristics and ownership of the vehicles.

The pilot survey reference period was the first eight weeks of the fourth quarter of 2002.

Stratification

All vehicles from the survey population are stratified by province of registration and then by class of vehicle weight: under 4.5t (light vehicles), 4.5t to 15t, and over 15t. As for CVS, the vehicles are further divided by two vehicle-age strata of newer and older vehicles.

Sample Allocation

The budget allowed for a sample size of 5,000 vehicles for the pilot: 1,000 for each option to be tested. With the low response rates expected, a sixth-root allocation method was applied to allocate among the vehicle type – age groups to ensure that there would be a sufficient number of heavier vehicles responding for each option to permit analysis of the results. The sample in the province of New Brunswick was sized to ensure that a sufficient number of the interviews and logs would be done in French so 60% of the 5,000 vehicles were allotted to New Brunswick and 40% to Ontario.

Table	1.	Sam	ple	Allo	ocation
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Province	Vehicle Weight Type	Sample Size	Sample Size per Option		
	under 4.5t (Light)	1,532	306		
New Brunswick	4.5t to under 15t	774	155		
	15 t and over	694	139		
	Total	3,000	600		
	under 4.5t (Light)	1,009	202		
Ontaria	4.5t to under 15t	486	97		
Ontario	15 t and over	505	101		
	Total	2,000	400		
Total		5,000	1,000		

Sample Selection

A sample of vehicles was randomly selected from the survey population. Within each stratum, vehicles in the sample for the previous three quarters of CVS are removed and the remaining vehicles are sorted by postal code. Then a systematic sample is selected using a random start. The sample of 5,000 was added to the number to be selected for the 4th quarter 2002 CVS sample. The units were later split between the fuel pilot and the CVS and then among the 5 options, before being assigned a start date from among the first eight weeks of the 4th quarter (Oct 5 to Nov 29). To reduce response burden, no vehicle selected for the pilot was selected for the current and previous three quarters of CVS.

The sample of 5,000 vehicles was drawn in September 2002. One thousand units were allotted for each option to be tested with 600 in New Brunswick and 400 in Ontario.

Data Collection

Of the total 5,000 units, 26 were not included in the sample file for Computer Assisted Telephone Interview (CATI) because the contact information received back from the Canadian Council of Motor Transport Administrators was insufficient. The CATI phone calls and first mail out began in September 2002.

The data collection procedure follows the CVS pattern. First is the CATI where it is verified that the owner on file does own or lease the vehicle. The vehicle type is verified to determine the appropriate log type to send in the case of the trip log. Questions on driving habits and an odometer reading are asked. For the pilot survey, additional questions pertaining to the maintenance of the vehicle and the household characteristics of the owner were also asked.

Contacted owners that agree to be sent a log will be contacted by telephone on the first day of the reporting period to inquire if they have received the log and begun filling it out, answer questions, and motivate them to complete the log. Those who do not respond to the CVS-Trip log in Options 3 and 4 are asked to fill out a postcard of odometer readings only instead (no fuel component).

Owners not contacted by telephone are mailed a log and sent a reminder letter by mail. Those who do not respond to the CVS-Trip log in Options 3 and 4 are asked to fill out a short form of the log instead, which is similar to the postcard of odometer readings only (no fuel component), but with the several questions that would otherwise have been asked during the CATI.

3. Analysis of Response Rates to the Computer Assisted Telephone Interview

Overall Response Rates

Figure 1 illustrates the results of the attempts to contact 4,974 (=5,000–26) vehicle owners and conduct a Computer Assisted Telephone Interview (CATI).





From Figure 1, we note that over 63% of the vehicle owners were contacted and a full or partial response was obtained for 2,858 (=2,779+79) of these. The 79 partial respondents agreed to be sent a log. Of the 2,779 full respondents, 2,189 (78.8%) accepted to be mailed a log or postcard. Among those not contacted by phone, logs were mailed to 1,442. Thus a total of 3,710 vehicle owners were mailed a log or postcard.

Among the 2,858 vehicles for which owners provided a full or partial response, 590 were not mailed a log or postcard. As seen in Table 2, 393 were not mailed to because the vehicle would not be in use (based on Questions 4 and 8) whereas 197 refused to be mailed a log or postcard. Thus only 6.9% [=197 / (2,779+79)] of the full and partial respondents refused to be mailed a log or postcard. The results by language are found in Table A.2 of Appendix A. Results by vehicle type are below. Here, heavy vehicles are those weighing 4.5t and over.

Question		Vehicle	Ac	cept	Refuse	/ Other	Don't	Know	Not Applicable (not in use)	
		Type	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Q25 & Q29	Mail log/postcard	Light	1369	82.2%	109	6.5%	0	0.0%	188	11.3%
		Heavy	899	75.4%	88	7.4%	0	0.0%	205	17.2%
		Total	2268	79.4%	197	6.9%	0	0.0%	393	13.8%

 Table 2: Reaction of the 2,858 Full and Partial Respondents to the Request for Their

 Cooperation in Completing a Postcard or Log, by Vehicle Type (1,666 Light, 1,192 Heavy)

Highlights

Appendix A contains tables of the response rates for individual CATI questions for the 2,858 full and partial respondents by language (Table A.3) and by type of vehicle (Table A.1): light vehicles which weigh less than 4.5t and heavy vehicles which weigh 4.5t and over. The following are points of interest drawn from these tables.

• The individual questions were generally very well reported. Few refusals (2.8% of responses) were encountered in general, but this was somewhat higher for the household questions: 4.4% of light vehicle owners refused to give the size of the household, 3.5% of light vehicle owners refused to provide the number of vehicles in the household, and 13.5% of light vehicle owners refused to provide the household income.

• The number who did not know the answer was high in some cases: 11.8% did not know the distance driven the previous week (Question 7) and 17.9% did not know the odometer reading of the vehicle (Question 10). This is not unexpected, however, for these questions. Almost 5% did not know whether or not the vehicle has an anti-lock braking system (Question 11E).

• The frequencies of "Don't know" and refusals are similar for both light and heavy vehicles.

• Only 349 of the 2,858 complete and partial interviews were conducted in French (see Table A.2 of Appendix A). An examination of the differences between the frequencies of "Don't know" for French and English does not indicate that any questions may be unclear in one of the two languages.

The following highlights concern those who responded to the question with an answer other than "Don't know" (the Response column).

• Of the 2,665 who responded to Question 6A, 82% fill-up their vehicle when purchasing fuel, compared to 18% who partially fill the vehicle. This is promising for obtaining the 2 fill-ups necessary to estimate fuel consumption. It remains to be seen if this is also observed in the completed logs.

• Of the 2,355 reporting the distance driven the previous week (Question 7), 74% indicated that this was a typical distance (Question 7B).

• Of the 2,349 who responded to Question 7G about the seasonal use of the vehicle, over 33% indicated that the usage of the vehicle depends on the season.

• Of the 2,679 who responded to Question 8, 88% indicated that the sampled vehicle would be used in the next 6 weeks.

• Among the 325 who reported that the vehicle would not be used in the next 6 weeks, seasonal use was the most common reason (over 65%) given (Question 8B). Under repair counted for over 8% of the responses.

• Less than 2% of the 2,356 who responded to Question 9 reported that they use the vehicle less than once a week, whereas almost 56% reported daily use.

4. Mail Out

Table 3 includes all data for Ontario and New Brunswick and is based on the entire pilot survey sample.

Frequency			Log Option			Total	
Percent	1	2	3	4	5		
CATI	473	455	460	441	439	2,268	
	9.5	9.1	9.3	8.9	8.9	45.6	
Dry Mail Out	289	277	282	295	299	1,442	
	5.8	5.6	5.7	5.9	6.0	29.0	
Not Mailed	234	264	251	260	255	1,264	
	4.7	5.3	5.1	5.2	5.1	25.4	
Total	996	996	993	996	993	4,974	
	20.0	20.0	20.0	20.0	20.0	100.0	

Table 3. First Log Mail Out, by Log Option¹

Of the total 4,974 units (all log options) in the sample, almost 75% were mailed a log. Close to 46% of the total were vehicle owners contacted through the CATI who agreed to accept a log. Dry mail-outs accounted for 29% and the remaining 25% were not mailed out. Dry mail-outs pertain to vehicle owners who could not be contacted by phone. Those not mailed out include cases such as refusals, vehicles not in use, moved out of province etc.

The number of vehicle owners agreeing to accept a log was fairly equal between log options, ranging between 8.9% and 9.5% of the total logs mailed.

¹ There is only one mail out to respondents in options 1, 2 and 5. There are two logs mailed out to respondents in options 3 and 4.

5. Analysis of the Return Rates of the Logs

The return rates presented in this section pertain to actual logs received from the mail out. Return rates do not include any item responses, only that the log was returned. The logs can have information or can be blank.

Log Option	1	2		3			4				5		
			1st log		2nd log	1st log	2nd log			Combined Log			
Log Type	Fuel1	Fuel2	L	Н	L&H	Fuel1	Fuel1	L	Н	L&H	L5	H5	Total
Total Mailed	762	732	416	326	742	656	736	367	267	634	421	317	738
Total Returned	277	280	186	127	313	197	299	149	73	222	143	102	245
% of total	36.4	38.3	44.7	39.0	42.2	30.0	40.6	40.6	27.3	35.0	34.0	32.2	33.2

Table 4. Number of Returned Logs, by Log Option and Type, as of April 18, 2003

The numbers presented in Table 4 indicate the number of logs returned as of April 18, 2003. The majority of the logs we continue to receive, although very few, pertain to the second log of options 3 and 4. The rate of log returns ranged between 33.2% and 42.2% for all log options. The first log of option 3 (the current CVS Light and Heavy logs recorded the highest return rate at 42.2% returned. The Fuel1 log of option 4 (the first log of the two log option) was next at 40.6% followed by option 2 (Fuel2 log) and option 1 (Fuel1 log) with 38.3% and 36.4% respectively. The combined log (option 5) recorded a return rate of 33.2%. As indicated in Table 4, the second logs of options 3 and 4 have return rates of 30% and 35%, respectfully. The low return rate of second logs can be explained by the longer period of time required to complete the first log and return it before a second log can be mailed out, as well as the response burden added to completing two logs over a longer period of time. It should be noted that log options 3 and 4 will yield a higher return rate given that there was added follow-up including postcards and short forms.

Log Option	;	3		4
	Returned	% of mailed	Returned	% of mailed
First Log Only	167	22.5	155	21.1
Second Log Only	51	6.9	78	10.6
Both Logs	146	19.7	144	19.6
No Logs	378	50.9	359	48.8
Number Mailed	742	100.0	736	100.0

Table 5. Returned Logs, Options 3 and 4, 1st and 2nd Logs, as of April 18, 2003

Note: The total number of first logs returned is the sum of the first log only and both logs. The total number of second logs returned is the sum of the second log only and both logs. Table 5 shows the number of returned logs for options 3 and 4 for both the first and second logs. (Option 3 consists of first mailing out the current CVS Light and Heavy logs followed by the Fuell log. Option 4 consists of first mailing out the Fuell log followed by the current CVS Light and Heavy logs.)

Two main observations can be made from Table 5.

- Only half of the respondents returning the first log also returned the second log, 47% (146 of 313) and 48% (144 of 299) for option 3 and 4, respectively.
- There are a significant number of respondents who returned only one log. There were 167 respondents who returned the first log only in Option 3 and 155 in Option 4. For both options, only 20% returned both the trip and the fuel log.

These observations highlight an important disadvantage for Options 3 and 4: not even half of the vehicles for which logs are returned, return both the trip and fuel logs

Another interesting observation is with the return of the second log and no first log returned. There were 51 second logs (Fuel 1) returned for Option 3 without a corresponding first log (CVS). This is reasonable considering the Fuel1 log is shorter and less burdensome. However, 78 respondents, in Option 4, returned the much longer log (CVS) without returning the shorter first log (Fuel 1).

When comparing return rates for all log options, (this is taking into account both logs for options 3 and 4) option 2 recorded the highest overall return rate at 38.3% followed by option 1 and option 5 at 36.4% and 33.2%, respectively. The first log of option 3 recorded a higher return rate at 42.2% but when coupled with the second log, the return rate decreased dramatically to only 19.7%. Option 4 followed a similar pattern where the first log amounted to a return rate of 40.6% but only 19.6% when both logs were taken into account. This was the concept behind both options 3 and 4 to determine the response rates for completing two logs.

						Option			
			1	2	3		4		5
					Trip	Fuel	Fuel	Trip	
		Fuel/Trips Reported	218	220	179	130	217	107	176
	Information	Postcard/Shortform			37			30	
	Reported	Not in Use	23	35	49	28	36	57	31
		Scrapped	1	3	2		3	1	1
Returned		Total	242	258	267	158	256	195	208
		Not Contacted (sold and							
	Information	Post Office Returns)	12	10	12	16	12	7	7
	Not	Data Not Available	4	5	6	9	20	5	2
	Reported	Refusal	19	7	16	14	11	6	28
		Blank Return			12			9	
		Total	35	22	46	39	43	27	37
Not Retur	ned		485	452	429	459	437	412	493
Total Mail	ed		762	732	742	656	736	634	738

Table 6. Number of Returned Logs, by Type of Information, by Log Option, as of April 18,2003

Table 6 contains the various types of responses from returned logs for all log options. The different responses have been divided into two categories: "Information Reported" and "Information Not Reported".

Logs with reported information include items such as fuel purchases and/or trips, information on vehicles not in use (this can include vehicles stored for the winter, heavy trucks not operated at this specific time, seasonal vehicles and vehicles under repair), vehicles scrapped and postcards and short forms (which pertain to the current CVS survey). Logs with no information reported include items such as data is not available or unable to report (N/A), refusals, vehicles sold (for which no contact with the current vehicle owner was made), post office returns and blank logs.

The majority of returned logs contain useful survey information (between 80.2% and 92.1%). (See details in Appendix B).

6. Analysis of the Response Rates of the Logs

Response rates are a first indication of the quality of the estimates. When response rates are low, there is a significant potential for nonresponse bias. Furthermore, not all completed CVS-Fuel logs or fuel portions of the CVS-Fuel combined log will contain sufficient information to be used to calculate the fuel consumption.

Evidence appears to indicate in the current CVS that low response rates result in biased estimates. The CVS data suggest that when a vehicle is extensively used, owners tend not to complete the log, as this is a large burden for them. On the other hand, owners whose selected vehicle is rarely used tend not to respond under the incorrect impression that their contribution to the survey results is insignificant. Although these two extremes may compensate each other to a certain extent when it comes to reporting averages, an important part of the travel pattern will be missing.

In order to compare some of the response rates observed, tests of statistical hypotheses were conducted in order to determine which options had rates significantly different from each other. The results of these tests are shown in the diagrams following the table of results. Options for which the response rates are not significantly different are joined by a line. Tests between pairs of options were done with 95% confidence level. Thus the results of all the tests combined together are at less than 95%. For a description of the statistical tests conducted, see Appendix E.

Note that the pilot survey data used for the comparisons has not gone through an edit and imputation process. Some basic editing has been done to correct for obvious errors in the dates of fuel purchases (such as the date November 31, 2002 which does not exist) and glaring inconsistencies between odometer readings.

For the analyses that follow, vehicles are grouped into two classes: light vehicles (under 4.5t) and heavy vehicles (4.5t and over).

Global Response Rates

The return rates discussed in Section 5 and the results of the Computer Assisted Telephone Interview (CATI) discussed in Section 3 are both aspects that make up the overall response to the Pilot Survey. Both of these parts are considered in the global response rate depicted here as a very basic measurement of overall survey response.

A vehicle is considered to be a respondent in the following cases:

- a vehicle determined out of scope or not in use via CATI or the logs
- a vehicle still owned or lease by the contacted individual with at least one answer on a returned log
- a vehicle for which a response was obtained through the follow-up procedure (Options 3 and 4 and the CVS) on a postcard or short form.

The global response rates are thus different from the return rates as they are based both on the returned logs, postcards and short forms, and the CATI. As well, the global response rates for Options 3 and 4 indicate only that a response was obtained from the vehicle, but not that both trip and fuel information (both logs) was provided.

The global response rates were calculated in order to test for significant differences among the options and are found in Table 7. Figures 2 and 3 depict the results of the tests of statistical hypotheses by joining by a line those options for which the response rates are not significantly different from each other.

The Fuel Pilot Survey data used was that which was received and captured on or before April 16, 2003, and did not go through an edit and imputation process. Some basic editing was done to correct for obvious errors in the dates of trips and glaring inconsistencies between odometer readings. The CVS data used is from the first eight weeks of the fourth quarter, 2002, for vehicles registered in the provinces of Ontario and New Brunswick, excluding buses. The data used was that before the edit and imputation step, but with the same basic editing as was done for the Fuel Pilot Survey.

W 1 · 1			Option										
Weight Type	Type of Response	1		2		3		4		5		CVS	
- 5 P -		Freq.	%										
	Response	178	32.5%	169	30.7%	222	40.7%	215	39.0%	155	28.8%	224	46.3%
Light	NonResp.	369	67.5%	381	69.3%	323	59.3%	336	61.0%	383	71.2%	260	53.7%
	Total	547	100.0%	550	100.0%	545	100.0%	551	100.0%	538	100.0%	484	100.0%
	Response	141	31.4%	150	33.6%	165	36.8%	170	38.1%	134	29.5%	84	40.6%
Heavy	NonResp.	308	68.6%	296	66.4%	283	63.2%	276	61.9%	320	70.5%	123	59.4%
	Total	449	100.0%	446	100.0%	448	100.0%	446	100.0%	454	100.0%	207	100.0%
	Response	319	32.0%	319	32.0%	387	39.0%	385	38.6%	289	29.1%	308	44.6%
Total	NonResp.	677	68.0%	677	68.0%	606	61.0%	612	61.4%	703	70.9%	383	55.4%
	Total	996	100.0%	996	100.0%	993	100.0%	997	100.0%	992	100.0%	691	100.0%

 Table 7. Global Response Rates

Figure 2. Light Vehicles: Response Rates to the Options



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Figure 2 has three lines indicating that three groups of options are found to be not significantly different from each other. The global response rates for Options 1, 2 and 5 are not significantly different among light vehicles. The global response rates for Options 3 and 4 are also not significantly different among light vehicles. Lastly, the global response rates for Option 3 and the CVS are not significantly different among light vehicles.

Figure 3. Heavy Vehicles: Response Rates to the Options



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Figure 3 also has three lines indicating that three groups of options are found to be not significantly different from each other. The global response rates for Options 1, 2 and 5 are not significantly different among heavy vehicles, as for light vehicles. The global response rates for Options 1, 2 and 3 are also not significantly different among heavy vehicles. Lastly, the global response rates for Options 2, 3, 4 and the CVS are not significantly different among heavy vehicles.

The response rates for the Fuel Pilot Survey range from 29% to 39% compared with nearly 45% achieved for the current CVS. Noteworthy is that response rates to Options 1, 2 and 5 are not significantly different from each other although Options 1 and 2 are the easiest logs to complete. For both heavy and light vehicles, the overall response rate to Option 5 is significantly different than for options 3 and 4 as well as the current CVS. Although Option 3 and 4 achieve higher response rates, it must be remembered that this is simply a response to at least one of the questionnaires, not to both. As seen in Section 5, only 20% of the vehicle owners returned both a trip and a fuel log for Options 3 and 4.

Differences in response rates may be explained by the follow-up procedure for the current CVS which was also conducted for Options 3 and 4. No follow-up procedure was conducted for Options 1, 2 and 5 and so no responses were incited from among those who initially did not respond. A follow-up process could be instituted for these options as well in order to increase the response rates. A follow-up procedure similar to that for CVS, a postcard of odometer readings with perhaps total cost or quantity of fuel purchased each day (as is found on the current CVS log), could be implemented for Option 5 and would likely increase the response rate.

In order to compare the response rates without the impact of the follow-up procedure used for the CVS and Options 3 and 4 of the pilot survey, the postcards and the short forms of the log were excluded and the global response rates calculated again. The results are found in Table 8, and illustrate the importance of the follow-up procedure on the CVS response rates. The impact on the response rates for Options 3 and 4 is less since fewer postcards and short forms had been received by April 16, 2003, when the analysis began. Receiving a postcard, short form or second log (as in the case of Options 3 and 4) is in itself a reminder that the first log has not been returned and may motivate the return of the first log in some cases.

Vehicle Weight	Type of Response	Option												
		1		2		3		4		5		CVS		
1990		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
	Response	178	32.5%	169	30.7%	191	35.0%	207	37.6%	155	28.8%	183	37.8%	
Light	NonResp.	369	67.5%	381	69.3%	354	65.0%	344	62.4%	383	71.2%	301	62.2%	
	Total	547	100.0%	550	100.0%	545	100.0%	551	100.0%	538	100.0%	484	100.0%	
	Response	141	31.4%	150	33.6%	165	36.8%	170	38.1%	134	29.5%	73	35.3%	
Heavy	NonResp.	308	68.6%	296	66.4%	283	63.2%	276	61.9%	320	70.5%	134	64.7%	
	Total	449	100.0%	446	100.0%	448	100.0%	446	100.0%	454	100.0%	207	100.0%	
	Response	319	32.0%	319	32.0%	356	35.9%	377	37.8%	289	29.1%	256	37.0%	
Total	NonResp.	677	68.0%	677	68.0%	637	64.1%	620	62.2%	703	70.9%	435	63.0%	
	Total	996	100.0%	996	100.0%	993	100.0%	997	100.0%	992	100.0%	691	100.0%	

 Table 8. Global Response Rates Excluding Responses to the Postcards and Short Forms

The global response rates to the first log sent were also calculated with the exclusions of the postcards and the short forms of the log. The results are found in Table 9. Once again, receiving a postcard, short form or a second log (as in the case of Options 3 and 4) is in itself a reminder that the first log has not been returned and may motivate the return of the first log in some cases.

x7 1 · 1	Type of Response		Option										
Vehicle			1		2		3		4	5 - Trij	p & Fuel1	(CVS
Туре		Fuel1 Log		Fuel2 Log		CVS-Trip		Fuel1 Log		Log			
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
	Response	178	32.5%	169	30.7%	169	31.0%	178	32.3%	155	28.8%	183	37.8%
Light	NonResp.	369	67.5%	381	69.3%	376	69.0%	373	67.7%	383	71.2%	301	62.2%
	Total	547	100.0%	550	100.0%	545	100.0%	551	100.0%	538	100.0%	484	100.0%
	Response	141	31.4%	150	33.6%	146	32.6%	158	35.4%	134	29.5%	73	35.3%
Heavy	NonResp.	308	68.6%	296	66.4%	302	67.4%	288	64.6%	320	70.5%	134	64.7%
	Total	449	100.0%	446	100.0%	448	100.0%	446	100.0%	454	100.0%	207	100.0%
	Response	319	32.0%	319	32.0%	315	31.7%	336	33.7%	289	29.1%	256	37.0%
Total	NonResp.	677	68.0%	677	68.0%	678	68.3%	661	66.3%	703	70.9%	435	63.0%
	Total	996	100.0%	996	100.0%	993	100.0%	997	100.0%	992	100.0%	691	100.0%

 Table 9. Global Response Rate to the First Log Sent, Excluding Responses to the Postcards and Short Forms

Significant potential for nonresponse bias is certainly a factor for an ongoing fuel consumption survey as demonstrated by the low response rates achieved in the pilot survey. Response rates lower than that of the CVS will have a negative impact on the CVS-Trip results if both surveys share at least part of the same sample. A larger sample size will only partially improve the estimates, but will not address the problem of nonresponse bias.

Item Response Rates

Response rates to the general information questions and each element of the fuel purchases are presented and analyzed in detail in Appendix C.

In summary, the date, odometer reading and fuel type are well reported for the fuel purchases. The fuel gauge reading before the fuel purchase was better reported than the fuel gauge reading after, which is what indicates whether or not the purchase was a fill-up. The fill-up indicator had a significantly higher response rate than did the fuel gauge reading after the purchase among light vehicles. This is reasonable as indicating a fill-up is easier than determining and recording the gauge reading. The price and the amount purchased in dollars are less well reported among heavy vehicles.

In general, the items were well reported among all the options. Often Options 3 and 5 were found to have significantly different response rates among the heavy vehicles and to be lower. This is consistent with the added response burden of the trip and fuel portions at once in the combined log of Option 5 and the fatigue of the respondent when answering the fuel log after the trip log as in Option 3. Among light vehicles, the purchases information reported for Option 4 tended to be less well reported than for Option 3 despite the fact that the fuel log was the second log received in Option 3. For both vehicle types, item response rates for Options 1 and 2 are often not significantly different. When there is a difference, Option 2 tends to have the higher response rate.

7. Analysis of the Data Quality of the Logs

Quality of the Fuel Data

At Question 6A of the CATI, respondents were asked whether or not they fill-up their vehicle's tank when purchasing fuel. Among those who also provided fuel purchase information on the log, a comparison was made to see if the reported purchases were consistent with the CATI response. Overall, 69% of those claiming to do fill-ups reported at least 80% of their reported purchases as being fill-ups. Of those claiming to do partial fills, 59% reported no fill-ups, but close to 23% reported at least 80% of their reported purchases as being fill-ups. When considering the number reporting 2 or more fill-ups, 71% of those claiming to do fill-ups reported 2 or more fill-ups and 30% of those claiming to do partial fills did report 2 or more fill-ups.

For Option 5, if a fuel purchase was made during a trip, it was noted in the trip portion of the log and the details of the fuel purchase were to be reported in the fuel portion. It is interesting to note whether or not fuel purchases noted in the trip portion of the combined log of option 5 were recorded in the fuel portion and whether fuel purchases made during the 7 days of trip recording were indicated in the trip portion. In matching fuel purchases recorded on the two parts of the log, it was found that the majority are recorded in both parts of the log.

In order to calculate the fuel consumption and cost, the following variables from the fuel purchase information are needed: the odometer reading, fuel type, two of price or amount or quantity and quantity type, and the gauge reading/fill-up indicator after the purchase. Thus fuel purchase was termed complete if these variables were reported. An analysis of whether or not complete information was provided is found in Appendix D in the section Quality of the Fuel Data. It is noted that fuel purchases made later (fuel purchases 4 and 5) are more likely to have some missing information. Overall, 70% to 80% of fuel purchases are complete as seen in Table D.1. The more complete the information provided, the less imputation will need to be done for item nonresponse.

Table D.2 in Appendix D highlights that 64% to 74% of fuel purchases are reported as fill-ups. It does not appear that people make fill-ups in order to send back the fuel log earlier (after 2 fill-ups as requested on the Fuel1 Log).

Fuel consumption without modeling can be calculated when two fill-ups are reported. The greater number of vehicles reporting two fill-ups, the better the quality of the fuel consumption estimates. From Table D.5 in Appendix D, fuel consumption could be calculated directly for fewer than 70% (49% to 68%) of the light vehicles reporting fuel purchases and fewer than 80% (57% to 79%) of the heavy vehicles reporting fuel purchases. For light vehicles, Option 5 has the fewest vehicles with two or more fill-ups. This is likely related to the fewer purchases reported by light vehicles in Option 5, perhaps as they mail back the log as soon as the 7-day trip portion is completed. Adjustments to the log can be considered so as to help correct this problem.

The quality of the fuel data will be negatively affected by low response rates. The consideration of the data reported for the Fuel Pilot Survey does not show that any great differences among the options

Quality of the Trip Data

It is desired to maintain the quality of the CVS-Trip data. A decrease in the response rate will affect the quality of the estimates and introduce a greater potential for biased estimates. The amount and type of data reported may also be affected by the addition of the CVS-Fuel. In order to compare the reported trip data of Options 3, 4 and 5 with the reported trip data of the current CVS, a crude comparison of the provided data was performed to give an idea of the effect of the fuel component on the quality of the trip data reported.

The Fuel Pilot Survey data was that which was received and captured on or before April 16, 2003 and did not go through an edit and imputation process. Some basic editing was done to correct for obvious errors in the dates of trips and glaring inconsistencies between odometer readings. Only those vehicles for which information was provided were included for each analysis. The CVS data used is that for the first 8 weeks of quarter 4, 2002, for vehicles registered in the provinces of Ontario and New Brunswick, excluding buses and that has not gone through the edit and imputation process. The basic editing performed for the Fuel Pilot Survey was also done for the CVS data. When the number of days accounted for was available, the values were prorated so as to represent 7 days of reporting.

The details of the analysis are found in Appendix D in the Section Quality of the Trip Quality.

There was concern that vehicle owners would report that the vehicle was not in use more often due to respondent fatigue in Options 4 and 5, yet the average number of days not in use is not significantly different from that of the CVS in the case of each of Options 3, 4 and 5. Similarly, a decrease in the number of trips was a concern; however, the average number of trips reported was not significantly different from the CVS except for Option 5 which reported the greatest number of trips. Furthermore, the average distance traveled did not vary significantly among the options and the CVS.

The data reported for the fuel question of the trip log (not on the combined log of Option 5) for Options 3 and 4 CVS-Trip logs was compared to that of the CVS. In the case of light vehicles, the highest average cost was reported for Option 4 and was significantly different from the CVS. For heavy vehicles, the highest average quantity reported was for Option 3 and was significantly different from the CVS.

Although the data reported does not seem to be affected, response rates lower than those for the current CVS will result in lower quality of the estimates from the addition of the CVS-Fuel component. Although the sample sizes can be increased, this will not compensate for the bias of the estimates.

8. Comparison of the Options

Issues such as timeliness, response rates, data quality and costs are compared in the following table.

Table 10.	Comparison	of the	Pilot	Survey	Options
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	Option 1	Option 2	Option 3	Option 4	Option 5
Description	Fuel1 Log for the same period as CVS with different samples	Fuel2 Log for the same period as CVS with different samples	Vehicle owners first receive the CVS trip log and then the Fuel1 log	Vehicle owners first receive the Fuel1 log and then the CVS log	Combined trip and fuel log for the first week. Then fuel continues to be reported until two fill-ups or 5 purchases are made or another 3 weeks have passed
Operational pros and cons	• Simple mail out	• Simple mail out	• Mail out is very complicated ²	• Mail out is very complicated ²	• Simple mail out
Return Rates (Returns as of April 18, 2003)	• Return rate of 36%, comparable to that of Option 2	• Return rate of 38%, comparable to that of Option 1	 Return rate of 42% for the trip (1st) log which is comparable to CVS rates The fuel log had a return rate of 30% which is less than for Options 1 and 2 Only 20% return both the trip and fuel logs 	 Return rate of 40% for the fuel log which is somewhat greater than Options 1 and 2, perhaps due to receiving a second log and then the follow-up process The trip log had a return rate of 35% which is less than CVS rates Only 20% return both the trip and fuel logs 	 Return rate of 33% which is comparable to Options 1 and 2 which also did not have a follow-up procedure in the pilot survey This is less than CVS rates, but could be increased with a follow- up procedure similar to that used by CVS.

