



## 1st Quarter, 2012 (Preliminary Results)

Vehicle Registration Jurisdiction		Fleet Size	Sample Size	Average Number of Study Days	Average Number of Active Days	Daily Number of Trips	Daily Vehicle km Traveled	Daily Passenger km Traveled	Daily Fuel Consumption (L)	Daily Driving Time (h)	Fuel Consumption Ratio (L/100km)	Idling Ratio	Average Vehicle Occupancy	Average Speed (km/h)	Average Trip Length (km)	Average Trip Duration (min)	
SK	QC	Canada <sup>1</sup>	12,241,791	966	21.7	16.8	3.9 <sup>a</sup>	38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.4 <sup>a</sup>	0.91 <sup>a</sup>	9.7 <sup>b</sup>	19.9% <sup>a</sup>	1.5 <sup>a</sup>	37.5 <sup>a</sup>	8.7 <sup>b</sup>	12.2 <sup>a</sup>
ON	QC	Québec <sup>2</sup>	4,462,084	23	21.5	13.5	2.4 <sup>d</sup>	23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.6 <sup>d</sup>	0.59 <sup>d</sup>	6.8 <sup>b</sup>	14.9% <sup>c</sup>	1.2 <sup>b</sup>	27.8 <sup>b</sup>	6.8 <sup>d</sup>	9.9 <sup>c</sup>
SK	QC	Ontario	7,176,462	873	21.8	18.8	4.7 <sup>a</sup>	46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.4 <sup>a</sup>	1.09 <sup>a</sup>	11.3 <sup>b</sup>	22.8% <sup>a</sup>	1.6 <sup>a</sup>	42.9 <sup>a</sup>	9.8 <sup>a</sup>	13.7 <sup>a</sup>
SK	QC	Saskatchewan <sup>3</sup>	603,245	70	21.2	17.5	5.0 <sup>b</sup>	44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.9 <sup>b</sup>	1.01 <sup>b</sup>	12.9 <sup>c</sup>	23.0% <sup>b</sup>	1.7 <sup>a</sup>	45.2 <sup>a</sup>	9.0 <sup>c</sup>	12.0 <sup>b</sup>

1. The Canadian estimates are compromised by the small sample sizes in Québec and Saskatchewan. These estimates are less reliable than they would otherwise be. They are presented here solely in the interest of completeness.

2. The Québec respondents consist entirely of late-comers from the 4th quarter of 2011. The data is unreliable and is not representative of Québec driving during the 1st quarter of 2012. It is presented here solely in the interest of completeness.

3. The small sample size for Saskatchewan is due to the late start of the study in that province: take note of the higher than expected coefficients of variation. While provincial estimates tend to be reliable, sub-provincial estimates have to be used with caution.

### Quality of Estimates (cv)

- a: less than 5% (excellent)
- b: between 5% and 10% (good)
- c: between 10% and 15% (acceptable)
- d: between 15% and 20% (use with caution)
- e: between 20% and 35% (unreliable)
- f: more than 35% (unusable)

# Calculating Estimates

How to use this document

4th Quarter 2011 (Preliminary Results)						
Vehicle Registration Jurisdiction	Fleet Size	Sample Size	Daily Vehicle km Traveled	Daily Fuel Consumption (L)	Fuel Consumption Ratio (L/100km)	
Canada	11,449,187	1009	45.9 0.024 a	5.3 0.024 a	11.2 0.009 a	
QC Québec	4,449,799	536	41.6 0.031 a	4.7 0.031 a	11.1 0.012 a	
ON Ontario	6,999,388	473	48.6 0.034 a	5.6 0.033 a	11.2 0.013 a	

## Examples:

- Each point estimate is accompanied by a coefficient of variation (cv). The cv provides a measure of the reliability of the estimate: the smaller it is, the "tighter" the estimate is (i.e. the smaller a desired confidence interval about the estimate is).
- Point estimates CANNOT be compared with one another without referring to their cv. The following examples will illustrate what data can and cannot be compared.

i. Suppose that the intent is to compare the mean daily VKT between Québec and Ontario during the 4th quarter of 2011. The point estimates are 41.6 km for QC and 48.6 km for ON. The corresponding cv levels are "a" in both instances, which correspond to a cv below 5%. In the absence of detailed information, we assume that the cv are 5% in both instances. The 95% confidence intervals (C.I.) are given by

$$41.6 (1 \pm 1.96(0.05)) = (37.5, 45.6) \quad (\text{QC})$$

$$48.6 (1 \pm 1.96(0.05)) = (43.8, 53.4) \quad (\text{ON})$$

Since the 95% C.I. overlap, we CANNOT conclude that there is a difference in the mean daily VKT between Québec and Ontario in the 4th quarter of 2011.

ii. Note, however, that the actual cv are available (from the accompanying detailed results files): they are 3.1% for QC and 3.4% for ON. With these cv values, the confidence intervals become

$$41.6 (1 \pm 1.96(0.031)) = (39.1, 44.1) \quad (\text{QC})$$

$$48.6 (1 \pm 1.96(0.034)) = (45.4, 51.8) \quad (\text{ON})$$

The intervals do not overlap, and so we conclude that at the 100% - 95% = 5% level, the mean daily VKT is smaller in QC than in ON. But we still CANNOT conclude that the average ON vehicle travels 48.6 - 41.6 = 7 km more daily than an average QC vehicle: at that level, we can only conclude that the average ON vehicle travels between 45.4 - 44.1 = 1.3 km and 51.8 - 39.1 = 12.7 km more than the average QC vehicle on a daily basis.

3. The vehicle characteristics are divided into 2 categories: the basic characteristics and the derived (or ratio) characteristics. Roughly speaking, a ratio characteristic is obtained by dividing a basic characteristic into another. For instance, the speed (derived) is the ratio of the distance traveled (basic) by the time (basic). Two methods are used to compute mean ratio characteristics: in the first, the ratio characteristic is computed for each vehicle (see Methodology) and this distribution is used to compute the mean and cv of the ratio characteristic. In the second, which is only used when the distribution of the ratio characteristic at the vehicle level isn't available, the mean of the basic numerator characteristic is divided by the mean of the basic denominator characteristic; the cv is then calculated (again, see Methodology, Appendix C). As the first method uses more available information than the second (the full distribution of the ratio characteristic vs. its first two moments only), it is preferable to the second when the distribution is known.

i. For instance, suppose that the intent is to compute the fuel consumption ratio (FCR) in both QC and ON during the 4th quarter of 2011. With the first method, the FCR is 11.2 L / 100 km, with cv level "a". A 95% C.I. for the FCR is given by

$$11.2 (1 \pm 1.96(0.05)) = (10.1, 12.3) \quad (\text{QC \& ON})$$

ii. Now, suppose that this information isn't available for some reason, while the mean daily VKT and the mean daily fuel consumption are known to be 45.9 km and 5.3 L, respectively, together with their cv 2.3% and 2.4%, respectively. In that case, an approximate 90% C.I. for the FCR is given by (see Methodology, Appendix C):

$$(100 * 5.3 / 45.9) ((1 - 1.96(0.024)) / (1 + 1.96(0.023)), (1 + 1.96(0.024)) / (1 - 1.96(0.023))) = (10.6, 12.6) \quad (\text{QC \& ON})$$

for a point estimate of  $(10.6 + 12.6) / 2 = 11.6$  km / 100 L and a cv (see Methodology, Appendix C) of  $0.61 (12.6 - 10.6) / (12.6 + 10.6) = 5.3\%$ . Note that the point estimates in both instances are different, and that the cv in the second case is substantially larger than in the first case:







# Canada\* – 1st Quarter, 2012



## Sub-Trip Characteristics

### Fleet Size

### Sample Size

### Average Number of Study Days

### Average Number of Active Days

### Daily Vehicle km Traveled

### Daily Passenger km Traveled

### Daily Fuel Consumption (L)

### Daily Non-idling Time (h)

### Daily idling Time (h)

VEHICLE SPEED	Canada*	12,241,791	966	21.7	16.8	38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.4 <sup>a</sup>	0.73 <sup>a</sup>	0.18 <sup>a</sup>
	IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.3 <sup>a</sup>	0.00 <sup>c</sup>	0.20 <sup>b</sup>
	1 km/h TO 24 km/h					1.9 <sup>b</sup>	3.0 <sup>b</sup>	0.5 <sup>a</sup>	0.15 <sup>a</sup>	0.00 <sup>a</sup>
	25 km/h TO 49 km/h					6.5 <sup>b</sup>	10.6 <sup>b</sup>	0.9 <sup>a</sup>	0.17 <sup>b</sup>	0.00 <sup>a</sup>
	50 km/h TO 79 km/h					11.7 <sup>a</sup>	18.9 <sup>b</sup>	1.1 <sup>a</sup>	0.19 <sup>a</sup>	0.00 <sup>a</sup>
	80 km/h TO 99 km/h					8.2 <sup>b</sup>	13.4 <sup>b</sup>	0.7 <sup>b</sup>	0.09 <sup>b</sup>	0.00 <sup>a</sup>
	100 km/h TO 119 km/h					8.2 <sup>b</sup>	14.4 <sup>b</sup>	0.7 <sup>b</sup>	0.08 <sup>b</sup>	0.00 <sup>a</sup>
	120+ km/h					1.8 <sup>e</sup>	3.0 <sup>e</sup>	0.2 <sup>e</sup>	0.01 <sup>e</sup>	0.00 <sup>a</sup>
IDLING TYPE	Canada*	12,241,791	966	21.7	16.8	38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.4 <sup>a</sup>	0.73 <sup>a</sup>	0.18 <sup>a</sup>
	NOT IDLING					38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.1 <sup>a</sup>	0.70 <sup>a</sup>	0.00 <sup>a</sup>
	IDLING DURING TRIP					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.2 <sup>b</sup>	0.00 <sup>a</sup>	0.13 <sup>b</sup>
	TRIP START IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.1 <sup>a</sup>	0.00 <sup>a</sup>	0.05 <sup>b</sup>
	TRIP END IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.0 <sup>b</sup>	0.00 <sup>a</sup>	0.02 <sup>b</sup>
TIME OF DRIVING	Canada*	12,241,791	966	21.7	16.8	38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.4 <sup>a</sup>	0.73 <sup>a</sup>	0.18 <sup>a</sup>
	EARLY (06:00-08:59)					5.9 <sup>c</sup>	8.9 <sup>c</sup>	0.7 <sup>b</sup>	0.11 <sup>b</sup>	0.03 <sup>b</sup>
	MORNING (09:00-11:59)					5.9 <sup>b</sup>	9.9 <sup>b</sup>	0.7 <sup>b</sup>	0.11 <sup>b</sup>	0.03 <sup>b</sup>
	MIDDAY (12:00-14:59)					7.0 <sup>a</sup>	11.8 <sup>b</sup>	0.8 <sup>a</sup>	0.13 <sup>a</sup>	0.04 <sup>b</sup>
	AFTERNOON (15:00-17:59)					10.1 <sup>b</sup>	16.6 <sup>b</sup>	1.1 <sup>b</sup>	0.19 <sup>b</sup>	0.05 <sup>b</sup>
	EVENING (18:00-20:59)					5.6 <sup>b</sup>	9.9 <sup>b</sup>	0.6 <sup>b</sup>	0.10 <sup>b</sup>	0.03 <sup>b</sup>
NIGHT (21:00-05:59)					4.0 <sup>b</sup>	6.5 <sup>b</sup>	0.4 <sup>b</sup>	0.07 <sup>b</sup>	0.02 <sup>b</sup>	
ENGINE TEMP.	Canada*	12,241,791	966	21.7	16.8	38.4 <sup>b</sup>	63.4 <sup>b</sup>	4.4 <sup>a</sup>	0.73 <sup>a</sup>	0.18 <sup>a</sup>
	COLD (< 50°C)					1.2 <sup>a</sup>	1.7 <sup>a</sup>	0.3 <sup>a</sup>	0.04 <sup>a</sup>	0.04 <sup>b</sup>
	WARM (50°C to 80°C)					5.6 <sup>a</sup>	8.5 <sup>a</sup>	0.8 <sup>a</sup>	0.13 <sup>a</sup>	0.05 <sup>b</sup>
	HOT (> 80°C)					31.6 <sup>b</sup>	53.2 <sup>b</sup>	3.3 <sup>b</sup>	0.53 <sup>b</sup>	0.11 <sup>b</sup>
NO DATA					0.1 <sup>f</sup>	0.1 <sup>f</sup>	0.0 <sup>f</sup>	0.00 <sup>f</sup>	0.00 <sup>f</sup>	

### Quality of Estimates (cv)

- a: less than 5% (excellent)
- b: between 5% and 10% (good)
- c: between 10% and 15% (acceptable)
- d: between 15% and 20% (use with caution)
- e: between 20% and 35% (unreliable)
- f: more than 35% (unusable)

### Vehicle Age

- 0 TO 3: 3 years old and younger
- 4 TO 8: between 4 and 8 years old
- 9+: 9 years old and older with model year post-1995
- OLD: model year between 1981 and 1995
- V.OLD: model year pre-1981

### Notes on Driver Age and Gender

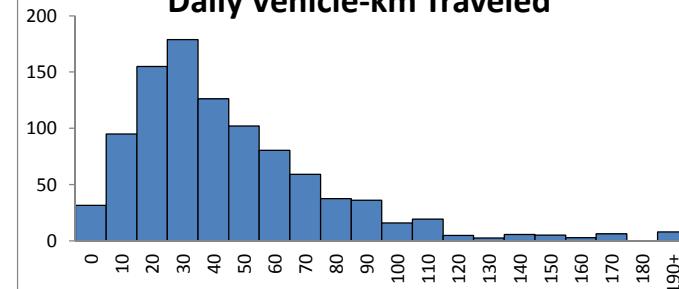
The estimates provided in the DRIVER AGE and GENDER categories are VEHICLE characteristics, not DRIVER characteristics. Without further information on the distribution of drivers in a given jurisdiction (by AGE and GENDER), the estimates of the basic characteristics (nTrips, VKT, PKT, Fuel, Use, UseNI) cannot be used to predict the average driving behaviour of various combinations of DRIVER AGE and GENDER for that jurisdiction.

Values in columns may not add up or average (weighted) exactly to the corresponding column header due to round off errors.

