Detailed profile of facts and statistics regarding

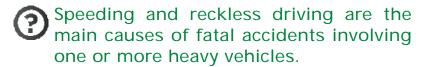
## **HEAVY VEHICLES**



# What?

# Detailed profile of facts and statistics regarding

#### **HEAVY VEHICLES**



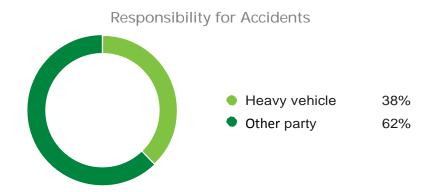
Speeding and reckless driving were the main cause of fatal accidents involving one or more heavy vehicles between 2007 and 2009. This statistic was determined by a working group that analyzed fatal accidents involving one or more heavy vehicles.

Definition of *speeding and reckless driving*: Any speed or reckless action that could put the safety or life of a person in danger or damage property. Such is the case whenever a driver's speed is too high for the circumstances, even if the driver does not exceed the legal speed limit.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) –

Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds

Heavy vehicle drivers are at fault in 38% of accidents involving one or more heavy vehicles



Analysis of fatal accidents involving one or more heavy vehicles between 2007 and 2009 has revealed the extent to which various parties were at fault in such accidents. Of the 342 accidents for which the information required to identify the responsible party was available, heavy vehicle drivers were at fault in 117 accidents, while the other party was responsible in 225. However, if one excludes cases of suicide and death by natural causes at the wheel and takes only driving-related accidents into account, a total of 297 accidents remain. Heavy vehicle drivers were at fault in 114 (38%) such accidents, while another party was at fault in 183 (62%) cases.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) —
Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds



The most common causes of fatal accidents in which a heavy vehicle driver is identified as the responsible party are speeding and reckless driving, working procedures, failure to yield and distraction.

Between 2007 and 2009, the main causes of accidents (see graph below) involving one or more heavy vehicles in which the heavy vehicle driver was at fault were speeding or reckless driving (19 out of 114 accidents), failure to yield (15 of 114 accidents), working procedures (15 out of 114 accidents) and lack of attention or distraction (13 out of 114 accidents).

"Other" includes multiple causes for with an insignificant number of cases, for which explanation is not necessary.

#### Main determined causes of accidents 40 36 30 19 20 15 15 13 10 7 5 3 **Impaired** Weather Fatigue, Fatigue Lack of Failure Working Speeding Other driving sleep or attention or to yield procedur and (alcohol discomfort distraction reckless or other) driving

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) – Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation gouvernement-industrie sur la sécurité des véhicules lourds



Victims of accidents involving one or more heavy vehicles are overrepresented among all accident victims.

In 2013, victims of accidents involving one or more heavy vehicles made up 8.8% of the total number of road accident victims (3,350 out of 38,098), even though heavy vehicles accounted for only 3.7% of all road vehicles. Heavy vehicle accident victims also made up 21.3% of road accident victims who lost their lives (85 out of 399).

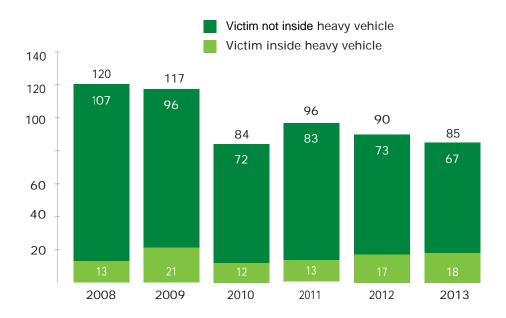
Source: Bilan routier (2013)

The number of fatalities from road accidents involving one or more heavy vehicles has been declining since 2008.

Nearly 80% of those killed in road accidents involving one or more heavy vehicles were not inside the heavy vehicle.

The number of fatalities from road accidents involving one or more heavy vehicles decreased by 29.2% between 2008 (120 fatalities) and 2013 (85 fatalities). Only about one in five of those killed in road accidents involving one or more heavy vehicles were inside the heavy vehicle at the time of the accident. In 2013, only 21.2% of those killed in an accident involving one or more heavy vehicles were inside the heavy vehicle (18 out of 85).