 $^{^{2}}$ We currently record any CVS log as returned as soon as it arrives, without any immediate review of the information on the log, in order to prevent sending out a reminder letter, postcard or short form to someone who has already returned his log. In Options 3 and 4, we would need to be able to distinguish whether a returned log was the first log mailed and there would be a subsequent mailout of the other log, or the second log and there would be no further mail outs. In addition, we need to immediately review each returned first log to verify that the respondent still owns the vehicle and did not refuse to do the survey prior to sending out the second log.

	Option 1	Option 2	Option 3	Option 4	Option 5
Response Rates	• Response rate of 32%, but no follow-up done as in CVS	• Response rate of 32%, but no follow-up done as in CVS	• Response rate of 39% which is not significantly different from that observed by CVS, yet this rate does not indicate that both logs were responded to	• Response rate of 39% which is not significantly different from that observed by CVS, yet this rate does not indicate that both logs were responded to	 Response rate of 29% which is not significantly different from Options 1 and 2 according to tests of statistical hypotheses, but is from CVS rates. The response rate could be increased by an appropriate follow-up, similar to that in the CVS.
Quality of the Fuel Data	• Fuel purchases reported with complete information less often than Option 2	• Fuel purchases reported with complete information more often than Option 1	 The type of data provided does not seem to be negatively impacted by receiving the fuel log after the trip log The lower response rate to the Fuel log as the second log would mean a higher risk of nonresponse bias 	• Fuel data seems of good quality compared to the other options	• Fewer light vehicles reporting 2 or more fill- ups than for other options

	Option 1	Option 2	Option 3	Option 4	Option 5
Quality of the Trip Data	• Trip data would not be affected as the samples would be different.	• Trip data would not be affected as the samples would be different.	• Basic trip data reported does not seem to differ much from the CVS reported data	 Basic trip data reported does not seem to differ much from the CVS reported data, The lower response rate to the Trip log as the second log would mean a higher risk of nonresponse bias 	• Basic trip data reported does not seem to differ much from the CVS reported data
Timeliness ³ pros and cons	• Fuel estimates could be released 5 months after the quarter	• Fuel estimates could be released 5 months after the quarter	 CVS trip estimates could be released 5 months after the quarter, as currently But fuel estimates delayed - released 8 months after the quarter 	 Fuel estimates could be released 6 months after the quarter But CVS trip estimates would be delayed - released 8 months after the quarter 	 Fuel and CVS estimates could be released 6 months after the quarter Thus CVS estimates are slightly delayed
Comparabi- lity between trip and fuel data	• Separate trip and fuel samples so comparability between driving patterns and fuel consumption only on a population level	• Separate trip and fuel samples so comparability between driving patterns and fuel consumption only on a population level	• Trip and fuel data collected for the same vehicles but in different quarters (11weeks from the mailing of the trip log until the mailing of the fuel log) so some comparability	• Trip and fuel data collected for the same vehicles but in different quarters (10weeks from the mailing of the fuel log until the mailing of the trip log and another 7 weeks until the final mailing of the postcard or short form) so some comparability	• Fuel and trip estimates cover the same period for the same vehicles and so excellent comparability between driving patterns and fuel consumption can be made
Cost (detailed costs are provided in Section 10)	• Separate trip and fuel samples so increased costs, especially as many more units to be contacted for the CATI	• Separate trip and fuel samples so increased costs, especially as many more units to be contacted for the CATI	• Same sample for the trip and fuel logs and so less expensive then Options 1 and 2	• Same sample for the trip and fuel logs and so less expensive then Options 1 and 2	• Same sample for the trip and fuel logs and only one log is mailed out so the cheapest option

	Option 1	Option 2	Option 3	Option 4	Option 5
Overall Pros	• No impact on trip data	• No impact on trip data	• Fuel and trip data for the same sample and so the increase in costs is less than for Options 1 and 2	• Fuel and trip data for the same sample and so the increase in costs is less than for Options 1 and 2	 Fuel and trip data from the same sample during the same period; thus excellent comparability Increase in costs compared to the CVS costs, but least expensive option providing both trip and fuel estimates each year Possibility to improve the response rates with an appropriate follow-up procedure
Overall Cons	 Costs are higher than for Options 3, 4 and 5 as there are 2 samples to be contacted Fuel and trip data for separate samples and so comparability at the population level only 	 Costs are higher than for Options 3, 4 and 5 as there are 2 samples to be contacted Fuel and trip data for separate samples and so comparability at the population level only 	 Fuel and trip data for the same sample, but different time periods and so limited comparability Costs are somewhat higher than for Option 5 due to mailing the logs separately Lower response rate to the Fuel log due to response burden of 2 logs Timeliness of fuel estimates poor 	 Fuel and trip data for the same sample, but different time periods and so limited comparability Costs are somewhat higher than for Option 5 due to mailing the logs separately Lower response rate to the trip due to response burden of 2 logs Timeliness of trip estimates poor 	 Lower response rate, but this could be increased by an appropriate follow-up procedure Trip estimates available one month later

9. Sample Sizes

The tables of expected C.V.'s are to be used as a guide in determining the sample size necessary to meet the users' needs, taking into consideration the quality of the estimates that will be produced and the costs involved. A larger sample, for example, will permit the publication of estimates of higher quality for smaller portions of the population (e.g. station wagons, trucks weighing 15t and over in Prince Edward Island), but may not be feasible in terms of the expected budget. Large samples selected from small population groups also result in a higher response burden and therefore declining response rates over time. Lower response rates due to a higher response burden can have a negative impact on the quality of the estimates.

When estimates for only part of the population are desired, such as for the province of Prince Edward Island or for vehicles of a certain body type, a larger sample will be required so that an adequate number of units in the group of interest are sampled. To assist in determining the required sample size for producing estimates for portions of the population, some examples of domains are given: the largest and smallest provinces, Ontario and PEI, and some examples of vehicle types.

The C.V.'s provided are not associated with estimates from the Fuel Pilot Survey. The statistical methods used to calculate the expected C.V.'s do not guarantee the quality of a single estimate. On average, however, three out of four estimates should be of the determined quality or better as long as the assumptions are met for the required sample sizes shown in the tables. For an in depth description of the methodology of the calculation of the expected C.V.'s, refer to Appendix F.

Tables are provided separately for Options 1, 2 and 5 and C.V.'s are given for each of the three vehicle types as follows:

- Light vehicles weighing less than 4.5t
- Trucks weighing 4.5t to under 15t
- Trucks weighing 15t and over

Note that buses were not included in the Pilot Survey and are not covered by the sample sizes in the following tables.

Tables are not provided for Options 3 and 4 at this time due to the disadvantages of these options, such as lack of timeliness, complex mail out and increased response burden with poor response to the second log sent, which make them less desirable options for ongoing CVS-Trip and CVS-Fuel surveys. Tables for these options can be prepared upon request.

Domain		Deriod	Estimate	Ар	proximate C	C.V.'s (%) fo	or Sample Si	izes
	Domain	i enou	Estimate	10,000	12,500	15,000	17,500	20,000
		annual	vehicle-km	1.9	1.7	1.5	1.4	1.3
	Canada	aiiiiuai	fuel	3.3	3.0	2.7	2.5	2.3
	Callaua	quarterly	vehicle-km	3.7	3.4	3.1	2.8	2.6
		quarterry	fuel	6.6	5.9	5.4	5.0	4.7
5t		annual	vehicle-km	4.4	4.0	3.6	3.3	3.1
4.5	Ontario	aiiiiuai	fuel	7.9	7.0	6.4	5.9	5.6
าลท	Ontario	quarterly	vehicle-km	8.9	7.9	7.2	6.7	6.3
Т s		quarterry	fuel	15.7	14.1	12.8	11.9	11.1
ese		annual	vehicle-km	9.3	8.3	7.6	7.0	6.6
gГ	DEI	aiiiiuai	fuel	16.5	14.8	13.5	12.5	11.7
lhin	г.с.1.	quartarly	vehicle-km	18.6	16.7	15.2	14.1	13.2
/eig		quarterry	fuel	33.1	29.6	27.0	25.0	23.4
s ≥	Cars	annual	vehicle-km	2.5	2.2	2.0	1.9	1.8
cle	(57% of vehicles	annual	fuel	4.4	3.9	3.6	3.3	3.1
ehi	weighing less	quarterly	vehicle-km	4.7	4.2	3.9	3.6	3.3
>	than 4.5t)		fuel	8.4	7.5	6.8	6.3	5.9
	Station Wagons	oppuol	vehicle-km	11.6	10.4	9.5	8.8	8.2
	(2.6% of vehicles	aiiiiuai	fuel	20.6	18.4	16.8	15.6	14.6
	weighing less than	quartarly	vehicle-km	24.2	21.6	19.7	18.3	17.1
	4.5t)	quarterry	fuel	42.9	38.4	35.0	32.4	30.3
		annual	vehicle-km	3.6	3.3	3.0	2.7	2.6
	Canada	annuai	fuel	5.3	4.8	4.4	4.0	3.8
5t	Callaua	quartarly	vehicle-km	7.3	6.5	5.9	5.5	5.1
er 1		quarterry	fuel	10.7	9.6	8.7	8.1	7.6
Inde		annual	vehicle-km	9.5	8.5	7.8	7.2	6.7
∩ o	Ontario	amuai	fuel	14.0	12.5	11.4	10.6	9.9
5t t	Ontario	quarterly	vehicle-km	19.0	17.0	15.5	14.4	13.5
<u> 4</u> .		quarterry	fuel	28.0	25.0	22.9	21.2	19.8
Jinç		annual	vehicle-km	17.7	15.8	14.4	13.4	12.5
eigł	PEI	amuai	fuel	26.0	23.3	21.2	19.7	18.4
We	1.L.1.	quarterly	vehicle-km	35.4	31.6	28.9	26.7	25.0
cles		quarterry	fuel	52.0	46.5	42.5	39.3	36.8
shic	Pickups	annual	vehicle-km	7.0	6.3	5.7	5.3	4.9
Ś	(27% of vehicles	annuar	fuel	10.3	9.2	8.4	7.8	7.3
	weighing 4.5t to	quarterly	vehicle-km	14.0	12.5	11.4	10.6	9.9
	under 15t)	quarterly	fuel	20.6	18.4	16.8	15.6	14.5

Table 11. Option 1: Expected C.V.'s for Various Sample Sizes

	Domain	Deriod	Estimate	Approximate C.V.'s (%) for Sample Sizes					
	Domani	1 chou	LStillate	10,000	12,500	15,000	17,500	20,000	
		annual	vehicle-km	4.2	3.7	3.4	3.1	2.9	
	Canada	amuai	fuel	5.9	5.2	4.8	4.4	4.1	
	Canada	quarterly	vehicle-km	8.3	7.4	6.8	6.3	5.9	
Nel		quarterry	fuel	11.7	10.5	9.6	8.9	8.3	
Ор		annual	vehicle-km	9.9	8.8	8.1	7.5	7.0	
an	Ontario	annuar	fuel	14.0	12.5	11.4	10.6	9.9	
15t	Olitario	quarterly	vehicle-km	19.8	17.7	16.1	14.9	14.0	
ng			fuel	27.9	25.0	22.8	21.1	19.7	
idhi		annual	vehicle-km	18.0	16.1	14.7	13.6	12.8	
Nei	DEI		fuel	25.5	22.8	20.8	19.3	18.0	
es /	1.L.1.	quarterly	vehicle-km	36.1	32.3	29.5	27.3	25.5	
licle		quarterry	fuel	50.9	45.6	41.6	38.5	36.0	
Veh	Straight Trucks	annual	vehicle-km	7.0	6.3	5.7	5.3	5.0	
	(35% of vehicles	amuai	fuel	9.9	8.9	8.1	7.5	7.0	
	weighing 15t and	quarterly	vehicle-km	14.0	12.6	11.5	10.6	9.9	
	over)		fuel	19.8	17.7	16.2	15.0	14.0	

Table 11 (cont.). Option 1: Expected C.V.'s for Various Sample Sizes

From the above table, we note that to achieve a C.V. of 5% or less for fuel estimates at the national level for each vehicle weight type a sample size of 12,500 to 15,000 is needed. However the foreseen budget may not be able to cover the cost of this sample size in addition to the CVS-Trip sample size of at least 20,000.

	Domain	Period	Estimate	Ар	proximate C	C.V.'s (%) fo	or Sample Si	zes
	Domain	i chou	LStillate	10,000	12,500	15,000	17,500	20,000
		annual	vehicle-km	1.9	1.7	1.5	1.4	1.3
	Canada	aiiiuai	fuel	3.4	3.1	2.8	2.6	2.4
	Callaua	quartarly	vehicle-km	3.7	3.4	3.1	2.8	2.6
		quarterry	fuel	6.9	6.1	5.6	5.2	4.8
ы		annual	vehicle-km	4.4	4.0	3.6	3.3	3.1
4	Ontario		fuel	8.1	7.2	6.6	6.1	5.7
าลท	Ontario	quarterly	vehicle-km	8.9	7.9	7.2	6.7	6.3
Ţ		quarterry	fuel	16.2	14.5	13.2	12.3	11.5
esse		annual	vehicle-km	9.3	8.3	7.6	7.0	6.6
ے ا	DEI	aiiiiuai	fuel	17.1	15.3	13.9	12.9	12.1
hin	1.L.1.	quarterly	vehicle-km	18.6	16.7	15.2	14.1	13.2
/eic		quarterry	fuel	34.1	30.5	27.8	25.8	24.1
s ≥	Cars	annual	vehicle-km	2.5	2.2	2.0	1.9	1.8
cle	(57% of vehicles	amuai	fuel	4.5	4.1	3.7	3.4	3.2
,ehi	weighing less	quarterly	vehicle-km	4.7	4.2	3.9	3.6	3.3
>	than 4.5t)		fuel	8.6	7.7	7.1	6.5	6.1
	Station Wagons	annual	vehicle-km	11.6	10.4	9.5	8.8	8.2
	(2.6% of vehicles	amuai	fuel	21.3	19.0	17.4	16.1	15.0
	weighing less than	quarterly	vehicle-km	24.2	21.6	19.7	18.3	17.1
	4.5t)		fuel	44.2	39.6	36.1	33.4	31.3
		annual	vehicle-km	3.6	3.3	3.0	2.7	2.6
	Canada	aiiiiuai	fuel	5.0	4.4	4.0	3.7	3.5
5t	Canada	quarterly	vehicle-km	7.3	6.5	5.9	5.5	5.1
er 1		quarterry	fuel	9.9	8.9	8.1	7.5	7.0
lnd		annual	vehicle-km	9.5	8.5	7.8	7.2	6.7
0	Ontario	unnuun	fuel	13.0	11.6	10.6	9.8	9.2
5t t	Onunio	quarterly	vehicle-km	19.0	17.0	15.5	14.4	13.5
4.		quarterry	fuel	25.9	23.2	21.2	19.6	18.3
hing		annual	vehicle-km	17.7	15.8	14.4	13.4	12.5
eigl	PFI	unnuur	fuel	24.1	21.5	19.7	18.2	17.0
We	1.12.1.	quarterly	vehicle-km	35.4	31.6	28.9	26.7	25.0
cles		quarterry	fuel	48.2	43.1	39.3	36.4	34.1
shic	Pickups	annual	vehicle-km	7.0	6.3	5.7	5.3	4.9
Š	(27% of vehicles	amuul	fuel	9.5	8.5	7.8	7.2	6.7
	weighing 4.5t to	quarterly	vehicle-km	14.0	12.5	11.4	10.6	9.9
	under 15t)	quarterry	fuel	19.1	17.0	15.6	14.4	13.5

Table 12. Option 2: Expected C.V.'s for Various Sample Sizes

	Domain	Deriod	Estimate	Ар	proximate C	C.V.'s (%) fo	or Sample Si	izes
	Domain	i enou	Estimate	10,000	12,500	15,000	17,500	20,000
		annual	vehicle-km	4.2	3.7	3.4	3.1	4.2
	Canada	aiiiiuai	fuel	5.4	4.9	4.4	4.1	5.4
	Callaua	quarterly	vehicle-km	8.3	7.4	6.8	6.3	8.3
Ver		quarterry	fuel	10.9	9.7	8.9	8.2	10.9
O p		annual	vehicle-km	9.9	8.8	8.1	7.5	9.9
an	Ontario	annuar	fuel	12.9	11.6	10.6	9.8	12.9
15t	Ontario	quarterly	vehicle-km	19.8	17.7	16.1	14.9	19.8
ng			fuel	25.9	23.1	21.1	19.5	25.9
ghi		annual	vehicle-km	18.0	16.1	14.7	13.6	18.0
Nei	DEI		fuel	23.6	21.1	19.3	17.8	23.6
- Se	1.L.1.	quarterly	vehicle-km	36.1	32.3	29.5	27.3	36.1
licle		quarterry	fuel	47.2	42.2	38.5	35.7	47.2
Veh	Straight Trucks	annual	vehicle-km	7.0	6.3	5.7	5.3	7.0
	(35% of vehicles weighing 15t and over)	amuai	fuel	9.2	8.2	7.5	6.9	9.2
		quartarly	vehicle-km	14.0	12.6	11.5	10.6	14.0
		quarterly	fuel	18.4	16.4	15.0	13.9	18.4

Table 12 (cont.). Option 2: Expected C.V.'s for Various Sample Sizes

From the above table, we note that to achieve a C.V. of 5% or less for fuel estimates at the national level for each vehicle weight type a sample size of 10,000 to 12,500 is needed. However, as mentioned for Option 1, the foreseen budget may not be able to cover the cost of this sample size in addition to the CVS-Trip sample size of at least 20,000.

	Domain	Period	Estimate	Approxir	nate C.V.'s	(%) for Sam	ple Sizes
Domani		i chou	LStillate	20,000	25,000	30,000	35,000
			vehicle-km	2.2	2.0	1.8	1.7
		annual	passenger-km	2.6	2.3	2.1	1.9
	Canada		fuel	3.6	3.2	3.0	2.7
	Canada	quarterly	vehicle-km	4.4	4.0	3.6	3.3
			passenger-km	5.1	4.6	4.2	3.9
			fuel	7.3	6.5	5.9	5.5
			vehicle-km	5.2	4.7	4.3	4.0
		annual	passenger-km	6.1	5.4	5.0	4.6
	Ontario		fuel	8.6	7.7	7.0	6.5
ы	Ontario		vehicle-km	10.5	9.4	8.5	7.9
4		quarterly	passenger-km	12.1	10.9	9.9	9.2
าลท			fuel	17.2	15.4	14.0	13.0
Ξ,			vehicle-km	11.0	9.8	9.0	8.3
ess		annual	passenger-km	12.8	11.4	10.4	9.7
ЪГ	PEI		fuel	18.1	16.2	14.7	13.7
hin	1.1.1.		vehicle-km	22.0	19.7	18.0	16.6
/eig		quarterly	passenger-km	25.5	22.9	20.9	19.3
S ≈			fuel	36.1	32.3	29.5	27.3
cle		annual	vehicle-km	2.9	2.6	2.4	2.2
ehi	Cars		passenger-km	3.4	3.0	2.8	2.6
>	(57% of vehicles		fuel	4.8	4.3	3.9	3.6
	weighing less	quarterly	vehicle-km	5.6	5.0	4.5	4.2
	than 4.5t)		passenger-km	6.5	5.8	5.3	4.9
			fuel	9.1	8.2	7.5	6.9
			vehicle-km	13.7	12.3	11.2	10.4
	Station Wagons	annual	passenger-km	15.9	14.2	13.0	12.0
	(2.6% of vehicles		fuel	22.5	20.1	18.4	17.0
	weighing less		vehicle-km	28.5	25.5	23.3	21.6
	than 4.5t)	quarterly	passenger-km	33.1	29.6	27.1	25.1
			fuel	46.9	41.9	38.3	35.4
5t			vehicle-km	4.6	4.1	3.8	3.5
er 1		annual	passenger-km	5.2	4.7	4.3	4.0
nde	Canada		fuel	6.1	5.4	5.0	4.6
∩	Callada		vehicle-km	9.2	8.3	7.5	7.0
5t t		quarterly	passenger-km	10.5	9.4	8.6	7.9
4			fuel	12.2	10.9	9.9	9.2
jing			vehicle-km	12.1	10.8	9.9	9.1
eigh		annual	passenger-km	13.7	12.3	11.2	10.4
Ň	Ontario		fuel	15.9	14.3	13.0	12.1
les	Ontario		vehicle-km	24.2	21.6	19.8	18.3
hic		quarterly	passenger-km	27.4	24.5	22.4	20.7
×			fuel	31.9	28.5	26.0	24.1

Table 13. Option 5: Expected C.V.'s for Various Sample Sizes

1 401				Approvir	nate C V 's l	(%) for Sam	nle Sizes
	Domain	Period	Estimate	20.000	25.000	30.000	35.000
5t			vehicle-km	22.5	20.1	18.3	17.0
ir 1		annual	passenger-km	25.5	22.8	20.8	19.3
nde	DEL		fuel	29.6	26.5	24.2	22.4
Πo	P.E.I.		vehicle-km	44.9	40.2	36.7	34.0
5t to		quarterly	passenger-km	51.0	45.6	41.6	38.5
4			fuel	59.2	53.0	48.4	44.8
ning			vehicle-km	8.9	8.0	7.3	6.7
eigh	Pickups	annual	passenger-km	10.1	9.0	8.2	7.6
W	(27% of vehicles		fuel	11.7	10.5	9.6	8.9
les	weighing 4.5t to		vehicle-km	17.8	15.9	14.5	13.4
Vehic	under 15t)	quarterly	passenger-km	20.2	18.0	16.5	15.2
			fuel	23.4	21.0	19.1	17.7
			vehicle-km	5.1	4.6	4.2	3.8
		annual	passenger-km	5.9	5.3	4.8	4.4
	Canada		fuel	6.5	5.8	5.3	4.9
	Canada		vehicle-km	10.2	9.1	8.3	7.7
		quarterly	passenger-km	11.8	10.5	9.6	8.9
			fuel	13.1	11.7	10.7	9.9
L			vehicle-km	12.1	10.8	9.9	9.2
)ve		annual	passenger-km	14.0	12.5	11.4	10.6
Оp	Ontario		fuel	15.5	13.9	12.7	11.7
an	Ontario	quarterly	vehicle-km	24.2	21.7	19.8	18.3
151			passenger-km	28.0	25.0	22.8	21.1
ng			fuel	31.1	27.8	25.4	23.5
ighi			vehicle-km	22.1	19.8	18.0	16.7
We		annual	passenger-km	25.5	22.8	20.8	19.3
es	PEI		fuel	28.3	25.3	23.1	21.4
licl	1.1.1.		vehicle-km	44.2	39.5	36.1	33.4
Veł		quarterly	passenger-km	51.0	45.7	41.7	38.6
-			fuel	56.7	50.7	46.3	42.8
			vehicle-km	8.6	7.7	7.0	6.5
	Straight Trucks	annual	passenger-km	9.9	8.9	8.1	7.5
	(35% of vehicles		fuel	11.0	9.9	9.0	8.3
	weighing 15t and		vehicle-km	17.2	15.4	14.0	13.0
	over)	quarterly	passenger-km	19.9	17.8	16.2	15.0
			fuel	22.1	19.7	18.0	16.7

Table 13 (cont.). Option 5: Expected C.V.'s for Various Sample Sizes

From the above table, we note we note that to achieve a C.V. of 5% or less for fuel estimates at the national level for each vehicle weight type a sample size of 30,000 to 35,000 is needed. The foreseen budget may not be able to cover the cost of this sample size. A sample size of 25,000 is expected to provide fuel estimates with a C.V of 5% at the national level for light vehicles and 6% for heavy vehicles. With the implementation of a follow-up procedure, the response rates would be increased and a smaller sample size would be required.

10. Costs

The following tables present cost estimates for all options by selected sample sizes.

Table 14 includes cost estimates for options 1 and 2 in addition to the current CVS cost.

Table 15 presents cost estimates for options 1 and 2 if conducted in alternate years with the current CVS. Increase in cost of Options 1 and 2 in alternate years scenario is due to CVS unit staff who must be retained from year to year.

Table 16 includes cost estimates for option 3, 4 and 5. These estimates include the CVS with a sample size of 20,000.

Table 14. Annual Costs for Options 1 and 2 in Addition to CVS Costs

Sample Size	Opt	CVS	
	1	2	
10,000	\$0.70 M	\$0.70 M	
12,500	\$0.79 M	\$0.79 M	
15,000	\$0.87 M	\$0.87 M	
17,500	\$0.96 M	\$0.96 M	
20,000	\$1.05 M	\$1.05 M	\$1.16 M

Table 15 Costs for Options 1 and 2 When Conducted in Alternate Years With CVS

Sample Size	Options				
Alternate years	1	2			
10,000	\$0.90 M	\$0.90 M			
12,500	\$0.99 M	\$0.99 M			
15,000	\$1.08 M	\$1.08 M			
17,500	\$1.17 M	\$1.17 M			
20,000	\$1.26 M	\$1.26 M			

Table 16. Costs for Options 3, 4 and 5

Prices include CVS with a sample of at least 20,000

Sample Size	Options				
	3	4	5		
20,000	\$1.48 M	\$1.48 M	\$1.44 M		
25,000	\$1.68 M	\$1.68 M	\$1.64 M		
30,000	\$1.88 M	\$1.88 M	\$1.83 M		
35,000	\$2.08 M	\$2.08 M	\$2.03 M		

Notes:

1. The fuel survey with a sample of 20,000 respondents when conducted in alternate years with CVS costs more than the CVS survey because the fuel survey will require additional methodology and systems resources for the first few years.

11. Conclusion

In summary, all log options yielded relatively similar return rates ranging between 32% to 42%. Although options 3 and 4 recorded higher return rates for the first log, this decreased significantly when coupled with the second log, resulting in a return rate of 20% for both logs.

In terms of overall response rates, options 3 and 4 recorded higher response rates at 39% compared to 32% for Options 1 and 2 and 29% for Option 5. This higher response is partly due to the significance of follow-up procedures including postcards and short forms. No major differences among the options were noted as to response rates to fuel log questions and fuel purchase items.

Operationally Options 3 and 4 are very demanding while Options 1, 2 and 5 are more straight forward. Managing the follow-up procedures for the CVS log and the numerous mail outs is complex and burdensome. As well, it takes a long time for the cycle to be completed and so timeliness of the results is jeopardized. Options 1, 2 and 5 can be released between 5 and 6 months after the reference quarter, while Options 3 and 4 can be released as much as 8 months after the reference quarter.

In terms of data comparability, Option 5 yields the only direct comparability between trips and fuel purchase for the same vehicle for the same time period.

We would recommend Option 5 (including the best aspects of the Fuel1 and Fuel2 logs for the fuel portion of the log) as the most feasible option both from an operational and financial standpoint. Obtaining trip and fuel information from the same sample at the same time reduces costs and is more manageable. As well, this feature makes Option 5 very rich in data as the fuel information can be directly linked to trip data, thus vehicle use characteristics. Response rates for Option 5 are lower but can be boosted by adding follow-up procedures such as postcards and short forms similar to the current CVS. Despite the added response burden, basic comparison of reported trip data shows no major differences to that reported in the CVS.