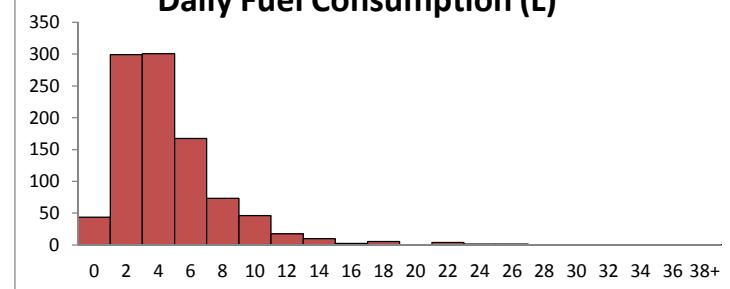
# Canada\* – 1st Quarter, 2012

## Histograms

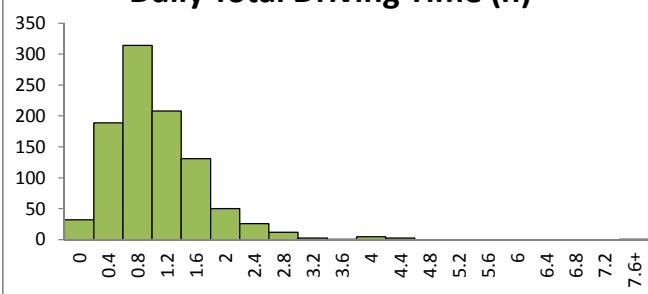
### Distribution of Daily Vehicle-km Traveled



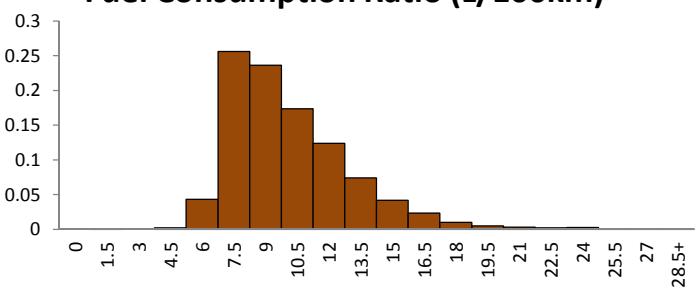
### Distribution of Daily Fuel Consumption (L)



### Distribution of Daily Total Driving Time (h)



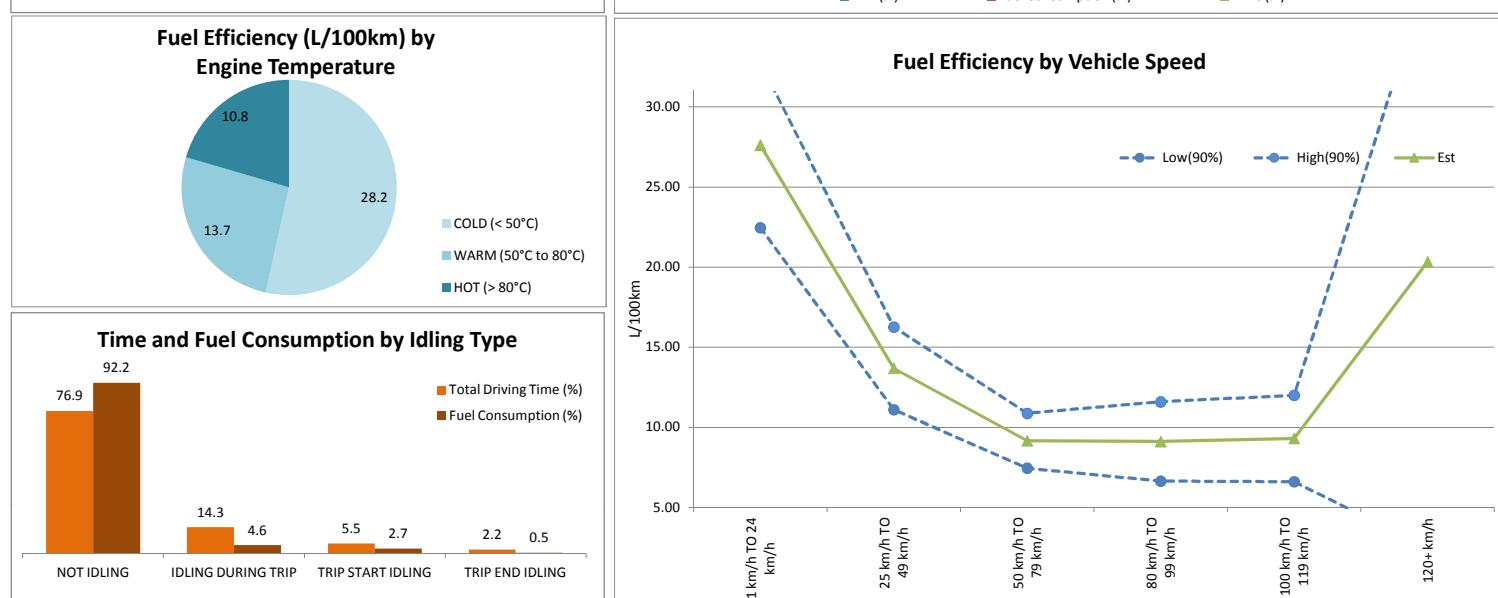
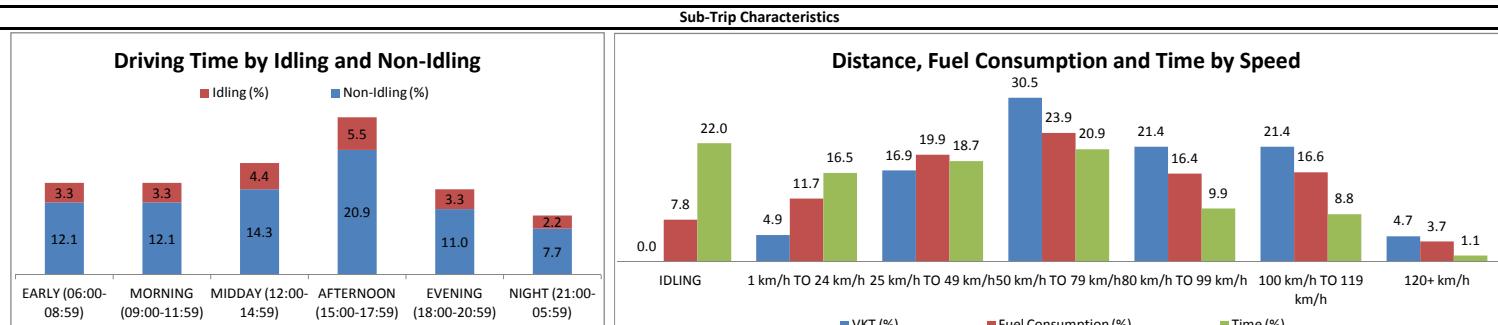
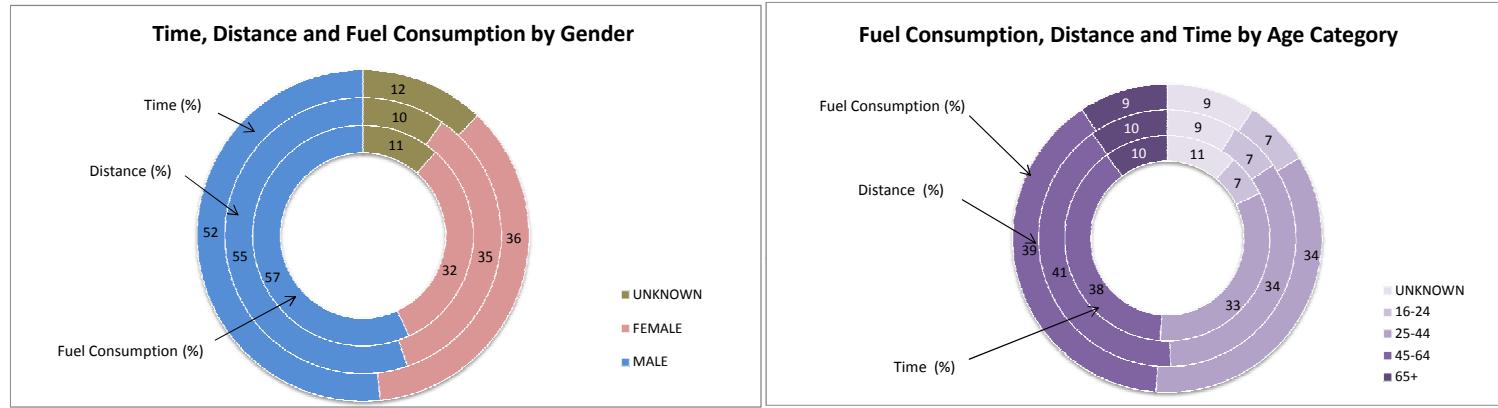
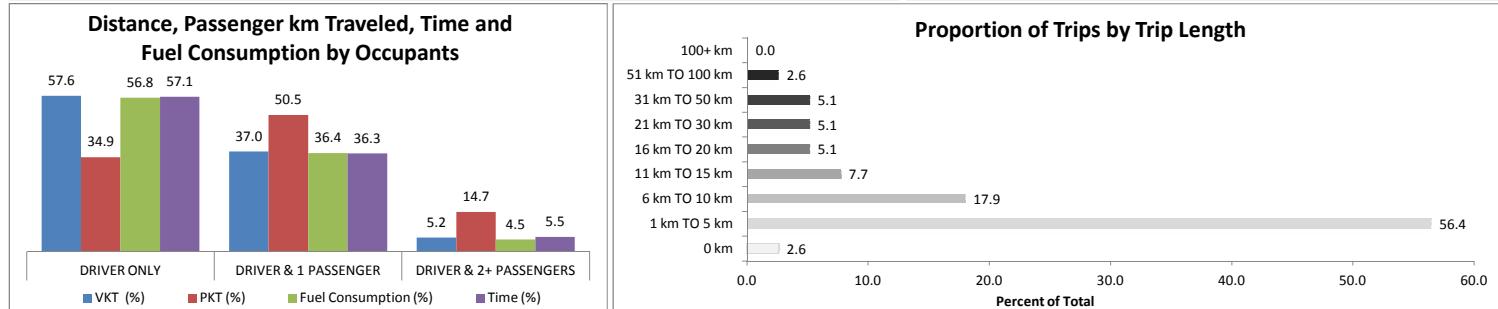
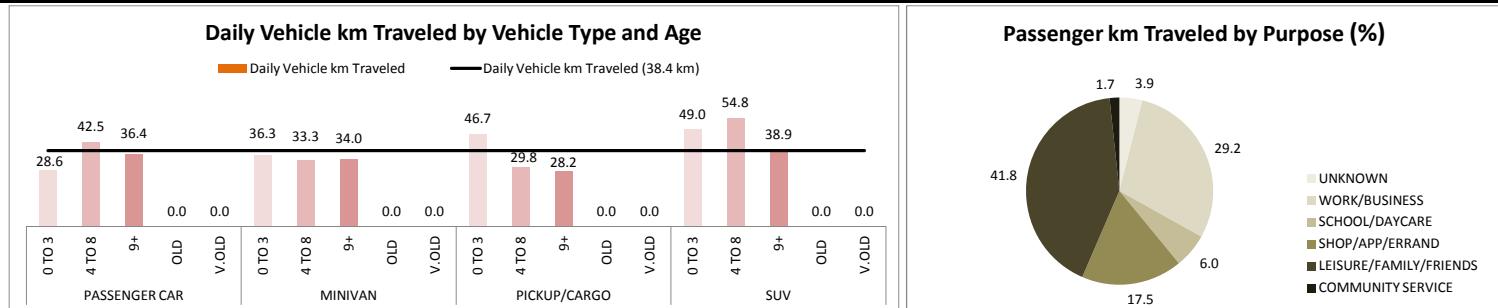
### Distribution of Fuel Consumption Ratio (L/100km)





# Canada\* – 1st Quarter, 2012

## Trip Characteristics

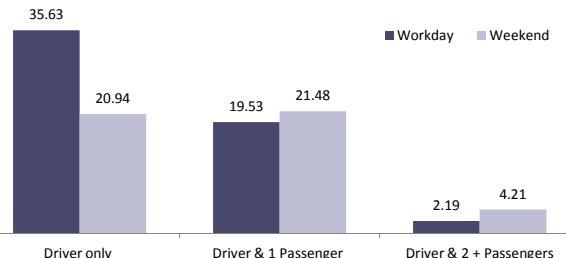




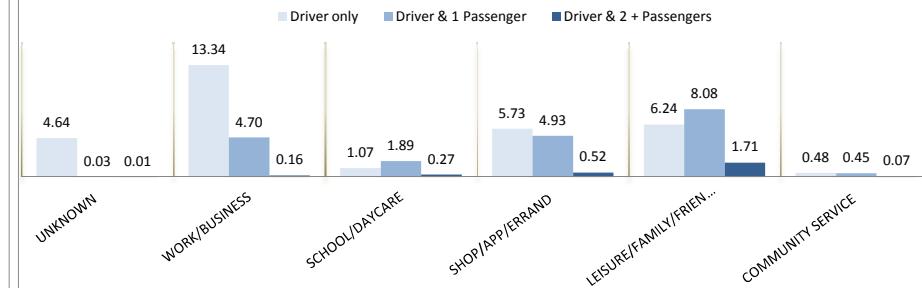
# Canada\* – 1st Quarter, 2012

## Mixed Characteristics

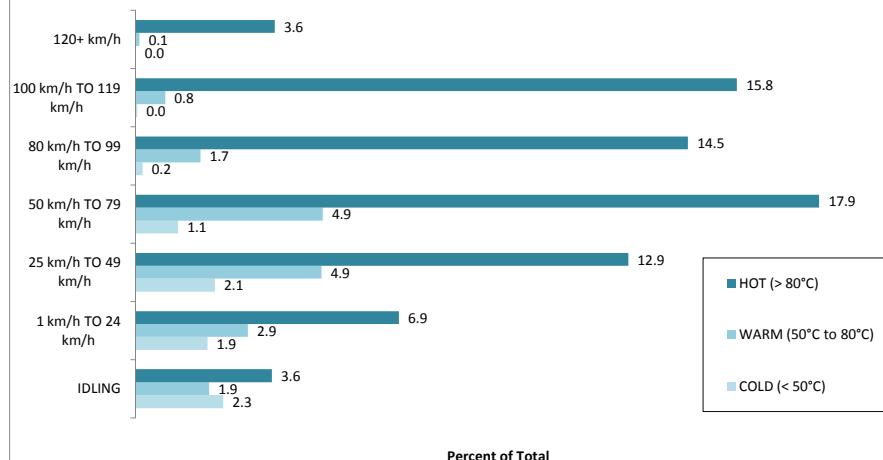
### Driving Time (min) by Day Type and Occupants



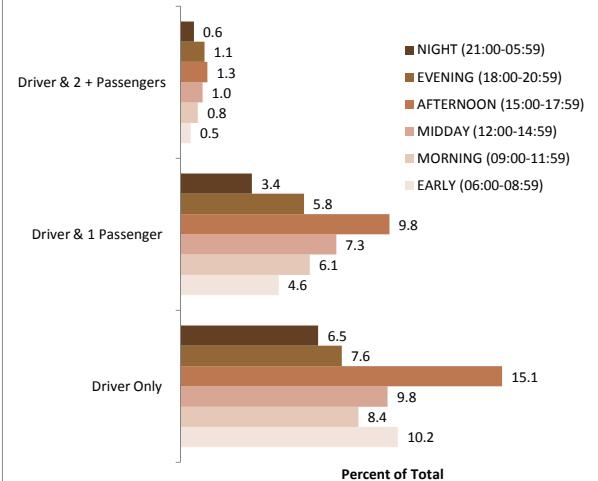
### Time Driven (min) by Purpose and Occupants