Progression in number of fatalities from accidents involving one or more heavy vehicles



Source: Bilan routier (2013)

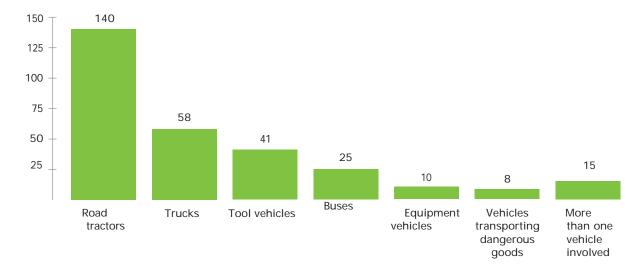




Road tractors (35.3) and equipment vehicles (34.6) have the highest fatality rates per 10,000 vehicles.

Analysis of the 297 fatal accidents involving one or more heavy vehicles that took place between 2007 and 2009 demonstrated that the heavy vehicles most frequently involved in such accidents were road tractors, which were involved in 140 fatal accidents (47.1%), as illustrated by the graph below.

Number of fatal accidents by type of heavy vehicle involved (2007-2009)



After road tractors, the types of heavy vehicles most frequently involved in fatal accidents are trucks (19.5%), tool vehicles (13.8%), buses (8.4%), equipment vehicles (3.4%) and vehicles transporting dangerous goods (2.7%). In order to ensure that statistics on accidents per vehicle type were not influenced by the number of vehicles of each type on the road, we calculated fatality rates per 10,000 vehicles.

Vehicle type	Fatal accidents analyzed <sup>1</sup>	Fatality rate per 10,000 heavy vehicles (according to vehicle type)
Road tractors, trucks and vehicles transporting dangerous goods <sup>2</sup>	206	17.7
Road tractors	140	35.3
Trucks	58	7.6
All tool vehicles	41	2.6
Farm tool vehicles (farm tractors)	18	1.5
Other tool vehicles	23	6.2
Buses	25	14.2
Equipment vehicles	10	34.6

- Number of accidents that were analyzed and included in the report of the government-industry advisory committee.
- Fatal accidents involving vehicles transporting dangerous goods are included in the number of fatal accidents involving road tractors and trucks, as nothing in these vehicles' registration information allowed us to differentiate between them.

We based our fatality rate calculations on the average annual number of registered vehicles of each type, according to the vehicle type indicated in each vehicle's registration information. We discovered that the vehicle types with the highest fatality rates per 10,000 vehicles were road tractors (35.3) and equipment vehicles (34.6).

With regard to tool vehicles, which have a fatality rate of 2.6, there is a significant difference between the fatality rate for farm tool vehicles (farm tractors), which is 1.5, and that of other tool vehicles, which is 6.2.

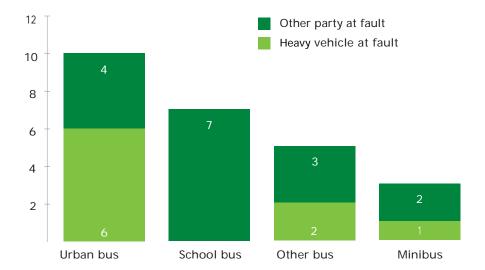
Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) – Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation gouvernement-industrie sur la sécurité des véhicules lourds; Registration information (2007–2009)

## What?

Detailed profile of facts and statistics regarding **HEAVY VEHICLES** 

In over 65% of fatal accidents involving one or more buses, the other party is responsible for the accident. No school bus drivers have been at fault in an accident involving a school bus.

Analysis of fatal accidents involving a bus (25 accidents analyzed – 2007 to 2009)



In 16 (64%) of the 25 fatal accidents involving a bus that were analyzed, the other party involved in the accident was at fault. The analysis of responsibility for fatal accidents involving one or more buses, which was carried out by the Groupe de travail multisectoriel (multi-sector working group), revealed that in most cases, the other party involved in the accident was at fault. However, the bus driver was more often at fault in the case of urban bus accidents (6 to 4). In all accidents involving school buses, the other party was at fault.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) —
Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds

Patal accidents involving one or more heavy vehicles and one or more pedestrians are often caused by tool vehicles (34%) or vehicles backing up (30%).