Appendix A: CATI Results

Question		Vehicle	Response		Refusal		Don't Know		Not Applicable	
		Туре	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
	Able to	Light	1628	97.7%	38	2.3%	0	0.0%	0	0.0%
Q2 answer questions	answer	Heavy	1151	96.6%	41	3.4%	0	0.0%	0	0.0%
	questions	Total	2779	97.2%	79	2.8%	0	0.0%	0	0.0%
	Cicilla Inc. Alex	Light	1595	95.7%	38	2.3%	0	0.0%	33	2.0%
Q3	Still has the	Heavy	1130	94.8%	41	3.4%	0	0.0%	21	1.8%
	venicie	Total	2725	95.3%	79	2.8%	0	0.0%	54	1.9%
		Light	115	6.9%	39	2.3%	0	0.0%	1512	90.8%
ID	VIN	Heavy	710	59.6%	41	3.4%	8	0.7%	433	36.3%
		Total	825	28.9%	80	2.8%	8	0.3%	1945	68.1%
	Reason does	Light	5	0.3%	38	2.3%	0	0.0%	1623	97.4%
Q4	not have	Heavy	14	1.2%	41	3.4%	0	0.0%	1137	95.4%
	vehicle	Total	19	0.7%	79	2.8%	0	0.0%	2760	96.6%
		Light	1577	94.7%	38	2.3%	3	0.2%	48	2.9%
Q5	Vehicle type	Heavy	1129	94.7%	41	3.4%	2	0.2%	20	1.7%
		Total	2706	94.7%	79	2.8%	5	0.2%	68	2.4%
	Valiate (as	Light	11	0.7%	38	2.3%	3	0.2%	1614	96.9%
Q5B	venicle type -	Heavy	143	12.0%	41	3.4%	2	0.2%	1006	84.4%
	other	Total	154	5.4%	79	2.8%	5	0.2%	2620	91.7%
		Light	1574	94.5%	38	2.3%	6	0.4%	48	2.9%
Q6	Fuel type	Heavy	1113	93.4%	41	3.4%	5	0.4%	33	2.8%
		Total	2687	94.0%	79	2.8%	11	0.4%	81	2.8%
	D (1.1.011	Light	1561	93.7%	38	2.3%	19	1.1%	48	2.9%
Q6A	Partial fill or	Heavy	1104	92.6%	41	3.4%	14	1.2%	33	2.8%
-	fill-up	Total	2665	93.2%	79	2.8%	33	1.2%	81	2.8%
	Distance	Light	1385	83.1%	38	2.3%	195	11.7%	48	2.9%
Q7	driven last	Heavy	970	81.4%	46	3.9%	143	12.0%	33	2.8%
	week	Total	2355	82.4%	84	2.9%	338	11.8%	81	2.8%
Q7B	TT : 1	Light	1381	82.9%	38	2.3%	4	0.2%	243	14.6%
	Q7B Typical distance	Heavy	967	81.1%	41	3.4%	3	0.3%	181	15.2%
		Total	2348	82.2%	79	2.8%	7	0.2%	424	14.8%
	(Light) Used for commuting	Light	1384	83.1%	38	2.3%	1	0.1%	243	14.6%
Q7C		Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
		Total	1384	48.4%	38	1.3%	1	0.0%	1435	50.2%
	(Light) Trips over 100 km	Light	1376	82.6%	38	2.3%	9	0.5%	243	14.6%
Q7D		Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
		Total	1376	48.1%	38	1.3%	9	0.3%	1435	50.2%
	(Heavy)	Light	0	0.0%	0	0.0%	0	0.0%	1666	100.0%
Q7E	City vs. long	Heavy	954	80.0%	41	3.4%	16	1.3%	181	15.2%
	dist.	Total	954	33.4%	41	1.4%	16	0.6%	1847	64.6%
Q7F	(Heavy)	Light	0	0.0%	0	0.0%	0	0.0%	1666	100.0%
	Overnight	Heavy	965	81.0%	41	3.4%	5	0.4%	181	15.2%
	trips	Total	965	33.8%	41	1.4%	5	0.2%	1847	64.6%
		Light	1384	83.1%	38	2.3%	1	0.1%	243	14.6%
Q7G	Seasonal use	Heavy	965	81.0%	41	3.4%	5	0.4%	181	15.2%
		Total	2349	82.2%	79	2.8%	6	0.2%	424	14.8%

 Table A. 1. Response Rates for CATI Questions by Vehicle Type for the 2,858 Full and

 Partial Respondents (1,666 Light, 1,192 Heavy)
Vehicle Response Refusal Don't Know Not Applicable Question Type Percent Percent Freq Percent Percent Freq. Freq. Freq. 2.9% Light 1572 94.4% 38 2.3% 8 0.5% 48 Used in next 6 Q8 Heavy 1107 92.9% 41 3.4% 11 0.9% 33 2.8% weeks Total 2679 93.7% 79 2.8% 19 0.7% 81 2.8% Light 140 8.4% 38 2.3% 0 0.0% 1488 89.3% Why not in 185 15.5% 41 3.4% 0 0.0% 966 81.0% Q8B Heavy use Total 325 11.4% 79 2.8% 0 0.0% 2454 85.9% 86.4% 0.1% Light 1439 38 2.3% 188 11.3% 1 Q8C Rental 931 78.1% 41 3.4% 2 0.2% 218 18.3% Heavy Total 2370 82.9% 79 3 0.1% 406 14.2% 2.8% Light 1434 86.1% 38 2.3% 4 0.2% 190 11.4% Frequency of 09 Heavy 922 77.3% 41 3.4% 7 0.6% 222 18.6% use Total 2356 82.4% 79 2.8% 11 0.4% 412 14.4% Light 1202 72.1% 39 2.3% 235 14.1% 190 11.4% Odometer 647 54.3% 45 3.8% 278 23.3% 222 18.6% Q10 Heavy reading 1849 64.7% 84 2.9% 513 17.9% 412 14.4% Total 1395 39 2.3% 42 2.5% 190 11.4% Light 83.7% Q11 Heavy 888 74.5% 43 3.6% 39 3.3% 222 18.6% Oil change Total 2283 79.9% 82 2.9% 81 2.8% 412 14.4% Light 1409 84.6% 38 2.3% 29 1.7% 190 11.4% 22 1.8% 222 906 76.0% 42 3.5% 18.6% Q11B Tire pressure Heavy 14.4% Total 2315 81.0% 80 2.8% 51 1.8% 412 Light 1436 86.2% 38 2.3% 2 0.1% 190 11.4% 1.3% 222 Q11D Transmission Heavy 913 76.6% 41 3.4% 16 18.6% 2349 14.4% Total 82.2% 79 2.8% 18 0.6% 412 Light 1364 81.9% 38 2.3% 74 4.4% 190 11.4% Anti-lock Q11E braking Heavy 863 72.4% 42 3.5% 65 5.5% 222 18.6% system 2227 77.9% 80 Total 2.8% 139 4.9% 412 14.4% Light 1437 86.3% 38 2.3% 1 0.1% 190 11.4% Leased or O11F 925 77.6% 41 3.4% 4 0.3% 222 Heavy 18.6% owned 0.2% Total 2362 82.6% 79 2.8% 5 412 14.4% Light 1425 85.5% 38 2.3% 13 0.8% 190 11.4% Under Q11G 916 76.8% 41 3.4% 13 1.1% 222 18.6% Heavy warranty Total 2341 81.9% 79 2.8% 26 0.9% 412 14.4% 0.0% Light 1438 86.3% 38 2.3% 0 190 11.4% Business/ Q11H 927 77.8% 41 3.4% 2 0.2% 222 18.6% Heavy personal use 2365 79 14.4% Total 82.8% 2.8% 0.1% 412 2 131 7.9% 38 2.3% 0 0.0% 1497 89.9% Light Private/ public 011I Heavy 898 75.3% 41 3.4% 3 0.3% 250 21.0% business 1029 79 0.1% 1747 Total 36.0% 2.8% 3 61.1% Light 0 0.0% 0 0.0% 0 0.0% 1666 100.0% (Heavy) 2 0.2% 899 75.4% 41 3.4% 250 21.0% Q14 Transport Heavy goods Total 899 41 2 0.1% 1916 67.0% 31.5% 1.4% Light 0 0.0% 0 0.0% 0 0.0% 1666 100.0% (Heavy) Q15 Heavy 898 75.3% 41 3.4% 3 0.3% 250 21.0% Type of Total 898 31.4% 41 1.4% 3 0.1% 1916 67.0%

Table A.1. (cont.). Response Rates for CATI Questions by Vehicle Type for the 2,858 Full and Partial Respondents (1,666 Light, 1,192 Heavy)

business

Ourset		Vehicle	Resp	onse	Ref	usal	Don't	Know	Not Ap	plicable
Quest	on	Туре	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
		Light	131	7.9%	38	2.3%	0	0.0%	1497	89.9%
Q16	Main driver	Heavy	927	77.8%	41	3.4%	2	0.2%	222	18.6%
		Total	1058	37.0%	79	2.8%	2	0.1%	1719	60.1%
	Main driver	Light	94	5.6%	38	2.3%	0	0.0%	1534	92.1%
Q17	gender	Heavy	663	55.6%	41	3.4%	3	0.3%	485	40.7%
	gender	Total	757	26.5%	79	2.8%	3	0.1%	2019	70.6%
	Main duisson	Light	92	5.5%	38	2.3%	2	0.1%	1534	92.1%
Q18	Main driver -	Heavy	642	53.9%	42	3.5%	23	1.9%	485	40.7%
	age	Total	734	25.7%	80	2.8%	25	0.9%	2019	70.6%
	II	Light	1252	75.2%	73	4.4%	20	1.2%	321	19.3%
H1 Hou	Housenoid	Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
	5120	Total	1252	43.8%	73	2.6%	20	0.7%	1513	52.9%
	Info on	Light	1244	74.7%	44	2.6%	2	0.1%	376	22.6%
H2	household	Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
	members	Total	1244	43.5%	44	1.5%	2	0.1%	1568	54.9%
	Number of	Light	1266	76.0%	58	3.5%	21	1.3%	321	19.3%
H3	vehicles in	Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
	household	Total	1266	44.3%	58	2.0%	21	0.7%	1513	52.9%
	Household	Light	897	53.8%	38	2.3%	3	0.2%	728	43.7%
H4	vehicle use	Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
	comparison	Total	897	31.4%	38	1.3%	3	0.1%	1920	67.2%
	Hausshald	Light	984	59.1%	225	13.5%	136	8.2%	321	19.3%
H5	income	Heavy	0	0.0%	0	0.0%	0	0.0%	1192	100.0%
	meome	Total	984	34.4%	225	7.9%	136	4.8%	1513	52.9%

Table A.1 (cont.). Response Rates for CATI Questions by Vehicle Type for the 2,858 Full and Partial Respondents (1,666 Light, 1,192 Heavy)

Table A.2. Reaction of the 2,858 Full and Partial Respondents to the Request for Their Cooperation in Completing a Postcard or Log, by Language (2,509 English, 349 French)

Question		Language	Accept		Refuse/ Other		Don't	Know	Not Applicable (not in use)		
			Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	
Q25	Moil	English	1977	78.8%	184	7.3%	0	0.0%	348	13.9%	
&	log/postcard	French	291	83.4%	13	3.7%	0	0.0%	45	12.9%	
Q29 logpostcard		Total	2268	79.4%	197	6.9%	0	0.0%	393	13.8%	

Question		Longuaga	e		Ref	usal	Don't	Know	Not Ap	plicable
Questi	.011	Language	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
	Able to	English	2440	97.2%	69	2.8%	0	0.0%	0	0.0%
Q2	answer	French	339	97.1%	10	2.9%	0	0.0%	0	0.0%
	questions	Total	2779	97.2%	79	2.8%	0	0.0%	0	0.0%
	Still has the	English	2392	95.3%	69	2.8%	0	0.0%	48	1.9%
Q3	vehicle	French	333	95.4%	10	2.9%	0	0.0%	6	1.7%
	veniere	Total	2725	95.3%	79	2.8%	0	0.0%	54	1.9%
		English	732	29.2%	70	2.8%	7	0.3%	1700	67.8%
ID	VIN	French	93	26.6%	10	2.9%	1	0.3%	245	70.2%
		Total	825	28.9%	80	2.8%	8	0.3%	1945	68.1%
	Reason does	English	14	0.6%	69	2.8%	0	0.0%	2426	96.7%
Q4	not have	French	5	1.4%	10	2.9%	0	0.0%	334	95.7%
	vehicle	Total	19	0.7%	79	2.8%	0	0.0%	2760	96.6%
		English	2375	94.7%	69	2.8%	5	0.2%	60	2.4%
Q5	Vehicle type	French	331	94.8%	10	2.9%	0	0.0%	8	2.3%
		Total	2706	94.7%	79	2.8%	5	0.2%	68	2.4%
	Vahiala turna	English	142	5.7%	69	2.8%	5	0.2%	2293	91.4%
Q5B	other	French	12	3.4%	10	2.9%	0	0.0%	327	93.7%
	other	Total	154	5.4%	79	2.8%	5	0.2%	2620	91.7%
		English	2357	93.9%	69	2.8%	11	0.4%	72	2.9%
Q6	Fuel type	French	330	94.6%	10	2.9%	0	0.0%	9	2.6%
		Total	2687	94.0%	79	2.8%	11	0.4%	81	2.8%
	Dortial fill or	English	2337	93.1%	69	2.8%	31	1.2%	72	2.9%
Q6A	fill_up	French	328	94.0%	10	2.9%	2	0.6%	9	2.6%
	iiii-up	Total	2665	93.2%	79	2.8%	33	1.2%	81	2.8%
	Distance	English	2074	82.7%	74	2.9%	289	11.5%	72	2.9%
Q7	driven last	French	281	80.5%	10	2.9%	49	14.0%	9	2.6%
	week	Total	2355	82.4%	84	2.9%	338	11.8%	81	2.8%
	Typical	English	2068	82.4%	69	2.8%	6	0.2%	366	14.6%
Q7B	distance	French	280	80.2%	10	2.9%	1	0.3%	58	16.6%
	uistanee	Total	2348	82.2%	79	2.8%	7	0.2%	424	14.8%
	(Light)	English	1202	47.9%	32	1.3%	1	0.0%	1274	50.8%
Q7C	Used for	French	182	52.1%	6	1.7%	0	0.0%	161	46.1%
	commuting	Total	1384	48.4%	38	1.3%	1	0.0%	1435	50.2%
	(Light)	English	1195	47.6%	32	1.3%	8	0.3%	1274	50.8%
Q7D	Trips over 100	French	181	51.9%	6	1.7%	1	0.3%	161	46.1%
	km	Total	1376	48.1%	38	1.3%	9	0.3%	1435	50.2%
	(Heavy)	English	858	34.2%	37	1.5%	13	0.5%	1601	63.8%
Q7E	City vs. long	French	96	27.5%	4	1.1%	3	0.9%	246	70.5%
	dist.	Total	954	33.4%	41	1.4%	16	0.6%	1847	64.6%
	(Heavy)	English	868	34.6%	37	1.5%	3	0.1%	1601	63.8%
Q7F	Overnight	French	97	27.8%	4	1.1%	2	0.6%	246	70.5%
	trips	Total	965	33.8%	41	1.4%	5	0.2%	1847	64.6%
		English	2070	82.5%	69	2.8%	4	0.2%	366	14.6%
Q7G	Seasonal use	French	279	79.9%	10	2.9%	2	0.6%	58	16.6%
		Total	2349	82.2%	79	2.8%	6	0.2%	424	14.8%

 Table A. 3. Response Rates for CATI Questions by Language for the 2,858 Full and Partial Respondents (2,509 English, 349 French)

Question		Longuaga	Resp	oonse	Ref	usal	Don't	Know	Not Ap	plicable
Questi	on	Language	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
	Used in part 6	English	2352	93.7%	69	2.8%	16	0.6%	72	2.9%
Q8	Used in next o	French	327	93.7%	10	2.9%	3	0.9%	9	2.6%
	WEEKS	Total	2679	93.7%	79	2.8%	19	0.7%	81	2.8%
	When not in	English	288	11.5%	69	2.8%	0	0.0%	2152	85.8%
Q8B	Why not III	French	37	10.6%	10	2.9%	0	0.0%	302	86.5%
	use	Total	325	11.4%	79	2.8%	0	0.0%	2454	85.9%
		English	2077	82.8%	69	2.8%	3	0.1%	360	14.3%
Q8C	Rental	French	293	84.0%	10	2.9%	0	0.0%	46	13.2%
		Total	2370	82.9%	79	2.8%	3	0.1%	406	14.2%
	Engrand	English	2065	82.3%	69	2.8%	11	0.4%	364	14.5%
Q9	Frequency of	French	291	83.4%	10	2.9%	0	0.0%	48	13.8%
	use	Total	2356	82.4%	79	2.8%	11	0.4%	412	14.4%
	Odamatar	English	1638	65.3%	74	2.9%	433	17.3%	364	14.5%
Q10	Cuometer	French	211	60.5%	10	2.9%	80	22.9%	48	13.8%
	leaung	Total	1849	64.7%	84	2.9%	513	17.9%	412	14.4%
		English	2001	79.8%	72	2.9%	72	2.9%	364	14.5%
Q11	Oil change	French	282	80.8%	10	2.9%	9	2.6%	48	13.8%
		Total	2283	79.9%	82	2.9%	81	2.8%	412	14.4%
		English	2030	80.9%	70	2.8%	45	1.8%	364	14.5%
Q11B	B Tire pressure	French	285	81.7%	10	2.9%	6	1.7%	48	13.8%
		Total	2315	81.0%	80	2.8%	51	1.8%	412	14.4%
		English	2059	82.1%	69	2.8%	17	0.7%	364	14.5%
Q11D	Transmission	French	290	83.1%	10	2.9%	1	0.3%	48	13.8%
		Total	2349	82.2%	79	2.8%	18	0.6%	412	14.4%
	Anti-lock	English	1952	77.8%	70	2.8%	123	4.9%	364	14.5%
Q11E	braking	French	275	78.8%	10	2.9%	16	4.6%	48	13.8%
	system	Total	2227	77.9%	80	2.8%	139	4.9%	412	14.4%
	T	English	2071	82.5%	69	2.8%	5	0.2%	364	14.5%
Q11F	Leased or	French	291	83.4%	10	2.9%	0	0.0%	48	13.8%
	owned	Total	2362	82.6%	79	2.8%	5	0.2%	412	14.4%
	T Tan al ana	English	2054	81.9%	69	2.8%	22	0.9%	364	14.5%
Q11G	Under	French	287	82.2%	10	2.9%	4	1.1%	48	13.8%
	Wallanty	Total	2341	81.9%	79	2.8%	26	0.9%	412	14.4%
	Duringaal	English	2074	82.7%	69	2.8%	2	0.1%	364	14.5%
Q11H	Business/	French	291	83.4%	10	2.9%	0	0.0%	48	13.8%
	personaruse	Total	2365	82.8%	79	2.8%	2	0.1%	412	14.4%
	Driverte/ public	English	921	36.7%	69	2.8%	3	0.1%	1516	60.4%
Q11I	Private/ public	French	108	30.9%	10	2.9%	0	0.0%	231	66.2%
	Dusiness	Total	1029	36.0%	79	2.8%	3	0.1%	1747	61.1%
	(Heavy)	English	805	32.1%	37	1.5%	2	0.1%	1665	66.4%
Q14	Transport	French	94	26.9%	4	1.1%	0	0.0%	251	71.9%
	goods	Total	899	31.5%	41	1.4%	2	0.1%	1916	67.0%
	(Heavy)	English	804	32.0%	37	1.5%	3	0.1%	1665	66.4%
Q15	Type of	French	94	26.9%	4	1.1%	0	0.0%	251	71.9%
	business	Total	898	31.4%	41	1.4%	3	0.1%	1916	67.0%

Table A.3. (cont.). Response Rates for CATI Questions by Language for the 2,858 Full and Partial Respondents (2,509 English, 349 French)

Question		Longuaga	Resp	oonse	Ref	usal	Don't	Know	Not Ap	plicable
Questi	on	Language	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
		English	947	37.7%	69	2.8%	2	0.1%	1491	59.4%
Q16	Main driver	French	111	31.8%	10	2.9%	0	0.0%	228	65.3%
		Total	1058	37.0%	79	2.8%	2	0.1%	1719	60.1%
	Main driver	English	674	26.9%	69	2.8%	3	0.1%	1763	70.3%
Q17	gender	French	83	23.8%	10	2.9%	0	0.0%	256	73.4%
	gender	Total	757	26.5%	79	2.8%	3	0.1%	2019	70.6%
	Main driver	English	651	25.9%	70	2.8%	25	1.0%	1763	70.3%
Q18		French	83	23.8%	10	2.9%	0	0.0%	256	73.4%
	age	Total	734	25.7%	80	2.8%	25	0.9%	2019	70.6%
	Hawashald	English	1077	42.9%	63	2.5%	19	0.8%	1350	53.8%
H1	Housenoid	French	175	50.1%	10	2.9%	1	0.3%	163	46.7%
	5120	Total	1252	43.8%	73	2.6%	20	0.7%	1513	52.9%
	Info on	English	1070	42.6%	38	1.5%	1	0.0%	1400	55.8%
H2	household	French	174	49.9%	6	1.7%	1	0.3%	168	48.1%
	members	Total	1244	43.5%	44	1.5%	2	0.1%	1568	54.9%
	Number of	English	1090	43.4%	50	2.0%	19	0.8%	1350	53.8%
H3	vehicles in	French	176	50.4%	8	2.3%	2	0.6%	163	46.7%
	household	Total	1266	44.3%	58	2.0%	21	0.7%	1513	52.9%
	Household	English	767	30.6%	32	1.3%	3	0.1%	1707	68.0%
H4	vehicle use	French	130	37.2%	6	1.7%	0	0.0%	213	61.0%
	comparison	Total	897	31.4%	38	1.3%	3	0.1%	1920	67.2%
	Household	English	840	33.5%	204	8.1%	115	4.6%	1350	53.8%
H5	income	French	144	41.3%	21	6.0%	21	6.0%	163	46.7%
	meome	Total	984	34.4%	225	7.9%	136	4.8%	1513	52.9%

Table A.3. (cont.). Response Rates for CATI Questions by Language for the 2,858 Full and Partial Respondents (2,509 English, 349 French)

Appendix B: Returns

Figures B.1 through B.7 present data on the types of responses returned but as percentages of total mailed and total reported.



Figure B. 1. Log Option 1 - Returned Logs, by Type, as of April 18, 2003







Figure B. 3. Log Option 3 – Returned Logs, by Type, First Log, as of April 18, 2003

A large majority of all returned logs for all log options include reported information. Logs with reported information range between 80.2% and as high as 92.1% for all log options. The fuel2 log recorded the highest rate of information reported at 92.1%, followed by the second log of option 4 (CVS logs) and the fuel1 log of option 1 at 87.8% and 87.4%, respectively. The combined fuel and trip log contained information in 84.9% of the returned logs.







Figure B. 5. Log Option 4 – Returned Logs, by Type, First Log, as of April 18, 2003

Figures B.1 to B.7 also present a further breakdown in information reported in the logs in terms of fuel purchases and trips. Both Fuel1 and Fuel2 logs report a higher response than the CVS trip logs. Of all logs reporting information for Fuel1 and Fuel2, 90.1% report fuel purchases for Fuel1 and 85.3% report fuel purchases for Fuel2. For the CVS logs in options 3 and 4 only 67% and 54.9% report trips, respectively. The exception is with the combined log (option 5) where 84.6% of the logs containing information report trips and fuel purchases. The fuel1 log of option 4 (the first log mailed) reports fuel purchases in 84.8% of the logs containing information.







Figure B. 7. Log Option 5 – Returned Logs, by Type

Appendix C: Item Response Rates of the Fuel Logs

Response Rates to the General Information Questions

Tables of item response rates are included for each option for the questions on the fuel log. Tables C.1 - C.7 are at the vehicle level.

Each vehicle with reported information on a returned fuel or combined log is included.

Vehicle						O	ption				
Vehicle Weight Type	Type of Response		1		2		3		4	5	
rype		Freq.	%								
	Response	139	92.7%	132	93.6%	82	86.3%	144	92.9%	114	81.4%
Light	Missing	11	7.3%	9	6.4%	13	13.7%	11	7.1%	26	18.6%
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%
	Response	96	82.8%	110	87.3%	65	76.5%	116	86.6%	84	84.0%
Heavy	Missing	20	17.2%	16	12.7%	20	23.5%	18	13.4%	16	16.0%
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%
	Response	235	88.3%	242	90.6%	147	81.7%	260	90.0%	198	82.5%
Total	Missing	31	11.7%	25	9.4%	33	18.3%	29	10.0%	42	17.5%
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%

Table C. 1. Response Rates to the Question on Owning or Leasing the Vehicle

It is interesting to note that there are cases where the respondents indicated that they owned or leased the vehicle, but then provided a comment under "other reason" why they did not own or lease the vehicle. An examination of the reason given in the other "comment" field showed that most of the time the vehicle was not in use. This was also the case when no selection was made for owning or leasing the vehicle, but the other field for why they did not own or lease the vehicle contained a comment. This suggests that a field for indicating that the vehicle was not in use is needed.

Vehicle						Oj	ption				
Weight Type	Type of Response		1		2		3	4		5	
1990		Freq.	%								
	Response	126	84.0%	120	85.1%	71	74.7%	126	81.3%	110	78.6%
Light	Missing	24	16.0%	21	14.9%	24	25.3%	29	18.7%	30	21.4%
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%
	Response	77	66.4%	101	80.2%	56	65.9%	96	71.6%	79	79.0%
Heavy	Missing	39	33.6%	25	19.8%	29	34.1%	38	28.4%	21	21.0%
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%
	Response	203	76.3%	221	82.8%	127	70.6%	222	76.8%	189	78.8%
Total	Missing	63	23.7%	46	17.2%	53	29.4%	67	23.2%	51	21.3%
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%

Vahiala	Turna of					Op	otion				
Weight	Type of		1		2		3		4		5
Type	Response		1		2	Fuel	1 Log	Fuel	1 Log	5	
rype		Freq.	%								
	Response	120	80.0%	112	79.4%	71	74.7%	118	76.1%	100	71.4%
Light	Missing	30	20.0%	29	20.6%	24	25.3%	37	23.9%	40	28.6%
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%
	Response	86	74.1%	96	76.2%	54	63.5%	102	76.1%	69	69.0%
Heavy	Missing	30	25.9%	30	23.8%	31	36.5%	32	23.9%	31	31.0%
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%
	Response	206	77.4%	208	77.9%	125	69.4%	220	76.1%	169	70.4%
Total	Missing	60	22.6%	59	22.1%	55	30.6%	69	23.9%	71	29.6%
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%

Table C. 3. Response rates to the Date When the Log was Received

Table C. 4. Response Rates to the Date When the Log was Returned

Vahiala						Op	otion				
Weight	Type of		1		2		3		4		5
Type	Response		1		2	Fuel	1 Log	Fuel 1 Log		5	
rype		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
	Response	83	55.3%	92	65.2%	49	51.6%	90	58.1%	75	53.6%
Light	Missing	67	44.7%	49	34.8%	46	48.4%	65	41.9%	65	46.4%
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%
	Response	59	50.9%	91	72.2%	44	51.8%	79	59.0%	44	44.0%
Heavy	Missing	57	49.1%	35	27.8%	41	48.2%	55	41.0%	56	56.0%
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%
	Response	142	53.4%	183	68.5%	93	51.7%	169	58.5%	119	49.6%
Total	Missing	124	46.6%	84	31.5%	87	48.3%	120	41.5%	121	50.4%
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%

A noticeable drop in the response rates to the date the log was returned compared to the date the log was received is observed. Likely respondents forget to go back to the top of the questionnaire or the beginning of the questionnaire in the case of Option 5, in order to fill out the remaining questions.

Vahiala						Oŗ	otion				
Weight	Type of		1		2		3		4		5
Type	Response		1		2	Fuel	1 Log	Fuel	1 Log		5
Type		Freq.	%								
	Response	116	77.3%	109	77.3%	69	72.6%	112	72.3%	99	70.7%
Light	Missing	34	22.7%	32	22.7%	26	27.4%	43	27.7%	41	29.3%
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%
	Response	76	65.5%	93	73.8%	52	61.2%	95	70.9%	65	65.0%
Heavy	Missing	40	34.5%	33	26.2%	33	38.8%	39	29.1%	35	35.0%
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%
	Response	192	72.2%	202	75.7%	121	67.2%	207	71.6%	164	68.3%
Total	Missing	74	27.8%	65	24.3%	59	32.8%	82	28.4%	76	31.7%
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%

Table C. 5. Response Rates to the Odometer Reading When the Log is Received

Vehicle					Option								
Weight	Type of		1		r		3		4		5		
Type	Response		1		2	Fuel	1 Log	Fuel	1 Log		5		
rype		Freq.	%										
	Response	82	54.7%	91	64.5%	49	51.6%	90	58.1%	78	55.7%		
Light	Missing	68	45.3%	50	35.5%	46	48.4%	65	41.9%	62	44.3%		
	Total	150	100.0%	141	100.0%	95	100.0%	155	100.0%	140	100.0%		
	Response	53	45.7%	90	71.4%	44	51.8%	79	59.0%	44	44.0%		
Heavy	Missing	63	54.3%	36	28.6%	41	48.2%	55	41.0%	56	56.0%		
	Total	116	100.0%	126	100.0%	85	100.0%	134	100.0%	100	100.0%		
	Response	135	50.8%	181	67.8%	93	51.7%	169	58.5%	122	50.8%		
Total	Missing	131	49.2%	86	32.2%	87	48.3%	120	41.5%	118	49.2%		
	Total	266	100.0%	267	100.0%	180	100.0%	289	100.0%	240	100.0%		

Table C. 6. Response Rates to the Odometer Reading When the Log is Returned

As for the dates, we observe a noticeable drop in the response rates to the odometer reading when the log was returned compared to the odometer reading when the log was received. Likely respondents forget to go back to the top of the questionnaire or the beginning of the questionnaire in the case of Option 5, in order to fill out the remaining questions. As well, to answer this question, the respondent must be in the vehicle.

 Table C. 7. Fuel Log 2: Response Rates to the Fuel Gauge Reading When the Log is

 Received and Returned

Vahiala		Option 2							
Vehicle Weight Type	Type of	Fuel Ga	uge - Log	Fuel Ga	uge - Log				
	Response	Rec	eived	Ret	urned				
rype		Freq.	%	Freq.	%				
	Response	108	76.6%	79	56.0%				
Light	Missing	33	23.4%	62	44.0%				
	Total	141	100.0%	141	100.0%				
	Response	90	71.4%	80	63.5%				
Heavy	Missing	36	28.6%	46	36.5%				
	Total	126	100.0%	126	100.0%				
Total	Response	198	74.2%	159	59.6%				
	Missing	69	25.8%	108	40.4%				
	Total	267	100.0%	267	100.0%				

Once again the response when the log is returned is lower, probably for the same reasons mentioned in the case of the odometer reading.

Response Rates to the Fuel Purchase Elements

Tables C.8 - C.17 contain the response rates over all the purchases reported on the fuel log or log portion (option 5). For Table C.10, odometer type is only requested at the time of the first purchase.

The diagrams that follow indicate the results of the tests of statistical hypotheses to compare differences. Options for which the response rates are not significantly different are joined by a line. Pairwise tests are conducted at the 5% significance level with the result that the group of all pairwise combinations is at a significance level greater than 5%. Refer to Appendix E for more information on the tests of statistical hypotheses. For examples of how to interpret these diagrams, see Figures 2 and 3 in Section 6 of the report.

Vehicle	Type of		Option										
Weight	ype Response –		1		2		3		4		5		
Туре	Response	Freq.	%										
	Response	400	99.0%	471	98.1%	237	99.2%	385	97.5%	265	100.0%		
Light	Missing	4	1.0%	9	1.9%	2	0.8%	10	2.5%	0	0.0%		
_	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%		
	Response	293	95.4%	403	95.5%	175	96.7%	367	98.4%	195	100.0%		
Heavy	Missing	14	4.6%	19	4.5%	6	3.3%	6	1.6%	0	0.0%		
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%		
	Response	693	97.5%	874	96.9%	412	98.1%	752	97.9%	460	100.0%		
Total	Missing	18	2.5%	28	3.1%	8	1.9%	16	2.1%	0	0.0%		
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%		

Table C. 8. Response Rates for the Date of the Fuel Purchase

Figure C. 1. Light Vehicles: Statistical Differences for the Response Rates to the Date



Figure C. 2. Heavy Vehicles: Statistical Differences for the Response Rates to the Date



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Vehicle Weight R	Type of		Option										
Weight	Response		1		2		3		4		5		
Туре	Response	Freq.	%										
	Response	395	97.8%	468	97.5%	237	99.2%	370	93.7%	265	100.0%		
Light	Missing	9	2.2%	12	2.5%	2	0.8%	25	6.3%	0	0.0%		
-	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%		
	Response	274	89.3%	391	92.7%	163	90.1%	352	94.4%	190	97.4%		
Heavy	Missing	33	10.7%	31	7.3%	18	9.9%	21	5.6%	5	2.6%		
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%		
	Response	669	94.1%	859	95.2%	400	95.2%	722	94.0%	455	98.9%		
Total	Missing	42	5.9%	43	4.8%	20	4.8%	46	6.0%	5	1.1%		
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%		

 Table C. 9. Response Rates to the Odometer Reading at the Time of the Fuel Purchase

Figure C. 3. Light Vehicles: Statistical Differences for the Response Rates to the Odometer Reading



Figure C. 4. Heavy Vehicles: Statistical Differences for the Response Rates to the Odometer Reading



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

The odometer reading at the time of purchase is an important variable for calculating the fuel consumption rate and so it is positive to note that it is provided for most fuel purchases. Option 5 is significantly different from Options 1 and 2 for both heavy and light vehicles. Perhaps filling out the trip portion at the same time makes them more aware of filling out the purchases information.