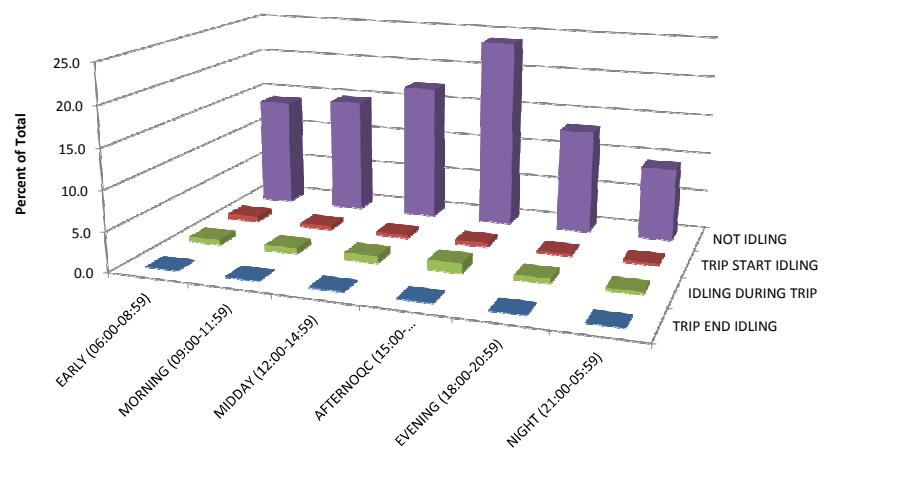
### Fuel Consumption by Speed and Engine Temperature



### Distance by Occupants and Time of Driving



### Fuel Consumption by Idling and Time of Driving





**Ontario – 1st Quarter, 2012**



Powering Informed Decisions





# Ontario – 1st Quarter, 2012



## Sub-Trip Characteristics

### Fleet Size

### Sample Size

### Average Number of Study Days

### Average Number of Active Days

### Daily Vehicle km Traveled

### Daily Passenger km Traveled

### Daily Fuel Consumption (L)

### Daily Non-idling Time (h)

### Daily Idling Time (h)

Vehicle Speed	Ontario	7,176,462	873	21.8	18.8	46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.4 <sup>a</sup>	0.84 <sup>a</sup>	0.24 <sup>a</sup>	
	IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.4 <sup>a</sup>	0.00 <sup>c</sup>	0.24 <sup>a</sup>	
1 km/h TO 24 km/h						2.1 <sup>a</sup>	3.4 <sup>a</sup>	0.6 <sup>a</sup>	0.18 <sup>a</sup>	0.00 <sup>a</sup>	
25 km/h TO 49 km/h						7.6 <sup>a</sup>	11.9 <sup>a</sup>	1.0 <sup>a</sup>	0.20 <sup>a</sup>	0.00 <sup>a</sup>	
50 km/h TO 79 km/h						15.2 <sup>a</sup>	24.0 <sup>a</sup>	1.4 <sup>a</sup>	0.24 <sup>a</sup>	0.00 <sup>a</sup>	
80 km/h TO 99 km/h						10.3 <sup>a</sup>	16.5 <sup>a</sup>	0.9 <sup>a</sup>	0.12 <sup>a</sup>	0.00 <sup>a</sup>	
100 km/h TO 119 km/h						9.7 <sup>b</sup>	16.7 <sup>b</sup>	0.9 <sup>b</sup>	0.09 <sup>b</sup>	0.00 <sup>a</sup>	
120+ km/h						2.0 <sup>c</sup>	3.4 <sup>c</sup>	0.2 <sup>c</sup>	0.02 <sup>c</sup>	0.00 <sup>a</sup>	
IDLING TYPE	Ontario	7,176,462	873	21.8	18.8	46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.4 <sup>a</sup>	0.84 <sup>a</sup>	0.24 <sup>a</sup>	
NOT IDLING						46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.0 <sup>a</sup>	0.84 <sup>a</sup>	0.00 <sup>a</sup>	
IDLING DURING TRIP						0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.2 <sup>a</sup>	0.00 <sup>a</sup>	0.15 <sup>a</sup>	
TRIP START IDLING						0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.1 <sup>a</sup>	0.00 <sup>a</sup>	0.07 <sup>a</sup>	
TRIP END IDLING						0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.00 <sup>a</sup>	0.02 <sup>b</sup>	
TIME OF DRIVING	Ontario	7,176,462	873	21.8	18.8	46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.4 <sup>a</sup>	0.84 <sup>a</sup>	0.24 <sup>a</sup>	
EARLY (06:00-08:59)						7.3 <sup>a</sup>	10.1 <sup>a</sup>	0.8 <sup>a</sup>	0.13 <sup>a</sup>	0.04 <sup>a</sup>	
MORNING (09:00-11:59)						7.1 <sup>a</sup>	11.8 <sup>a</sup>	0.9 <sup>a</sup>	0.13 <sup>a</sup>	0.04 <sup>a</sup>	
MIDDAY (12:00-14:59)						9.0 <sup>a</sup>	15.3 <sup>a</sup>	1.1 <sup>a</sup>	0.17 <sup>a</sup>	0.05 <sup>a</sup>	
AFTERNOON (15:00-17:59)						11.6 <sup>a</sup>	18.3 <sup>a</sup>	1.3 <sup>a</sup>	0.21 <sup>a</sup>	0.06 <sup>a</sup>	
EVENING (18:00-20:59)						7.1 <sup>a</sup>	12.3 <sup>b</sup>	0.8 <sup>a</sup>	0.12 <sup>a</sup>	0.03 <sup>a</sup>	
NIGHT (21:00-05:59)						4.8 <sup>b</sup>	8.0 <sup>b</sup>	0.5 <sup>b</sup>	0.08 <sup>b</sup>	0.02 <sup>b</sup>	
ENGINE TEMP.	Ontario	7,176,462	873	21.8	18.8	46.9 <sup>a</sup>	75.8 <sup>a</sup>	5.4 <sup>a</sup>	0.84 <sup>a</sup>	0.24 <sup>a</sup>	
COLD (< 50°C)						1.5 <sup>a</sup>	2.2 <sup>a</sup>	0.4 <sup>a</sup>	0.05 <sup>a</sup>	0.05 <sup>a</sup>	
WARM (50°C to 80°C)						7.2 <sup>a</sup>	11.0 <sup>a</sup>	1.0 <sup>a</sup>	0.16 <sup>a</sup>	0.06 <sup>a</sup>	
HOT (> 80°C)						38.0 <sup>a</sup>	62.6 <sup>a</sup>	4.0 <sup>a</sup>	0.63 <sup>a</sup>	0.13 <sup>a</sup>	
NO DATA						0.1 <sup>f</sup>	0.1 <sup>f</sup>	0.0 <sup>f</sup>	0.00 <sup>f</sup>	0.00 <sup>f</sup>	

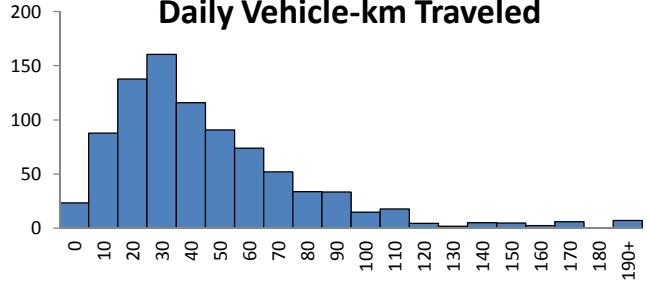


# Ontario – 1st Quarter, 2012

### Histograms

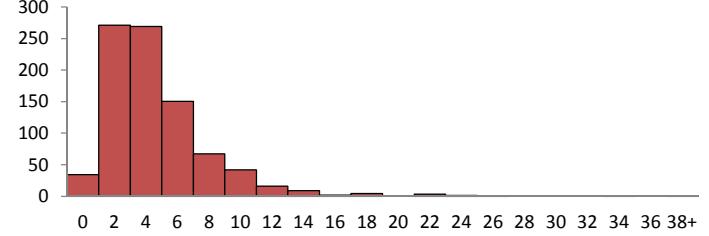
#### Distribution of

#### Daily Vehicle-km Traveled



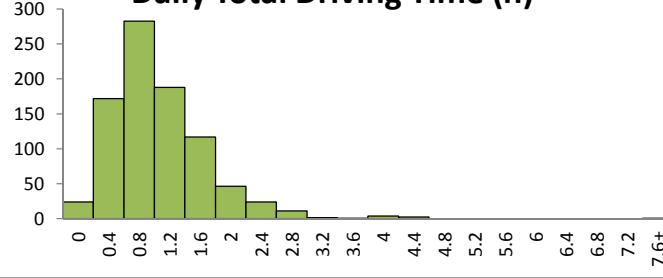
#### Distribution of

#### Daily Fuel Consumption (L)



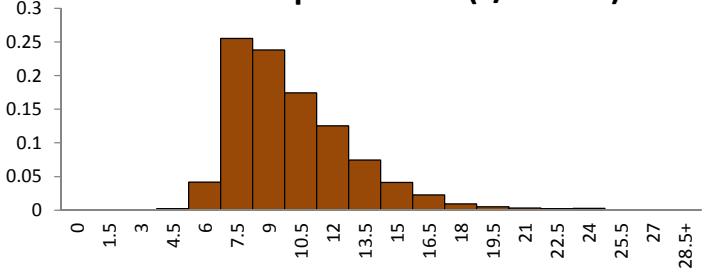
#### Distribution of

#### Daily Total Driving Time (h)



#### Distribution of

#### Fuel Consumption Ratio (L/100km)



### Quality of Estimates (cv)

- a: less than 5% (excellent)
- b: between 5% and 10% (good)
- c: between 10% and 15% (acceptable)
- d: between 15% and 20% (use with caution)
- e: between 20% and 35% (unreliable)
- f: more than 35% (unusable)