Analysis of 47 fatal accidents involving one or more pedestrians and one or more heavy vehicles that took place between 2007 and 2009 provides information on the causes and circumstances of such accidents as well as the responsibility of the parties involved. The major conclusions of this analysis are as follows:

#### Responsibility:

• In 32% of accidents (15 out of 47), the pedestrian was at fault.

#### Circumstances:

- In 34% of accidents (16 out of 47), the heavy vehicle involved was a tool vehicle.
- In 30% of accidents (14 out of 47), the heavy vehicle was backing up.
- In 15% of accidents (7 out of 47), the heavy vehicle was turning left.

#### Causes

• In 15% of accidents (7 out of 47), the heavy vehicle driver's working procedures were to blame.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) —
Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds

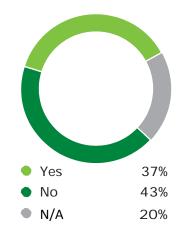
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Half of all accidents involving a heavy vehicle only (excluding farm tractors) were due to excessive speeds around a curve.

Of the 18 fatal accidents involving a heavy vehicle only that took place between 2007 and 2009, half (9) were due to excessive speeds around a curve. Only 2 of these accidents took place on a snow-covered surface.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) —
Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds

Of all victims killed while inside a heavy vehicle, 43% were not wearing a seat belt.



Among all fatalities occurring to those inside heavy vehicles (excluding farm tractors) during an accident involving one or more heavy vehicles:

- 37% of victims were wearing a seat belt;
- 43% of victims were not wearing a seat belt;
- · Information was unavailable for 20% of victims.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) – Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation gouvernement-industrie sur la sécurité des véhicules lourds



## What?

Detailed profile of facts and statistics regarding HEAVY VEHICLES

In fatal accidents involving one or more heavy vehicles, deaths occur more frequently among those outside the heavy vehicle than among those inside it.

Deaths from accidents involving one or more heavy vehicles occur more often among those outside the heavy vehicle. In fact, 78.8% of people killed in a heavy vehicle accident were not inside the heavy vehicle.

In 2013, a total of 64 people died in an accident involving a truck or road train; only 13 of those people were inside the truck or road train. In the same year, only 1 of 9 people who died in an accident involving a bus were inside the bus at the time of the accident.

Source: Accident reports (2013)

### Fatalities from accidents involving one or more heavy vehicles in 2013 (by vehicle type)

Heavy vehicle type	Victims outside the heavy vehicle	Victims inside the heavy vehicle	Total
School buses	2	0	2
Buses and minibuses	6	1	7
Trucks and Road tractors	51	13	64
Tool and equipment vehicles	10	4	14
Total	67	18	85



# Detailed profile of facts and statistics regarding

#### **HEAVY VEHICLES**



The road users who most often become victims of accidents involving one or more heavy vehicles are users of automobiles and light trucks.

Our analysis of accidents involving one or more heavy vehicles that resulted in bodily injury in 2013 by type of road user revealed that the accident victims were most often automobile or light truck users (60.9%), heavy vehicle users (28.4%) or pedestrians (5.5%).



Source: Accident reports (2013)

Type of road user	Number of victims	Percentage
Automobile or light truck users	2,039	60.9%
Heavy vehicle users	952	28.4%
Motorcycle users	37	1.1%
Scooter users	11	0.3%
Off-road vehicle users	7	0.2%
Cyclists	81	2.4%
Pedestrians	183	5.5%
Others/not specified	40	1.2%
Total	3,350	100%





38% of pedestrian victims of an accident involving one or more heavy vehicles are 65 or older.

	Under 65	65 or older
Pedestrian deaths from accidents involving one or more heavy vehicles	61.7%	38.3%
Pedestrian deaths from all accidents	56.9%	43.1%
Population of Québec	83.8%	16.2%

Of the 47 pedestrians who died in accidents involving one or more pedestrians and one or more heavy vehicles between 2007 and 2009, 18 (38.3%) were 65 or older.