Vehicle Weight Respon	Type of		Option								
Weight	Response		1	2			3		4		5
Туре	Response	Freq.	%								
	Response	93	70.5%	94	77.7%	52	74.3%	97	78.2%	0	0.0%
Light	Missing	39	29.5%	27	22.3%	18	25.7%	27	21.8%	97	100.0%
	Total	132	100.0%	121	100.0%	70	100.0%	124	100.0%	97	100.0%
	Response	64	75.3%	70	72.2%	33	67.3%	79	77.5%	35	61.4%
Heavy	Missing	21	24.7%	27	27.8%	16	32.7%	23	22.5%	22	38.6%
	Total	85	100.0%	97	100.0%	49	100.0%	102	100.0%	57	100.0%
	Response	157	72.4%	164	75.2%	85	71.4%	176	77.9%	35	22.7%
Total	Missing	60	27.6%	54	24.8%	34	28.6%	50	22.1%	119	77.3%
	Total	217	100.0%	218	100.0%	119	100.0%	226	100.0%	154	100.0%

Table C. 10. Response Rates for the Unit of the Odometer Reading (the First Fuel Purchase)

Figure C. 5. Light Vehicles: Statistical Differences for the Response Rates for the Unit of the Odometer



Figure C. 6. Heavy Vehicles: Statistical Differences for the Response Rates for the Unit of the Odometer



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

The odometer unit is less well reported than the odometer reading itself. That no light vehicles reported the odometer unit for Option 5 remains to be investigated further; however the odometer unit could also be determined from the trip portion of the log. Otherwise there are no real differences in reporting among the options. Contrary to the odometer reading, Option 5 has the lowest response rate to the odometer unit.

Vehicle , Weight	Type of		Option											
Weight	Response		1		2	3		4			5			
Туре	Response	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%			
	Response	390	96.5%			231	96.7%	364	92.2%	256	96.6%			
Light	Missing	14	3.5%			8	3.3%	31	7.8%	9	3.4%			
	Total	404	100.0%			239	100.0%	395	100.0%	265	100.0%			
	Response	283	92.2%			154	85.1%	347	93.0%	180	92.3%			
Heavy	Missing	24	7.8%			27	14.9%	26	7.0%	15	7.7%			
	Total	307	100.0%			181	100.0%	373	100.0%	195	100.0%			
	Response	673	94.7%			385	91.7%	711	92.6%	436	94.8%			
Total	Missing	38	5.3%			35	8.3%	57	7.4%	24	5.2%			
	Total	711	100.0%			420	100.0%	768	100.0%	460	100.0%			

Table C. 11. Response Rates for the Fuel Gauge Reading Before the Fuel Purchase

Figure C. 7. Light Vehicles: Statistical Differences for the Response Rates for the Fuel Gauge Reading Before the Fuel Purchase



Figure C. 8. Heavy Vehicles: Statistical Differences for the Response Rates for the Fuel Gauge Reading Before the Fuel Purchase



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

For the fuel gauge reading before the fuel purchase, we have different results for light and heavy vehicles. For light vehicles, Option 4 has a significantly lower response rate, despite being the same log as Option 1 and the first of the 2 logs to be received. On the other hand, Option 3 has the lowest response rate among heavy vehicles. As the second log, it is reasonable to expect that respondents are tired and perhaps careless when filling out the log.

Vehicle	Type of					Op	otion				
Weight	Response		1		2		3		4		5
Туре	Response	Freq.	%								
	Response	390	96.5%	474	98.8%	237	99.2%	375	94.9%	256	96.6%
Light	Missing	14	3.5%	6	1.3%	2	0.8%	20	5.1%	9	3.4%
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%
	Response	294	95.8%	420	99.5%	172	95.0%	363	97.3%	195	100.0%
Heavy	Missing	13	4.2%	2	0.5%	9	5.0%	10	2.7%	0	0.0%
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%
	Response	684	96.2%	894	99.1%	409	97.4%	738	96.1%	451	98.0%
Total	Missing	27	3.8%	8	0.9%	11	2.6%	30	3.9%	9	2.0%
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%

Table C. 12. Response Rates for the Type of Fuel Purchased

Figure C. 9. Light Vehicles: Statistical Differences for the Response Rates for the Type of Fuel Purchased



Figure C. 10. Heavy Vehicles: Statistical Differences for the Response Rates for the Type of Fuel Purchased



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

This variable is very well reported overall. Option 2 achieves higher response rates than does Option 1 for the type of fuel purchased. Somewhat surprisingly, Option 3 does significantly better than all options except for Option 2 among light vehicles despite the Fuel log being the second log received.

Vehicle Weight Type of Response					Op	otion					
Weight	Response		1		2		3		4		5
Туре	Response	Freq.	%								
	Response	340	84.2%	406	84.6%	191	79.9%	304	77.0%	212	80.0%
Light	Missing	64	15.8%	74	15.4%	48	20.1%	91	23.0%	53	20.0%
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%
	Response	253	82.4%	385	91.2%	150	82.9%	341	91.4%	186	95.4%
Heavy	Missing	54	17.6%	37	8.8%	31	17.1%	32	8.6%	9	4.6%
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%
	Response	593	83.4%	791	87.7%	341	81.2%	645	84.0%	398	86.5%
Total	Missing	118	16.6%	111	12.3%	79	18.8%	123	16.0%	62	13.5%
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%

Table C. 13. Response Rates for the Quantity of Fuel Purchased

Figure C. 11. Light Vehicles: Statistical Differences for the Response Rates for the Quantity of Fuel Purchased



Figure C. 12. Heavy Vehicles: Statistical Differences for the Response Rates for the Quantity of Fuel Purchased



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Among heavy vehicles, Options 1 and 3 achieve significantly lower response rates. Response rates are generally lower among the light vehicles, whose drivers likely pay more attention to the total amount spent and the price of fuel, rather than the quantity purchased.

Vehicle	Vehicle Weight Type Page of Response		Option										
Weight			1		2		3		4		5		
Туре	Response	Freq.	%										
	Response	317	78.5%	363	75.6%	181	75.7%	285	72.2%	195	73.6%		
Light	Missing	87	21.5%	117	24.4%	58	24.3%	110	27.8%	70	26.4%		
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%		
	Response	249	81.1%	369	87.4%	130	71.8%	315	84.5%	168	86.2%		
Heavy	Missing	58	18.9%	53	12.6%	51	28.2%	58	15.5%	27	13.8%		
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%		
	Response	566	79.6%	732	81.2%	311	74.0%	600	78.1%	363	78.9%		
Total	Missing	145	20.4%	170	18.8%	109	26.0%	168	21.9%	97	21.1%		
i otai	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%		

Table C. 14. Response Rates for the Unit of the Quantity of Fuel Purchased

Figure C. 13. Light Vehicles: Statistical Differences for the Response Rates for the Unit of the Quantity of Fuel Purchased



Figure C. 14. Heavy Vehicles: Statistical Differences for the Response Rates for the Unit of the Quantity of Fuel Purchased



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Among heavy vehicles, Option 3 has a significantly lower response rate and the rates for Options 1 and 2 are significantly different. For light vehicles, the only difference observed is that Option 4 has a lower response rate than Option1 despite being the same log.

Vehicle Weight Type of Response		Option 5										
Weight	Response		1	2		3		4		5		
Туре	Response	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
	Response	340	84.2%	450	93.8%	199	83.3%	315	79.7%	216	81.5%	
Light	Missing	64	15.8%	30	6.3%	40	16.7%	80	20.3%	49	18.5%	
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%	
	Response	218	71.0%	305	72.3%	116	64.1%	110	29.5%	109	55.9%	
Heavy	Missing	89	29.0%	117	27.7%	65	35.9%	263	70.5%	86	44.1%	
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%	
	Response	558	78.5%	755	83.7%	315	75.0%	425	55.3%	325	70.7%	
Total	Missing	153	21.5%	147	16.3%	105	25.0%	343	44.7%	135	29.3%	
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%	

Table C. 15. Response Rates for the Amount Spent (\$) on the Fuel Purchase

Figure C. 15. Light Vehicles: Statistical Differences for the Response Rates for the Amount Spent (\$) on the Fuel Purchase



Figure C. 16. Heavy Vehicles: Statistical Differences for the Response Rates for the Amount Spent (\$) on the Fuel Purchase



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

The response rate among light vehicles for Option 2 is greater than for any other option. Option 2 reports the highest response rate among heavy vehicles as well, but it is only significantly greater Options 3 and 5 which likely show the most respondent fatigue. The response rates were lower for heavy vehicles;

Vehicle Weight Respon	Type of					Op	otion				
Weight	Response		1		2		3	4			5
Туре	Response	Freq.	%								
	Response	341	84.4%	441	91.9%	198	82.8%	312	79.0%	211	79.6%
Light	Missing	63	15.6%	39	8.1%	41	17.2%	83	21.0%	54	20.4%
-	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%
	Response	231	75.2%	325	77.0%	115	63.5%	281	75.3%	123	63.1%
Heavy	Missing	76	24.8%	97	23.0%	66	36.5%	92	24.7%	72	36.9%
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%
	Response	572	80.5%	766	84.9%	313	74.5%	593	77.2%	334	72.6%
Total	Missing	139	19.5%	136	15.1%	107	25.5%	175	22.8%	126	27.4%
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%

Table C. 16. Response Rates for the Price of the Fuel Purchased

Figure C. 17. Light Vehicles: Statistical Differences for the Response Rates for the Price of the Fuel Purchased



Figure C. 18. Heavy Vehicles: Statistical Differences for the Response Rates for the Price of the Fuel Purchased



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Option 2 achieves the highest response rate among both vehicle types, but only for light vehicles is the response rate significantly different from all other options. Options 3 and 5, showing the most respondent fatigue, are significantly less respondent to among heavy vehicles. As for the amount spent, the price is less well reported among heavy vehicles.

Vehicle Weight Rest	Type of		Option								
Weight	Response		1		2		3	4			5
Туре	Response	Freq.	%								
	Response	344	85.1%	439	91.5%	201	84.1%	319	80.8%	212	80.0%
Light	Missing	60	14.9%	41	8.5%	38	15.9%	76	19.2%	53	20.0%
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%
-+	Response	259	84.4%	397	94.1%	136	75.1%	330	88.5%	188	96.4%
Heavy	Missing	48	15.6%	25	5.9%	45	24.9%	43	11.5%	7	3.6%
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%
	Response	603	84.8%	836	92.7%	337	80.2%	649	84.5%	400	87.0%
Total	Missing	108	15.2%	66	7.3%	83	19.8%	119	15.5%	60	13.0%
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%

 Table C. 17. Response Rate for the Fuel Gauge Reading or Fill-up Indicator (Option 2)

 After the Fuel Purchase

Figure C. 19. Light Vehicles: Statistical Differences for the Response Rate to the Fuel Gauge Reading or Fill-up Indicator (Option 2) After the Fuel Purchase



Figure C. 20. Heavy Vehicles: Statistical Differences for the Response Rate to the Fuel Gauge Reading or Fill-up Indicator (Option 2) After the Fuel Purchase



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Among light vehicles, Option 2 is the most well reported, significantly different from all other options. This is due in part to the question being easier to answer as Option 2 asks only whether or not the purchase was a fill-up and not for a fuel gauge reading after the purchase. Among heavy vehicles, Option 2 also does significantly better than all options, except for Option 5. Option 3 is significantly different from all other options among heavy vehicles.

Appendix D: Data Quality of the Logs

Quality of the Fuel Data

In order to calculate the fuel consumption and cost, the following variables from the fuel purchase information are needed: the odometer reading, fuel type, two of price or amount or quantity and quantity type, and the gauge reading/fill-up indicator after the purchase. Thus a fuel purchase is termed complete if these variables were reported.

Figure D. 1. Number of Fuel Purchases Reported With Complete or Incomplete Information as Purchase Number 1-5 (all options)



From Figure D.1, we observe that as respondents provide more fuel purchases there is a decrease in the percentage of purchases with complete information.

Figure D. 2. Option 1: Number of Fuel Purchases, Fill-up or Not, Reported as Purchase Number 1-5





Figure D. 3. Option 2: Number of Fuel Purchases, Fill-up or Not, Reported as Purchase Number 1-5

Option 1 requested that the log be returned after 2 fill-ups, 5 purchases or 4 weeks had passed. This is reflected in the noticeable drop in reported purchases from purchase number 2 to number 3 in Figure D.2. The more constant number of purchases for each purchase number in Figure D.3 reflects that for Option 2 respondents were requested to return the log after 5 purchases or 4 weeks had passed. As well, the percentage of purchases that are fill-ups remains relatively the same across the five purchase numbers for Option 2 (Figure D.3) whereas the percentage of fill-ups drops after the first two purchases for Option 1 (Figure D.2) as those with 2 fill-ups send the log back.

The diagrams that follow indicate the results of the tests of statistical hypotheses to compare differences. Options for which the percentages are not significantly different are joined by a line. Pairwise tests are conducted at the 5% significance level with the result that the group of all pairwise combinations is at a significance level greater than 5%. Refer to Appendix E for more information on the tests of statistical hypotheses. For examples of how to interpret these diagrams, see Figures 2 and 3 in Section 6 of the report.

Vehicle	Durchase					Op	otion				
Weight	Reported		1		2		3		4		5
Туре	Reported	Freq.	%								
	Complete	318	78.7%	428	89.2%	197	82.4%	289	73.2%	202	76.2%
Light	Incomplete	86	21.3%	52	10.8%	42	17.6%	106	26.8%	63	23.8%
-	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%
	Complete	196	63.8%	303	71.8%	98	54.1%	260	69.7%	119	61.0%
Heavy	Incomplete	111	36.2%	119	28.2%	83	45.9%	113	30.3%	76	39.0%
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%
	Complete	514	72.3%	731	81.0%	295	70.2%	549	71.5%	321	69.8%
Total	Incomplete	197	27.7%	171	19.0%	125	29.8%	219	28.5%	139	30.2%
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%

Table D. 1. Percentage of Reported Fuel Purchases With Complete Purchase Information

Figure D. 4.Light Vehicles: Statistical Differences for the Percentage of Reported Fuel Purchases With Complete Purchase Information



Figure D. 5. Heavy Vehicles: Statistical Differences for the Percentage of Reported Fuel Purchases With Complete Purchase Information



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

The more complete the fuel purchase information is, the less imputation will have to take place. As noted in the previous section, heavy vehicles had lower response rates to variables such as the amount of fuel purchased and the price and this is reflected by the lower percentages of complete information observed. For both vehicle types, Option 2 has the highest rate of complete purchase information and is significantly different from Option 1.

Vehicle	Durchase		Option									
Weight	Reported	1		2		3		4		5		
Туре	Reported	Freq.	%									
	Fill-up	262	64.9%	304	63.3%	155	64.9%	238	60.3%	154	58.1%	
Light	Partial	142	35.1%	176	36.7%	84	35.1%	157	39.7%	111	41.9%	
	Total	404	100.0%	480	100.0%	239	100.0%	395	100.0%	265	100.0%	
	Fill-up	221	72.0%	366	86.7%	115	63.5%	304	81.5%	177	90.8%	
Heavy	Partial	86	28.0%	56	13.3%	66	36.5%	69	18.5%	18	9.2%	
	Total	307	100.0%	422	100.0%	181	100.0%	373	100.0%	195	100.0%	
Total	Fill-up	483	67.9%	670	74.3%	270	64.3%	542	70.6%	331	72.0%	
	Partial	228	32.1%	232	25.7%	150	35.7%	226	29.4%	129	28.0%	
	Total	711	100.0%	902	100.0%	420	100.0%	768	100.0%	460	100.0%	

Table D. 2. Percentage of Reported Fuel Purchases that are Fill-ups

Figure D. 6. Light Vehicles: Statistical Differences for the Percentage of Reported Fuel Purchases that are Fill-ups



Figure D. 7. Heavy Vehicles: Statistical Differences for the Percentage of Reported Fuel Purchases that are Fill-ups



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Fuel consumption without modeling can be calculated when two consecutive fill-ups are reported. The greater number of vehicles reporting two consecutive fill-ups, the better the quality of thefuel consumption estimates. Heavy vehicles report higher percentages of their purchases as fill-ups: Options 2 and 5 report 87% and 91%, respectively, and are not significantly different from each other. Among light vehicles, however, at most 65% of the purchases are reported to be fill-ups.

The following tables are at the vehicle level for vehicles reporting fuel purchases.

Vehicle Weight Type	Number of		Option										
	Purchases		1		2		3		4		5		
	r urchases	Freq.	%										
	0 or 1	13	9.8%	9	7.4%	6	8.3%	9	7.1%	16	16.5%		
Light	2 or more	120	90.2%	112	92.6%	66	91.7%	117	92.9%	81	83.5%		
	Total	133	100.0%	121	100.0%	72	100.0%	126	100.0%	97	100.0%		
	0 or 1	7	8.2%	11	11.2%	6	12.2%	9	8.8%	10	17.2%		
Heavy	2 or more	78	91.8%	87	88.8%	43	87.8%	93	91.2%	48	82.8%		
	Total	85	100.0%	98	100.0%	49	100.0%	102	100.0%	58	100.0%		
	0 or 1	20	9.2%	20	9.1%	12	9.9%	18	7.9%	26	16.8%		
Total	2 or more	198	90.8%	199	90.9%	109	90.1%	210	92.1%	129	83.2%		
	Total	218	100.0%	219	100.0%	121	100.0%	228	100.0%	155	100.0%		

Table D. 3. Number of Vehicles Reporting 2 or More Fuel Purchases





Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.





Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Vehicle	Number of		Option									
Weight	Complete	1		2		3		4		5		
Туре	Purchases	Freq.	%									
	0 or 1	37	27.8%	19	15.7%	16	22.2%	37	29.4%	37	38.1%	
Light	2 or more	96	72.2%	102	84.3%	56	77.8%	89	70.6%	60	61.9%	
	Total	133	100.0%	121	100.0%	72	100.0%	126	100.0%	97	100.0%	
	0 or 1	30	35.3%	34	34.7%	26	53.1%	33	32.4%	26	44.8%	
Heavy	2 or more	55	64.7%	64	65.3%	23	46.9%	69	67.6%	32	55.2%	
	Total	85	100.0%	98	100.0%	49	100.0%	102	100.0%	58	100.0%	
Total	0 or 1	67	30.7%	53	24.2%	42	34.7%	70	30.7%	63	40.6%	
	2 or more	151	69.3%	166	75.8%	79	65.3%	158	69.3%	92	59.4%	
	Total	218	100.0%	219	100.0%	121	100.0%	228	100.0%	155	100.0%	

 Table D. 4. Number of Vehicles Reporting 2 or More Fuel Purchases with Complete

 Purchase Information

Figure D. 10. Light Vehicles: Statistical Differences for the Percentage of Vehicles Reporting 2 or More Fuel Purchases with Complete Purchase Information







Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Vehicle	Number of		Option										
Weight	Fill-ups		1		2		3		4		5		
Туре		Freq.	%										
	0 or 1	49	36.8%	45	37.2%	23	31.9%	50	39.7%	50	51.5%		
Light	2 or more	84	63.2%	76	62.8%	49	68.1%	76	60.3%	47	48.5%		
	Total	133	100.0%	121	100.0%	72	100.0%	126	100.0%	97	100.0%		
	0 or 1	24	28.2%	21	21.4%	21	42.9%	22	21.6%	15	25.9%		
Heavy	2 or more	61	71.8%	77	78.6%	28	57.1%	80	78.4%	43	74.1%		
	Total	85	100.0%	98	100.0%	49	100.0%	102	100.0%	58	100.0%		
Total	0 or 1	73	33.5%	66	30.1%	44	36.4%	72	31.6%	65	41.9%		
	2 or more	145	66.5%	153	69.9%	77	63.6%	156	68.4%	90	58.1%		
	Total	218	100.0%	219	100.0%	121	100.0%	228	100.0%	155	100.0%		

Table D. 5. Number of Vehicles Reporting 2 or More Fill-ups

Figure D. 12. Light Vehicles: Statistical Differences for the Percentage of Vehicles Reporting 2 or More Fill-ups



Figure D. 13. Heavy Vehicles: Statistical Differences for the Percentage of Vehicles Reporting 2 or More Fill-ups



Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Fuel consumption without modeling can be calculated when two consecutive fill-ups are reported. The greater number of vehicles reporting two consecutive fill-ups, the better the quality of the fuel consumption estimates. From the above, fuel consumption could be calculated directly for fewer than 70% of the light vehicles reporting fuel purchases and fewer than 80% of the heavy vehicles reporting fuel purchases. For light vehicles, Option 5 has the fewest vehicles with two or more fill-ups. This is likely related to the fewer purchases reported by light vehicles in Option 5, perhaps as they mail back the log as soon as the 7-day trip portion is completed. Among heavy vehicles, Option 3 is significantly different from Options 4 and 2.

Vehicle	Number of		Option									
Weight	Complete	1		2		3		4		5		
Туре	Fill-ups	Freq.	%									
	0 or 1	54	40.6%	46	38.0%	23	31.9%	56	44.4%	52	53.6%	
Light	2 or more	79	59.4%	75	62.0%	49	68.1%	70	55.6%	45	46.4%	
	Total	133	100.0%	121	100.0%	72	100.0%	126	100.0%	97	100.0%	
	0 or 1	35	41.2%	39	39.8%	30	61.2%	38	37.3%	29	50.0%	
Heavy	2 or more	50	58.8%	59	60.2%	19	38.8%	64	62.7%	29	50.0%	
	Total	85	100.0%	98	100.0%	49	100.0%	102	100.0%	58	100.0%	
Total	0 or 1	89	40.8%	85	38.8%	53	43.8%	94	41.2%	81	52.3%	
	2 or more	129	59.2%	134	61.2%	68	56.2%	134	58.8%	74	47.7%	
	Total	218	100.0%	219	100.0%	121	100.0%	228	100.0%	155	100.0%	

 Table D. 6. Number of Vehicles Reporting 2 or More Fill-ups With Complete Purchases

 Information

Figure D. 14. Light Vehicles: Statistical Differences for the Percentage of Vehicles Reporting 2 or More Fill-ups With Complete Purchases Information







Note: Options for which the response rates are not significantly different according to the Chi-square Test are joined by a line. See Appendix E for more information.

Quality of the Trip Data

It is desired to maintain the quality of the CVS-Trip data. A decrease in the response rate will affect the quality of the estimates and introduce a greater potential for biased estimates. The amount and type of data reported may also be affected by the addition of the CVS-Fuel. In order to compare the reported trip data of Options 3, 4 and 5 with the reported trip data of the current CVS, a crude comparison of the provided data was performed to give an idea of the effect of the fuel component on the quality of the trip data reported.

The Fuel Pilot Survey data was that which was received and captured on or before April 16, 2003, and did not go through an edit and imputation process. Some basic editing was done to correct for obvious errors in the dates of trips and glaring inconsistencies between odometer readings. Only those vehicles for which information was provided were included for each analysis. The CVS data used is that for the first 8 weeks of quarter 4, 2002, for vehicles registered in the provinces of Ontario and New Brunswick, excluding buses. The CVS data used has not gone through the edit and imputation process, but the basic editing done for the Fuel Pilot Survey data has been performed. When the number of days accounted for was available, the values were prorated so as to represent 7 days of reporting. T

The details of the analysis are found in Appendix D in the Section Quality of the Trip Quality.

The diagrams that follow indicate the results of the tests of statistical hypotheses to compare differences. Options for which the values are not significantly different are joined by a line. The group of all pairwise tests is at a significance level of 5%. Refer to Appendix E for more information on the tests of statistical hypotheses. For examples of how to interpret these diagrams, see Figures 2 and 3 in Section 6 of the report.



Figure D. 16. Light Vehicles: Statistical Differences for the Number of Days Not In Use

Note: Options for which the number of days not in use are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.



Figure D. 17. Heavy Vehicles: Statistical Differences for the Number of Days Not In Use

Note: Options for which the number of days not in use are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

There are no statistical differences in the number of days reported as not in use among the light vehicles. Among heavy vehicles, Options 4 and 5 are statistically different from each other, but not from the CVS.



Figure D. 18. Light Vehicles: Statistical Differences for the Distance Traveled

Note: Options for which the distances traveled are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.





Note: Options for which the distances traveled are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

There appears to be no statistical differences between the distances reported by light or heavy vehicles among the different options



Figure D. 20. Light Vehicles: Statistical Differences for the Number of Trips Reported

Note: Options for which the number of trips reported are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

Figure D. 21. Heavy Vehicles: Statistical Differences for the Number of Trips Reported



Note: Options for which the number of trips reported are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

Vehicles in Options 5 report significantly different number of trips than in CVS. Option 5 would tend to have more trips reported if the respondent reports a trip as being finished at the time of a fuel purchase, when in the CVS-Trip log the trip would have stopped at a later time. This would need further investigation.



Figure D. 22. Light Vehicles: Statistical Differences for the Cost of the Fuel Purchases Reported

Note: Options for which the costs of the fuel purchases reported are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

Figure D. 23. Heavy Vehicles: Statistical Differences for the Quantity of the Fuel Purchases Reported



Note: Options for which the quantities of the fuel purchases reported are not significantly different according to the Tukey Multiple Comparison Procedure are joined by a line. See Appendix E for more information.

The data reported for the fuel question of the trip log (not on the combined log of Option 5) for Options 3 and 4 CVS-Trip logs was compared to that of the CVS. In the case of light vehicles, the highest average cost was reported for Option 4 and was significantly different from the CVS. For heavy vehicles, the highest average quantity reported was for Option 3 and was significantly different from the CVS.
Appendix E: Description of Tests of Statistical Hypotheses

Tests of statistical hypotheses were conducted in order to determine if the response rates were significantly different among the options and if differences in the trip data reported were significant.

Pearson Chi-square Test

The Pearson chi-square statistic can be thought of as a test of difference between two proportions. The null hypothesis of no association was tested. This was used to compare response rates.

Tukey Multiple Comparison Procedure

This procedure considers the set of all pairwise comparisons among the options of interest and utilizes the studentized range distribution. Since the sample sizes are not equal among the options, the procedure is conservative. In other words, the significance level for the group of comparisons is less than that used.

The significance level of the test denoted the probability of rejecting the null hypothesis, that of no difference (equality) and accepting the alternative hypothesis when the null hypothesis is true. A significance level of 5% was used for the tests. Alternately we can say that the confidence coefficient (1-the significance level) is 95%. As multiple comparisons were made using the Chi-square Test, each at the 5% significance level, then the findings of all the comparisons combined is at a level of significance greater than 5%, or a confidence coefficient less than 95%.

The results of these tests are indicated by diagrams in which options for which the response rates or variable values are not significantly different are joined by a line. Figures 2 and 3 in Section 6 of the report are examples of these diagrams and are explained thoroughly as examples of how to interpret the diagrams.

Note: Failure to reject the null hypothesis implies that the difference between population means, if any, is not large enough to be detected with the given sample size and not that the null hypothesis is indeed true.

Appendix F: Description of the Calculation of the Estimated C.V.'s

In order to calculate the expected C.V's, a formula for determining the approximate sample size necessary for a certain level of precision was determined. This formula was then used to calculate the expected C.V.'s for a given sample size.

The sample size required depends on the characteristics of interest, the desired precision of their estimates, the population level at which these estimates are required, and the variability of these characteristics in the population. When estimates for portions of a population are desired, a larger sample will be required so that an adequate number of units in the group of interest are sampled. Formulae are known for calculating the sample size required in order to achieve a certain level of precision when a simple random sample (SRS) from the entire population is to be selected. For the CVS and the Fuel Pilot Survey, however, the survey design is more complex due to stratification, sample allocation and estimation strategies; it is therefore necessary to adjust the sample size under SRS to take these factors into account.

The current CVS design was compared to a SRS of vehicles and vehicle-days across the Canadian provinces (note that territories were excluded). The design effect, a measure of the effectiveness of a design in comparison to a SRS, was produced. The design of the CVS, trip portion, for options 3, 4 and 5 is the same as the current CVS design and so the current CVS design effects were used as an approximation in the estimated C.V.'s calculation.

To simulate a design for the fuel survey, a SRS stratified by province, vehicle type (light vehicles weighing less than 4.5t, trucks weighing 4.5t to under 15t, and trucks weighing 15t and over) and vehicle age was assumed. This was done as there is no need for individual daily observations to estimate the fuel consumed and the distance traveled for the CVS-Fuel. A comparison was then made between the assumed stratified SRS to a SRS within each vehicle type to calculate the design effects. The design effects calculated were used to approximate the design of a fuel purchase log for a one-month period similar to that used in NaPVUS. This was done using CVS data

The sample size under SRS was further adjusted to account for the fact that not all sampled vehicles will provide sufficient information (nonresponse). The response rates achieved by the Fuel Pilot Survey were used to establish the sample sizes. Furthermore, to calculate fuel consumption without the use of a model, two consecutive fill-ups must be provided for the vehicle and so not all responses would be deemed usable. This is equivalent to a lower response rate. In this case, extra units would have to be sampled to compensate for the additional loss of responses.

The levels of precision are expressed by the coefficient of variation (C.V.), which is a measure of the relative error of the estimate. The formulae used to calculate the sample size, can then be used to calculate the estimated C.V.'s, given a sample size.

When both the CVS and the Fuel Survey occur at the same time in order to collect both trip and fuel information, an increase in the quality of some of the estimates, such as vehicle-kilometers (by vehicle characteristics), would likely be achieved by combining the information from both parts of the survey. But that is not taken into account in the scenarios examined.

Note that the approximate sample sizes provided are for vehicles registered in the ten provinces as the territories are excluded. Furthermore, the sample sizes provided do not guarantee the expected level of precision, but should ensure that three-quarters of the estimates are of the expected quality or better.

The following sections describe in detail the procedure used to produce the tables of expected C.V.'s. In particular the formula used to calculate the sample size for a simple random sample and how this was adjusted to compensate for nonresponse as well as the complexity of the survey designs that will be used for the CVS-Fuel are described. This formula is then used to calculate the expected C.V.'s for a given sample size.

Equations for Sample Size Calculations

In order to calculate the sample size necessary to control the relative error in the estimated population mean (or total) under a SRS, we have the following, assuming that the sample mean is normally distributed:

$$n_{SRS} = \left(\frac{tS}{r\overline{Y}}\right)^2 / \left[1 + \frac{1}{N} \left(\frac{tS}{r\overline{Y}}\right)^2\right]$$

where:

 n_{SRS} is the sample size for a SRS

N is the population size

 \overline{Y} is the population mean

 α is the probability that the relative error in the estimated population total is greater than r

t is the abscissa of the normal curve that cuts off an area of size α at the tails of the normal distribution

 y_i is the value for a unit in the population

S is the population standard error where
$$S^2 = \frac{\sum_{i=1}^{N} (y_i - \overline{Y})^2}{N - 1}$$

When the N is large so that the sampling fraction is small, we can approximate the sample size by

$$n_o = \left(\frac{tS}{r\overline{Y}}\right)^2 = \frac{CV^2}{cv^2}$$

where:

 n_0 is the approximate sample size for a SRS when N is large

 CV^2 is the population coefficient of variation (C.V.)

 cv^2 is the C.V. desired from the sample

To estimate the sample size required for a sampling plan other than SRS, the modified design effect (Deff) is applied (a discussion of the modified design effect follows). The response rate (R) is taken into account as well so that, when N is large, we have the following formula to estimate the sample size:

$$n = Deff\left(\frac{1}{R}\right)\left(\frac{CV^2}{cv^2}\right)$$

It is important to note that the sample size as calculated above is an estimate and does not guarantee the desired C.V.