### Vehicle Age

0 TO 3: 3 years old and younger

4 TO 8: between 4 and 8 years old

9+: 9 years old and older with model year post-1995

OLD: model year between 1981 and 1995

V.OLD: model year pre-1981

### Notes on Driver Age and Gender

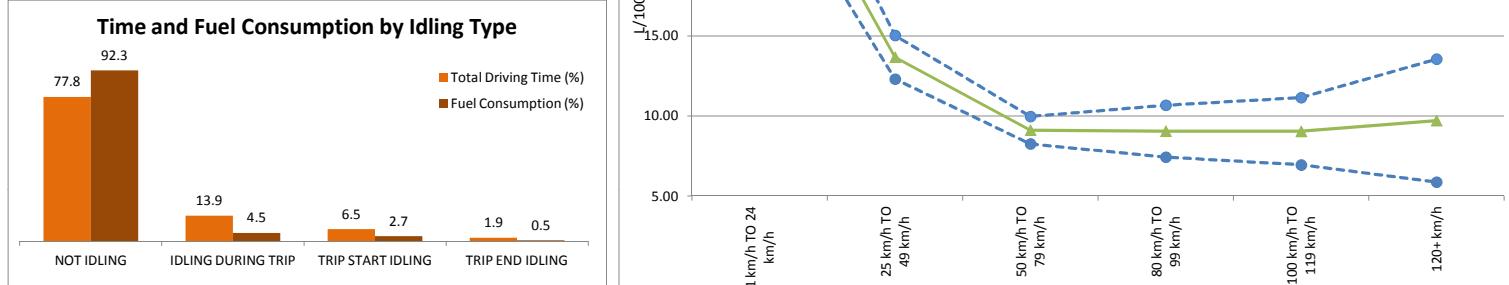
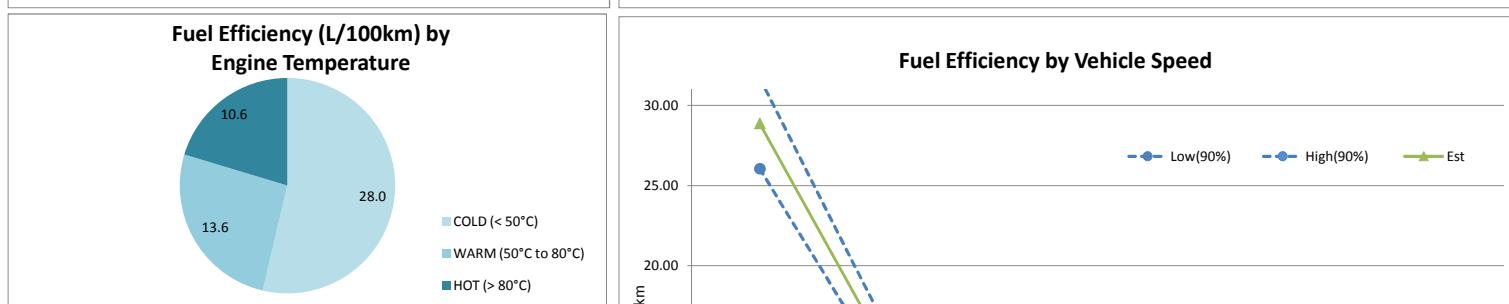
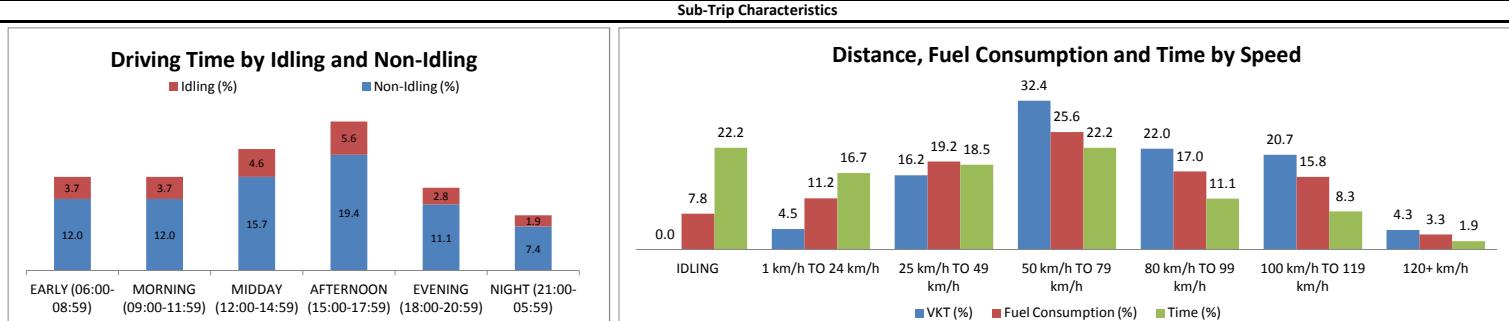
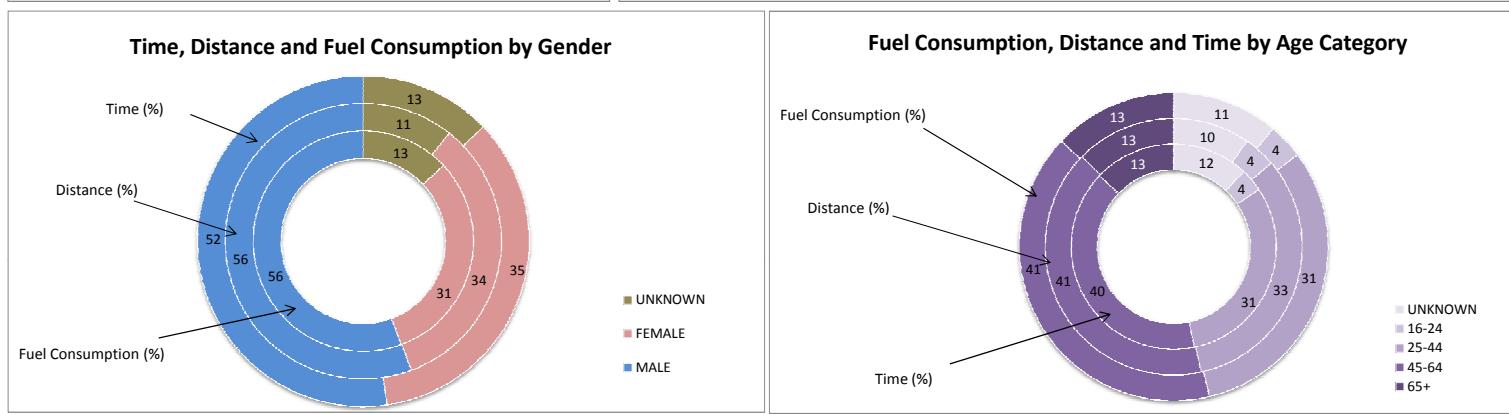
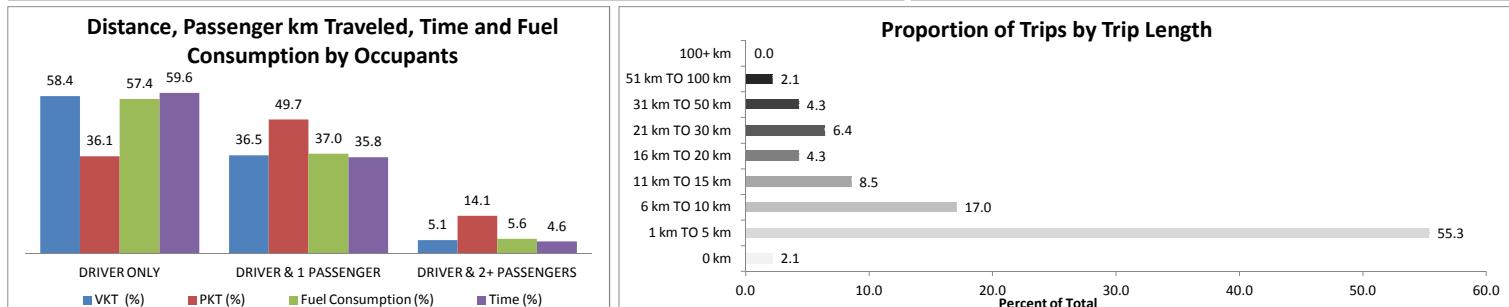
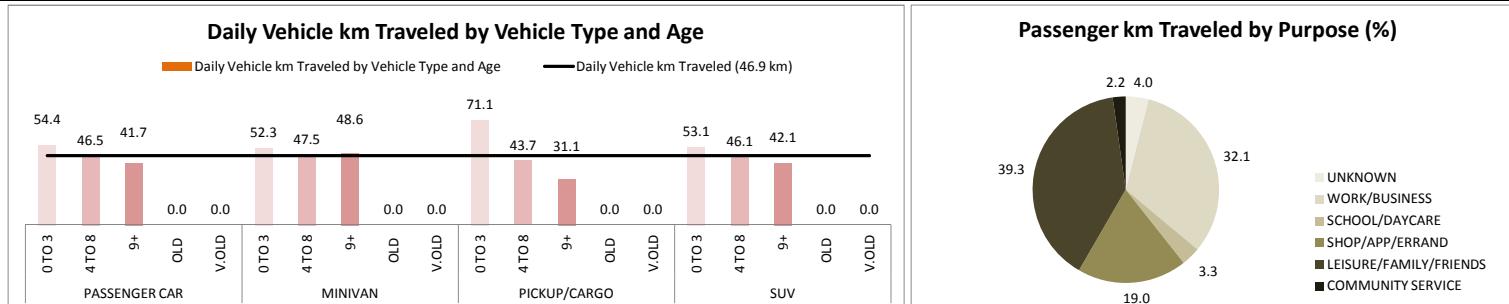
The estimates provided in the DRIVER AGE and GENDER category are VEHICLE characteristics, not DRIVER characteristics. Without further information on the distribution of drivers in a given jurisdiction (by AGE and GENDER), the estimates of the basic characteristics (nTrips, VKT, PKT, Fuel, Use, UseNI) cannot be used to predict the average driving behaviour of various combinations of DRIVER AGE and GENDER for that jurisdiction.

Values in columns may not add up or average (weighted) exactly to the corresponding column header due to round off errors.



# Ontario – 1st Quarter, 2012

## Trip Characteristics

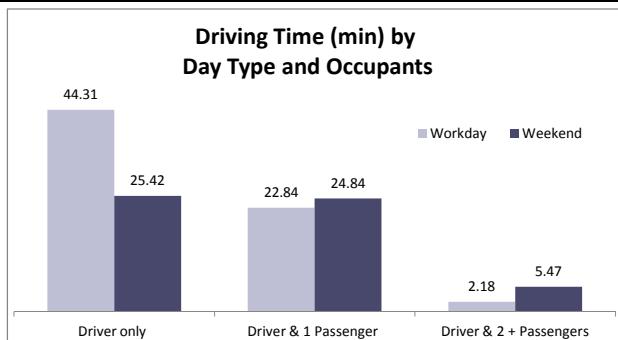




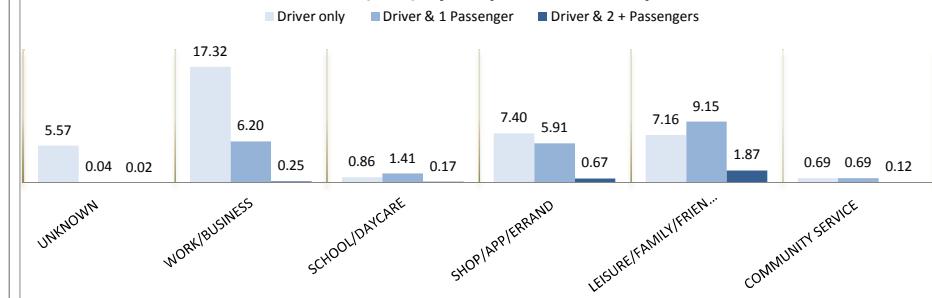
# Ontario – 1st Quarter, 2012

## Mixed Characteristics

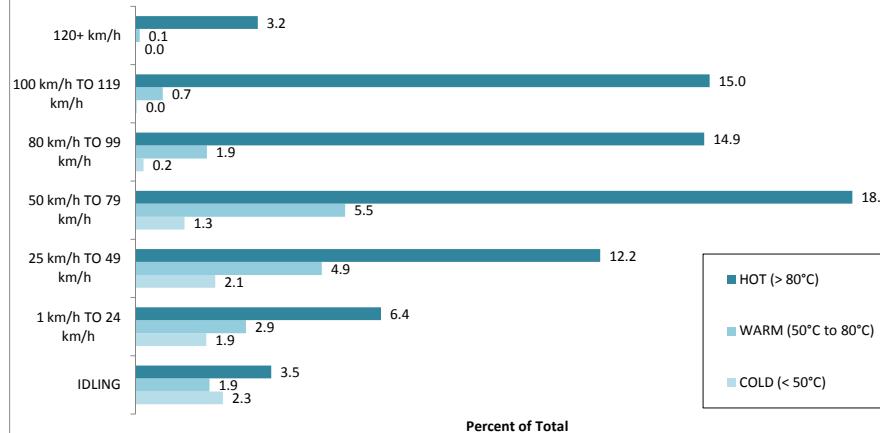
### Driving Time (min) by Day Type and Occupants



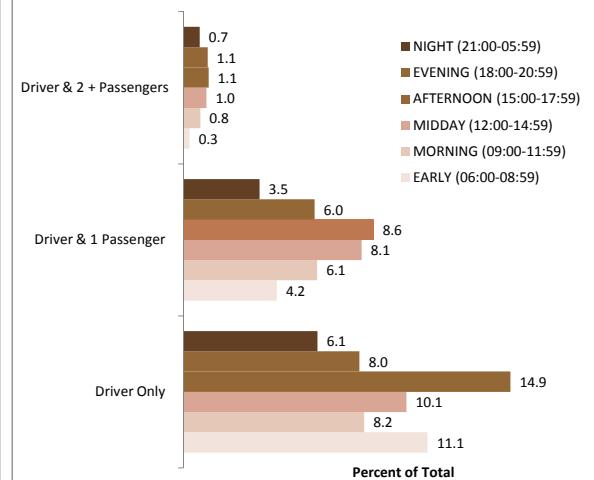
### Time Driven (min) by Purpose and Occupants



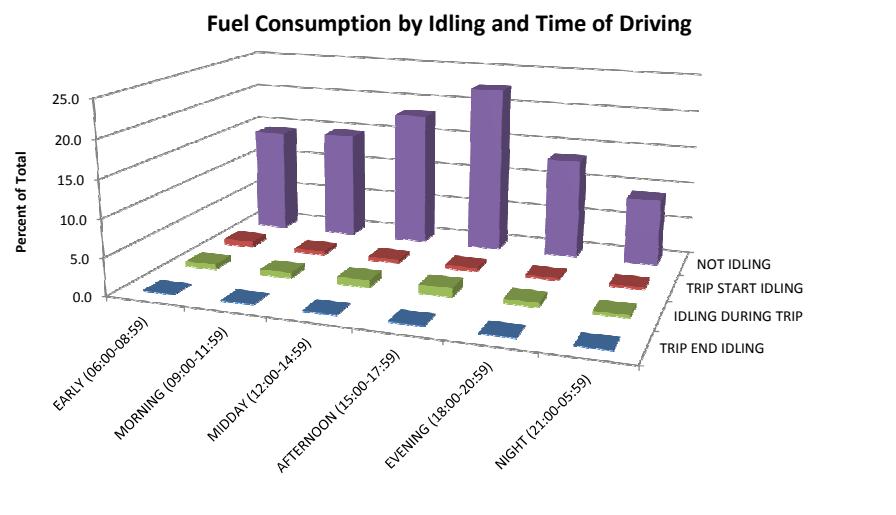
### Fuel Consumed by Speed and Engine Temperature



### Distance by Occupants by Time of Driving



### Fuel Consumption by Idling and Time of Driving



**Québec – 1st Quarter, 2012**

## Trip Characteristics

	Fleet Size	Sample Size	Average Number of Study Days	Average Number of Active Days	Daily Number of Trips	Daily Vehicle km Traveled	Daily Passenger km Traveled	Daily Fuel Consumption (L)	Daily Driving Time (h)	Fuel Consumption Ratio (L/100km)	Idling Ratio	Average Vehicle Occupancy	Average Speed (km/h)	Average Trip Length (km)	Average Trip Duration (min)
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>f</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
0 TO 3	1,273,456	2	4.6	3.6	0.8 <sup>f</sup>	9.6 <sup>f</sup>	17.6 <sup>f</sup>	1.2 <sup>f</sup>	0.20 <sup>f</sup>	2.8 <sup>e</sup>	5.1% <sup>e</sup>	0.4 <sup>e</sup>	10.8 <sup>e</sup>	2.9 <sup>f</sup>	3.6 <sup>e</sup>
4 TO 8	1,718,592	12	21.2	15.9	3.4 <sup>e</sup>	34.6 <sup>e</sup>	56.1 <sup>e</sup>	4.0 <sup>e</sup>	0.89 <sup>e</sup>	8.2 <sup>e</sup>	19.0% <sup>e</sup>	1.3 <sup>e</sup>	32.5 <sup>e</sup>	8.5 <sup>e</sup>	12.7 <sup>e</sup>
9+	1,470,036	9	36.4	19.1	2.6 <sup>f</sup>	23.8 <sup>f</sup>	43.5 <sup>f</sup>	2.2 <sup>e</sup>	0.59 <sup>f</sup>	8.5 <sup>e</sup>	18.4% <sup>e</sup>	1.7 <sup>e</sup>	37.0 <sup>e</sup>	8.3 <sup>f</sup>	12.0 <sup>e</sup>
OLD															
V.OLD															
PASSENGER CAR	2,929,362	14	26.5	15.3	2.3 <sup>e</sup>	23.9 <sup>e</sup>	38.8 <sup>e</sup>	2.2 <sup>e</sup>	0.59 <sup>e</sup>	6.3 <sup>e</sup>	17.1% <sup>e</sup>	1.2 <sup>e</sup>	29.5 <sup>e</sup>	7.4 <sup>e</sup>	11.0 <sup>e</sup>
MINIVAN															
PICKUP/CARGO	479,101	2	7.1	4.2	0.5 <sup>f</sup>	6.0 <sup>f</sup>	21.4 <sup>f</sup>	0.9 <sup>f</sup>	0.10 <sup>f</sup>	5.3 <sup>e</sup>	4.5% <sup>f</sup>	1.2 <sup>f</sup>	19.6 <sup>e</sup>	4.2 <sup>f</sup>	4.4 <sup>f</sup>
SUV	675,713	7	21.8	19.6	5.3 <sup>e</sup>	50.0 <sup>f</sup>	86.8 <sup>f</sup>	7.0 <sup>f</sup>	1.28 <sup>e</sup>	13.6 <sup>e</sup>	20.8% <sup>e</sup>	1.7 <sup>e</sup>	41.6 <sup>e</sup>	10.0 <sup>e</sup>	14.3 <sup>e</sup>
0 TO 3															
4 TO 8															
PASSENGER CAR	1,138,807	9	26.7	18.8	3.3 <sup>e</sup>	36.9 <sup>e</sup>	59.2 <sup>e</sup>	3.7 <sup>e</sup>	0.89 <sup>e</sup>	9.0 <sup>e</sup>	24.1% <sup>e</sup>	1.6 <sup>e</sup>	41.6 <sup>e</sup>	11.0 <sup>e</sup>	15.8 <sup>e</sup>
9+	1,005,915	5	46.9	23.2	3.0 <sup>f</sup>	27.7 <sup>f</sup>	46.1 <sup>f</sup>	2.3 <sup>f</sup>	0.71 <sup>f</sup>	8.2 <sup>e</sup>	22.5% <sup>e</sup>	1.7 <sup>e</sup>	38.9 <sup>e</sup>	9.2 <sup>f</sup>	14.2 <sup>e</sup>
OLD															
V.OLD															
MINIVAN	0 TO 3														
	4 TO 8														
	9+														
	OLD														
	V.OLD														
PICKUP/CARGO	161,828	2	21.0	12.5	1.5 <sup>f</sup>	17.7 <sup>f</sup>	63.4 <sup>f</sup>	2.8 <sup>f</sup>	0.31 <sup>f</sup>	15.8 <sup>e</sup>	13.3% <sup>f</sup>	3.7 <sup>f</sup>	58.0 <sup>e</sup>	12.5 <sup>f</sup>	13.0 <sup>f</sup>
0 TO 3															
4 TO 8															
SUV	288,860	2	20.2	16.0	3.3 <sup>f</sup>	42.4 <sup>f</sup>	77.5 <sup>f</sup>	5.2 <sup>f</sup>	0.89 <sup>f</sup>	12.1 <sup>e</sup>	22.5% <sup>e</sup>	1.8 <sup>e</sup>	47.6 <sup>e</sup>	12.7 <sup>f</sup>	16.0 <sup>e</sup>
9+	252,027	3	23.9	23.6	8.0 <sup>e</sup>	68.9 <sup>f</sup>	115.0 <sup>f</sup>	10.6 <sup>f</sup>	2.04 <sup>f</sup>	15.4 <sup>e</sup>	21.1% <sup>e</sup>	1.7 <sup>e</sup>	33.7 <sup>e</sup>	8.5 <sup>f</sup>	15.2 <sup>e</sup>
OLD	134,826	2	21.2	19.6	4.5 <sup>e</sup>	31.1 <sup>f</sup>	53.8 <sup>f</sup>	4.1 <sup>e</sup>	0.71 <sup>e</sup>	13.1 <sup>e</sup>	16.5% <sup>e</sup>	1.7 <sup>e</sup>	43.6 <sup>e</sup>	6.7 <sup>e</sup>	9.3 <sup>e</sup>
V.OLD															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>c</sup></b>
UNKNOWN															
WORK/BUSINESS															
SCHOOL/DAYCARE															
SHOP/APP/ERRAND															
LEISURE/FAMILY/FRIENDS															
COMMUNITY SERVICE															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
UNKNOWN															
FEMALE															
MALE															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
UNKNOWN															
16-24															
25-44															
45-64															
65+															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
DRIVER ONLY															
DRIVER & 1 PASSENGER															
DRIVER & 2+ PASSENGERS															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
0 km															
1 km TO 5 km															
6 km TO 10 km															
11 km TO 15 km															
16 km TO 20 km															
21 km TO 30 km															
31 km TO 50 km															
51 km TO 100 km															
100+ km															
Quebec	<b>4,462,084</b>	<b>23</b>	<b>21.5</b>	<b>13.5</b>	<b>2.4<sup>e</sup></b>	<b>23.9<sup>e</sup></b>	<b>40.9<sup>e</sup></b>	<b>2.6<sup>e</sup></b>	<b>0.59<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>14.9%<sup>e</sup></b>	<b>1.2<sup>e</sup></b>	<b>27.8<sup>e</sup></b>	<b>6.8<sup>e</sup></b>	<b>9.9<sup>e</sup></b>
WORKDAY															
WEEKEND															