The percentage of pedestrians aged 65 and older who died in all accidents in 2013 is slightly higher still (43.1%).

The high proportion of pedestrian deaths that occur among individuals 65 and older is worrying considering that individuals aged 65 and older account for only 16.2% of Québec's population.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) —
Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds; Accident reports
(2007-2009)



Although more male heavy vehicle drivers are involved in accidents resulting in bodily injury, women are overrepresented among drivers involved in such accidents.

	Men¹	Women <sup>1</sup>
Percentage of heavy vehicle drivers involved in an accident resulting in bodily injury	93.6%	6.4%
Holders of licence class 1, 2 or 3	94.9%	5.1%
Ratio	0.99	1.25

1 Data for cases in which a driver's gender was not known was distributed proportionally.

In 2013, 93.6% of heavy vehicle drivers involved in accidents resulting in bodily injury were men. Only 6.4% were women.

However, when comparing these numbers with the proportion of Class 1, 2 or 3 licence holders who are female, and by calculating the ratio, we have found that women were overrepresented among drivers involved in such accidents.

Source: Accident reports (2013); Driver's licences (2013)





Heavy vehicle drivers between 35 and 54 years of age are most often involved in accidents resulting in bodily injury.

However, younger heavy vehicle drivers are overrepresented among drivers involved in accidents resulting in bodily injury.

The age ranges of 35 to 44 and 45 to 54 account for the majority of heavy vehicle drivers involved in an accident resulting in bodily injury (52.7%).

By comparing these numbers with the proportions of Class 1, 2 and 3 licence holders from different age ranges and by calculating the ratios of these proportions, we have concluded that the age ranges that include younger drivers are overrepresented. It was not possible to calculate the ratio for drivers aged 20 and under. However, the ratios for the age ranges of 20 to 24 (3.69), 25 to 34 (2.00) and 35 to 44 (1.30) are all higher than 1.

Source: Accident reports (2013); Driver's licences (2013)

Age	Percentage of heavy vehicle drivers involved in an accident resulting in bodily injury <sup>1</sup>	Percentage of drivers who hold a Class 1, 2 or 3 licence	Ratio
Under 20	1.4%	0.0%	_
20 to 24	4.8%	1.3%	3.69
25 to 34	16.8%	8.4%	2.00
35 to 44	23.7%	18.3%	1.30
45 to 54	29.0%	30.0%	0.97
55 to 64	18.9%	31.0%	0.61
65 to 74	4.9%	10.0%	0.49
75 and older	0.4%	0.9%	0.44

<sup>1</sup> Data for cases in which a driver's age was not known was distributed proportionally.

# When?

# Detailed profile of facts and statistics regarding

#### **HEAVY VEHICLES**

Accidents involving one or more heavy vehicles (regardless of type) resulting in bodily injury occur more frequently on weekdays. Heavy vehicle accidents occurring on weekdays are also overrepresented.

Accidents involving one or more heavy vehicles that result in bodily injury occur more frequently on weekdays than on weekends. The average proportion is higher on each weekday than on Saturday and Sunday. These statistics are unsurprising, as most heavy vehicle drivers work during the week.

Tool vehicles and equipment vehicles are the only heavy vehicle types for which the percentage of accidents resulting in bodily injury that take place on weekends (10.2%) is comparable to the average percentage of all such accidents that take place on weekends (12.3%). Obviously, these vehicle types are used more frequently on weekends than other types.