To calculate the expected C.V., cv_E^2 for a given sample size we have:

$$cv_E^2 = Deff\left(\frac{1}{R}\right)\left(\frac{1}{n}\right)CV^2$$

The Modified Design Effect

The design effect is typically defined as the ratio of the variance of the estimate obtained from the actual sample (of a more complex design) to the variance of the estimate obtained from a SRS of the same number of units. The design effect is used to evaluate the efficiency of more complex sampling plans and in estimating the necessary sample size.

For the purpose of estimating the sample size required for the CVS-Fuel, modified design effects (Deff) were used. The design effects were modified by the squared ratio of the estimate from a SRS to the estimate from the more complex design. This reflects the differences in the size of the estimates. The modified design effects were calculated as follows:

$$Deff = \left(\frac{V_C}{V_{SRS}}\right) \left(\frac{E_{SRS}}{E_C}\right)^2 = \left(\frac{CV_C}{CV_{SRS}}\right)^2$$

where:

 V_{c} is the variance of the estimate obtained under the complex design

 V_{SRS} is the variance of the estimate obtained under a SRS of the same number of units

 E_{C} is the estimate obtained under the complex design

 E_{SRS} is the estimate obtained under a SRS of the same number of units

 CV_{C} is the C.V. of the estimate obtained under the complex design

 CV_{SRS} is the C.V. of the estimate obtained under a SRS of the same number of units

The modified design effects for the CVS-Trip were calculated based on the CVS data for both the fourth quarter of 2000 and the first quarter of 2001 in comparison to a SRS within each vehicle type. To model the CVS-Fuel of the survey, the CVS data was assumed to be a stratified (by province, vehicle type and vehicle age) SRS of vehicles and vehicle-weeks and this was compared to a SRS within each vehicle type. For each vehicle type and type of estimate, a

conservative value (the 75th percentile) of the modified design effects was chosen and the average for the two periods was taken.

Modified Design Effects		Vehicle Type		
		Less than 4.5t	4.5t to under	15t and over
			15t	
Vehicle count	S	1.3	1.1	1.2
CVS-Fuel	Vehicle-km by vehicle	1.4	1.2	1.3
	characteristics			
	Fuel	1.5	1.3	1.5
CVS-Trip	Vehicle-km by vehicle	3.9	4.2	4.5
	characteristics			
	Fuel	2.4	3	3.1
	Passenger-km and vehicle-km	2.5	3	3.4
	by trip characteristics			

Response Rates

The response rate has an impact on the necessary sample size. The lower the response rate, the larger the sample size that is required so that a sufficient number of responding units is obtained.

The response rates used to calculate the expected C.V.'s are the response rates observed for the Fuel Pilot Survey. At the vehicle level (vehicle-km) the response rate is higher as information can be obtained from CATI without the completion of a trip or fuel log which require more effort on the respondent's part. Information such as fuel use and passenger-km require the completion of the trip or fuel log which have lower response rates as they constitute a heavier response burden.

Level of	Vahiala Typa	Option		
Estimate	venicie i ype	1	2	5
Vehicle Level	Less than 4.5t	61%	61%	61%
(vehicle-km by	4.5t to under 15t	54%	54%	54%
vehicle charac.)	15t and over	53%	53%	53%
Log Level	Less than 4.5t	33%	31%	29%
(passenger-km,	4.5t to under 15t	32%	34%	30%
fuel)	15t and over	32%	34%	30%

Table F. 2: Response Rates

Table F. 3: Percentage of Reported Logs With 2 or More Fill-ups

Vahiala Typa		Option	
venicie i ype	1	2	5
Less than 4.5t	63%	63%	48%
4.5t to under 15t	72%	79%	74%
15t and over	72%	79%	74%

Population Coefficient of Variation

Since the C.V. of the population is unknown, a value of 1 is used to estimate the sample size for the CVS-Fuel as this represents the worse case scenario. In fact, the CVS has attained this upper bound on several occasions.

Appendix G: Schedule of Mail Out Activities

Survey	CVS	Options 1 and 2	Option 3	Option 4	Option 5
Week	Activity	Activity	Activity	Activity	Activity
1	CVS log mail out	log mail out	CVS log mail out	Fuel log mail out	log mail out
2	in the mail	in the mail	in the mail	in the mail	in the mail
3					
4	Reminder letters	Reminder letters	Reminder letters	Reminder letters	Reminder letters
5	in the mail	in the mail	in the mail	in the mail	in the mail
6		complete survey			
7	in the mail	complete survey	in the mail		
8	Postcard/Short form	complete survey	Postcard/Short form		
9	in the mail	complete survey	in the mail		
10	complete postcards/short forms	mail back	complete postcards/short forms		
11	mail back	received	mail back		Postcard/Short form
12	received		Fuel log mail out	CVS log mail out	in the mail
13			in the mail	in the mail	complete postcards/short forms
14					mail back
15			Reminder letters	Reminder letters	received
16			in the mail	in the mail	
17			complete survey		
18			complete survey	Postcard/Short form	
19			complete survey	in the mail	
20			complete survey	complete survey	
21			mail back	mail back	
22			received	received	
Processing	2 months	2 months	2 months	2 months	2 months
Estimates	5 months	5 months	8 months	8 months	6 months

Table G. 1. Mail Out Schedule for the CVS and the 5 Options

Notes:

Week 1 is the first week after the end of the quarter. It is the latest possible week for mailing out the first log for each quarterly sample.

The **final possible mail out** (worst case) for each option is shown in **bold**.

An additional two months are required after the final mail out to receive all returns and produce the estimates

Option 5 includes the postcard/short form that are part of the follow-up procedure expected to be implemented

Appendix H: Logs for the Pilot Survey

Fuel1 Log – Options 1, 3 and 4 Fuel2 Log - Option 2 Combined Log for Light Vehicles - Option 5 Combined Log for Heavy Vehicles - Option 5



Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Si vous préférez ce questionnaire en **français**, veuillez nous appeler au numéro de téléphone indiqué ci-dessous.

Survey Objective

The purpose of this survey is to help Transport Canada to monitor fuel consumption and the impact of vehicle usage on the environment.

Instructions

Please verify that the information on the label on page 2 is correct and write any corrections on the label.

Please report only for the vehicle identified on the label.

As soon as you receive the questionnaire, please record the date and the current odometer reading. Please answer the questions and report all fuel purchases made for the reporting period

indicated on the label. Please return the questionnaire as soon as you have recorded **two fill-ups** (by fill-up, we mean that the gas tank was full after your purchase). If you do not fill-up twice, please return the questionnaire after making **five fuel purchases** or when the **return date** indicated on the label **has passed**. Record the date and the odometer reading before returning the questionnaire.

Please seal the questionnaire and return by mail. No stamp is required.

Definitions

The **odometer** is the instrument on the front dash or panel of your vehicle which measures the distance that your vehicle has been driven to date.

Please provide the **odometer reading** at the time of the fuel purchase. <u>It is not necessary</u> to report the tenths.

The **fuel gauge** is the instrument on the front dash or panel of your vehicle that indicates the amount of fuel left in the fuel tank. Please indicate the amount of fuel in the fuel tank just prior to your fuel purchase and again after your fuel purchase by putting an X in the box that best describes the amount of fuel indicated by the gauge.

You may record the quantity of fuel purchased by either indicating the volume pumped (number of litres or gallons) or the total price.

Federal Agreement

To avoid duplication in surveys, Statistics Canada has entered into an agreement under Section 12 of the Statistics Act with the Federal Department of Transport for the sharing of information from this survey. Under Section 12 of the Statistics Act, you may refuse to share your information with the Federal Department of Transport by writing to the Chief Statistician and returning your letter of objection along with the completed questionnaire.

While participation in this survey is voluntary, your cooperation is very important.



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Thank you very much for your cooperation.

5-5400-100.1: 2002-07-11 STC/TRA-400-75335



Statistics Statistique Canada Canada



Place label here

1	General Information				
	1. Do you still own or lease the vehicle described above?				
	○ Yes ○ Never owned or leased the identified vehicle				
	\bigcirc No \rightarrow Was this vehicle, (please check where applicable and				
	record the date in the box provided)				
	Õ	scrapped O leased to someone	else I		
		Month Day Year			
	Whe	en?			
	Note: If you do n	not own or lease this vehicle, please	mail back the questi	onnaire at this point.	
	As soon as you re	eceive this Month	Day Odometer		
	and the current of	dometer reading.	(01-31)	1/10	
·	Enter date of	Enter odometer reading at		Type of fuel	
	fuel purchase	time of purchase	before		
1	Month Day	Odometer	○ 7/8 full	O regular gasoline	
			◯ 3/4 full	O mid-grade gasoline	
	(01 12) (01 31)	1/10	🔿 5/8 full	O premium gasoline	
	(01-12) (01-01)	⊖ kilometres	◯ 1/2 full	O ethanol blend	
		⊖ miles	🔿 3/8 full	Odiesel	
			◯ 1/4 full	O other	
			◯ 1/8 full		
			◯ empty		
2	Month Dav	Odometer	○ 7/8 full	O regular gasoline	
			◯ 3/4 full	O mid-grade gasoline	
			○ 5/8 full	O premium gasoline	
	(01-12) (01-31)	1/10	0 1/2 full	O ethanol blend	
			0 3/8 full	Odiesel	
			○ 1/4 full	() other	
			0 1/8 full	-	
			O empty		
3	Marth Dav	Odometer	○ 7/8 full		
Ŭ	Month Day		○ 7/6 full	mid-grade gasoline	
			\bigcirc 5/8 full	O premium gasoline	
	(01-12) (01-31)	1/10		⊖ ethanol blend	
			○ 3/8 full	⊖ diesel	
				◯ other	
			\bigcirc 1/8 full	0	
			O empty		
4		Odemeter		<u> </u>	
4	Month Day	Odometer		O regular gasoline	
			◯ 3/4 full		
	(01-12) (01-31)	1/10			
5	Month Day	Odometer	○ 7/8 full	 ◯ regular gasoline ◯ usid 	
			○ 3/4 full	mid-grade gasoline	
	(01-12) (01-31)	1/10	⊖ 5/8 full	premium gasoline	
			○ 1/2 full		
			◯ 3/8 full		
			\bigcirc 1/4 full		
			\bigcirc 1/8 full		
			\cup empty		

3. Mail. 1. Please remove paper strip. 2. Fold flap and seal onto the back cover. Mailing instructions:

← Please fill in this questionnaire for this vehicle only.

General Information				
2. Which of the following best describes this vehicle?				
⊖ car	⊖ picl	k-up		
\bigcirc station wagon	\bigcirc bus	3		
○ van/mini-van ○ straight truck				
◯ sport utility	\bigcirc sport utility \bigcirc truck tractor			
(example: Explo	orer, Jeep) O oth	er: please specify:		
		,,		
Please record the date	and Mo	nth Day Odometer		
odometer reading befo	re returning			
	(01	-12) (01-31)	1/10	
Enter quantity purchased	Enter amount spent	Price per litre/gallon	Fuel gauge after purchase	
	\$) full	
		d d	○ 7/8 full	
			\bigcirc 3/4 full	
Olitres				
US gallons				
() other				
			\bigcirc 1/4 full	
	\$			
		d d		
litres				
US gallons				
⊖ other				
			\bigcirc 1/8 full	
			◯ full	
	\$		○ 7/8 full	
		¢	3/4 full	
			🔿 5/8 full	
			◯ 1/2 full	
\bigcirc other			🔾 3/8 full	
			◯ 1/4 full	
			○ 1/8 full	
	¢) full	
	⊅		🔿 7/8 full	
		¢	◯ 3/4 full	
Olitres			◯ 5/8 full	
O US gallons			◯ 1/2 full	
Oother			◯ 3/8 full	
			◯ 1/4 full	
			◯ 1/8 full	
	¢		⊖ full	
			○ 7/8 full	
		¢	○ 3/4 full	
⊖ litres			○ 5/8 full	
O US gallons			○ 1/2 full	
Oother			○ 3/8 full	
			U 1/4 tull O 1/0 €	
			\bigcirc 1/8 full	



Confidential once completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Si vous préférez ce questionnaire en français, veuillez nous appeler au numéro de téléphone indiqué ci-dessous.

Survey Objective

The purpose of this survey is to help Transport Canada to monitor fuel consumption and the impact of vehicle usage on the environment.

Instructions

Please verify that the information on the label on page 2 is correct and write any corrections on the label.

Please report only for the vehicle identified on the label.

As soon as you receive the questionnaire, please record the date, the current odometer reading and the fuel gauge.

Please answer the questions and report all fuel purchases made for the reporting period indicated on the label.

Please return the questionnaire after making five fuel purchases or when the return date indicated on the label has passed. Record the date, the odometer reading and the fuel gauge before returning the questionnaire.

Please seal the questionnaire and return by mail. No stamp is required.

Definitions

The odometer is the instrument on the front dash or panel of your vehicle which measures the distance that your vehicle has been driven to date.

Please provide the odometer reading at the time of the fuel purchase. It is not necessary to report the tenths.

The **fuel gauge** is the instrument on the front dash or panel of your vehicle that indicates the amount of fuel left in the fuel tank.

You may record the quantity of fuel purchased by either indicating the volume pumped (number of litres or gallons) or the total price.

Federal Agreement

To avoid duplication in surveys, Statistics Canada has entered into an agreement under Section 12 of the Statistics Act with the Federal Department of Transport for the sharing of information from this survey. Under Section 12 of the Statistics Act, you may refuse to share your information with the Federal Department of Transport by writing to the Chief Statistician and returning your letter of objection along with the completed questionnaire.

While participation in this survey is voluntary, your cooperation is very important.



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Thank you very much for your cooperation.

5-5400-150.1: 2002-07-11 STC/TRA-400-75335





Place label here

	Ceneral Information					
	• Yes • Never owned or leased the identified vehicle					
	\bigcirc No \rightarrow Was this vehicle, (please check where applicable and					
	record the date in the box provided)					
	0	scrapped O leased to someone else	e			
	Month Day Year					
	Noto: If you do r	en r	ail back the questionnaire at this point			
	Note: If you do not own or lease this vehicle, please mail back the questionnaire at this point. As soon as you receive this questionnaire, please record the date, the current odometer (01-12) (01-31) 0dometer 1/10					
	-	○ 7/8 full	🔿 3/8 full			
		◯ 3/4 full	◯ 1/4 full			
		◯ 5/8 full	○ 1/8 full			
		() 1/2 full	⊖ empty			
	Enter date of fuel purchase	Enter odometer reading at time of purchase	Type of fuel			
1	Month Day	Odometer	O regular gasoline			
			mid-grade gasoline promium gasoline			
	(01-12) (01-31)	1/10	\bigcirc ethanol blend			
) miles	O diesel			
_		• • • •				
2	Month Day	Odometer	 regular gasoline mid-grade gasoline 			
	(01-12) (01-31)	1/10	O premium gasoline			
			 ◯ ethanol blend ◯ diesel 			
) other			
3	Month Day	Odometer	O regular gasoline			
			mid-grade gasoline premium gasoline			
	(01-12) (01-31)	1/10	ethanol blend			
			Odiesel			
4	Month Day	Odometer	regular gasoline mid-grade gasoline			
		1/10	O premium gasoline			
	(01-12) (01-31)		ethanol blend			
			O other			
5	Month Day	Odometer	◯ regular gasoline			
			⊖ mid-grade gasoline			
	(01-12) (01-31)	1/10	 premium gasoline ethanol blend 			
			Ödiesel			
			() other			
	5-5400-150.1		Page 2			

3. Mail. 1. Please remove paper strip. 2. Fold flap and seal onto the back cover. Mailing instructions:

Please fill in this questionnaire for this vehicle only.

	venicie	; only.		
	General In	formation		
2. Which of the follow	ving best describes thi	s vehicle?		
⊖ car	⊖ picl	k-up		
\bigcirc station wagon	\bigcirc bus	3		
🔿 van/mini-van	⊖ stra	aight truck		
O sport utility	O true	ck tractor		
(example. Expl	⊖ oth	◯ other: please specify:		
Please record the da odometer reading au gauge before return questionnaire.	ate, the \rightarrow \square ing the (01)	Day Odometer	1/10	
	07	7/8 full 🔿 3/8 full		
	O 3	1/4 full 🔿 1/4 full		
	0 5	i/8 full 🔿 1/8 full		
	\cap			
	\bigcirc I			
Enter quantity purchased	Enter amount spent	Price per litre/gallon	Fill up indicator	
Enter quantity purchased	Enter amount spent \$	Price per litre/gallon	Fill up indicator Was this purchase a fill up? yes no	
Enter quantity purchased	Enter amount spent	Price per litre/gallon	Fill up indicator Was this purchase a fill up? yes no	
Enter quantity purchased	Enter amount spent \$	Price per litre/gallon	Fill up indicator Was this purchase a fill up? yes no Was this purchase a fill up? yes no	

OS gallons other		() no
<pre> litres US gallons other </pre>	\$ ¢	Was this purchase a fill up? O yes O no
<pre> litres US gallons other </pre>	\$ ¢	Was this purchase a fill up? O yes O no
<pre> litres US gallons other </pre>	\$ ¢	Was this purchase a fill up? O yes O no



Confidential once completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Si vous préférez ce carnet des activités de conduite en **français**, veuillez nous appeler au numéro de téléphone indiqué ci-dessous.

Survey Objective

The purpose of the survey is to help Transport Canada improve road safety, monitor fuel consumption and deal with the impact of vehicle usage on the environment. The information you give us will be combined with other data already available to provide a better picture of the total distance travelled by vehicles, safety issues, and fuel purchases. The information you are asked to provide in this trip and fuel log covers:

- Starting and ending time of each trip to see when traffic is on the road.
- Odometer readings for each trip to measure distance travelled.
- · Purpose of each trip to see why people are travelling.
- Number of passengers on each trip and types of roads driven to provide information related to safety.
- Driver's sex and age group to obtain a profile of drivers.
- Fuel purchases to get information about any purchases in this period.

For more background information about specific questions, please see the inside back cover.

Reporting procedure

Please complete the trip and fuel log for the first week of the period stated on the label on page 2. Then continue to complete the fuel portion of the log for the remainder of the period stated on the label or until you have recorded two fill-ups or made five fuel purchases.

Any questions or concerns? 2 1-800-647-0642

Thank you very much for your cooperation.

5-5400-151.1: 2002-08-02 STC/TRA-400-75335





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Place label here

g while driving.
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5
, here applicable and record
y month year
II back the trip log at this point.
ehicle?
CK
r Ie: nlease snecify:
(please specify)
(please specify) anada has entered into with the Federal Departme his survey. Under section
v vour cooperation is ve
tr our Sti

I

Based on our tests, most people have found that it is easier to complete the trip and fuel log if it is kept in the vehicle.

All drivers using this vehicle should complete the trip log.

In order to get an accurate measurement of fuel purchases, please do ${\rm NOT}$ change your usual pattern of fuel purchases.

For trip purposes, if this vehicle was not "in use" during the reporting period, please provide the date(s) in the table below.



Odometer Reading

Month

(01-12)

Day

(01-31)

Odomete

1/10

1/10

As soon as you receive this log, please record the date and the current odometer reading.

Please record the date and odometer reading before returning this log. Month Day (01-12) (01-31) Odometer

Instructions For Completing the Trip and Fuel Log

Listed below are the instructions for completing the trip and fuel log. Please read them carefully and if you have any questions, contact us at the toll-free number shown on the front cover.

Odometer

The odometer is the instrument on the front dash or panel of your vehicle which measures the distance that your vehicle has been driven to date.

Odometer Reading

For trip purposes please provide the odometer reading at the beginning and at the end of each trip to the nearest kilometre. For fuel purposes please provide the odometer reading at the time of the fuel purchase. **It is not necessary to report the tenths**.

The **fuel gauge** is the instrument on the front dash or panel of your vehicle that indicates the amount of fuel left in the fuel tank. Please indicate the amount of fuel in the fuel tank just prior to your fuel purchase and again after your fuel purchase by putting an X in the box that best describes the amount of fuel indicated by the gauge.

You may record the quantity of fuel purchased by either indicating the volume pumped (number of litres or gallons) or the total price.

Trip /Trip Purpose

A trip is defined as your travel from one location to another for a specific purpose such as to or from work or school (the types of trip purpose are listed in question 9). **Report a separate trip** if there is:

• a change in the main trip purpose – for instance, if you leave your home to go shopping and then you travel to a social function, report this as two trips (see detailed examples 1 and 3 on pages 4 and 5).

or

 a stop of more than 30 minutes – for instance, if you leave home to go to work or school and you stay there more than 30 minutes, report this as two trips, since we need to know when the vehicle is actually on the road (see detailed examples 1 and 2 on pages 4 and 5).

or

• a change of driver

Picking up or delivering dangerous goods

If you are transporting products regulated under the Transportation of Dangerous Goods Regulations, please check the dangerous goods box.

Fuel

If you purchase fuel during a trip, please record fuel log on page 26 and 27.

Note:

Flip out this page.

It has the written description for the three examples.

Examples for Completing the Trip Log and Fuel Log

The completed trip logs, for these examples, are on pages 4 and 5.

Example 1 – No change in the main trip purpose.

John is a male driver who is 36 years old. On September 8, John and his wife (who is 32 years old) leave their home at 7:05 a.m. to go to work (he should enter 1 passenger in Question 3). On the way, they stop to buy \$22.00 in gas and they also stop to pick up a coffee. John then stops to drop his wife off at her office and arrives at his work at 7:45 (he checks off "none" for the number of passengers in Question 6, since his wife is not in the car at the end of the trip). The odometer at the beginning of the trip reads 74,836 kilometres and the odometer reading at the end of the trip reads 74,851 kilometres. Of the total distance driven (15 kilometres) approximately 7 kilometres were driven on roads with a posted speed limit of 80 km/h or more.

This would be considered as one trip because no stop is greater than 30 minutes and the main purpose of the trip is to go to work. John's return trip home from work would be reported <u>as a separate</u> trip since he will be at work for more than 30 minutes and we need to know when the vehicle is actually on the road.

Example 2 – Same trip purpose but all stops are less than 30 minutes.

Mary is a female driver, 45 years old, who works for a delivery company. On November 5, she leaves the warehouse at 8:00 a.m. and makes 20 deliveries during the day, never stopping for more than 30 minutes on any delivery, until she returns to the warehouse at 4:37 p.m. The odometer reading when she leaves the warehouse reads 122,223 kilometres and the odometer reading when she returns to the warehouse reads 122,373 kilometres. Of the total distance driven (150 kilometres), 90.5 kilometres were driven on roads with a posted speed limit of 80 km/h or more.

This would be considered as one trip because the main purpose has not changed throughout all these deliveries, and none of the stop times were ever greater than 30 minutes. However, if she had stopped for any reason for over 30 minutes, then this trip would end, and a separate trip should be entered.

Example 3 – Two trips due to a change in the main trip purpose.

On October 8, Myrna, a 33 year old female driver, leaves her home with her three children at 4:10 p.m. to go to the dentist office, where her two elder children (ages 10 and 7) and herself have scheduled appointments. On the way to the mall she drops off the youngest child (age 3) at her parents' house and stays for only 5 minutes. They arrive at the mall at 4:37 p.m. The odometer at the beginning of the trip reads 33,245 kilometres and the odometer reading at the end of the trip reads 33,257 kilometres. Of the total distance driven (12 kilometres), 10 kilometres were driven on roads with a posted speed limit of 80 km/h or more. At 5:57 p.m. Myrna and her two children leave the dentist to go to a birthday party and arrive there at 6:15 p.m. The odometer at the beginning of the trip reads 33,257 kilometres and the odometer reading at the end of the trip reads 33,264 kilometres. Of the total distance driven (7 kilometres), none was on roads with a posted speed limit of 80 km/h or more. This would be considered as two trips because the main purpose of the trip has changed from traveling to do errands to traveling to a recreational or social event.

Flip out this page for quick reference.



Please remember ...

Beginning with the date on the label on page 2 of this log - please complete the trip and fuel log for the first week only and then only the fuel portion of the log for the remainder of the period.

What if this vehicle isn't used much - or at all?



This survey wants to measure how much Canadians are using **or not using** their vehicles.

For our studies - a vehicle not in use is just as important as one that is.

Days that the vehicle is **not in use** should be recorded on **page 3.**

Please mail back this log if you **no longer** own this vehicle.

All kilometres or miles travelled during the first 7 days should be accounted for.



A new trip should be started if:

- 1. You stop longer than **30** minutes.
- 2. The main trip purpose changes.
- 3. The driver changes.

For **examples** of different trip situations, please see pages 4 and 5.

For Question 7, please select only **one** "Purpose of Trip". (i.e. should be the **main** purpose)

Q11. Any fuel purchases?



Please record fuel log on pages 26 and 27.

Mailing Instructions:

When log is completed, please remove paper strip on outer flap, fold flap and seal onto the back cover - then mail.

Thank you very much for your time and participation.

For a written description of these examples	please see the "flip-out" page.
Example 1	Example 2
1. Date / Time trip started:	1. Date / Time trip started:
date 8 9 7:05 0 a.m. dd mm 24br	date 5 11 8 : 00 0 a.m. dd mm 0 24br
2. Odometer reading at start:	2. Odometer reading at start:
3. Number of passengers (excluding	3. Number of passengers <i>(excluding</i>
<i>driver</i>) in each age group at beginning of trip. <i>Check if none.</i>	<i>driver</i>) in each age group at beginning of trip. <i>Check if none.</i>
None O Under 5 years 5 to 14 15 years	None V Under 5 years
years and over 1	years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date 8 9 7 : 45 0 p.m. dd mm 24hr	date 5 11 4 : 37 0 p.m. dd mm 0 24hr
5. Odometer reading at end: 0 km	5. Odometer reading at end: 🕺 km
1/10	<u> </u>
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	6. Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None Ø Under	None 🛛 Under
5 to 14 15 years and over	5 to 14 15 years years and over
7. Why are you making this trip?	7. Why are you making this trip?
\bigcirc To go home	\bigcirc To go home
To go to work or school	O To go to work or school
\bigcirc To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
personal or family appointments)	personal or family appointments)
 To go to a recreational or social activity 	 To go to a recreational or social activity
• To go somewhere else (<i>specify</i>)	• To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
picking up or delivering goods	\blacktriangleright $ otin field the value of $
O dangerous goods	O dangerous goods
• to or from service call	• to or from service call
8. Driver's sex	8. Driver's sex
9. Driver's age group	9. Driver's age group
\bigcirc under 20 \bigcirc 55 to 64	\bigcirc under 20 \bigcirc 55 to 64
○ 20 to 24 ○ 65 to 74	○ 20 to 24 ○ 65 to 74
\bigcirc 25 to 34 \bigcirc 75 to 84	\bigcirc 25 to 34 \bigcirc 75 to 84 \bigcirc 85 and over
○ 45 to 54	○ 35 to 44 ○ 35 and over ○ 45 to 54
10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
	rryes 𝔄 No ◯
If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trin?	↓ If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trin?
7 Ø km	90 5 0 km
$\frac{1}{1/10} \cup \text{miles}$	11 Evel purchased during this trip?
	Yes, go to page 26.
E E 600 4E1 4	

Example 3 - trip 1	Example 3 - trip 2
data 8 10 4 10 a.m.	
dd mm Q 24br	dd mm 24br
2 Odometer reading at start:	2 Odometer reading at start:
3 3 2 4 5 0 km	3 3 2 5 7 Ø km
1/10 O miles	$\frac{1}{1/10} \bigcirc \text{ miles}$
3. Number of passengers (excluding	3. Number of passengers (excluding
of trip. Check if none.	of trip. Check if none.
None Under	None O Under
5 to 14	5 to 14
years 2 and over	years 2 and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date 8 10 4 : 37 Ø p.m.	date 8 10 6 : 15 Ø p.m.
dd mm 🔾 24hr	dd mm O 24hr
5. Odometer reading at end: () km	5. Odometer reading at end: W km
6. Number of passengers (excluding	6. Number of passengers (excluding
driver) in each age group at end of trip. Check if none.	driver) in each age group at end of trip. Check if none.
None O Under	None O Under
5 to 14 2 15 years	5 to 14 15 years
years 2 and over	years 2 and over
7. Why are you making this trip? (check one purpose only)	Why are you making this trip? (check one purpose only)
O To go home	O To go home
\bigcirc To go to work or school	\bigcirc To go to work or school
	 To do shopping or errands (such as porsenal or family appointments)
\bigcirc To go to a recreational or social	\oint To go to a recreational or social
activity	activity
\bigcirc To go somewhere else <i>(specify)</i>	\bigcirc To go somewhere else (specify)
Driving as part of the job	Driving as part of the job
➡ ○ picking up or delivering goods	➡ ○ picking up or delivering goods
dangerous goods to or from convice coll	O dangerous goods
O other work purpose	O other work purpose
² Driver's cov	8. Driverie eev
\bigcirc Male \bigcirc Female	\bigcirc Male \checkmark Female
9. Driver's age group	9. Driver's age group
\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74	\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74
Ø 25 to 34 ♀ 75 to 84	O 25 to 34 O 75 to 84
○ 35 to 44 ○ 85 and over	○ 35 to 44 ○ 85 and over
10. Did you travel on any roads with	10. Did you travel on any roads with
posted speeds of 80 km/h	posted speeds of 80 km/h
If yes, what was the <i>estimated</i>	If yes, what was the <i>estimated</i>
distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.)	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.)
or more during this trip?	or more during this trip?
10 (V) km	
11 Fuel purchased during this trip?	1/10 C miles
O Yes, go to page 26.	Yes, go to page 26.

Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 1	Trip 2
1. Date / Time trip started: date : O a.m. dd mm O 24hr	1. Date / Time trip started: date : O a.m. dd mm O 24hr
2. Odometer reading at start:	2. Odometer reading at start: 1/10
3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.	3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years and over	5 to 14 15 years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date dd mm O 24hr
5. Odometer reading at end: 0 km miles	5. Odometer reading at end:
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years and over	5 to 14 15 years and over
 7. Why are you making this trip? (check one purpose only) ○ To go home 	 7. Why are you making this trip? (check one purpose only) O To go home
O To go to work or school	\bigcirc To go to work or school
 To do shopping or errands (such as personal or family appointments) 	 To do shopping or errands (such as personal or family appointments)
 To go to a recreational or social activity 	 To go to a recreational or social activity
\bigcirc To go somewhere else (specify)	$^{\bigcirc}$ To go somewhere else <i>(specify)</i>
Driving as part of the job	Driving as part of the job
picking up or delivering goods	➡ ○ picking up or delivering goods
dangerous goods to or from service call	 dangerous goods to or from service call
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
O Male O Female	O Male O Female
\bigcirc under 20 \bigcirc 55 to 64	\bigcirc under 20 \bigcirc 55 to 64
○ 20 to 24 ○ 65 to 74	○ 20 to 24 ○ 65 to 74
○ 25 to 34 ○ 75 to 84 ○ 35 to 44 ○ 85 and over	 ○ 25 to 34 ○ 75 to 84 ○ 35 to 44 ○ 85 and over
O 45 to 54	O 45 to 54
 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 	 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
Yes O No O	Yes O No O
distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
1/10 O km	1/10 O km
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
O No	O No
O Yes, go to page 26.	O Yes, go to page 26.
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3-3400-	ເວເ	

	Trip 3	Trip 4
1.	Date / Time trip started:	1. Date / Time trip started:
	date	date
	dd mm O 24hr	dd mm O 24hr
2.	Odometer reading at start:	2. Odometer reading at start:
	1/10	1/10
3.	Number of passengers (excluding	3. Number of passengers (excluding
	of trip. Check if none.	of trip. Check if none.
	None 5 years	None 5 years
	5 to 14 15 years and over	5 to 14 15 years and over
4	Date / Time trip ended:	4 Date / Time trip ended:
ч.	O a.m.	• Date / Time trip ended. O a.m.
	date	date
	aa mm O 24nr	da mm O 24hr
5.	Odometer reading at end:	5. Odometer reading at end:
6	1/10 Number of passengers (excluding	1/10
0.	<i>driver</i>) in each age group at end of	<i>driver</i>) in each age group at end of
	trip. Check if none.	trip. Check if none.
	None O Under 5 years	None O Under 5 years
	5 to 14 15 years	5 to 14 15 years
	years and over	years and over
7.	Why are you making this trip?	7. Why are you making this trip?
	\bigcirc To go home	\bigcirc To go home
	\bigcirc To go to work or school	\bigcirc To go to work or school
	\bigcirc To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
	personal or family appointments)	personal or family appointments)
	\bigcirc To go to a recreational or social	\bigcirc To go to a recreational or social
	\bigcirc To go somewhere else (specify)	\bigcirc To go somewhere else (<i>specify</i>)
—	Driving as part of the job	Driving as part of the job
∣⊾∣	O picking up or delivering goods	► O picking up or delivering goods
	○ dangerous goods	○ dangerous goods
	\bigcirc to or from service call	\bigcirc to or from service call
	O other work purpose	O other work purpose
8.	Driver's sex	8. Driver's sex
	O Male O Female	O Male O Female
9.	Driver's age group	9. Driver's age group
	 Under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74 	 ∪ under 20 ∪ 55 to 64 ○ 20 to 24 ○ 65 to 74
	O 25 to 34 O 75 to 84	○ 25 to 34 ○ 75 to 84
	○ 35 to 44 ○ 85 and over	○ 35 to 44 ○ 85 and over
40	○ 45 to 54	$- \underbrace{\bigcirc 45 \text{ to } 54}_{40}$
10.	Did you travel on any roads with posted speeds of 80 km/h	10. Did you travel on any roads with posted speeds of 80 km/h
	(50 m.p.h.) or more during this trip?	(50 m.p.h.) or more during this trip?
	Yes O No O	└ Yes ○ No ○
🖌	If yes, what was the estimated	If yes, what was the <i>estimated</i>
	posted speeds of 80 km/h (50 m.p.h.)	posted speeds of 80 km/h (50 m.p.h.)
	or more during this trip?	or more during this trip?
	O km	O km
	1/10 U miles	
11.	Fuel purchased during this trip?	11. Fuel purchased during this trip?
	O No	O No
	○ Yes, go to page 26.	 Yes, go to page 26.
4	00 151 1	

Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 5	Trip 6
1. Date / Time trip started: O a.m.	1. Date / Time trip started:
date contraction contrac	date ; O p.m. dd mm O 24hr
2. Odometer reading at start:	2. Odometer reading at start:
1/10	1/10
3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.	3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years and over	5 to 14 15 years years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date dd mm O 24hr
5. Odometer reading at end:	5. Odometer reading at end:
1/10	1/10
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under Under	None O Under Under
5 to 14 15 years and over	5 to 14 15 years years and over
 7. Why are you making this trip? (check one purpose only) ○ To go home 	 Why are you making this trip? (check one purpose only) ○ To go home
O To go to work or school	\bigcirc To go to work or school
 To do shopping or errands (such as personal or family appointments) 	 To do shopping or errands (such as personal or family appointments)
O To go to a recreational or social activity	 To go to a recreational or social activity
• To go somewhere else (<i>specify</i>)	• To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
picking up or delivering goods	picking up or delivering goods
dangerous goods to or from service call	dangerous goods to or from service call
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
9 Driver's age group	 Male Female Driver's age group
\bigcirc under 20 \bigcirc 55 to 64	\bigcirc under 20 \bigcirc 55 to 64
○ 20 to 24 ○ 65 to 74	○ 20 to 24 ○ 65 to 74
$\bigcirc 25 \text{ to } 34 \qquad \bigcirc 75 \text{ to } 64$ $\bigcirc 35 \text{ to } 44 \qquad \bigcirc 85 \text{ and over}$	$\bigcirc 25 \text{ to } 34 \qquad \bigcirc 75 \text{ to } 64 \\ \bigcirc 35 \text{ to } 44 \qquad \bigcirc 85 \text{ and over}$
O 45 to 54	O 45 to 54
 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 	 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
Yes No O	Yes No O
distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
1/10 O km	1/10 O km
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
O No	O No
O Yes, go to page 26.	O Yes, go to page 26.
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Trip 7	Trip 8
1. Date / Time trip started:	1. Date / Time trip started:
date	date
dd mm O 24hr	dd mm O 24hr
2. Odometer reading at start:	2. Odometer reading at start:
1/10	1/10
3 Number of passengers (excluding	3 Number of passengers (excluding
driver) in each age group at beginning	driver) in each age group at beginning
None 5 years	Sta 14
years and over	years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date : O a.m.	date : O a.m.
dd mm O 24hr	dd mm O 24hr
5. Odometer reading at end:	5. Odometer reading at end:
1/10 6. Number of passengers (excluding	1/10 6 Number of passengers (excluding
driver) in each age group at end of	driver) in each age group at end of
trip. Check if none.	trip. Check if none.
None 5 years	None 5 years
years and over	years and over
7. Why are you making this trip?	7. Why are you making this trip?
(check one purpose only)	(check one purpose only)
\bigcirc To go to work or school	\bigcirc To go to work or school
\bigcirc To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
personal or family appointments)	personal or family appointments)
 I o go to a recreational or social activity 	 I o go to a recreational or social activity
\bigcirc To go somewhere else (<i>specify</i>)	○ To go somewhere else (<i>specify</i>)
- Driving as part of the job	Driving as part of the job
 Driving as part of the job nicking up or delivering goods 	\bigcirc nicking up or delivering goods
 dangerous goods 	O dangerous goods
\bigcirc to or from service call	○ to or from service call
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
 Male Priver's age group 	 Male Priver's age group
O under 20 O 55 to 64	○ under 20 ○ 55 to 64
○ 20 to 24 ○ 65 to 74 ○ 25 to 24 ○ 75 to 84	○ 20 to 24 ○ 65 to 74 ○ 25 to 24 ○ 75 to 24
O 35 to 44 O 85 and over	○ 25 to 34 ○ 75 to 84 ○ 35 to 44 ○ 85 and over
O 45 to 54	O 45 to 54
10. Did you travel on any roads with posted speeds of 80 km/h	10. Did you travel on any roads with posted speeds of 80 km/h
(50 m.p.h.) or more during this trip?	(50 m.p.h.) or more during this trip?
Yes No O	Yes No O
distance travelled on roads with	distance travelled on roads with
posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
O km	0 km
1/10 O miles	1/10 O miles
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
O No	O No
○ Yes, go to page 26.	○ Yes, go to page 26.
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Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 9	Trip 10
1. Date / Time trip started:	1. Date / Time trip started:
date date date date date date date date	date dd mm O a.m. dd mm O 24br
2 Odometer reading at start:	2 Odometer reading at start:
3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.	3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years years and over	5 to 14 15 years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date dd mm O 24hr
5. Odometer reading at end:	5. Odometer reading at end:
1/10	1/10
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under	None O Under
5 to 14 15 years and over	5 to 14 15 years and over
7. Why are you making this trip? (check one purpose only)	7. Why are you making this trip? (check one purpose only) ○ To go home
\bigcirc To go to work or school	\bigcirc To go to work or school
 To do shopping or errands (such as 	\bigcirc To do shopping or errands (such as
personal or family appointments)	personal or family appointments)
activity	activity
○ To go somewhere else (<i>specify</i>)	O To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
➡ ○ picking up or delivering goods	➡ ○ picking up or delivering goods
O dangerous goods	O dangerous goods
to or from service call other work purpose	to or from service call other work purpose
8. Driver's sex	8. Driver's sex
9. Driver's age group	9. Driver's age group
○ under 20 ○ 55 to 64	O under 20 O 55 to 64
○ 20 to 24 ○ 65 to 74	O 20 to 24 O 65 to 74
\bigcirc 25 to 34 \bigcirc 75 to 84 \bigcirc 85 and over	\bigcirc 25 to 34 \bigcirc 75 to 84 \bigcirc 85 and over
0 45 to 54	$\bigcirc 35 \text{ to } 54 \bigcirc 000 \text{ and } 0000 \text{ to } 54$
10. Did you travel on any roads with posted speeds of 80 km/h (50 m p h) or more during this trip?	10. Did you travel on any roads with posted speeds of 80 km/h (50 m p b) or more during this trip?
Yes No	
If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
1/10 O km	1/10 O km
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
	\bigcirc No
○ Yes, go to page 26.	
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Trip 11	Trip 12
1. Date / Time trip started:	1. Date / Time trip started:
date	date
dd mm O 24hr	dd mm O 24hr
2. Odometer reading at start:	2. Odometer reading at start:
1/10	1/10
3. Number of passengers (excluding	3. Number of passengers (excluding
of trip. Check if none.	of trip. Check if none.
None 5 years	None 5 years
5 to 14 15 years years and over	5 to 14 15 years and over
1 Bate / Time trip ended:	A Date / Time trip ended:
4. Date / Time trip ended. O a.m.	4. Date / Time trip ended. O a.m.
date	date
dd mm 🔾 24hr	dd mm 💛 24hr
5. Odometer reading at end:	5. Odometer reading at end:
1/10	1/10
Number of passengers (excluding driver) in each age group at end of	6. Number of passengers (excluding driver) in each age group at end of
trip. Check if none.	trip. Check if none.
None O Under	None O Under
5 to 14 15 years	5 to 14 15 years
years and over	years and over
7. Why are you making this trip?	7. Why are you making this trip?
(check one purpose only)	(check one purpose only)
\bigcirc To go to work or school	\bigcirc To go to work or school
 To do shopping or errands (such as personal or family appointments) 	 To do shopping or errands (such as personal or family appointments)
\bigcirc To go to a recreational or social	\bigcirc To go to a recreational or social
activity	activity
\bigcirc To go somewhere else (specify)	\bigcirc To go somewhere else <i>(specify)</i>
Driving on part of the ich	Driving on part of the ich
Driving as part of the job	Driving as part of the job
picking up or delivering goods dangerous goods	picking up or delivering goods dengeroue goode
\bigcirc to or from service call	\bigcirc to or from service call
O other work purpose	O other work purpose
2 Driveria cov	2 Driverdo con
• Uriver's sex	• Uriver's sex
9. Driver's age group	9. Driver's age group
O under 20 O 55 to 64	○ under 20 ○ 55 to 64
O 20 to 24 O 65 to 74	○ 20 to 24 ○ 65 to 74
$\bigcirc 25 \text{ to } 34 \qquad \bigcirc 75 \text{ to } 84$ $\bigcirc 35 \text{ to } 44 \qquad \bigcirc 85 \text{ and over}$	\bigcirc 25 to 34 \bigcirc 75 to 84 \bigcirc 35 to 44 \bigcirc 85 and over
O 45 to 54	O 45 to 54
10. Did you travel on any roads with	10. Did you travel on any roads with
posted speeds of 80 km/h	posted speeds of 80 km/h
(50 m.p.n.) or more during this trip?	(50 m.p.n.) or more during this trip?
Yes () No ()	Yes () No ()
distance travelled on roads with	distance travelled on roads with
posted speeds of 80 km/h (50 m.p.h.)	posted speeds of 80 km/h (50 m.p.h.)
11 Fuel nurchased during this trin?	11 Fuel nurchased during this trip?
\bigcirc Vec. do to page 26	\bigcirc NU \bigcirc Ves. do to page 26
→ res, yo to page ∠o.	
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Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 13	Trip 14
1. Date / Time trip started: date can a dd mm	1. Date / Time trip started: date cam. ddt cam. ddt cam.
2. Odometer reading at start:	2. Odometer reading at start:
 3. Number of passengers (excluding driver) in each age group at beginning 	 Number of passengers (excluding driver) in each age group at beginning
None O	of trip. Check if none.
5 to 14 15 years and over	5 to 14 15 years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date date date date date date date date
5. Odometer reading at end:	5. Odometer reading at end:
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years and over	5 to 14 15 years and over
 7. Why are you making this trip? (check one purpose only) ○ To go home 	 7. Why are you making this trip? (check one purpose only) O To go home
 To go to work or school 	\bigcirc To go to work or school
 To do shopping or errands (such as personal or family appointments) 	 To do shopping or errands (such as personal or family appointments)
 To go to a recreational or social activity 	 To go to a recreational or social activity
• To go somewhere else (<i>specify</i>)	• To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
➡ ○ picking up or delivering goods	picking up or delivering goods
O dangerous goods	 ○ dangerous goods ○ to or from sonvice call
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
O Male O Female	O Male O Female
9. Driver's age group	9. Driver's age group
\bigcirc 20 to 24 \bigcirc 55 to 64	\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74
O 25 to 34 O 75 to 84	O 25 to 34 O 75 to 84
○ 35 to 44 ○ 85 and over ○ 45 to 54	○ 35 to 44 ○ 85 and over ○ 45 to 54
10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
Yes No	
If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
1/10 O km	│
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
O No	O No
U Yes, go to page 26.	○ Yes, go to page 26.
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Trip 15	Trip 16
1. Date / Time trip started:	1. Date / Time trip started:
date	date
dd mm O 24hr	dd mm O 24hr
2. Odometer reading at start:	2. Odometer reading at start:
1/10	1/10
3. Number of passengers (excluding	3. Number of passengers (excluding
of trip. Check if none.	of trip. Check if none.
years and over	years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
data data data data data data data data	
	date ; O p.m.
5. Odometer reading at end:	5. Odometer reading at end:
1/10	
6 Number of passengers (excluding	1/10 6 Number of passengers (excluding
<i>driver</i>) in each age group at end of	<i>driver</i>) in each age group at end of
trip. Check if none.	trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years	5 to 14 15 years
7. Why are you making this trip?	7. Why are you making this trip?
\bigcirc To go home	\bigcirc To go home
O To go to work or school	\bigcirc To go to work or school
• To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
personal or family appointments)	personal or family appointments)
\bigcirc To go to a recreational or social	O To go to a recreational or social
○ To go somewhere else (specify)	 To go somewhere else (specify)
Driving as part of the job	Driving as part of the job
picking up or delivering goods	➡ ○ picking up or delivering goods
O dangerous goods	O dangerous goods
O to or from service call	O to or from service call
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
○ Male ○ Female	○ Male ○ Female
9. Driver's age group	9. Driver's age group
○ under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74	\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74
O 25 to 34 O 75 to 84	O 25 to 34 O 75 to 84
○ 35 to 44 ○ 85 and over	○ 35 to 44 ○ 85 and over
 U 45 to 54 10 Picture fragment are served at 10 million 	 U 45 to 54 10 Bid years through an annual statistic
posted speeds of 80 km/h	posted speeds of 80 km/h
(50 m.p.h.) or more during this trip?	(50 m.p.h.) or more during this trip?
Yes O No O	Yes O No O
If yes, what was the <i>estimated</i>	↓ If yes, what was the estimated distance travelled on roads with
posted speeds of 80 km/h (50 m.p.h.)	posted speeds of 80 km/h (50 m.p.h.)
or more during this trip?	or more during this trip?
• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • •
	\cup No
\bigcirc Yes, go to page 26.	\cup Yes, go to page 26.
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Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 17	Trip 18
1. Date / Time trip started: date can and a constant of a.m. of a.m. of p.m. of a.m. of p.m. of a constant	1. Date / Time trip started: date cam. dd cam. dd
2. Odometer reading at start:	2. Odometer reading at start:
 3. Number of passengers (excluding driver) in each age group at beginning 	 Number of passengers (excluding driver) in each age group at beginning
of trip. Check if none.	of trip. Check if none.
5 to 14 15 years 5 years 15 ye	5 to 14 15 years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date date date date date date date date
5. Odometer reading at end:	5. Odometer reading at end:
6. Number of passengers (excluding driver) in each age group at end of trip. Check if none.	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under 5 years	None O Under 5 vears
5 to 14 15 years and over	5 to 14 15 years and over
 7. Why are you making this trip? (check one purpose only) ○ To go home 	 7. Why are you making this trip? (check one purpose only) O To go home
○ To go to work or school	\bigcirc To go to work or school
• To do shopping or errands (such as	• To do shopping or errands (such as
 To go to a recreational or social activity 	 To go to a recreational or social activity
\bigcirc To go somewhere else (specify)	\bigcirc To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
picking up or delivering goods	➡ ○ picking up or delivering goods
 ○ dangerous goods ○ to or from convice coll 	O dangerous goods
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
O Male O Female	O Male O Female
9. Driver's age group	9. Driver's age group
\bigcirc 20 to 24 \bigcirc 65 to 74	○ 20 to 24 ○ 65 to 74
○ 25 to 34 ○ 75 to 84	○ 25 to 34 ○ 75 to 84
○ 35 to 44 ○ 85 and over ○ 45 to 54	 ○ 35 to 44 ○ 85 and over ○ 45 to 54
10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
Yes O No O	└ Yes ○ No ○
If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
│	│
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
O No	O No
○ Yes, go to page 26.	\bigcirc Yes, go to page 26.
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	Trip 19		Trip 20
1.	Date / Time trip started:	1.	Date / Time trip started:
	date		date
	dd mm O 24hr		dd mm O 24hr
2.	Odometer reading at start:	2.	Odometer reading at start:
	1/10		1/10
3.	Number of passengers (excluding	3.	Number of passengers (excluding
	of trip. Check if none.		of trip. Check if none.
	Ste 11		
	years and over		years and over
4.	Date / Time trip ended:	4.	Date / Time trip ended:
	date date of a.m.		date 0 a.m.
	dd mm O 24br		$\begin{array}{c c} \text{uate} & \bigcirc \text{p.m.} \\ \text{dd} & \text{mm} & \bigcirc \text{24br} \end{array}$
_		-	
5.	Odometer reading at end:	5.	Odometer reading at end:
	1/10		1/10
6.	Number of passengers (excluding	6.	Number of passengers (excluding
	driver) in each age group at end of		driver) in each age group at end of
	trip. Check if none.		trip. Check if none.
	None 5 years		None C 5 years
	5 to 14 15 years and over		5 to 14 15 years and over
7.	Why are you making this trip?	7.	Why are you making this trip?
	(check one purpose only)		(check one purpose only)
	O To go home		O To go home
	\bigcirc To go to work or school		\bigcirc To go to work or school
	• To do shopping or errands (such as		• To do shopping or errands (such as
	\bigcirc To go to a recreational or social		\bigcirc To go to a recreational or social
	activity		activity
	○ To go somewhere else <i>(specify)</i>		O To go somewhere else (<i>specify</i>)
	Driving as part of the job		Driving as part of the job
┡	○ picking up or delivering goods	ا	\bigcirc picking up or delivering goods
	O dangerous goods		O dangerous goods
	• to or from service call		• to or from service call
8.	Driver's sex	8.	Driver's sex
<u>م</u>	○ Male ○ Female Driver's age group	0	○ Male ○ Female Driver's age group
9.	\bigcirc under 20 \bigcirc 55 to 64	ອ.	\bigcirc under 20 \bigcirc 55 to 64
	O 20 to 24 O 65 to 74		O 20 to 24 O 65 to 74
	○ 25 to 34 ○ 75 to 84		○ 25 to 34 ○ 75 to 84
	\bigcirc 35 to 44 \bigcirc 55 and over \bigcirc 45 to 54		\bigcirc 35 to 44 \bigcirc 65 and 69e
10.	Did you travel on any roads with	10.	Did you travel on any roads with
	posted speeds of 80 km/h	-	posted speeds of 80 km/h
	(50 m.p.n.) or more during this trip?		(50 m.p.n.) or more during this trip?
[Tes ∪ No ∪ If ves what was the estimated		If yes, what was the estimated
*	distance travelled on roads with	*	distance travelled on roads with
	posted speeds of 80 km/h (50 m.p.h.) or more during this trip?		posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
	O km		⊖ km
	1/10 O miles		1/10 O miles
11.	Fuel purchased during this trip?	11.	Fuel purchased during this trip?
	○ No		○ No
	O Yes, go to page 26.		O Yes, go to page 26.
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Questions? Please see instructions on page 3 and examples on pages 4 and 5.				
Trip 21	Trip 22			
1. Date / Time trip started:	1. Date / Time trip started:			
date date date date date date date date	date dd mm O a.m. dd mm O 24br			
2 Odometer reading at start:	2 Odometer reading at start:			
3. Number of passengers (excluding driver) in each age group at beginning	3. Number of passengers (excluding driver) in each age group at beginning			
None O 5 years	None O 5 years			
5 to 14 15 years and over	5 to 14 15 years and over			
4. Date / Time trip ended:	4. Date / Time trip ended:			
date date date date date date date date	date date date date date date date date			
5. Odometer reading at end:	5. Odometer reading at end:			
1/10	1/10			
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 			
None O Under	None O Under			
5 to 14 15 years and over	5 to 14 15 years and over			
7. Why are you making this trip? (check one purpose only) ○ To go home	7. Why are you making this trip? (check one purpose only) O To go home			
\bigcirc To go to work or school	\bigcirc To go to work or school			
O To do shopping or errands (such as	\bigcirc To do shopping or errands (such as			
personal or family appointments) \bigcirc To go to a recreational or social	personal or family appointments) O To go to a recreational or social			
activity O To go somewhere else (<i>specify</i>)	C To go somewhere else (<i>specify</i>)			
Driving as part of the job	Driving as part of the job			
O picking up or delivering goods O dangerous goods	O picking up or delivering goods O angerous goods			
O to or from service call	O to or from service call			
O other work purpose	O other work purpose			
8. Driver's sex	8. Driver's sex			
O Male O Female	O Male O Female			
9. Driver's age group	9. Driver's age group			
\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74	\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74			
O 25 to 34 O 75 to 84	O 25 to 34 O 75 to 84			
\bigcirc 35 to 44 \bigcirc 85 and over	\bigcirc 35 to 44 \bigcirc 85 and over			
10. Did you travel on any roads with posted speeds of 80 km/h	10. Did you travel on any roads with posted speeds of 80 km/h			
(50 m.p.h.) or more during this trip?	(50 m.p.h.) or more during this trip?			
Yes V No V	Yes () No ()			
distance travelled or roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?			
1/10 O km	│			
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?			
O No	O No			
○ Yes, go to page 26.	○ Yes, go to page 26.			
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	Trip 23		Trip 24	
1.	Date / Time trip started:	1. Date	e / Time trip started:	
	date	date		
	dd mm O 24hr		dd mm O 24hr	
2.	Odometer reading at start:	2. Odo	meter reading at start:	
	1/10		1/10	
3.	Number of passengers (excluding	3. Nun driv	nber of passengers <i>(excluding</i>	
	of trip. Check if none.	of tr	ip. Check if none.	
	None O Under	Non		
	5 to 14 15 years	5 to	14 15 years	
	years and over	yea	rs and over	
4.	Date / Time trip ended:	4. Date	e / Time trip ended:	
	date	date	e	
	dd mm O 24hr	dute	dd mm O 24hr	
5	Odometer reading at end:	5 Odo	motor reading at end:	
5.				
	1/10		1/10	
6.	Number of passengers (excluding	6. Nun	nber of passengers (excluding	
	driver) in each age group at end of	driv trin	er) in each age group at end of	
		Non		
	5 years		5 years	
	years and over	year	s and over	
7.	Why are you making this trip?	7. Why	/ are you making this trip?	
	(check one purpose only)	(che	eck one purpose only)	
			o go home	
	O To go to work or school		o go to work or school	
	 Do do shopping or errands (such as personal or family appointments) 		o do shopping or errands (such as personal or family appointments)	
	O To go to a recreational or social activity	 To go to a recreational or social activity To go somewhere else (<i>specify</i>) 		
	• To go somewhere else (<i>specify</i>)			
	Driving as part of the job	Driv	ing as part of the job	
╞	O picking up or delivering goods	→ O picking up or delivering goods		
	 dangerous goods 	O dangerous goods		
	O to or from service call		to or from service call	
	O other work purpose		other work purpose	
8.	Driver's sex	8. Driv	ver's sex	
_	⊖ Male ⊖ Female		Male O Female	
9.	Driver's age group \bigcirc 55 to 64	9. Driv	ver's age group \bigcirc 55 to 64	
	○ 20 to 24 ○ 65 to 74	ŏ	20 to 24 O 65 to 74	
	○ 25 to 34 ○ 75 to 84	0	25 to 34 O 75 to 84	
	○ 35 to 44 ○ 85 and over	0	35 to 44 U 85 and over	
10	Did you travel on any roads with		40 IU 04	
10.	posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	post (50 r	ted speeds of 80 km/h n.p.h.) or more during this trip?	
	Yes O No O	Yes	○ No ○	
 	If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If year dista posta or m	s, what was the <i>estimated</i> ince travelled on roads with ed speeds of 80 km/h (50 m.p.h.) ore during this trip?	
	O km		O km 1/10 ○ miles	
11	Fuel nurchased during this trin?	11 Eucl	nurchased during this trip?	
'''			ruei purchased during this trip? No	
		 Yes, go to page 26. 		
		\bigcirc	, go to page 20.	
5-54	00-151.1		Page 17	
Questions? Please see instructions	on page 3 and examples on pages 4 and 5.			
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Trip 25	Trip 26			
1. Date / Time trip started:	1. Date / Time trip started:			
date date date date date date date date	date dd mm O a.m. dd mm O 24br			
2 Odometer reading at start:	2 Odometer reading at start:			
3. Number of passengers (excluding driver) in each age group at beginning	3. Number of passengers (excluding driver) in each age group at beginning			
None O 5 years	None O Under			
5 to 14 15 years and over	5 to 14 15 years and over			
4. Date / Time trip ended:	4. Date / Time trip ended:			
date date date date date date date date	date date date date date date date date			
5. Odometer reading at end:	5. Odometer reading at end:			
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	6. Number of passengers (excluding driver) in each age group at end of trip. Check if none.			
None O Under	None O Under			
5 to 14 15 years and over	5 to 14 15 years and over			
7. Why are you making this trip? (check one purpose only) ○ To go home	7. Why are you making this trip? (check one purpose only) ○ To go home			
\bigcirc To go to work or school	\bigcirc To go to work or school			
O To do shopping or errands (such as	\bigcirc To do shopping or errands (such as			
personal or family appointments) O To go to a recreational or social	personal or family appointments) O To go to a recreational or social			
activity O To go somewhere else <i>(specify)</i>	activity O To go somewhere else (specify)			
Driving as part of the job	Driving as part of the job			
picking up or delivering goods	 → ○ picking up or delivering goods 			
O dangerous goods	O dangerous goods			
to or from service call other work purpose	• to or from service call			
8. Driver's sex	8. Driver's sex			
9. Driver's age group	9. Driver's age group			
○ under 20 ○ 55 to 64	○ under 20 ○ 55 to 64			
\bigcirc 20 to 24 \bigcirc 65 to 74 \bigcirc 75 to 84	\bigcirc 20 to 24 \bigcirc 65 to 74 \bigcirc 25 to 24 \bigcirc 75 to 84			
○ 25 to 34 ○ 75 to 64 ○ 35 to 44 ○ 85 and over	$\bigcirc 25 \text{ to } 34 \qquad \bigcirc 75 \text{ to } 34 \\ \bigcirc 35 \text{ to } 44 \qquad \bigcirc 85 \text{ and over}$			
O 45 to 54	O 45 to 54			
 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 	 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 			
Yes O No O	Yes O No O			
If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?			
1/10 O km	1/10 O km			
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?			
\bigcirc No	\bigcirc No			
○ 1 cs, yo to paye 20.	\bigcirc res, yo to paye 20.			
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	Trip 27		Trip 28	
1.	Date / Time trip started:	1.	Date / Time trip started:	
	date		date	
	dd mm O 24hr		dd mm O 24hr	
2.	Odometer reading at start:	2.	Odometer reading at start:	
	1/10		1/10	
3.	Number of passengers (excluding	3.	Number of passengers (excluding	
	of trip. Check if none.		of trip. Check if none.	
	None 5 years		None U 5 years	
	5 to 14 15 years and over		5 to 14 15 years and over	
4	Data / Time trip andod:		Date / Time trip ended:	
4.	O a.m.	4.		
	date		date	
	dd mm 🛛 24hr		dd mm 💛 24hr	
5.	Odometer reading at end:	5.	Odometer reading at end:	
6	1/10	•	1/10	
ю.	Number of passengers (excluding driver) in each age group at end of	6.	Number of passengers (excluding driver) in each age group at end of	
	trip. Check if none.		trip. Check if none.	
	None O Under		None O Under	
	5 to 14 15 years		5 to 14 15 years	
	years and over		years and over	
7.	Why are you making this trip?	7.	Why are you making this trip?	
	(check one purpose only)		(check one purpose only)	
			\bigcirc To go to work or school	
	personal or family appointments)		personal or family appointments)	
	\bigcirc To go to a recreational or social		\bigcirc To go to a recreational or social	
	activity		activity	
	igodoldoldoldoldoldoldoldoldoldoldoldoldol		igodoldoldoldoldoldoldoldoldoldoldoldoldol	
	Driving as part of the job	_	Driving as part of the job	
	\bigcirc picking up or delivering goods		\bigcirc picking up or delivering goods	
	 dangerous goods 		O dangerous goods	
	○ to or from service call		O to or from service call	
	\bigcirc other work purpose		\bigcirc other work purpose	
8.	Driver's sex	8.	Driver's sex	
_	O Male O Female		O Male O Female	
9.	Driver's age group	9.	Driver's age group	
	○ under 20 ○ 55 to 64		○ under 20 ○ 55 to 64	
	$\bigcirc 20 \text{ to } 24 \qquad \bigcirc 65 \text{ to } 74$ $\bigcirc 25 \text{ to } 34 \qquad \bigcirc 75 \text{ to } 84$		○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84	
	O 35 to 44 O 85 and over		O 35 to 44 O 85 and over	
	O 45 to 54		O 45 to 54	
10.	Did you travel on any roads with	10.	Did you travel on any roads with	
	postea speeas of 80 km/h (50 m.p.h.) or more during this trip?		postea speeas of 80 km/h (50 m.p.h.) or more during this trip?	
		_		
🖵	If yes, what was the <i>estimated</i>	Ļ	If yes, what was the <i>estimated</i>	
	distance travelled on roads with		distance travelled on roads with posted speeds of 80 km/b (50 m p h)	
	or more during this trip?		or more during this trip?	
	O km		⊖ km	
	1/10 O miles		1/10 O miles	
11.	Fuel purchased during this trip?	11.	Fuel purchased during this trip?	
	O No		○ No	
	O Yes, go to page 26.		○ Yes, go to page 26.	
F 5 4	00 151 1			
o-54	00-101.1		Page 19	