# Québec – 1st Quarter, 2012

Vehicle Type and Age (NRCan & TC)		Fleet Size	Sample Size	Trip Characteristics													
				Average Number of Study Days	Average Number of Active Days	Daily Number of Trips	Daily Vehicle km Traveled	Daily Passenger km Traveled	Daily Fuel Consumption (L)	Daily Driving Time (h)	Fuel Consumption Ratio (L/100km)	Idling Ratio	Average Vehicle Occupancy	Average Speed (km/h)	Average Trip Length (km)	Average Trip Duration (min)	
Vehicle Type and Age (TC)	Québec		4,462,084	23	21.5	13.5	2.4 e	23.9 e	40.9 e	2.6 e	0.59 e	6.8 e	14.9% e	1.2 e	27.8 e	6.8 e	9.9 e
	0 TO 8	2,992,048	14	14.1	10.7	2.3 e	24.0 e	39.7 e	2.8 e	0.60 e	5.9 e	13.1% e	0.9 e	23.3 e	6.1 e	8.8 e	
		1,470,036	9	36.4	19.1	2.6 f	23.8 f	43.5 f	2.2 e	0.59 f	8.5 e	18.4% e	1.7 e	37.0 e	8.3 f	12.0 e	
	PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	0.0 f	
	PASSENGER CAR	2,929,362	14	26.5	15.3	2.3 e	23.9 e	38.8 e	2.2 e	0.59 e	6.3 e	17.1% e	1.2 e	29.5 e	7.4 e	11.0 e	
	MINIVAN	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	0.0 f	
	PICKUP/CARGO	479,101	2	7.1	4.2	0.5 f	6.0 f	21.4 f	0.9 f	0.10 f	5.3 e	4.5% f	1.2 f	19.6 e	4.2 f	4.4 f	
	SUV	675,713	7	21.8	19.6	5.3 e	50.0 f	86.8 f	7.0 f	1.28 e	13.6 e	20.8% e	1.7 e	41.6 e	10.0 e	14.3 e	
	PASSENGER CAR	0 TO 8	1,138,807	9	26.7	18.8	3.3 e	36.9 e	59.2 e	3.7 e	0.89 e	9.0 e	24.1% e	1.6 e	41.6 e	11.0 e	15.8 e
			1,005,915	5	46.9	23.2	3.0 f	27.7 f	46.1 f	2.3 f	0.71 f	8.2 e	22.5% e	1.7 e	38.9 e	9.2 f	14.2 e
		PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
	MINIVAN	0 TO 8	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
			0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
	PICKUP/CARGO	0 TO 8	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
			161,828	2	21.0	12.5	1.5 f	17.7 f	63.4 f	2.8 f	0.31 f	15.8 e	13.3% f	3.7 f	58.0 e	12.5 f	13.0 f
		PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
	SUV	0 TO 8	540,887	5	21.9	19.5	5.5 e	54.7 f	95.0 f	7.7 f	1.43 e	13.6 e	21.8% e	1.8 e	41.1 e	10.7 e	15.6 e
			134,826	2	21.2	19.6	4.5 e	31.1 f	53.8 f	4.1 e	0.71 e	13.1 e	16.5% e	1.7 e	43.6 e	6.7 e	9.3 e
		PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
Vehicle Type and Age (EC)	Québec		4,462,084	23	21.5	13.5	2.4 e	23.9 e	40.9 e	2.6 e	0.59 e	6.8 e	14.9% e	1.2 e	27.8 e	6.8 e	9.9 e
	0 TO 8	1,273,456	2	4.6	3.6	0.8 f	9.6 f	17.6 f	1.2 f	0.20 f	2.8 e	5.1% e	0.4 e	10.8 e	2.9 f	3.6 e	
		1,718,592	12	21.2	15.9	3.4 e	34.6 e	56.1 e	4.0 e	0.89 e	8.2 e	19.0% e	1.3 e	32.5 e	8.5 e	12.7 e	
		1,470,036	9	36.4	19.1	2.6 f	23.8 f	43.5 f	2.2 e	0.59 f	8.5 e	18.4% e	1.7 e	37.0 e	8.3 f	12.0 e	
		OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		V.OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
	PASSENGER CAR	2,929,362	14	26.5	15.3	2.3 e	23.9 e	38.8 e	2.2 e	0.59 e	6.3 e	17.1% e	1.2 e	29.5 e	7.4 e	11.0 e	
	LIGHT TRUCK	1,154,814	9	15.7	13.2	3.3 e	31.7 f	59.7 f	4.5 e	0.79 e	10.2 e	14.0% e	1.5 e	32.5 e	7.6 e	10.2 e	
	PASSENGER CAR	0 TO 3	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		4 TO 8	1,138,807	9	26.7	18.8	3.3 e	36.9 e	59.2 e	3.7 e	0.89 e	9.0 e	24.1% e	1.6 e	41.6 e	11.0 e	15.8 e
		9+	1,005,915	5	46.9	23.2	3.0 f	27.7 f	46.1 f	2.3 f	0.71 f	8.2 e	22.5% e	1.7 e	38.9 e	9.2 f	14.2 e
		OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		V.OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
	LIGHT TRUCK	0 TO 3	288,860	2	20.2	16.0	3.3 f	42.4 f	77.5 f	5.2 f	0.89 f	12.1 e	22.5% e	1.8 e	47.6 e	12.7 f	16.0 e
		4 TO 8	252,027	3	23.9	23.6	8.0 e	68.9 f	115.0 f	10.6 f	2.04 f	15.4 e	21.1% e	1.7 e	33.7 e	8.5 f	15.2 e
		9+	296,654	4	21.1	15.7	2.9 e	23.8 f	59.0 f	3.4 f	0.49 f	14.6 e	14.8% e	2.8 e	51.5 e	9.9 f	11.3 e
		OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		V.OLD	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
Vehicle Type and Age (AGE)	Québec		4,462,084	23	21.5	13.5	2.4 e	23.9 e	40.9 e	2.6 e	0.59 e	6.8 e	14.9% e	1.2 e	27.8 e	6.8 e	9.9 e
	0 TO 8	2,992,048	14	14.1	10.7	2.3 e	24.0 e	39.7 e	2.8 e	0.60 e	5.9 e	13.1% e	0.9 e	23.3 e	6.1 e	8.8 e	
		1,470,036	9	36.4	19.1	2.6 f	23.8 f	43.5 f	2.2 e	0.59 f	8.5 e	18.4% e	1.7 e	37.0 e	8.3 f	12.0 e	
	PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	0.0 f	
	PASSENGER CAR	2,929,362	14	26.5	15.3	2.3 e	23.9 e	38.8 e	2.2 e	0.59 e	6.3 e	17.1% e	1.2 e	29.5 e	7.4 e	11.0 e	
	LIGHT TRUCK	1,154,814	9	15.7	13.2	3.3 e	31.7 f	59.7 f	4.5 e	0.79 e	10.2 e	14.0% e	1.5 e	32.5 e	7.6 e	10.2 e	
	PASSENGER CAR	0 TO 8	1,138,807	9	26.7	18.8	3.3 e	36.9 e	59.2 e	3.7 e	0.89 e	9.0 e	24.1% e	1.6 e	41.6 e	11.0 e	15.8 e
		9+	1,005,915	5	46.9	23.2	3.0 f	27.7 f	46.1 f	2.3 f	0.71 f	8.2 e	22.5% e	1.7 e	38.9 e	9.2 f	14.2 e
		PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	
		0 TO 8	540,887	5	21.9	19.5	5.5 e	54.7 f	95.0 f	7.7 f	1.43 e	13.6 e	21.8% e	1.8 e	41.1 e	10.7 e	15.6 e
		9+	296,654	4	21.1	15.7	2.9 e	23.8 f	59.0 f	3.4 f	0.49 f	14.6 e	14.8% e	2.8 e	51.5 e	9.9 f	11.3 e
	PRE '96	0	0	0.0	0.0	0.0 f	0.0 f	0.0 f	0.00 f	0.0 f	0.0% f	0.0 f	0.0 f	0.0 f	0.0 f	0.0 f	