		Accidents resulting in bodily injury involving one or more:				
Day Trucks or tractors	Trucks or road tractors	School buses	Buses (other than school buses)	Tool or equipment vehicles	All accidents resulting in bodily injury	
Saturday	4.7%	1.9%	8.3%	11.6%	13.1%	
Sunday	4.1%	3.8%	7.0%	8.8%	11.5%	
Weekend	4.4%	2.9%	7.7%	10.2%	12.3%	
Monday	18.2%	20.0%	16.9%	13.5%	13.9%	
Tuesday	<b>↑</b> 18.2%	<b>1</b> 7.1%	<b>1</b> 6.9%	<b>1</b> 20.3%	14.0%	
Wednesday	<b>↑</b> 19.1%	<b>1</b> 20.0%	<b>1</b> 5.8%	13.9%	14.5%	
Thursday	<b>↑</b> 16.3%	<b>1</b> 23.8%	<b>1</b> 7.9%	14.3%	15.1%	
Friday	<b>↑</b> 19.4%	13.3%	17.1%	17.5%	17.9%	
Weekday	18.2%	18.8%	16.9%	15.9%	15.1%	

This symbol indicates that for the day in question, accidents resulting in bodily injury involving one or more heavy vehicles of a given type are overrepresented among all accidents resulting in bodily injury.

Source: Accident reports (2013)



Accidents resulting in bodily injury involving one or more heavy vehicles take place at different times of day, depending on the type of vehicle involved.

The times of day during which the most accidents resulting in bodily injury involving one or more heavy vehicles occurred and for which overrepresentation was noted were:

- between 6:00 a.m. and 2:59 p.m. for trucks and road tractors;
- between 6:00 and 8:59 a.m. and between 3:00 and 5:59 p.m. for school buses;
- between 12:00 and 5:59 p.m. for other types of buses; and
- between 9:00 a.m. and 2:59 p.m. for tool and equipment vehicles.

		All assidents requiting			
Time	Trucks or road tractors	School buses	Buses (other than school buses)	Tool or equipment vehicles	All accidents resulting in bodily injury
Midnight-2:59 a.m.	2.9%	0%	2.4 %	3.6%	4.2%
3:00-5:59 a.m.	<b>1</b> 5.0%	1.0%	2.4 %	↑6.0%	4.0%
6:00-8:59 a.m.	<b>1</b> 9.0%	<b>1</b> 34.6%	14.6%	10.4%	12.8%
9:00–11:59 a.m.	<b>1</b> 22.9%	7.7%	12.2 %	<b>1</b> 20.3%	13.9%
Noon-2:59 p.m.	<b>↑</b> 22.1%	13.5%	<b>↑</b> 22.2 %	<b>1</b> 9.5%	18.8%
3:00-5:59 p.m.	18.0%	<b>1</b> 43.3%	<b>↑</b> 25.1 %	23.5%	24.8%
6:00-8:59 p.m.	5.9%	0%	13.0%	11.6%	13.0%
9:00–11:59 p.m.	4.1%	0%	8.2 %	5.2%	8.5%

This symbol indicates that for the time of day in question, accidents resulting in bodily injury involving one or more heavy vehicles of a given type are overrepresented among all accidents resulting in bodily injury.

Source: Accident reports (2013)

The number of accidents resulting in bodily injury involving one or more heavy vehicles varies from month to month, depending on the vehicle type involved. However, accidents occurring in the period from November to January are overrepresented among all such accidents for all heavy vehicle types.

The months in which the most accidents resulting in bodily injury involving one or more heavy vehicles occurred, or in which such accidents were overrepresented, were:

- November and December for trucks and road tractors:
- September and October for school buses;
- August and October for other types of buses; and
- November and December for tool and equipment vehicles.

Accidents resulting in bodily injury involving one or more trucks or road tractors occurred more frequently in November and December. During this period, the percentage of accidents resulting in bodily injury involving one or more trucks or road tractors was over 10%. We also noted that accidents occurring in winter (November to February) are slightly overrepresented.