Trip 29 Trip 30 1. Date / Time trip started:	Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
1. Date / Time trip started: a.m. date	Trip 29	Trip 30
date	1. Date / Time trip started:	1. Date / Time trip started:
2. Odometer reading at start:	date date date date date date date date	date
Coorner reading at data 1/10 1/10 1/10 1/10 1/10	2 Odometer reading at start:	2 Odometer reading at start:
3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if nome. 3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if nome. Nome ○ Under 5 to 14 15 years 10 and over 4. Date / Time trip ended: a.m. date and over 110 and dd mm 24hr 5. Odometer reading at end: and 110 6. Number of passengers (excluding driver) in each age group at end of trip. Check if nome. None ○ Under 5. to 14 15 years years and over 110 6. Number of passengers (excluding driver) in each age group at end of trip. Check if nome. None ○ Under 5. to 14 15 years years and over years and over '''' (check one purpose only) To go to work or school O to a stopping or errands (such as personal or family appointments) To go to work or school O to a stopping or errands (such as personal or family appointments) To go to work or school O to a ot a recreational or social activity To go somewhere else (speecify) <		
None Under None Under Sto 14 15 years sto 14 15 years sto 14 15 years and over and over 4. Date / Time trip ended: a.m. date	3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.	3. Number of passengers (excluding driver) in each age group at beginning of trip. Check if none.
5 to 14 15 years 4. Date / Time trip ended: 0 a.m. date 0 arm date </td <td>None O 5 years</td> <td>None O 5 years</td>	None O 5 years	None O 5 years
 4. Date / Time trip ended:	5 to 14 15 years and over	5 to 14 15 years and over
date	4. Date / Time trip ended:	4. Date / Time trip ended:
5. Odometer reading at end:	date date date date date date date date	date dd mm O 24hr
Image: state of the set	5. Odometer reading at end:	5. Odometer reading at end:
6. Number of passengers (excluding driver) in each age group at end of trip. Check if none. 0 None ○ Under Under Sto 14 15 years 5 7. Why are you making this trip? Check if none. None ○ 7. Why are you making this trip? Check one purpose only 5 10. To go home To go to work or school To go to work or school 11. To go to a recreational or social activity To go somewhere else (specify) 11. Driving as part of the job Driver's sex 12. Driver's age group Ounder Sto 64 12. Driver's age group Ounder Sto 64 13. Driver's age group Ounder Sto 64 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes Yes No Yes, go to page 26. Yes, go to page 26.	1/10	1/10
None Under Syears S to 14 15 years and over 5 to 14 15 years and over 7. Why are you making this trip? (check one purpose only) To go home To go to work or school To go to work or school To go to a recreational or social activity To go to a recreational or social activity To go somewhere else (specify) Driving as part of the job picking up or delivering goods d angerous goods to or from service call other work purpose 8. Driver's sex Male 9. Driver's age group under 20 55 to 64 20 to 24 65 to 74 25 to 54 75 to 84 25 to 54 75 to 84 25 to 54 75 to 84 0 bid you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No If yes, go to page 26. Yes, go to page 26.	 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	 Number of passengers (excluding driver) in each age group at end of trip. Check if none.
5 to 14 15 years years 15 years 7. Why are you making this trip? (check one purpose only) 0 To go home 0 To go to work or school 0 To go to work or school 0 To go to a recreational or social activity 0 To go to a recreational or social activity 0 To go somewhere else (specify) 0 Driving as part of the job 0 picking up or delivering goods 0 dangerous goods 0 to ar from service call 0 ther work purpose 8. Driver's sex 0 Male 0 under 20 20 to 24 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 11. Fuel purchased during this trip? 11. Fuel purchased during this trip? 0 No 11. Fuel purchased during this trip? 0 No 12. Fuel purchased during this trip? 0 No 13. Fuel purchased during this trip? 14. Fuel purchased during this trip? 15. No 16. Yes, go to page 26.	None O Under	None O Under
7. Why are you making this trip? (check one purpose only) 7. Why are you making this trip? (check one purpose only) 7. To go home To go home 7. To go to work or school To go to work or school 7. To go to a recreational or scial activity To go to a recreational or social activity To go to a recreational or social activity 9. To go to a recreational or social activity To go somewhere else (specify) 9. Drivering as part of the job Driving as part of the job 9. Driver's sex Male 9. Driver's seg group Outher work purpose 9. Driver's age group Outher work purpose 9. Driver's age group Outher 20 9. Joit 24 65 to 74 9. 25 to 34 75 to 84 9. 35 to 44 85 and over 9. 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No 9. If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 9. No Yes, go to page 26. <td>5 to 14 15 years and over</td> <td>5 to 14 15 years day over</td>	5 to 14 15 years and over	5 to 14 15 years day over
 C To go to work or school C To go to a recreational or social activity To go to a recreational or social activity To go to a recreational or social activity To go to work or school To go to work or school To go to a recreational or social activity To go to a recreational or social activity To go to work or school To go to work or school To go to a recreational or social activity To for sore set (seedia) Male Priver's age group Under 20 S to 44 S to 44<td>7. Why are you making this trip? (check one purpose only) ○ To go home</td><td>7. Why are you making this trip? (check one purpose only) ○ To go home</td>	7. Why are you making this trip? (check one purpose only) ○ To go home	7. Why are you making this trip? (check one purpose only) ○ To go home
 To do shopping or errands (such as personal or family appointments) To go to a recreational or social activity To go somewhere else (<i>specify</i>) Driving as part of the job picking up or delivering goods dangerous goods to or from service call other work purpose 8. Driver's sex Male Female Driver's age group under 20 55 to 64 20 to 24 65 to 74 25 to 34 75 to 84 35 to 44 85 and over 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes Yes No Yes, go to page 26. To do shopping or errands (such as personal or family appointments) To go to a recreational or social activity To go somewhere else (<i>specify</i>) To go somewhere else (<i>specify</i>) To go somewhere else (<i>specify</i>) Driving as part of the job picking up or delivering goods to or from service call other work purpose 8. Driver's age group under 20 55 to 64 20 to 24 65 to 74 25 to 34 75 to 84 35 to 44 85 and over 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No Yes, go to page 26. 	\bigcirc To go to work or school	\bigcirc To go to work or school
personal or family appointments) personal or family appointments) To go to a recreational or social activity To go to a recreational or social activity To go somewhere else (<i>specify</i>) To go somewhere else (<i>specify</i>) Driving as part of the job Driving as part of the job picking up or delivering goods O angerous goods o to or from service call O other work purpose o to rfom service call O other work purpose B. Driver's sex Male Male Female Driver's age group O triver's age group under 20 55 to 64 20 to 24 65 to 74 25 to 34 75 to 84 35 to 44 85 and over 45 to 54 O bid you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No I1. Fuel purchased during this trip? No Yes, go to page 26.	O To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
activity activity activity C To go somewhere else (specify) To go somewhere else (specify) Driving as part of the job Driving as part of the job picking up or delivering goods dangerous goods to or from service call other work purpose other work purpose 8. Driver's sex Male Female 9. Driver's age group under 20 under 20 55 to 64 20 to 24 65 to 74 25 to 34 75 to 84 35 to 44 85 and over 45 to 54 0 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No f yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No 11. Fuel purchased during this trip? km 11. Fuel purchased during this trip? No No Yes, go to page 26.	personal or family appointments) O To go to a recreational or social	personal or family appointments) O To go to a recreational or social
Driving as part of the job picking up or delivering goods dangerous goods to or from service call other work purpose picking up or delivering goods dangerous goods to or from service call other work purpose picking up or delivering goods dangerous goods to or from service call other work purpose other work purpose Driver's sex Male Permate Driver's age group under 20 55 to 64 20 to 24 65 to 74 25 to 34 75 to 84 35 to 44 85 and over 45 to 54 Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No Yes, go to page 26. Yes, go to page 26. Yes, go to page 26. Yes, go to page 26. 	activity O To go somewhere else (<i>specify</i>)	C To go somewhere else (<i>specify</i>)
 Driver's age group Oriver's age group<td>Driving as part of the job</td><td>Driving as part of the job</td>	Driving as part of the job	Driving as part of the job
○ to or from service call ○ to or from service call ○ other work purpose 8. Driver's sex ○ ○ Male ○ 9. Driver's age group ○ 0 ○ under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84 ○ 35 to 44 0 85 and over ○ 45 to 54 ○ 0 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 10. Did you travel on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ✓ Yes No ○ If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ○ I1. Fuel purchased during this trip? 0 No I1. Fuel purchased during this trip? ○ ○ No ○ ○ Yes, go to page 26. 0	 picking up or delivering goods dangerous goods 	O picking up or delivering goods O dangerous goods
○ other work purpose ○ other work purpose ○ other work purpose ○ Male ○ ○ Driver's sex ○ ○ Under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84 ○ 35 to 44 ○ 85 and over ○ 45 to 54 0 Diver's age group 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 10. Yes No ○ Yes No 11. Fuel purchased during this trip? ○ km 11. Fuel purchased during this trip? ○ km ○ No ○ Yes, go to page 26. 11.	O to or from service call	O to or from service call
8. Driver's sex Male Female 9. Driver's age group under 20 55 to 64 20 to 24 65 to 74 20 to 24 65 to 74 25 to 34 75 to 84 20 to 24 65 to 74 35 to 44 85 and over 45 to 54 9. Driver's age group 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 11. Fuel purchased during this trip? 0 km 11. Fuel purchased during this trip? No Yes, go to page 26. 11. Fuel purchased during this trip?	O other work purpose	O other work purpose
○ Male ○ Female 9. Driver's age group ○ under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74 ○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84 ○ 20 to 24 ○ 65 to 74 ○ 35 to 44 ○ 85 and over ○ 25 to 34 ○ 75 to 84 ○ 35 to 44 ○ 85 and over ○ 45 to 54 ○ 20 to 24 ○ 65 to 74 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ○ 11 yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ○ No ○ Yes No ○ Yes No ○ 11. Fuel purchased during this trip? ○ km ○ km ○ km 11. Fuel purchased during this trip? ○ No ○ Yes, go to page 26. ○ No	8. Driver's sex	8. Driver's sex
9. Driver's age group 9. Driver's age group ○ under 20 55 to 64 ○ 20 to 24 65 to 74 ○ 25 to 34 75 to 84 ○ 35 to 44 85 and over ○ 45 to 54 0 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 0 Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No In Fuel purchased during this trip? No Yes, go to page 26. 9. Driver's age group 9. Driver's age group 9. Driver's age group	O Male O Female	O Male O Female
○ 0	9. Driver's age group	9. Driver's age group
 25 to 34 ○ 75 to 84 35 to 44 ○ 85 and over 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes ○ No ○ If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes ○ No ○ If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? In Fuel purchased during this trip? No ○ Yes, go to page 26. Yes, go to page 26. 	\bigcirc 20 to 24 \bigcirc 55 to 64	\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74
 35 to 44 0 85 and over 45 to 54 10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes 0 No 0 If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes 0 No 0 If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? In Fuel purchased during this trip? No Yes, go to page 26. Yes, go to page 26. 	O 25 to 34 O 75 to 84	O 25 to 34 O 75 to 84
10. Did you travel on any roads with posted speeds of 80 km/h 10. Did you travel on any roads with posted speeds of 80 km/h Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Yes No 0 km 11. Fuel purchased during this trip? 0 km No 11. Fuel purchased during this trip? No Yes, go to page 26.	○ 35 to 44 ○ 85 and over	\bigcirc 35 to 44 \bigcirc 85 and over \bigcirc 45 to 54
(50 m.p.h.) or more during this trip? Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: transformed distance travelled distance travelled distance travelled distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Image: travelled distance trav	10. Did you travel on any roads with posted speeds of 80 km/h	10. Did you travel on any roads with posted speeds of 80 km/h
Yes No Yes No Yes No Yes No Yes Yes No Yes Yes <td>(50 m.p.h.) or more during this trip?</td> <td>(50 m.p.h.) or more during this trip?</td>	(50 m.p.h.) or more during this trip?	(50 m.p.h.) or more during this trip?
Impose the contractor distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed km Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during this trip? Imposed to the speeds of 80 km/h (50 m.p.h.) or more during the speeds of 80 km/h (50 m.p.h.) or more during the speeds of 80 km/h (50 m.p.h.) or more during the speeds of 80 km/h (50 m.p.h.) or more during the speeds of 80 km/h (50 m.p.h.) or more during	Yes () No ()	Yes () No ()
Image: Minimit of the set of the se	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
11. Fuel purchased during this trip? 11. Fuel purchased during this trip? O No O Yes, go to page 26. O Yes, go to page 26.	1/10 O km	1/10 O km
O NO O Yes, go to page 26. O Yes, go to page 26.	11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
	\bigcirc No	\bigcirc No
		\bigcirc Tes, yo to paye 20.

	Trip 31		Trip 32	
1.	Date / Time trip started:	1.	Date / Time trip started:	
	date		date	
	dd mm O 24hr		dd mm O 24hr	
2.	Odometer reading at start:	2.	Odometer reading at start:	
	1/10		1/10	
3.	Number of passengers (excluding	3.	Number of passengers (excluding	
	of trip. Check if none.		of trip. Check if none.	
	None 5 years		None U 5 years	
	5 to 14 15 years and over		5 to 14 15 years and over	
4	Data / Time trip anded:		Date / Time trip anded:	
4.	O a.m.	4.		
	date		date	
	dd mm 🛛 24hr		dd mm 💛 24hr	
5.	Odometer reading at end:	5.	Odometer reading at end:	
6	1/10	•	1/10	
ю.	Number of passengers (excluding driver) in each age group at end of	6.	Number of passengers (excluding driver) in each age group at end of	
	trip. Check if none.		trip. Check if none.	
	None O Under		None O Under	
	5 to 14 15 years		5 to 14 15 years	
	years and over		years and over	
7.	Why are you making this trip?	7.	Why are you making this trip?	
	(check one purpose only)		(check one purpose only)	
			\bigcirc To go to work or school	
	personal or family appointments)		personal or family appointments)	
	\bigcirc To go to a recreational or social		\bigcirc To go to a recreational or social	
	activity		activity	
	igodoldoldoldoldoldoldoldoldoldoldoldoldol		igodoldoldoldoldoldoldoldoldoldoldoldoldol	
	Driving as part of the job	_	Driving as part of the job	
	\bigcirc picking up or delivering goods		\bigcirc picking up or delivering goods	
	 dangerous goods 		O dangerous goods	
	○ to or from service call		O to or from service call	
	\bigcirc other work purpose		\bigcirc other work purpose	
8.	Driver's sex	8.	Driver's sex	
_	O Male O Female		O Male O Female	
9.	Driver's age group	9.	Driver's age group	
	○ under 20 ○ 55 to 64		○ under 20 ○ 55 to 64	
	○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84		 ○ 20 to 24 ○ 65 to 74 ○ 25 to 34 ○ 75 to 84 	
	○ 35 to 44 ○ 85 and over		○ 35 to 44 ○ 85 and over	
	O 45 to 54		O 45 to 54	
10.	Did you travel on any roads with	10.	Did you travel on any roads with	
	posted speeds of 80 km/h (50 m.p.h.) or more during this trin?		posted speeds of 80 km/h (50 m.p.h.) or more during this trin?	
—		_		
	If yes, what was the <i>estimated</i>	L	If yes, what was the <i>estimated</i>	
Í	distance travelled on roads with		distance travelled on roads with	
	or more during this trip?		or more during this trip?	
	O km		O km	
	1/10 O miles		1/10 O miles	
11.	Fuel purchased during this trip?	11.	Fuel purchased during this trip?	
	O No		○ No	
	O Yes, go to page 26.		O Yes, go to page 26.	
	00 151 1			
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Questions? Please see instructions	on page 3 and examples on pages 4 and 5.
Trip 33	Trip 34
1. Date / Time trip started: date cam a.m p.m.	1. Date / Time trip started: date cam a.m.
2. Odometer reading at start:	24hr 2. Odometer reading at start:
1/10	1/10
<i>driver</i>) in each age group at beginning of trip. <i>Check if none.</i>	driver) in each age group at beginning of trip. Check if none.
None O Under 5 years	None O Under 5 years
years and over	years 15 years and over
4. Date / Time trip ended:	4. Date / Time trip ended:
date date date date date date date date	date dd mm O 24hr
5. Odometer reading at end:	5. Odometer reading at end:
 Number of passengers (excluding driver) in each age group at end of trip. Check if none. 	6. Number of passengers (excluding driver) in each age group at end of trip. Check if none.
None O Under 5 years	None O Under 5 years
5 to 14 15 years data with the second	5 to 14 15 years years and over
 7. Why are you making this trip? (check one purpose only) ○ To go home 	 7. Why are you making this trip? (check one purpose only) O To go home
○ To go to work or school	\bigcirc To go to work or school
• To do shopping or errands (such as	\bigcirc To do shopping or errands (such as
 To go to a recreational or social activity 	 Personal or family appointments) To go to a recreational or social activity
\bigcirc To go somewhere else (specify)	\bigcirc To go somewhere else (<i>specify</i>)
Driving as part of the job	Driving as part of the job
picking up or delivering goods	➡ ○ picking up or delivering goods
O dangerous goods	O dangerous goods
O other work purpose	O other work purpose
8. Driver's sex	8. Driver's sex
O Male O Female	O Male O Female
9. Driver's age group	9. Driver's age group
\bigcirc under 20 \bigcirc 55 to 64 \bigcirc 20 to 24 \bigcirc 65 to 74	○ under 20 ○ 55 to 64 ○ 20 to 24 ○ 65 to 74
○ 25 to 34 ○ 75 to 84	○ 25 to 34 ○ 75 to 84
○ 35 to 44 ○ 85 and over ○ 45 to 54	 ○ 35 to 44 ○ 65 and 6ver ○ 45 to 54
10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	10. Did you travel on any roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
Yes O No O	Yes O No O
If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	If yes, what was the <i>estimated</i> distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?
│	│
11. Fuel purchased during this trip?	11. Fuel purchased during this trip?
\bigcirc No \bigcirc Yes go to page 26	\bigcirc No \bigcirc Yes no to page 26
5 5400 151 1	

	Trip 35		Trip 36
1.	Date / Time trip started:	1. Date	e / Time trip started:
	date	date	
	dd mm O 24hr		dd mm O 24hr
2.	Odometer reading at start:	2. Odo	ometer reading at start:
	1/10		1/10
3.	Number of passengers (excluding	3. Nun	nber of passengers <i>(excluding</i>
	of trip. Check if none.	of ti	rip. Check if none.
		Nor	
	5 years	E to	
	years and over	yea	rs and over
4.	Date / Time trip ended:	4. Date	e / Time trip ended:
	date date of a.m.	date	ol
	$dd mm$ $\bigcirc 24 hr$	uale	$\begin{array}{c c} c \\ c \\ c \\ d \\ d \\ mm \\ \end{array} \qquad O 24 hr$
_		5 0 1	
5.	Odometer reading at end:	5. Udd	ometer reading at end:
	1/10		1/10
6.	Number of passengers (excluding	6. Nun	nber of passengers <i>(excluding</i>
	driver) in each age group at end of	driv	ver) in each age group at end of
		trip.	
	None 0 5 years	Non	e 5 years
	5 to 14 15 years and over	5 to year	14 15 years and over
7.	Why are you making this trip?	7. Why	y are you making this trip?
	(check one purpose only)	(che	ck one purpose only)
	O To go home	01	Го go home
	O To go to work or school	0 1	To go to work or school
	• To do shopping or errands (such as	s O To do shopping or errands (su	
	\bigcirc To go to a recreational or social		To go to a recreational or social
	activity	activity	
	O To go somewhere else (<i>specify</i>)	r O -	To go somewhere else (specify)
	Driving as part of the job	Driv	ing as part of the job
╘	○ picking up or delivering goods	L O	picking up or delivering goods
	O dangerous goods		O dangerous goods
	• to or from service call		to or from service call
			other work purpose
8.	Driver's sex	8. Driv	ver's sex
<u>م</u>	○ Male ○ Female Driver's age group		viale U Female
9.	\bigcirc under 20 \bigcirc 55 to 64		under 20 \bigcirc 55 to 64
	○ 20 to 24 ○ 65 to 74	ŏ	20 to 24 O 65 to 74
	○ 25 to 34 ○ 75 to 84	Õ	25 to 34 0 75 to 84
	○ 35 to 44 ○ 55 and over	00	45 to 54
10.	Did you travel on any roads with	10. Did	you travel on any roads with
	posted speeds of 80 km/h	pos	ted speeds of 80 km/h
	(50 m.p.n.) or more during this trip?	(50 ו	m.p.n.) or more during this trip?
[Tes ∪ N0 ∪ If ves what was the estimated	Yes	○ N0 ○ s what was the estimated
*	distance travelled on roads with	dista	ance travelled on roads with
	posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	post or m	ea speeds of 80 km/h (50 m.p.h.)
	O km		O km
	1/10 O miles		1/10 O miles
11.	Fuel purchased during this trip?	11. Fue	I purchased during this trip?
	O No	0	No
	O Yes, go to page 26.	O Yes, go to page 26.	
5 5 4	00-151 1		Dog- 00
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Detailed Information For Your Interest

Purpose of the survey

It is the goal of this survey to provide annual estimates of the amount of road travel, broken down by types of vehicle, age and sex of driver, time of day and season. Transport Canada sponsors the survey and uses the information in conjunction with other data to monitor how vehicle use changes over time and how use affects safety, fuel consumption and the environment. The results are also the prime source of road vehicle use information for researchers and interested members of the public. Prior to this survey, there was no valid, comprehensive source for this information in Canada, even though about ninety percent of all travel in Canada is by road.

Why this vehicle was chosen

Your vehicle was one of those that was selected in your province/territory so that we can find out how you use it over the stated time period. To save money, we are keeping the number of vehicles sampled to a minimum, so it is important that we get your response. Your response is not analysed in any way that identifies you or your vehicle - it is only useful to us when combined with all the other responses. We get a representative picture by picking vehicles at random from the official vehicle registration files, in order to cover the entire country and all types of vehicles and we cover the whole year by picking new ones every week. Once the completed forms are returned, we combine them to build up a profile of the average kilometres for vehicles during the year, then multiply the average by the total number of registered vehicles in the country to obtain total kilometres in the year.

The profile created from the sample includes average kilometres per vehicle for each day of the week, and each hour within the day, by sex and age group of drivers, by trip purpose, and by highways and other roads. Each of these characteristics is then multiplied by the total number of vehicles to obtain the total vehicle-kilometres during the year in each group.

The recorded number of passengers at the beginning and ending of each trip are used to calculate average vehicle occupancy, which is multiplied by vehicle-kilometres to give the total person-kilometres of travel in a year. "Person-kilometres" is the main measure used to compare travel by different means of transport - for example the extent of car travel versus travel by plane, train, intercity bus or urban transit.

How we use each question

Questions 2 and 5 are the most important of all, allowing us to know the kilometres traveled each trip, and total traveled by the vehicle during the survey days. These are essential to calculating the amount of travel in the country each year.

Questions 1 and 4 tell us when trips start and finish, so we can show, for example, how much travel is on weekdays compared to weekends, in the morning and evening rush-hours compared to the middle of the day, or in the middle of the night. This data can be used to show how staggered working hours are spreading the peaks, whether Sunday shopping is shifting traffic from weekdays, whether changes in night-time accidents involving alcohol are partly due to changes in night-time traffic and so on. These questions also give us the trip duration in hours and minutes, which helps us determine how much of total travel is made up of very short local trips and how much of long intercity trips. We can also compare the duration of trips to the kilometres traveled to estimate average speeds, in order to see whether speeds are tending to fall over the years through congestion.

Detailed Information For Your Interest

Questions 3 and 6 ask for the number of passengers carried, **excluding the driver**, at the beginning and ending of each trip which lets us calculate vehicle occupancy. The details of passengers by age-group are primarily for safety analyses because of the particular concerns over safety of infants and other children. Multiplying the number of passengers carried by vehicle-kilometres we produce person-kilometres, the best indicator of the extent of personal travel, and its breakdown by time of day, trip purpose, etc. This information allows for comparisons of car travel to travel by public transport - showing for instance, how the share of total long-distance travel by plane is rising, while shares by train and intercity bus are declining; or how the share of short-distance travel by public transit is declining. Average occupancies by type of vehicle, trip purpose and time of day are very important to measuring trends in congestion, fuel consumption and vehicle emissions.

Question 7 gives trip purpose. It is important to know why you are travelling by road for the people who plan urban land use, or plan public transit, air, bus, and bus services. It also lets us know, whether leisure travel is growing faster than commuting, or whether people are travelling longer distances to do their shopping.

Questions 8 and 9 asks the driver's sex and age group, particularly for computation of accident rates by each group. The age categories listed are those normally used by safety agencies in compiling accident reports, so the estimates of kilometres traveled by age group can be combined with records of accident involvement, to give accidents per vehicle-kilometre.

Question 10 attempts to distinguish between travel on urban streets, and that on highways or in rural conditions. We are attempting to do this by asking you how much of each trip is on roads with posted speed limits of 80 km/h or more, which we will use as an approximation of highway or rural conditions. This is an important distinction since safety, fuel consumption and emissions differ greatly between urban streets, and highways or rural conditions. But it is a difficult distinction to make, because people often don't know whether they are in an urban or a rural area, or whether the road they are on is classified as a street or a highway. The clearest difference that most people are aware of is the speed limit. Of course, we realise many drivers will not know exactly how many kilometres they drive on roads with posted speed limits of 80 km/h or more during a trip, so we expect only the best approximate answer the driver is able to provide.

Question 11 asks if any fuel was purchased during the trip. The answers are not directly used to try to assess the fuel consumption of your vehicle, but instead to calculate the average amount of fuel bought per day by all the vehicles in the sample that are similar to yours (in type, engine size and model year according to the vehicle registration files). From the daily averages we can estimate annual amounts of fuel used nationally by vehicles similar to your group. These are useful to monitor trends in fuel use - for example to see how much of the increase in national fuel use is due to the shift from cars to vans and utility vehicles; or to see how fuel use changes by age of vehicle. Total fuel purchases by each type of vehicle can be compared to annual vehicle-kilometres for that type, to give their average fuel consumption.

Comments about the trip and fuel log

	Fuel Purchases	6		
	Enter date of fuel purchase	Enter odometer reading at time of purchase	Fuel gauge before purchase	Type of fuel
EXAMPLE	Month Day 0 9 0 8 (01-12) (01-31)	Odometer 7 4 8 3 6 1/10 1/10 Ø kilometres miles	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other
1	Month Day (01-12) (01-31)	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other
2	Month Day	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other
3	Month Day (01-12) (01-31)	Odometer	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other
4	Month Day (01-12) (01-31)	Odometer	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other
5	Month Day	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline ethanol blend diesel other

Fuel Purchases			
Enter quantity purchased	Enter amount spent	Price per litre/gallon	Fuel gauge after purchase
 3 2 . √ litres ○ US gallons ○ other 	\$ 222.00	67 . 9 ¢	 ✔ full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full
│ litres │ US gallons │ other	\$	· ¢	 full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 3/8 full 1/4 full 1/8 full
│ litres │ US gallons │ other	\$	¢	 full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 3/8 full 1/4 full 1/8 full
│ litres │ US gallons │ other	\$	· ¢	 full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 1/4 full 1/8 full
│ litres │ US gallons │ other	\$	· ¢	 full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 3/8 full 1/4 full 1/8 full
│ litres │ US gallons │ other	\$	¢	 full 7/8 full 3/4 full 5/8 full 1/2 full 3/8 full 3/8 full 1/4 full 1/8 full

I



Confidential once completed

Collected under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19. Si vous préférez ce carnet des activités de conduite en français, veuillez nous appeler au numéro de téléphone indiqué ci-dessous.

Survey Objective

The purpose of this survey is to help Transport Canada improve road safety, monitor fuel consumption and deal with the impact of vehicle usage on the environment. The information you provide will be combined with other data already available to provide Transport Canada with a better picture of the total distance travelled by vehicles and fuel purchases. The information you are asked to provide in this trip and fuel log covers:

- Starting and ending time of trip to see when traffic is on the road.
- Starting and ending odometer readings for each trip to measure the distance travelled. ٠
- Number of passengers on each trip and types of roads driven to provide information related to safety.
- Trip purpose to determine the type of trips.
- Truck configuration to see what types of configurations are being used. •
- Driver's sex and age group to obtain a profile of drivers. •
- Fuel purchases to get an idea of how much fuel is purchased during the period.

For more background information about specific questions, please see the inside back cover.

Reporting procedure

Please complete the trip and fuel log for the first week of the period stated on the label on page 2. Then continue to complete the fuel portion of the log for the remainder of the period stated on the label or until you have recorded two fill-ups or made five fuel purchases.

Any questions or concerns?

 \bigcirc

Thank you very much for your cooperation.

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Canada



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Page 2

PLACE LABEL HERE

Plea	se read this first					
	Please do not complete this log while driving.					
1.	Only report for the vehicle identified on the label above.					
2.	Please verify that the vehicle information is correct	t and make any corrections on the label.				
	General Info	ormation				
1.	Do you still own or lease the vehicle described	d on the label above?				
	\bigcirc Yes (Please go to guestion 2)					
	\bigcirc Never owned or leased the identified vehicle					
	○ No → Was this vehicle, (please check wh date in the box provided)	ere applicable and record the				
	◯ sold/traded					
	O scrapped	te.				
	returned (end of lease)					
	leased to someone else	day month year				
	other. please specify.					
(Note: If you do not own or lease the vehicle	please mail back the trip log at this point				
	Note. If you do not own of lease the vehicle,	please mail back the tilp log at this point.				
2.	Which of the following best describes this veh	iicle?				
	⊖ car	O bus				
	\bigcirc station wagon	⊖ straight truck				
	O van	O truck tractor				
	O sport utility (Bronco, Blazer, Jeep,	O other vehicle: <i>please specify:</i>				
	Pathfinder)					
3.	I ype of activity Please indicate whether this vehicle is currently being u	sed by				
	\sim a for-hire trucking carrier (includes contract	\bigcirc a person company or agency whose main				
	trucking)	business is not trucking				
	 an owner operator whose main business is trucking 	O other				
4.	What kind of fuel does this vehicle use?					
	◯ gasoline ◯ natural gas	○ other, <i>please specify</i> :				
	O diesel O propane					
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Page 3

The information for this log could be taken from company records, or you could send us copies of the driver logs, or it can be filled in by the driver(s). If for some reason you are not able to provide information for a particular trip, please explain in the comments section below.