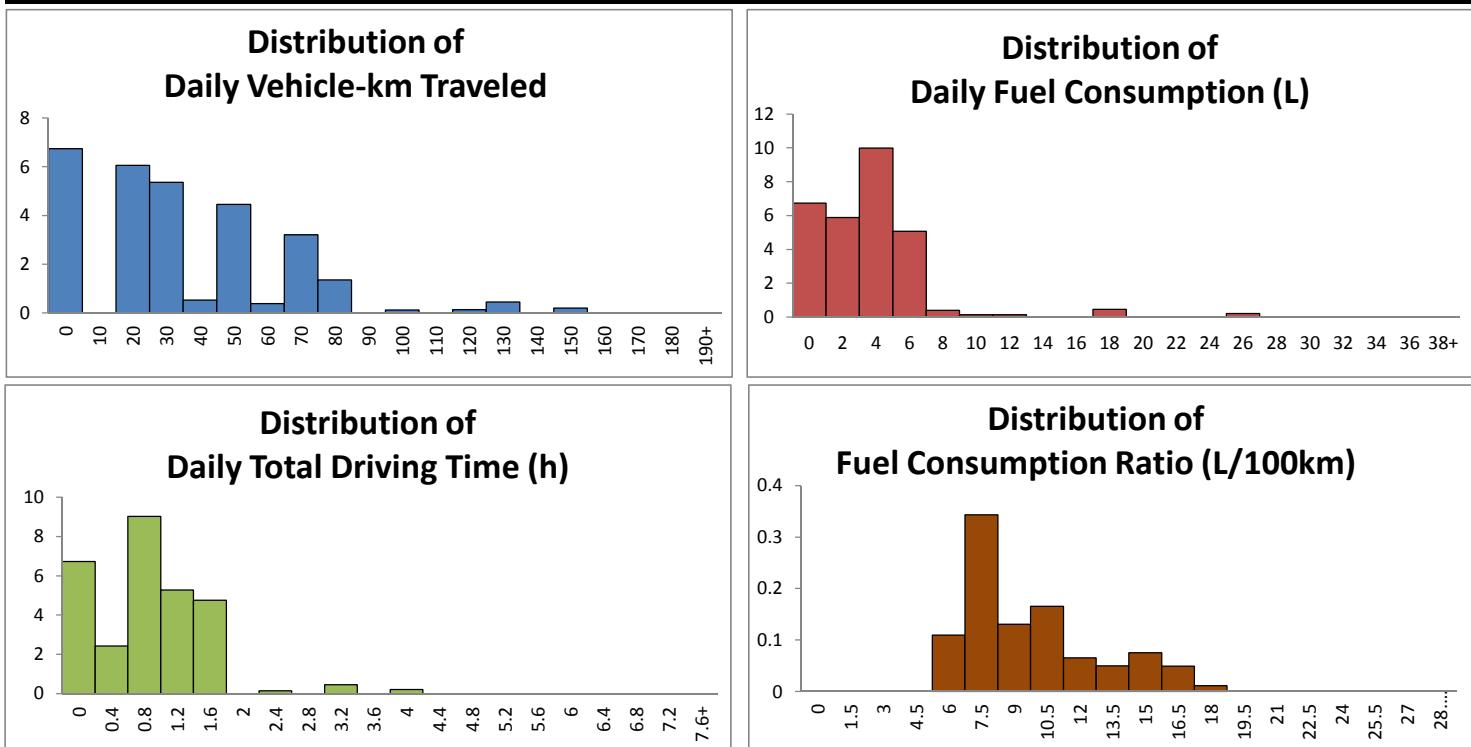
# Québec – 1st Quarter, 2012

Sub-Trip Characteristics		Fleet Size	Sample Size	Average Number of Study Days	Average Number of Active Days	Daily Vehicle km Traveled	Daily Passenger km Traveled	Daily Fuel Consumption (L)	Daily Non-idling Time (h)	Daily Idling Time (h)	
VEHICLE SPEED	Québec	4,462,084	23	21.5	13.5	23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.6 <sup>e</sup>	0.50 <sup>e</sup>	0.09 <sup>e</sup>	
	IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.2 <sup>e</sup>	0.00 <sup>e</sup>	0.13 <sup>e</sup>	
	1 km/h TO 24 km/h					1.5 <sup>e</sup>	2.5 <sup>e</sup>	0.4 <sup>e</sup>	0.11 <sup>e</sup>	0.00 <sup>a</sup>	
	25 km/h TO 49 km/h					4.7 <sup>e</sup>	8.2 <sup>e</sup>	0.6 <sup>e</sup>	0.13 <sup>e</sup>	0.00 <sup>a</sup>	
	50 km/h TO 79 km/h					6.5 <sup>e</sup>	11.0 <sup>e</sup>	0.5 <sup>e</sup>	0.11 <sup>e</sup>	0.00 <sup>a</sup>	
	80 km/h TO 99 km/h					5.1 <sup>e</sup>	8.6 <sup>e</sup>	0.4 <sup>e</sup>	0.06 <sup>e</sup>	0.00 <sup>a</sup>	
	100 km/h TO 119 km/h					4.8 <sup>e</sup>	8.4 <sup>e</sup>	0.4 <sup>e</sup>	0.04 <sup>e</sup>	0.00 <sup>a</sup>	
	120+ km/h					1.3 <sup>f</sup>	2.2 <sup>f</sup>	0.1 <sup>f</sup>	0.01 <sup>f</sup>	0.00 <sup>a</sup>	
IDLING TYPE	Québec	4,462,084	23	21.5	13.5	23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.6 <sup>e</sup>	0.50 <sup>e</sup>	0.09 <sup>e</sup>	
	NOT IDLING					23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.4 <sup>e</sup>	0.46 <sup>e</sup>	0.00 <sup>a</sup>	
	IDLING DURING TRIP					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.1 <sup>e</sup>	0.00 <sup>a</sup>	0.09 <sup>e</sup>	
	TRIP START IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.1 <sup>e</sup>	0.00 <sup>a</sup>	0.03 <sup>e</sup>	
	TRIP END IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.0 <sup>e</sup>	0.00 <sup>a</sup>	0.01 <sup>e</sup>	
TIME OF DRIVING	Québec	4,462,084	23	21.5	13.5	23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.6 <sup>e</sup>	0.50 <sup>e</sup>	0.09 <sup>e</sup>	
	EARLY (06:00-08:59)					3.5 <sup>f</sup>	6.8 <sup>f</sup>	0.4 <sup>f</sup>	0.07 <sup>f</sup>	0.02 <sup>e</sup>	
	MORNING (09:00-11:59)					3.7 <sup>f</sup>	6.5 <sup>f</sup>	0.4 <sup>e</sup>	0.07 <sup>e</sup>	0.02 <sup>e</sup>	
	MIDDAY (12:00-14:59)					3.5 <sup>e</sup>	5.7 <sup>e</sup>	0.4 <sup>e</sup>	0.07 <sup>e</sup>	0.02 <sup>e</sup>	
	AFTERNOON (15:00-17:59)					7.5 <sup>e</sup>	13.1 <sup>e</sup>	0.8 <sup>e</sup>	0.15 <sup>e</sup>	0.04 <sup>e</sup>	
	EVENING (18:00-20:59)					3.0 <sup>e</sup>	5.3 <sup>e</sup>	0.3 <sup>e</sup>	0.06 <sup>e</sup>	0.02 <sup>e</sup>	
	NIGHT (21:00-05:59)					2.7 <sup>e</sup>	3.7 <sup>e</sup>	0.3 <sup>e</sup>	0.05 <sup>e</sup>	0.01 <sup>e</sup>	
ENGINE TEMP.	Québec	4,462,084	23	21.5	13.5	23.9 <sup>e</sup>	40.9 <sup>e</sup>	2.6 <sup>e</sup>	0.50 <sup>e</sup>	0.09 <sup>e</sup>	
	COLD (< 50°C)					0.6 <sup>e</sup>	0.9 <sup>e</sup>	0.2 <sup>e</sup>	0.02 <sup>e</sup>	0.03 <sup>e</sup>	
	WARM (50°C to 80°C)					2.6 <sup>e</sup>	3.9 <sup>e</sup>	0.4 <sup>e</sup>	0.07 <sup>e</sup>	0.03 <sup>e</sup>	
	HOT (> 80°C)					20.7 <sup>e</sup>	36.2 <sup>e</sup>	2.1 <sup>e</sup>	0.37 <sup>e</sup>	0.07 <sup>e</sup>	
	NO DATA					0.0	0.0	0.0	0.00	0.00 <sup>f</sup>	



# Québec – 1st Quarter, 2012

Histograms



## Quality of Estimates (cv)

- a: less than 5% (excellent)
- b: between 5% and 10% (good)
- c: between 10% and 15% (acceptable)
- d: between 15% and 20% (use with caution)
- e: between 20% and 35% (unreliable)
- f: more than 35% (unusable)

## Vehicle Age

- 0 TO 3: 3 years old and younger
- 4 TO 8: between 4 and 8 years old
- 9+: 9 years old and older with model year post-1995
- OLD: model year between 1981 and 1995
- V.OLD: model year pre-1981

## Notes on Driver Age and Gender

The estimates provided in the DRIVER AGE and GENDER category are VEHICLE characteristics, not DRIVER characteristics. Without further information on the distribution of drivers in a given jurisdiction (by AGE and GENDER), the estimates of the basic characteristics (nTrips, VKT, PKT, Fuel, Use, UseNI) cannot be used to predict the average driving behaviour of various combinations of DRIVER AGE and GENDER for that jurisdiction.

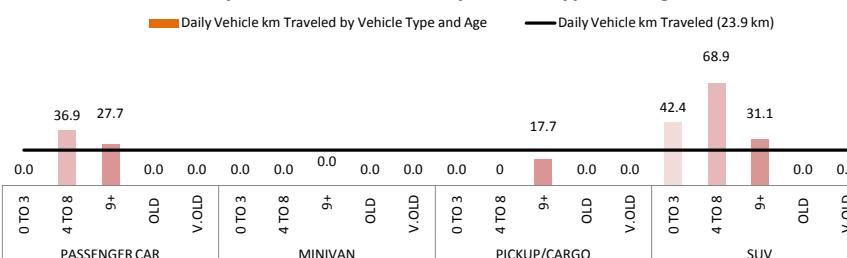
Values in columns may not add up or average (weighted) exactly to the corresponding column header due to to round off errors.

# Québec – 1st Quarter, 2012

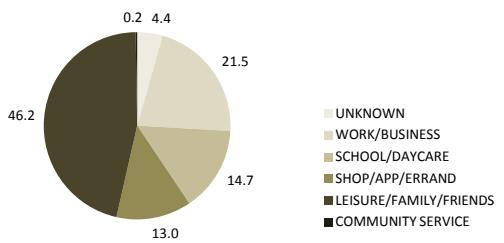


## Trip Characteristics

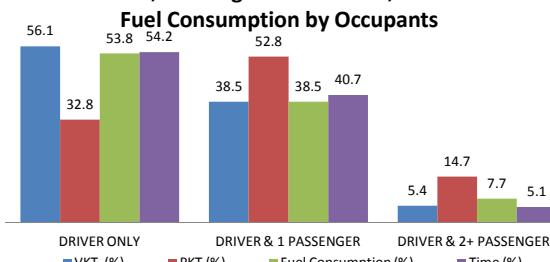
### Daily Vehicle km Traveled by Vehicle Type and Age



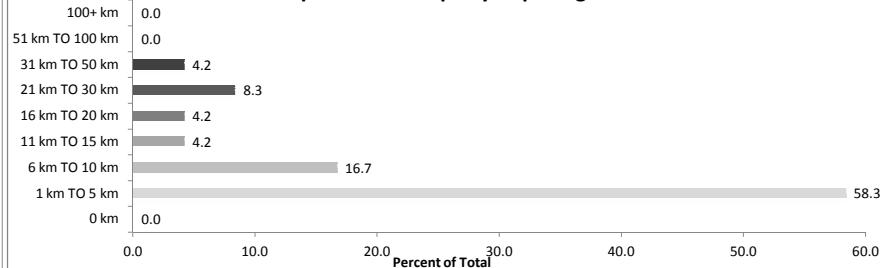
### Passenger km Traveled by Purpose (%)



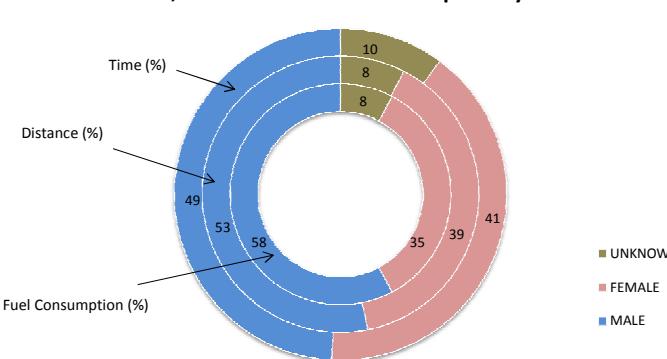
### Distance, Passenger km Traveled, Time and Fuel Consumption by Occupants



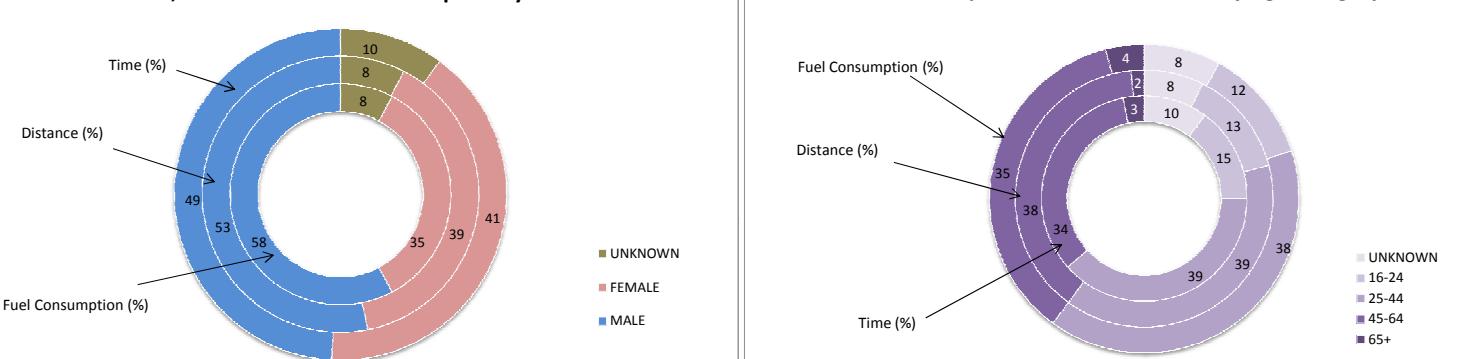
### Proportions of Trips by Trip Length



### Time, Distance and Fuel Consumption by Gender

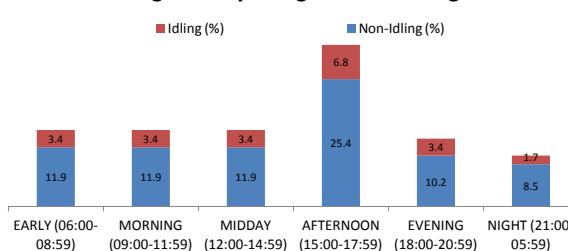


### Fuel Consumption, Distance and Time by Age Category

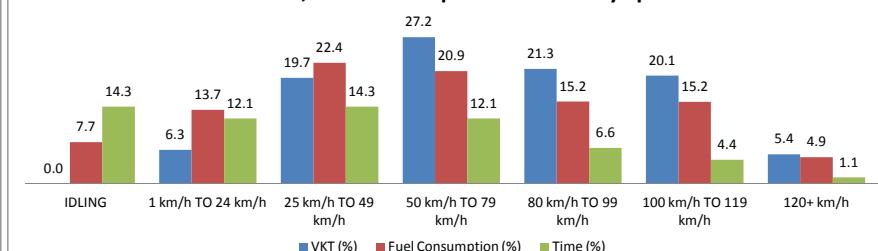


## Sub-Trip Characteristics

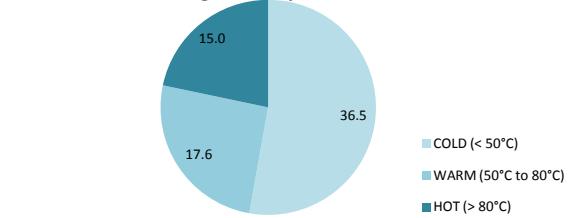
### Driving Time by Idling and Non-Idling



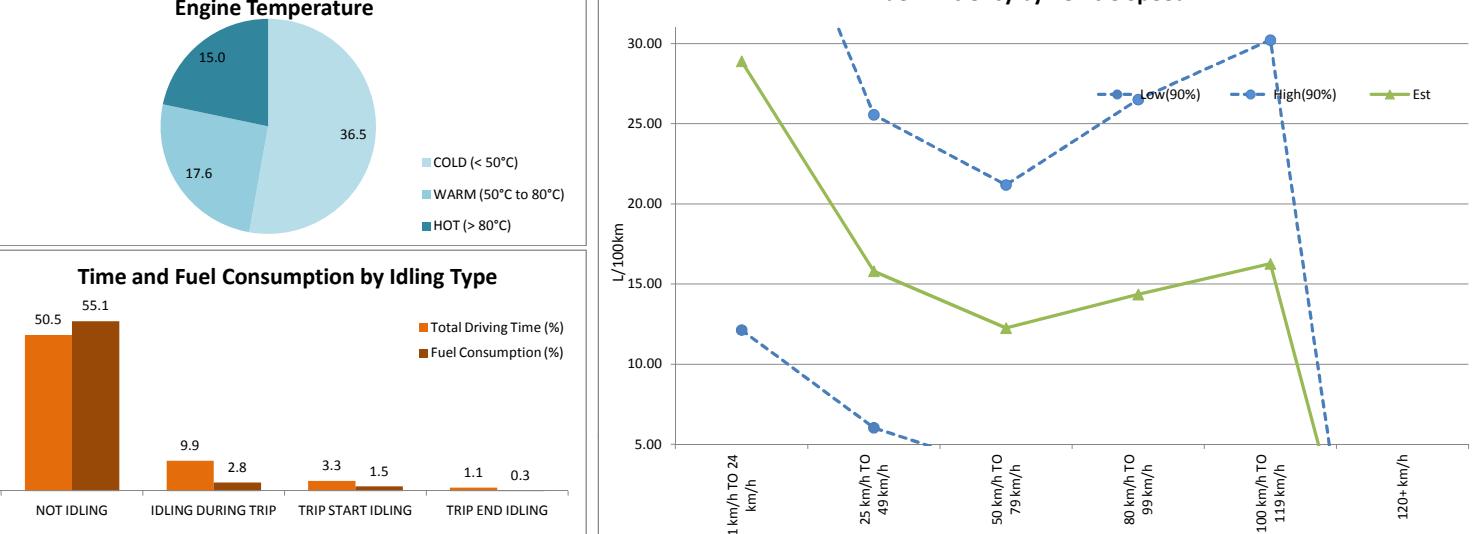
### Distance, Fuel Consumption and Time by Speed