		Accidents resulting in bodily injury involving one or more:				
Month	Trucks or road tractors	School buses	Buses (other than school buses)	Tool or equipment vehicles	All accidents resulting in bodily injury	
January	8.6%	10.5%	7.3%	8.8%	7.6%	
February	8.1%	12.4%	6.0%	9.2%	7.2%	
March	6.0%	4.8%	6.8%	7.6%	6.2%	
April	5.9%	<b>1</b> 2.9%	<b>1</b> 9.4%	3.6%	6.4%	
May	8.1%	19.5%	9.4%	<b>1</b> 8.0%	8.4%	
June	7.7%	8.6%	5.2%	8.8%	8.5%	
July	8.6%	1.0%	7.3%	5.2%	9.6%	
August	9.1%	1.9%	<b>1</b> 0.4%	4.8%	9.6%	
September	7.4%	<b>1</b> 7.1%	8.3%	6.4%	9.0%	
October	8.9%	<b>↑</b> 15.2%	<b>1</b> 0.9%	6.4%	8.9%	
November	<b>↑</b> 11.3%	5.7%	<b>1</b> 9.6%	<b>1</b> 2.4%	9.0%	
December	<b>↑</b> 10.4%	<b>1</b> 0.5%	<b>1</b> 9.6%	<b>1</b> 9.1%	9.5%	

This symbol indicates that for the month in question, accidents resulting in bodily injury involving one or more heavy vehicles of a given type are overrepresented among all accidents resulting in bodily injury.



# Where?

# Detailed profile of facts and statistics regarding

#### **HEAVY VEHICLES**

The regions with the highest rates of accidents resulting in bodily injury involving one or more trucks or truck roads are Côte-Nord, Nord-du-Québec and Abitibi-Témiscamingue.

In 2013, the rate of accidents resulting in bodily injury in all of Québec's regions involving one or more trucks or road tractors per 10,000 of such vehicles was higher than the rate of all accidents resulting in bodily injury. This overrepresentation was even higher for the Côte-Nord, Nord-du-Québec and Abitibi-Témiscamingue regions.

The rates in the Nord-du-Québec (654.2) and Côte-Nord (613.2) regions are extremely high for road tractors (over 15 times the rate for all vehicles in these regions). The rates for trucks only are highest in the Outaouais (170.6) and Montréal (147.4) regions.

D	Rate of accidents resulting in bodily injury per 10,000 vehicles <sup>1</sup>				
Region	Trucks	Road tractors	Trucks and road tractors	All vehicles	
Côte-Nord	106.8	613.2	218.8	36.6	
Nord-du-Québec	95.9	654.2	209.9	31.8	
Abitibi-Témiscamingue	131.7	323.2	201.4	37.0	
Outaouais	170.6	219.1	178.9	42.4	
Saguenay-Lac-Saint-Jean	113.8	253.3	162.4	36.9	
Bas-Saint-Laurent	111.1	226.4	156.1	37.8	
Estrie	125.1	202.4	146.1	45.0	
Montréal	147.4	143.9	144.6	64.4	
Mauricie	113.4	208.2	139.8	48.8	
All of Québec	117.1	176.0	134.9	45.9	
Chaudière-Appalaches	111.1	156.1	130.6	35.9	
Montérégie	100.9	182.0	127.7	44.2	
Laurentides	110.2	177.6	126.7	43.9	
Lanaudière	134.6	82.0	118.5	47.9	
Gaspésie-Îles-de-la-Madeleine	73.1	263.9	118.5	35.6	
Capitale-Nationale	105.8	157.7	117.4	40.6	
Centre-du-Québec	87.7	118.7	101.8	44.3	
Laval	89.8	139.6	99.4	50.2	

<sup>1.</sup> Rate based on the number of vehicles in circulation on December 31, 2013.

Source: Bilan 2013 des taxis, des autobus, des camions lourds et des tracteurs routiers; Accident reports (2013)



The administrative regions with the highest rates of accidents resulting in bodily injury involving one or more buses are Montréal and Outaouais.

In all of Québec's regions (except Nord-du-Québec, where no bus accidents occurred in 2013), the rate of accidents resulting in bodily injury involving one or more school buses was higher than the rate of all accidents resulting in bodily injury. However, it is important to use caution when interpreting region-specific rates, as they are based on a very small number of accidents.