Please fill in the Driver Information section on the fold-out page for all drivers using this vehicle.

If this vehicle was not "in use" for any days during the first seven days of the reporting period, please provide the date(s) in the section below.

	Dates n	ot in use	
Day Month 1.	Day Month	Day Month 3 4 Day Month 7	Day Month
	Odomete	er Reading	
As soon as you receive this log please record the date and the current odometer reading.	Month Day → (01-12) (01-31)	Odometer 1/10	
Please record the date and odometer reading before returning this log.	→ Month Day (01-12) (01-31)	Odometer	
Comments about the trip	and fuel log		

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Page 4

Instructions For Completing the Trip and Fuel Log

Listed below are the instructions for completing the trip and fuel log. Please read them carefully and if you have any questions, contact us at the telephone number shown on the front cover.

Please complete the trip and fuel log for the first week of the period stated on the label on page 2. Then continue to complete the fuel portion of the log for the remainder of the period stated on the label or until you have recorded two fill-ups or made five fuel purchases. **This information can be taken from company records** for the first week of the reporting period, or you could send us copies of the driver logs.

Examples

Please refer to the Examples on pages 24 to 31 for help in completing the log.

Trip

A trip is defined as travelling from one location to another for a **specific purpose or use such as carrying goods, going to or from work, or using the vehicle for personal use**. This information will enable us to know what times of day the vehicle is on the road. **Report a separate trip if there is:**

a change of purpose or use

or

a stop of more than 30 minutes

or

a change in the truck configuration

or

• a change in the status of the load from loaded to empty or the reverse

or

• a change of drivers

Date/time of departure and date/time of arrival

Please indicate the day of the month and time of departure and the day of the month and time of arrival for each trip.

Examples of how to complete this log are shown on pages 24 to 31.

Example 1. A change in the status of the load from empty to loaded - pages 24 and 25.

Example 2. A change in the trip purpose and a stop of more than 30 minutes - pages 26 and 27.

Example 3. A change in the truck configuration - pages 28 and 29.

Example 4. A change of drivers and two stops over 30 minutes - pages 30 and 31.

Example 5. A fuel purchase - pages 34 and 35.

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Page 5

Note:

Fold out this page.

It has the codes for the **Truck Configuration** and a section to be completed and used for **Driver Information**

Truck Configuration Section

Please enter the following codes in the proper columns (I, II and $\,$ III) of the truck configuration section of the log.

Truck Configuration	Trailer Type	Connection Type
Column I	Column II	Column III
Code	Code	Code
 Straight truck Tractor only Tractor and 1 trailer Straight truck and trailer Tractor and 2 trailers Tractor and 2 trailers 	1 - Not applicable 2 - Van 3 - Flatbed 4 - Tanker 5 - Dump	1 - Not applicable 2 - "B" Train 3 - Other
7 - Other	6- Other (please specify)	

Driver Information

For each driver of this vehicle, please complete the driver information below. Provide each driver's sex and age group. The column for driver's initials is for your use only so that you can easily identify which driver code belongs to which driver. Enter the appropriate driver code for each trip in the **Driver** column on the log.

Driver's initials	Driver Code	Driver's sex	Drive	Driver's age-group	
	Α	O Male O Female	 Under 20 20 to 24 25 to 34 35 to 44 	 ○ 45 to 54 ○ 55 to 64 ○ 65 and over 	
	В	O Male O Female	Under 20 20 to 24 25 to 34 35 to 44	 45 to 54 55 to 64 65 and over 	
	С	O Male O Female	Under 20 20 to 24 25 to 34 35 to 44	 45 to 54 55 to 64 65 and over 	
	D	O Male	Under 20 20 to 24 25 to 34 35 to 44	 45 to 54 55 to 64 65 and over 	
	E	O Male O Female	 ○ Under 20 ○ 20 to 24 ○ 25 to 34 ○ 35 to 44 	 45 to 54 55 to 64 65 and over 	

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			Start of tr	ip				End of trip		
				24	4 hour clock (hour clock (00:00 to 23:59)				
	Date	Time	Ode re	ometer ading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)	
TRIP 1	dd mm	00:00 to 23:59		km miles		dd mm	00:00 to 23:59	km ○ miles		
TRIP 2	dd mm	00:00 to 23:59				dd mm	00:00 to 23:59			
TRIP	dd mm	00:00 to 23:59				dd mm	: 00:00 to 23:59			
TRIP 4	dd mm	00:00 to 23:59				dd mm	00:00 to 23:59			
	Please remember.	For instructi completing fuel log, see	ons for the trip and a page 5.	What if this vehicle isn't used much - or at all?	This survey wa measure how r Canadians are using their veh For our studies vehicle not in u as important as is. Days that ve not used shou recorded on Pa	ints to much using or not nicles. s - a use is just s one that ehicle is ld be age 4.	Please mail back the log even if you do not own or lease the vehicle.	 When to start a new trip 1. A change of purpose 2. If you stop longer that 3. If truck configuration 4. If status of truck load (see page 5). 5. If drivers change. 	o: e or use. an 30 minutes. has changed. d changes	

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Code Purpose of trip	Truck configuratio	n Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	(please us codes on "fold-out pag	(please use codes on "fold-out" page,	Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Column	Code	4 - outside Canada		
O ₁ O ₂ O ₃ O ₄ O ₅ O ₆ O dangerous goods O 7 Other			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other}$			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	No Yes, go to page 34.
O 1 O 2 O 3 O 4 O 5 O 6 O dangerous goods O 7 Other			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	✓ Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? Km ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods $\bigcirc_7 \text{ Other}$			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	No Yes, go to page 34.
Please record times in a 24H format. i.e. $6:00 \text{ PM} = 1800$, 10:30 PM = 2230. Please select only one "Purpose of Trip". (i.e. should be the main purpose) For examples of different trip situations, please see pages 24 - 31.	All kilometres travelled durin days should b accounted for.	or miles g the 7 Pie pur	y fuel purchases? ase record chases on page 34.	ne number of passengers sho ny spare drivers but not the ac nank you very much for nd participation.	uld include ctual driver. ' your time

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Page 7

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			Start of trip				End of trip	
			24	l hour clock (
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)
TRIP 5	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
TRIP	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
TRIP	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
TRIP 8	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
TRIP 9	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		,
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Code Purpose of trip	Truc configur	k ation	Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	please) codes fold-out ו	use on bage")	(please use codes on "fold-out page")	Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Colur	nn III	Code	4 - outside Canada		
$\begin{array}{c c} & & & \\ &$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
O 1 O 2 O 3 O 4 O 5 O 6 O dangerous goods O 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
<pre> O 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 dangerous goods O 7 Other </pre>				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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			Start of trip				End of trip	
			24	4 hour clock ((00:00 to 23	3:59)		
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)
Т R I Р 10	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 11	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 12	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R I P 13	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
Т R I Р 14	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
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Code Purpose of trip 1 -Driving to or from service call	Tru configu	ck ration	Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	(pieas code: "fold-out	e use s on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
 5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose) 	Colu	mn 	Code	4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Fyes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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			Start of trip				End of	trip	
			24	4 hour clock (Number of	(00:00 to 23	3:59)			Number of
	Date	Time	Odometer reading	passengers (excluding current driver)	Date	Time	0	dometer reading	passengers (excluding current driver)
T R I P 15	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 16	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 17	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R P 18	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 19	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
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Code Purpose of trip 1 -Driving to or from service call	Tru configu	ck ration	Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	(pieas code: "fold-out	e use s on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Colu	mn 	Code	U.S. border 4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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Page 13

			Start of trip				End of trip	
			24	l hour clock (
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)
T R I P 20	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 21	 dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 22	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 23	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
T R P 24	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59		
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Code Purpose of trip 1 -Driving to or from service call	Tru configu	ck ration	Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	(pieas code: "fold-out	e use s on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Colu	mn 	Code	4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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Page 15

			Start of trip				End of trip		
			24	4 hour clock (hour clock (00:00 to 23:59)				
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)	
T R P 25	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
Т R I Р 26	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 27	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R P 28	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 29	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
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Code Purpose of trip 1 -Driving to or from service call	Tru configu	ck ration	Driver, Code	Trip type	Road type	Fuel purchased?
 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 	(pieas code: "fold-out	e use s on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Colu	mn 	Code	4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? km km	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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Page 17

			Start of trip		End of trip						
			24	l hour clock (hour clock (00:00 to 23:59)						
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)			
T R I 9 30	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
Т R I Р 31	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
T R P 32	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
T R I P 33	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
T R P 34	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
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Code Purpose of trip 1 - Driving to or from service call 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose		Truck configuration (place use		Trip type	Road type	Fuel purchased?
		e use : on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)	Colu 	mn 	Code	4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods $\bigcirc_7 \text{ Other}$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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Page 19

			Start of trip		End of trip						
			24	4 hour clock (Number of	our clock (00:00 to 23:59)						
	Date	Time	Odometer reading	passengers (excluding current driver)	Date	Time	Oc re	dometer eading	passengers (excluding current driver)		
T R P 35	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
Т R I Р 36	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
T R P 37	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
Т Р 38	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
T R I 9 39	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59					
	5-5400-152.1	1							Page 20		

Code Purpose of trip 1 - Driving to or from service call 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose		Truck configuration (place use		Trip type	Road type	Fuel purchased?
		e use : on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
 5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose) 	Colu 	mn 	Code	U.S. border 4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods $\bigcirc_7 \text{ Other}$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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			Start of trip				End of	trip	
	Date	Time	24 Odometer reading	4 hour clock (Number of passengers (excluding current driver)	00:00 to 23 Date	3:59) Time	0	dometer reading	Number of passengers (excluding current driver)
Т R I Р 40	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
Т R I Р 41	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
T R I P 42	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
Т R I Р 43	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
Т R – Р 44	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
ļ	5-5400-152.´	1		1					Page 22

Code Purpose of trip 1 - Driving to or from service call 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose		Truck configuration (place use		Trip type	Road type	Fuel purchased?
		e use : on page")	(please use codes on "fold-out page")	 1 - within province 2 - between provinces 3 - across Canada - 	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
 5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose) 	Colu 	mn 	Code	U.S. border 4 - outside Canada		
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods $\bigcirc_7 \text{ Other}$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other }$				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.
1 2 3 4 5 6 dangerous goods 7 Other				$\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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			Start of trip		End of trip									
			24	4 hour clock (10ur clock (00:00 to 23:59)									
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)						
	Examp On Septe he left his The fertili 80857.	le 1. Two tr ember 21, a farm s house at 7:00. izer is loaded an	ips due to a change i her drove his empty straight t When he arrived at his destir hd he leaves for his farm at 7	n load from ruck to pick up a nation at 7:30, th :50 a.m. that san	empty to a load of ferti le odometer r me morning a	loaded lizer. The odom reading was 808 and arrives back	neter reading was 80795 kilor 25 kilometres. at 8:22 a.m. The odometer	netres when reading was						
TRIP 1	21 09 dd mm	7 : 00 00:00 to 23:59	8 0 7 9 5 ₩ km miles	0	21 09 dd mm	7 : 30 00:00 to 23:59	8 0 8 2 5	0						
TRIP 2	21 09 dd mm	7 : 50 00:00 to 23:59	80825	0	21 09 dd mm	8 : 22 00:00 to 23:59	80857	0						
TRIP 3	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59								
TRIP 4	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59								
	5-5400-152	1						Page (
Purpose of trip 1 - Driving to or from service call 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose) The farmer is a 47 year old male. This infor Since the whole trip took place within the sa There were no fuel purchases. Note: The trip information could be logs, or it could be filled in by	Truck configuration (please use codes on "fold-out page") Column I II III mation would be me province, it w taken from co the driver(s).	Driver, Code (please use codes on "fold-out page") Code completed on rould be codec	Trip type Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border 4 - outside Canada the fold out page. On the as "within the province".	Road type Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip? e trip log, the driver code would	Fuel purchased? (either purchased or from company supplies)									
---	--	---	---	---	--									
$\bigcirc_1 \bigcirc_2 \ \textcircled{0}_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \text{ Other}$	111	A		Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.									
$\bigcirc_1 \ \textcircled{0}_2 \ \bigcirc_3 \ \bigcirc_4 \ \bigcirc_5 \ \bigcirc_6$ $\textcircled{0} dangerous goods$ $\bigcirc_7 \ Other$	1 1 1	Α		Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.									
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.									
○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ dangerous goods ○ 7 Other			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	✓ Yes O No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? M km 1/10 miles	No Yes, go to page 34.									

	Start of trip						End of trip			
			24	4 hour clock (< (00:00 to 23:59)					
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)		
	Example 2. Three trips due to a change in trip purpose and one stop over 30 minutes On February 19, the driver of a straight truck left his home in Ontario at 6:43 a.m. to go to the terminal of a local broker. The odometer reading was 105296 miles at the start of his trip. He arrived at the terminal at 7:15. The odometer reading was 105310.									
	At the terminal, he picked up a load and left the terminal at 8:30 a.m. to go to Montreal, where he made 3 short stops for deliveries, none of which was more than thirty minutes. He completed his last delivery at 12:20. The odometer reading was 105550.									
TRIP	19 02 dd mm	6:43 00:00 to 23:59	1 0 5 2 9 6 ◯ km ଐ miles	0	19 02 dd mm	7:15 00:00 to 23:59	1 0 5 3 1 0 ◯ km ଐ miles	0		
TRIP 2	19 02 dd mm	8 : 30 00:00 to 23:59	1 0 5 3 1 0	0	19 02 dd mm	12 : 20 00:00 to 23:59	1 0 5 5 5 0	0		
TRIP 3	19 02 dd mm	13 : 05 00:00 to 23:59	1 0 5 5 5 0	0	19 02 dd mm	18 : 15 00:00 to 23:59	1 0 5 7 9 3	0		
TRIP 4	dd mm	00:00 to 23:59			dd mm	00:00 to 23:59				
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Purpose of trip 1 - Driving to or from service call 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3 - Empty (unladen of goods) 4 - Other work purpose 5 - Driving to home 7 - Other (please describe the purpose) He then stopped for lunch for 45 minutes a The driver is a 35 year old male. This infor Since the first trip took place within the san	Truck configuratic (please use codes on "fold-out page Column I II I nd returned ho mation would	n Driver, Code (please use codes on "fold-out page") Code me. When he a pe completed on would be coded	Trip type Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border 4 - outside Canada rrived home, it was 6:15 the fold out page. On th as "within the province"	Road type Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	Fuel purchased? (either purchased or from company supplies) was 105793.
The trip to Montreal and the trip home wou Note: The trip information could be logs, or it could be filled in b	ld be coded as taken from y the driver("between provir company rec s).	nces". There was one fue	el purchase.	er
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \ \textcircled{0}_5 \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \text{ Other}$	11			Fyes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	○ No
$\bigcirc 1 \bigcirc 2 \bigcirc 3 \bigcirc 4 \bigcirc 5 \bigcirc 6$ \bigcirc dangerous goods $\bigcirc 7$ Other	11		$ \bigcirc 1 \\ \textcircled{0} 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 205 ↓ km 1/10 ↓ miles	No Yes, go to page 34.
$\bigcirc_1 \bigcirc_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \ \textcircled{0}_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc_7 \text{ Other}$	1 1		$ \bigcirc 1 \\ \textcircled{0} 2 \\ \bigcirc 3 \\ \bigcirc 4 $	If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 210 ↓ 1/10 ↓	No Yes, go to page 34.
$ \bigcirc 1 \bigcirc 2 \bigcirc 3 \bigcirc 4 \bigcirc 5 \bigcirc 6 \\ \bigcirc \text{ dangerous goods} \\ \bigcirc 7 \text{ Other } _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ $			$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array} $	Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 34.

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		Start of trip				End of trip		
		24	4 hour clock ((00:00 to 23:59)				
Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)	
Example 3. Two trips due to a change the truck configuration A road tractor leaves Halifax for Fredericton on November 16 at 15:39 with two van trailers carrying paper, joined by a "B" connector. The odometer reading is 204583 kilometres at the start of the trip. The truck arrives in Fredericton at 21:52 and delivers one of the trailers. The odometer reading was 205058. The unit then leaves Fredericton at 22:47 for Moncton where the second trailer is delivered. When the truck arrives at 00:50, the odometer reading is 205258.								
16 11 dd mm	15 : 39 00:00 to 23:59	2 0 4 5 8 3 Ø km O miles	0	16 11 dd mm	00:00 to 23:59	2 0 5 0 5 8	0	
dd mm	22:47 00:00 to 23:59	205058	0	17 11 dd mm	00:00 to 23:59	205258	0	
R 3 dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
r R b dd mm	00:00 to 23:59			dd mm	00:00 to 23:59			
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Code Purpose of trip 1 - Driving to or from service call 2 2 - Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) 3. Empty (unladen of goods) 3 - Other work purpose 5. Driving to work 6 - Driving to home 7 - Other (please describe the purpose) The driver is 54 year old male. This inforr The first trip would be recorded as "betwe Brunswick). There was one fuel purchase. Note: The trip information could be logs, or it could be filled in be	Column (please use codes on "fold-out page", Column I II III nation would be c een provinces" (N e taken from c y the driver(s)	Driver, Code (please use codes on "fold-out page") Code completed on the Nova Scotia to	Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border 4 - outside Canada ne fold out page. On the New Brunswick) while the pords, or you could se	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip? trip log, the driver code would the e second trip was "within the p	ruei purchased? (either purchased or from company supplies) De "A". Drovince" (New
$\bigcirc_1 \ \textcircled{0}_2 \ \bigcirc_3 \ \bigcirc_4 \ \bigcirc_5 \ \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \text{ Other}$	522	A	$ \bigcirc 1 \\ \textcircled{0} 2 \\ \bigcirc 3 \\ \bigcirc 4 $	yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? ↓20 ↓ km 1/10 ↓ miles	O No Ves, go to page 26.
$\bigcirc_1 \ \textcircled{0}_2 \ \bigcirc_3 \ \bigcirc_4 \ \bigcirc_5 \ \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \ \text{Other}$	321	A		yes O No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 178 ○ km 1/10 ○ miles	No Yes, go to page 26.
<pre></pre>			$ \bigcirc 1 \\ \bigcirc 2 \\ \bigcirc 3 \\ \bigcirc 4 $	Ves No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip?	No Yes, go to page 26.
<pre></pre>			$ \begin{array}{c} 0 1 \\ 2 \\ 3 \\ 4 \end{array} $	yes O No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? O km 1/10 Miles	No Yes, go to page 26.

	Start of trip						End of trip			
			24	4 hour clock (00:00 to 23	3:59)				
	Date	Time	Odometer reading	Number of passengers (excluding current driver)	Date	Time	Odometer reading	Number of passengers (excluding current driver)		
	Example 4. Multiple trips due to driver changes and two stops. A straight truck leaves Calgary at 21:13 for Seattle on December 15, carrying automobile tires. The odometer reading is 83527 kilometres. Driver "A" is a 48 year old male and driver "B" is a 33 year old female. This information would be recorded on the fold-out page. The truck arrives at 10:45 the next day. The final odometer reading is 84497. The drivers take turns driving. A new trip is recorded each time there is a driver change. In addition to the driver changes there are two stops, each over 30 minutes between the time the truck leaves Calgary									
T R I P	15 12 dd mm	21:13 00:00 to 23:59	8 3 5 2 7 ₩ km miles	1	15 12 dd mm	00:00 to 23:59	8 3 7 0 5	1		
T R I P 2	16 12 dd mm	1 : 05 00:00 to 23:59	8 3 7 0 5	1	16 12 dd mm	3:25 00:00 to 23:59	8 3 9 1 2	1		
T R I 9	16 12 dd mm	3:25 00:00 to 23:59	8 3 9 1 2	1	16 12 dd mm	4 : 12 00:00 to 23:59	84007	1		
T R I P	16 12 dd mm	5 : 34 00:00 to 23:59	8 4 0 0 7	1	16 12 dd mm	10 : 45 00:00 to 23:59	8 4 4 9 7	1		
5	-5400-152 ·	1								

Code Purpose of trip	Tru configu	ick Iration	Driver, Code	Trip type	Road type	Fuel purchased?
 Driving to or from service call Carrying goods or equipment (if applicable, please also check if carrying dangerous goods) Empty (unladen of goods) Other work purpose 	(pleas code "fold-out	se use s on t page")	(please use codes on "fold-out page")	Code 1 - within province 2 - between provinces 3 - across Canada - U.S. border	Did you travel on any roads with <i>posted</i> speeds of 80 km/h (50 m.p.h.) or more during this trip?	(either purchased or from company supplies)
5 - Driving to work 6 - Driving to home 7 - Other (please describe the purpose)		ımn I III	Code	4 - outside Canada		
and the time it arrives in Seattle. The first accident.	st stop is	at 23:4	7 to 01:05 for	a meal while the secon	d stop is from 04:12 to 05:34	due to a minor
The first trip takes place entirely in Alberta. and the truck crosses the U.S. border durin	The sec ig the fina	cond trip al trip. 1	o crosses into l There were two	British Columbia. The thi fuel purchases.	rd trip takes place entirely in B	ritish Columbia
Note: The trip information could be logs, or it could be filled in b	e taken by the dr	from c river(s)	company rec).	ords, or you could s	end us copies of the drive	er
$\bigcirc_1 \ \textcircled{0}_2 \ \bigcirc_3 \ \bigcirc_4 \ \bigcirc_5 \ \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \ \text{Other}$	1 1	1	Α		F S Yes O No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 150 S km 1/10 Miles	○ No ♥ Yes, go to page 26.
$ \bigcirc 1 \ \bigoplus^{2} \ \bigcirc 3 \ \bigcirc 4 \ \bigcirc 5 \ \bigcirc 6 \ \bigcirc 6 \ \bigcirc 7 \ Other \ _ \ _ \ _ \ _ \ _ \ _ \ _ \ _ \ _ \ $	1 1	1	A	$\bigcirc 1$ $\bigotimes 2$ $\bigcirc 3$ $\bigcirc 4$	Yes ○ No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 200 ↓ 1/10 ♀ km 1/10 ♀ miles	No Yes, go to page 26.
$\bigcirc_1 \bigoplus_2 \bigcirc_3 \bigcirc_4 \bigcirc_5 \bigcirc_6$ \bigcirc dangerous goods \bigcirc_7 Other	1 1	1	В		Yes No If yes, what was the estimated distance travelled on roads with posted speeds of 80 km/h (50 m.p.h.) or more during this trip? 86 ↓ 1/10 ↓ km 1/10 ↓ miles	No Yes, go to page 26.
$\bigcirc_1 \ \textcircled{0}_2 \ \bigcirc_3 \ \bigcirc_4 \ \bigcirc_5 \ \bigcirc_6$ $\bigcirc \text{ dangerous goods}$ $\bigcirc 7 \ \text{Other}$	1 1	1	В	$\bigcirc 1$ $\bigcirc 2$ $\textcircled{0} 3$ $\bigcirc 4$	Image: Weight of the set of the se	No Yes, go to page 26.
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Detailed Information For Your Interest

Purpose of the survey

It is the goal of this survey to provide annual estimates of the amount of road travel, broken down by types of vehicle, age and sex of driver, time of day and season. Transport Canada sponsors the survey and uses the information in conjunction with other data to monitor how vehicle use changes over time and how use affects safety, fuel consumption and the environment. The results are also the prime source of road vehicle use information for researchers and interested members of the public. Prior to this survey, there was no valid, comprehensive source for this information in Canada, even though about ninety percent of all travel in Canada is by road.

Why this vehicle was chosen

Your vehicle was one of those that was selected in your province/territory so that we can find out how you use it over the stated time period. To save money, we are keeping the number of vehicles sampled to a minimum, so it is important that we get your response. Your response is not analysed in any way that identifies you or your vehicle - it is only useful to us when combined with all the other responses. We get a representative picture by selecting vehicles at random from the official vehicle registration files, in order to cover the entire country and all types of vehicles and we cover the whole year by selecting new ones every week. Once the completed forms are returned, we combine them to build up a profile of the average kilometres for a vehicle during the year, then multiply the average by the total number of registered vehicles in the country to obtain total kilometres in the year.

The profile created from the sample includes average kilometres per vehicle for each day of the week, and each hour within the day, by sex and age group of drivers and by type of vehicles. Each of these characteristics is then multiplied by the total number of vehicles to obtain the total vehicle-kilometres during the year in each group.

How we use each question

The odometer readings are the most important of all, allowing us to know the kilometres traveled for each trip, and the total travelled by the vehicle during the survey days. These are essential to calculating the amount of kilometres driven in the country each year.

Date and time of departure and arrival tell us when trips start and finish, so we can show, for example, how much travel is on weekdays compared to weekends, in the morning and evening rush-hours compared to the middle of the day, or in the middle of the night. These questions also give us the trip duration in hours and minutes, which helps us determine how much of total travel is made up of very short local trips and how much of long intercity trips. We can also compare the duration of trips to the kilometres traveled to estimate average speeds, in order to see whether speeds are tending to fall over the years through congestion.

Number of passengers carried, including any spare drivers but excluding the current driver, at the beginning and ending of each trip which lets us calculate vehicle occupancy. Multiplying the number of passengers carried by vehicle-kilometres we produce person-kilometres.

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Detailed Information For Your Interest

Purpose of trip Because the trucks we are surveying can be used for so many different purposes, we want to be able to describe them in broad categories, for example how many trucks are being used by small businessmen or farmers carrying equipment for their own operations, how many by larger businesses distributing their own goods or carrying them between plants, and how many by for-hire or contract carriers carrying for others. And to estimate those we also need to know how many are running empty, and how many are used for personal purposes (meaning not in the course of business).

The Driver Information is asked to provide driver's age group and sex, particularly for computation of accident rates by each group. The age categories listed are those normally used by safety agencies in compiling accident reports, so the estimates of kilometres travelled by age group can be combined with records of accident involvement, to give accidents per vehicle-kilometre.

Truck configuration, is asked because this questionnaire is being used for registered trucks or truck tractors with a gross weight of 4,500 kg (10,000 lbs) or more, and in actual use any vehicle might be used with different numbers and types of trailers. We are interested in knowing when, where and for which purposes different configurations are used, and in monitoring changes in configurations over time (e.g. shifts to doubles from tractor-semis). The question asks for the configuration to be described in detail, including the types of any trailers and connections used for them.

Type of road attempts to distinguish between travel on urban streets, and that on highways or in rural conditions. We are attempting to do this by asking you how much of each trip is on roads with posted speed limits of 80 km/h or more, which we will use as an approximation of highway or rural conditions. This is an important distinction since safety, fuel consumption and emissions differ greatly between urban streets, and highways or rural conditions. But it is a difficult distinction to make, because people often don't know whether they are in an urban or a rural area, or whether the road they are on is classified as a street or a highway. The clearest difference that most people are aware of is the speed limit. Of course, we realise it is difficult to know exactly how many kilometres are driven on roads with posted speed limits of 80 km/h or more during a trip, so we expect only the best estimated answer you are able to provide.

Fuel Purchased asks for the quantity of fuel purchased or pumped into the vehicle from company supplies. The answers are not directly used to try to assess the fuel consumption of the vehicle, but instead to calculate the average amount of fuel bought per day by all the vehicles in the sample that are similar (in type, engine size and model year according to the vehicle registration files). From the daily averages we can estimate annual amounts of fuel used nationally by vehicles similar to your group. These are useful to monitor trends in fuel use - for example to see how fuel use changes by age of vehicle. Total fuel purchases by each type of vehicle can be compared to annual vehicle-kilometres for that type, to give their average fuel consumption.

Federal Agreement

To avoid duplication in surveys, Statistics Canada has entered into an agreement under section 12 of the Statistics Act with the Federal Department of Transport for the sharing of information from this survey. Under section 12 of the Statistics Act you may refuse to share your information with the Federal Department of Transport by writing to the Chief Statistician and returning your letter of objection along with the completed questionnaire.

While participation in this survey is voluntary, your cooperation is very important.

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Fuel Log

	Enter date of fuel purchase	Enter odometer reading at time of purchase	Fuel gaug purc	je before hase	Туре	of fuel
EXAMPLE	Month Day 0 2 1 9 (01-12) (01-31)	Odometer 1 0 5 3 1 0 1/10 Ø kilometres 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 	 ○ 3/8 full √ 1/4 full ○ 1/8 full ○ empty 	 regular gasoline mid-grade gasoline premium gasoline other 	 ○ ethanol blend
1	Month Day	Odometer 1/10 kilometres miles	 7/8 full 3/4 full 5/8 full 1/2 full 	 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline other 	 ethanol blend diesel
2	Month Day	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 	 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline other 	 ethanol blend diesel
3	Month Day (01-12) (01-31)	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 	 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline other 	 ethanol blend diesel
4	Month Day (01-12) (01-31)	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 	 3/8 full 1/4 full 1/8 full empty 	regular gasoline mid-grade gasoline premium gasoline other	 ethanol blend diesel
5	Month Day	Odometer 1/10	 7/8 full 3/4 full 5/8 full 1/2 full 	 3/8 full 1/4 full 1/8 full empty 	 regular gasoline mid-grade gasoline premium gasoline other 	 ethanol blend diesel

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Enter quantity purchased	Enter amount spent	Price per litre/gallon	Fuel	gauge after purchase
	\$	6794	\oint full	○ 1/2 full
Ø litres			○ 7/8 full	○ 3/8 full
US gallons			◯ 3/4 full	◯ 1/4 full
O other			🔿 5/8 full	○ 1/8 full
	\$		🔿 full	O 1/2 full
		· ¢	○ 7/8 full	○ 3/8 full
US gallons			◯ 3/4 full	◯ 1/4 full
			🔿 5/8 full	○ 1/8 full
	\$		🔿 full	1/2 full
│ litres		└── │ - └── ¢	🔿 7/8 full	◯ 3/8 full
US gallons			◯ 3/4 full	◯ 1/4 full
O other			🔿 5/8 full	O 1/8 full
	\$		🔿 full	O 1/2 full
) litres		· · · · · · · · · · · · · · · · · · ·	○ 7/8 full	○ 3/8 full
US gallons			◯ 3/4 full	◯ 1/4 full
			○ 5/8 full	○ 1/8 full
	\$		🔿 full	O 1/2 full
		· · · · · · · · · · · · · · · · · · ·	🔿 7/8 full	○ 3/8 full
US gallons			◯ 3/4 full	◯ 1/4 full
			🔿 5/8 full	○ 1/8 full
	\$		🔿 full	1/2 full
◯ litres		<u> </u>	○ 7/8 full	○ 3/8 full
O US gallons			◯ 3/4 full	◯ 1/4 full
other			🔿 5/8 full	○ 1/8 full

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