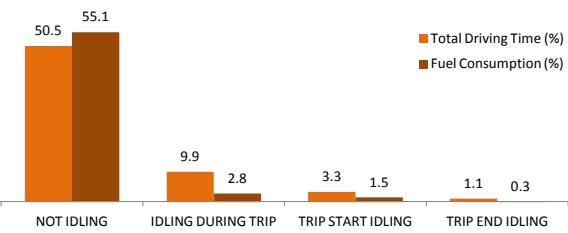
### Fuel Efficiency (L/100km) by Engine Temperature



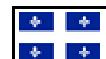
### Fuel Efficiency by Vehicle Speed



### Time and Fuel Consumption by Idling Type

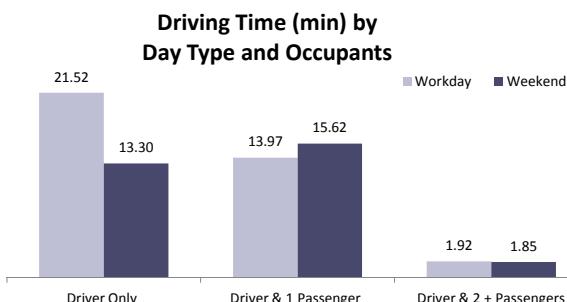


# Québec – 1st Quarter, 2012

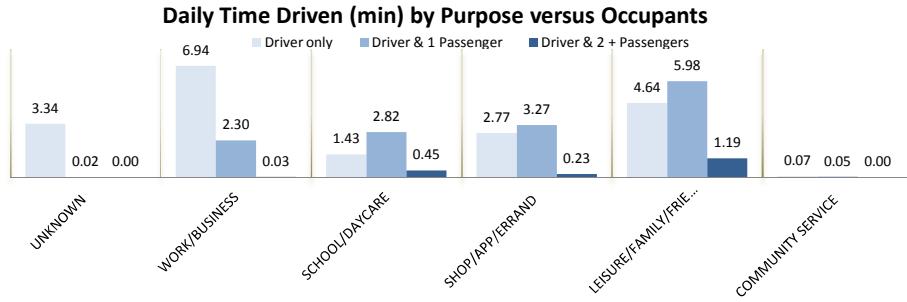


## Mixed Characteristics

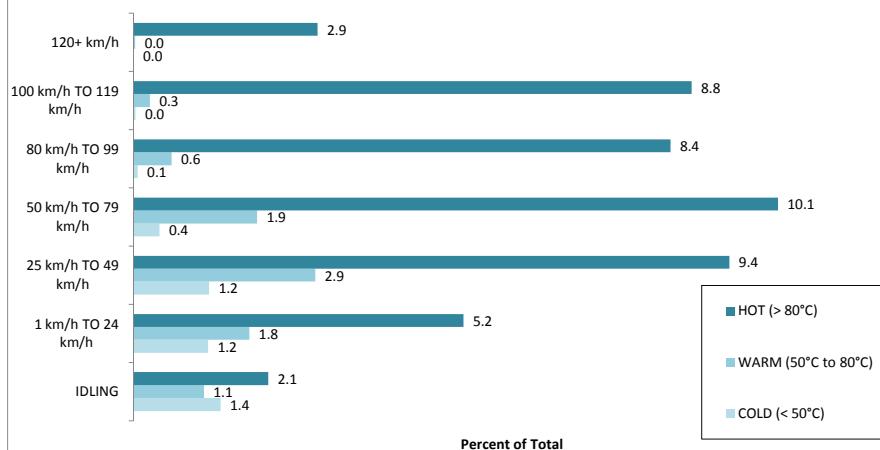
### Driving Time (min) by Day Type and Occupants



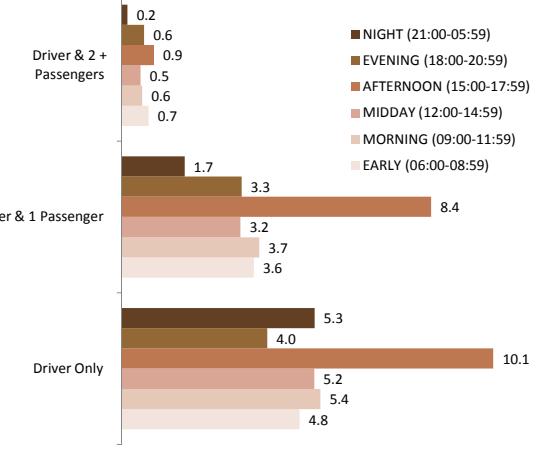
### Daily Time Driven (min) by Purpose versus Occupants



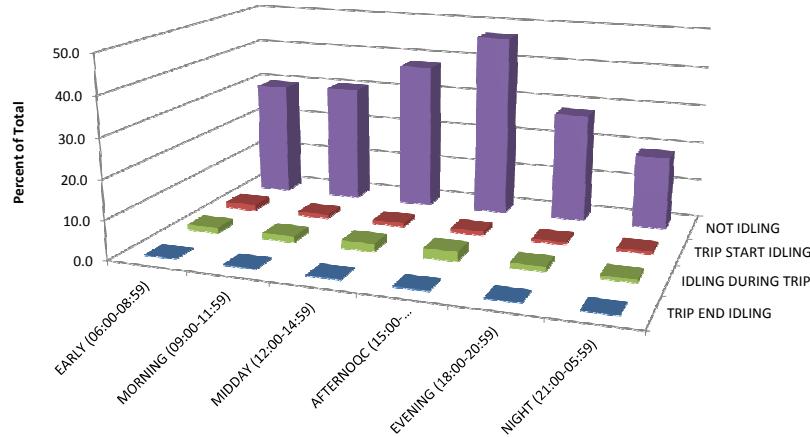
### Fuel Consumption by Speed and Engine Temperature



### Distance by Occupants by Time of Driving



### Fuel Consumption by Idling and Time of Driving









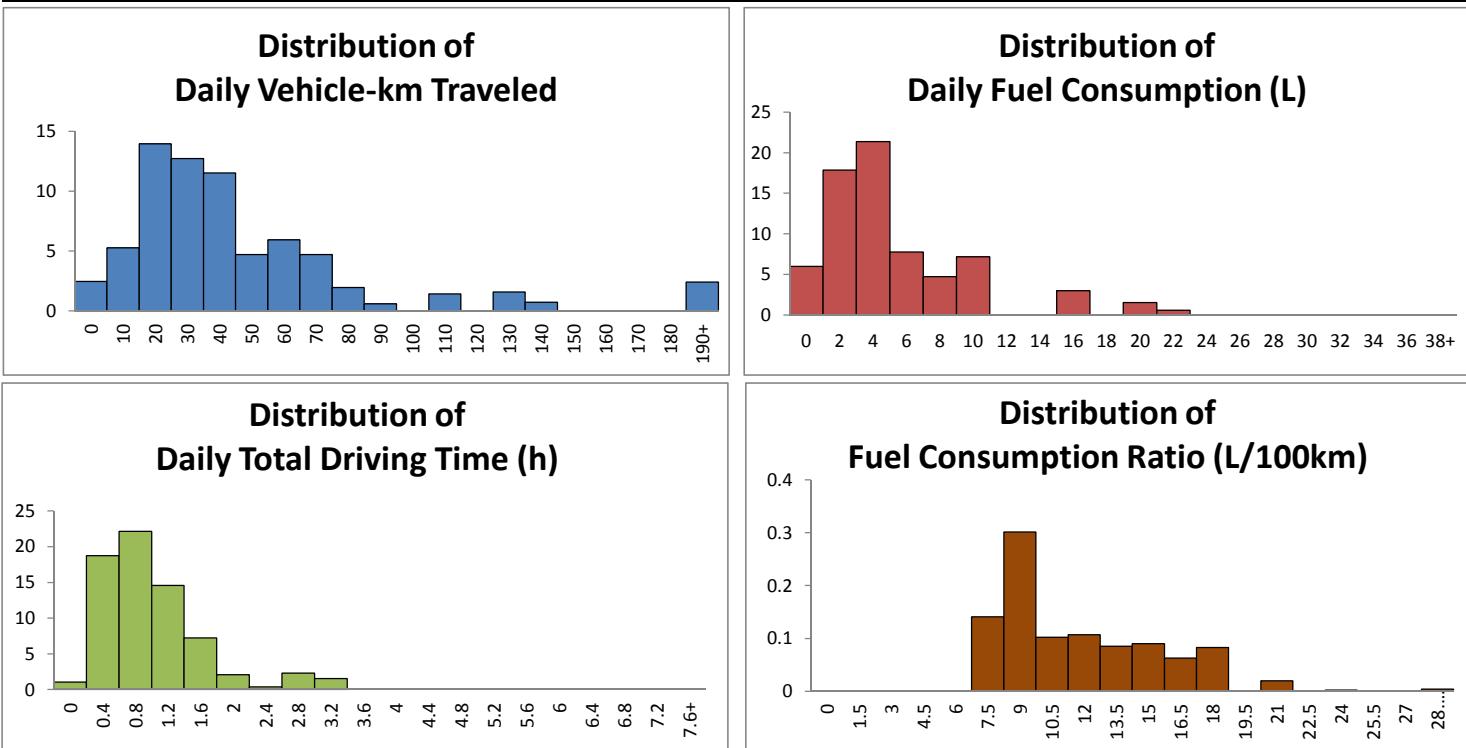
# Saskatchewan – 1st Quarter, 2012

Sub-Trip Characteristics		Fleet Size	Sample Size	Average Number of Study Days	Average Number of Active Days	Daily Vehicle km Traveled	Daily Passenger km Traveled	Daily Fuel Consumption (L)	Daily Non-idling Time (h)	Daily Idling Time (h)	
VEHICLE SPEED	Saskatchewan	603,245	70	21.2	17.5	44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.9 <sup>b</sup>	0.78 <sup>b</sup>	0.23 <sup>b</sup>	
	IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.5 <sup>c</sup>	0.00 <sup>c</sup>	0.24 <sup>c</sup>	
	1 km/h TO 24 km/h					2.1 <sup>b</sup>	3.5 <sup>b</sup>	0.6 <sup>b</sup>	0.16 <sup>b</sup>	0.00 <sup>a</sup>	
	25 km/h TO 49 km/h					7.6 <sup>b</sup>	13.5 <sup>c</sup>	1.1 <sup>b</sup>	0.20 <sup>b</sup>	0.00 <sup>a</sup>	
	50 km/h TO 79 km/h					9.0 <sup>b</sup>	16.1 <sup>b</sup>	0.9 <sup>b</sup>	0.15 <sup>b</sup>	0.00 <sup>a</sup>	
	80 km/h TO 99 km/h					7.2 <sup>d</sup>	12.1 <sup>d</sup>	0.8 <sup>d</sup>	0.08 <sup>d</sup>	0.00 <sup>a</sup>	
	100 km/h TO 119 km/h					16.9 <sup>d</sup>	31.7 <sup>e</sup>	1.7 <sup>d</sup>	0.16 <sup>d</sup>	0.00 <sup>a</sup>	
IDLING TYPE	120+ km/h					2.1 <sup>e</sup>	4.7 <sup>f</sup>	0.3 <sup>e</sup>	0.02 <sup>e</sup>	0.00 <sup>a</sup>	
	Saskatchewan	603,245	70	21.2	17.5	44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.9 <sup>b</sup>	0.78 <sup>b</sup>	0.23 <sup>b</sup>	
	NOT IDLING					44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.4 <sup>b</sup>	0.77 <sup>b</sup>	0.00 <sup>a</sup>	
	IDLING DURING TRIP					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.3 <sup>d</sup>	0.00 <sup>a</sup>	0.16 <sup>d</sup>	
TIME OF DRIVING	TRIP START IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.2 <sup>c</sup>	0.00 <sup>a</sup>	0.06 <sup>c</sup>	
	TRIP END IDLING					0.0 <sup>a</sup>	0.0 <sup>a</sup>	0.0 <sup>c</sup>	0.00 <sup>a</sup>	0.02 <sup>c</sup>	
	Saskatchewan	603,245	70	21.2	17.5	44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.9 <sup>b</sup>	0.78 <sup>b</sup>	0.23 <sup>b</sup>	
	EARLY (06:00-08:59)					6.3 <sup>d</sup>	10.0 <sup>d</sup>	0.9 <sup>d</sup>	0.10 <sup>c</sup>	0.04 <sup>e</sup>	
	MORNING (09:00-11:59)					7.5 <sup>d</sup>	12.8 <sup>d</sup>	1.0 <sup>d</sup>	0.13 <sup>c</sup>	0.04 <sup>d</sup>	
	MIDDAY (12:00-14:59)					8.1 <sup>c</sup>	14.3 <sup>d</sup>	1.1 <sup>c</sup>	0.15 <sup>b</sup>	0.05 <sup>d</sup>	
ENGINE TEMP.	AFTERNOON (15:00-17:59)					11.9 <sup>c</sup>	21.7 <sup>c</sup>	1.5 <sup>c</sup>	0.20 <sup>b</sup>	0.06 <sup>c</sup>	
	EVENING (18:00-20:59)					7.1 <sup>c</sup>	14.3 <sup>d</sup>	0.9 <sup>c</sup>	0.12 <sup>c</sup>	0.03 <sup>c</sup>	
	NIGHT (21:00-05:59)					4.0 <sup>e</sup>	8.6 <sup>e</sup>	0.5 <sup>e</sup>	0.07 <sup>d</sup>	0.02 <sup>e</sup>	
	Saskatchewan	603,245	70	21.2	17.5	44.9 <sup>b</sup>	81.7 <sup>c</sup>	5.9 <sup>b</sup>	0.78 <sup>b</sup>	0.23 <sup>b</sup>	
COLD (< 50°C)	COLD (< 50°C)					1.5 <sup>b</sup>	2.1 <sup>b</sup>	0.4 <sup>b</sup>	0.05 <sup>b</sup>	0.04 <sup>b</sup>	
	WARM (50°C to 80°C)					8.1 <sup>e</sup>	12.3 <sup>e</sup>	1.1 <sup>d</sup>	0.17 <sup>c</sup>	0.06 <sup>c</sup>	
	HOT (> 80°C)					35.4 <sup>c</sup>	67.3 <sup>c</sup>	4.3 <sup>c</sup>	0.55 <sup>b</sup>	0.13 <sup>d</sup>	
	NO DATA					0.0	0.0	0.0	0.00 <sup>f</sup>	0.00 <sup>f</sup>	



# Saskatchewan – 1st Quarter, 2012

Histograms



### Quality of Estimates (cv)

- a: less than 5% (excellent)
- b: between 5% and 10% (good)
- c: between 10% and 15% (acceptable)
- d: between 15% and 20% (use with caution)
- e: between 20% and 35% (unreliable)
- f: more than 35% (unusable)

### Vehicle Age

- 0 TO 3: 3 years old and younger
- 4 TO 8: between 4 and 8 years old
- 9+: 9 years old and older with model year post-1995
- OLD: model year between 1981 and 1995
- V.OLD: model year pre-1981

### Notes on Driver Age and Gender

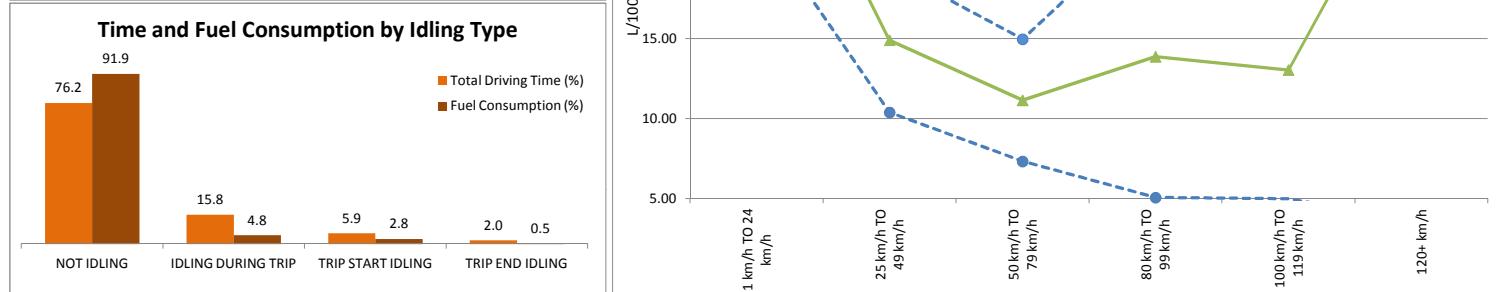
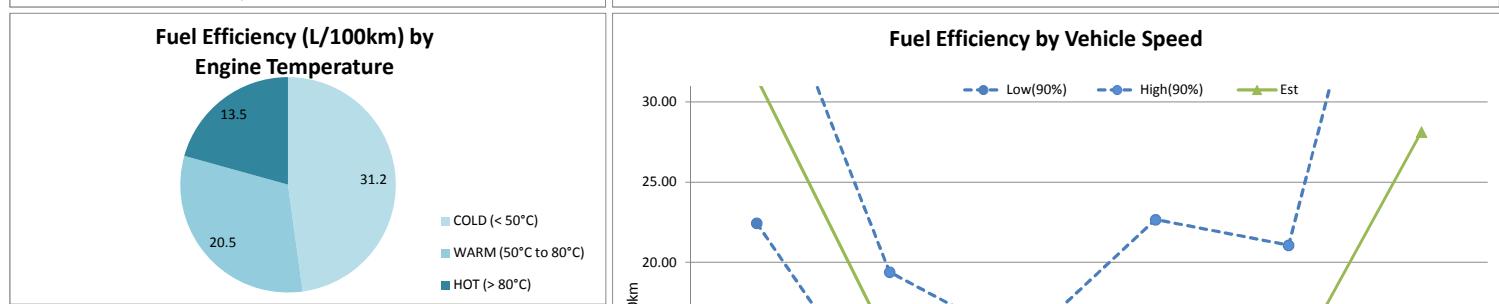
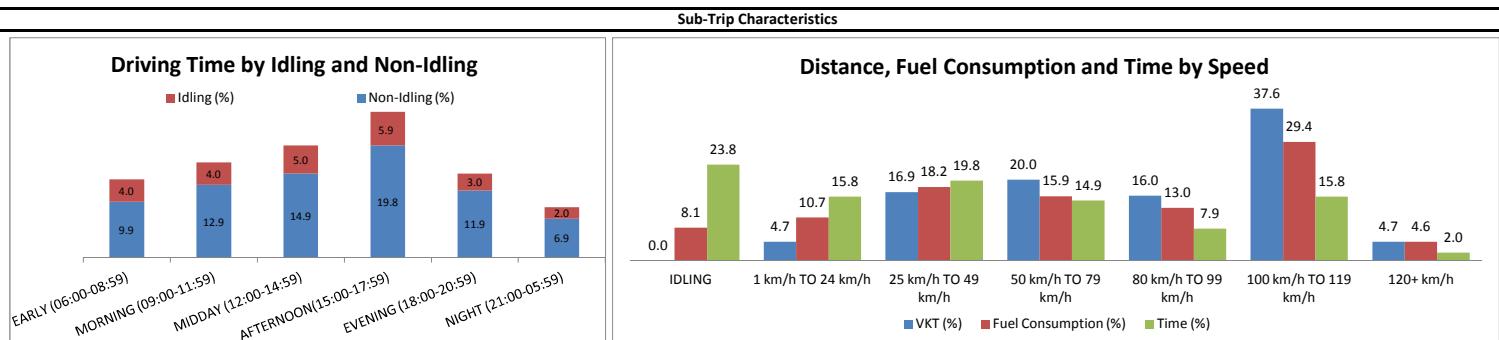
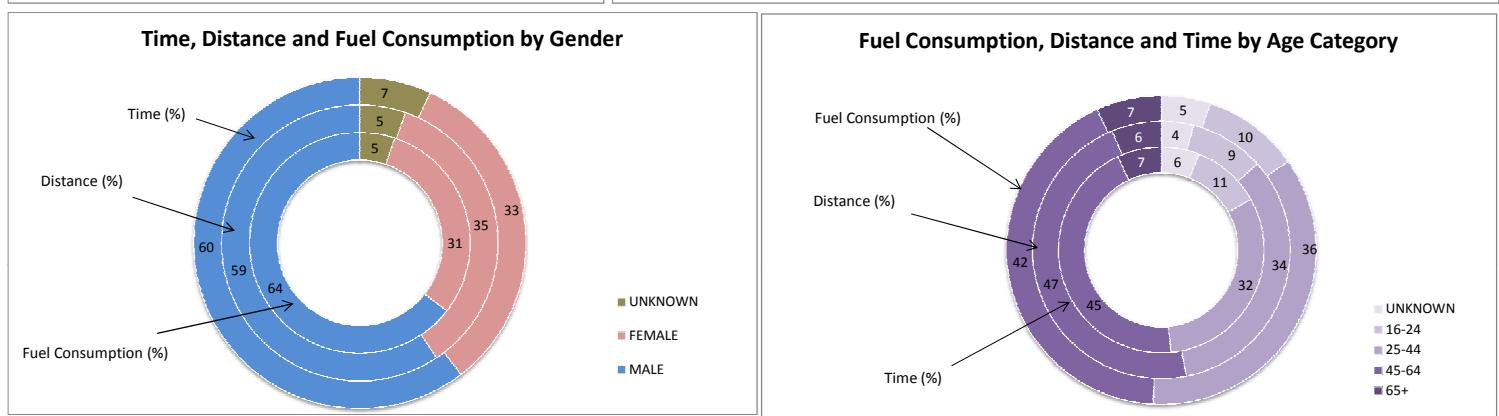
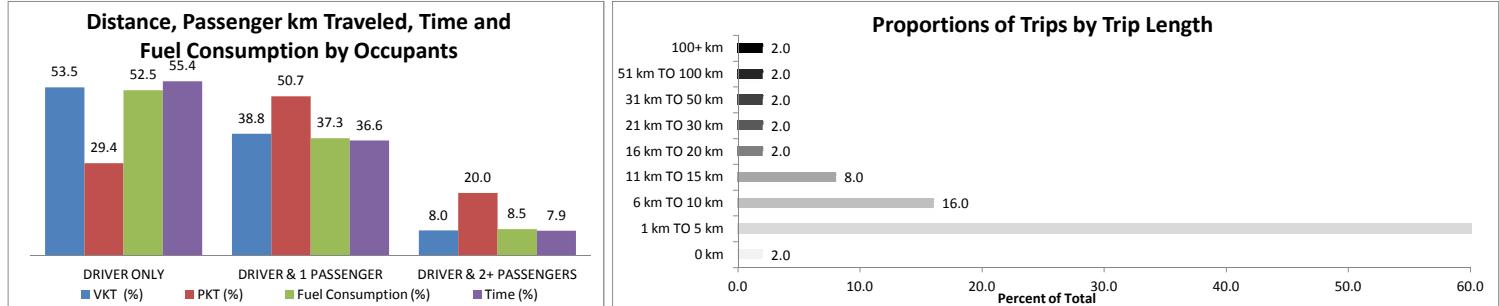
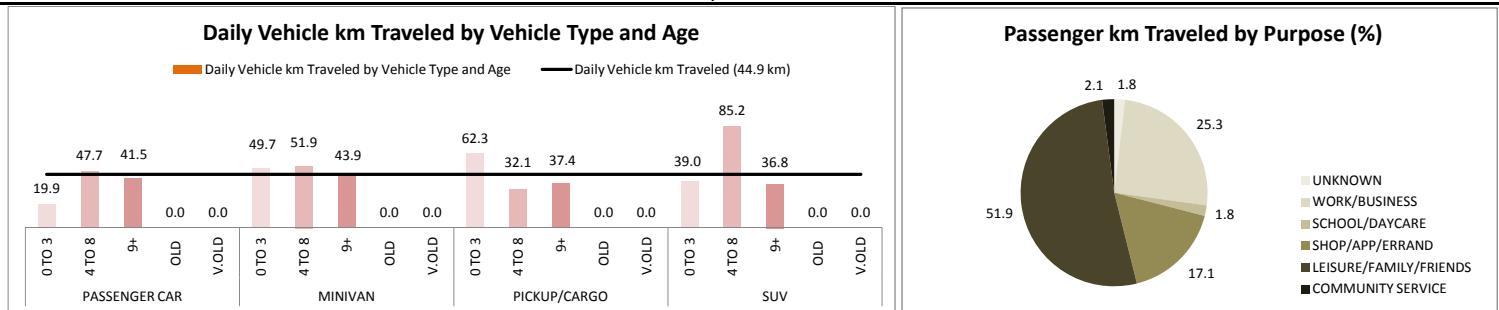
The estimates provided in the DRIVER AGE and GENDER category are VEHICLE characteristics, not DRIVER characteristics. Without further information on the distribution of drivers in a given jurisdiction (by AGE and GENDER), the estimates of the basic characteristics (nTrips, VKT, PKT, Fuel, Use, UseNI) cannot be used to predict the average driving behaviour of various combinations of DRIVER AGE and GENDER for that jurisdiction.

Values in columns may not add up or average (weighted) exactly to the corresponding column header due to round off errors.



# Saskatchewan – 1st Quarter, 2012

## Trip Characteristics

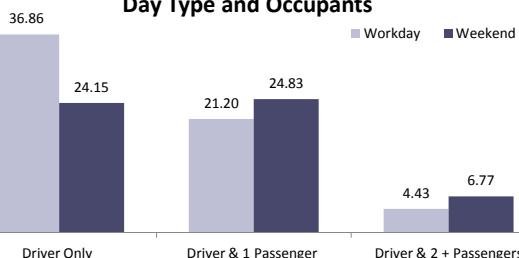




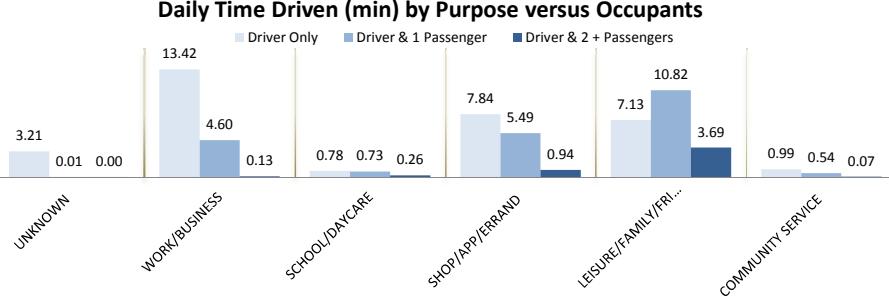
# Saskatchewan – 1st Quarter, 2012

## Mixed Characteristics

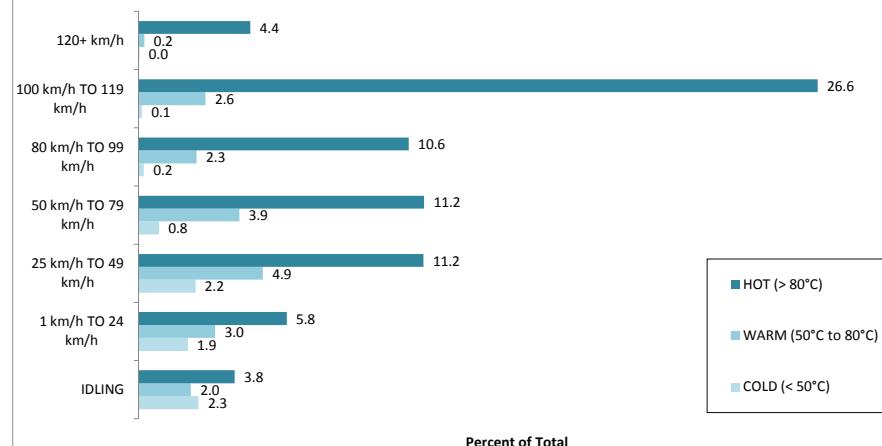
**Driving Time (min) by Day Type and Occupants**



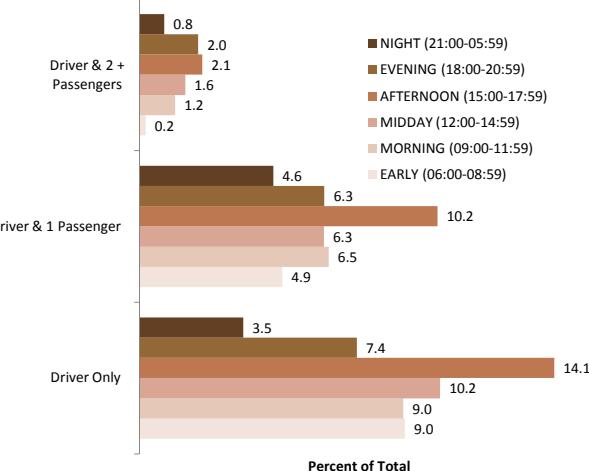
**Daily Time Driven (min) by Purpose versus Occupants**



**Fuel Consumption by Speed and Engine Temperature**



**Distance by Occupants by Time of Driving**



**Fuel Consumption by Idling and Time of Driving**