5 .	Rate of accidents per 10,000 vehicles <sup>1</sup>				
Region	School buses	Other buses	All buses	All vehicles	
Montréal	136.2	971.2	717.7	64.4	
Outaouais	198.7	430.6	310.0	42.4	
All of Québec	101.9	469.5	264.8	45.9	
Mauricie	147.5	393.0	246.5	48.8	
Laval	45.0	403.8	238.6	50.2	
Estrie	137.0	403.6	238.1	45.0	
Montérégie	108.9	348.0	209.0	44.2	
Centre-du-Québec	164.2	143.9	160.1	44.3	
Capitale-Nationale	91.0	200.6	159.8	40.6	
Lanaudière	126.4	128.6	127.0	47.9	
Côte-Nord	138.9	102.0	124.0	36.6	
Saguenay-Lac-Saint-Jean	80.0	161.3	111.1	36.9	
Laurentides	61.9	281.7	106.1	43.9	
Bas-Saint-Laurent	20.0	500.0	86.2	37.8	
Chaudière-Appalaches	83.9	25.9	65.6	35.9	
Gaspésie-Îles-de-la-Madeleine	40.7	140.8	63.1	35.6	
Abitibi-Témiscamingue	53.3	64.1	56.5	37.0	
Nord-du-Québec	<del></del>	<del>_</del>	<del>-</del>	31.8	

<sup>1.</sup> Rate based on the number of vehicles in circulation on December 31, 2013.

Source: Bilan 2013 des taxis, des autobus, des camions lourds et des tracteurs routiers; Accident reports (2013)

The administrative regions with the highest rates of accidents resulting in bodily injury involving one or more tool or equipment vehicles are Montréal and Laval.

In 2013, the rate of accidents resulting in bodily injury involving one or more tool or equipment vehicles remained lower than the rate of all accidents resulting in bodily injury. The regions of Montréal and Laval had the highest rates of accidents resulting in bodily injury involving one or more tool or equipment vehicles.

	Rate of accidents per 10,000 vehicles <sup>1</sup>					
Region	Tool vehicles	Equipment vehicles	Tool or equipment vehicles	All vehicles		
Montréal	23.7	282.3	36.3	64.4		
Laval	25.3	236.2	36.1	50.2		
Lanaudière	15.4	82.3	16.8	47.9		
Laurentides	10.0	196.1	14.6	43.9		
Capitale-Nationale	13.8	36.6	14.3	40.6		
Montérégie	12.7	125.0	14.2	44.2		
Mauricie	12.9	138.9	14.0	48.8		
All of Québec	11.6	168.2	13.3	45.9		
Côte-Nord	9.0	192.3	13.3	36.6		
Chaudière-Appalaches	13.1	<del></del>	13.0	35.9		
Outaouais	12.3	<del>-</del>	12.0	42.4		
Saguenay-Lac-Saint-Jean	6.8	365.9	10.8	36.9		
Bas-Saint-Laurent	8.4	<del>-</del>	8.4	37.8		
Gaspésie-Îles-de-la-Madeleine	6.9	<del></del>	6.8	35.6		
Abitibi-Témiscamingue	6.6	<del>-</del>	6.6	37.0		
Centre-du-Québec	5.9	<del>-</del>	5.9	44.3		
Estrie	4.7	101.0	5.5	45.0		
Nord-du-Québec	<del>_</del>	<del>_</del>	<del>-</del>	31.8		

<sup>1.</sup> Rate based on the number of vehicles in circulation on December 31, 2013.

Source: Accident reports (2013)

The administrative regions with the highest rates of accidents resulting in bodily injury involving one or more heavy vehicles are Montréal and Montérégie.

A total of 2,511 accidents resulting in bodily injury involving one or more heavy vehicles occurred in 2013. Of these accidents, 630 (25.1%) took place in Montréal and 476 (19.0%), in Montérégie. A total of 44.1% of such accidents took place in these two regions. The high number of accidents that occurred in these two regions should not be overlooked, although accidents involving one or more heavy vehicles are overrepresented among all accidents in some other regions as well.

Region	Number of accidents resulting in bodily injury involving one or more heavy vehicles according to vehicle type								
	Trucks	Road tractors	School buses	Other buses	Tool vehicles	Equipment vehicles	All heavy vehicles		
Montréal	233	117	14	229	23	14	630		
Montérégie	177	181	20	46	45	7	476		
Capitale-Nationale	91	47	7	26	17	1	189		
Chaudière-Appalaches	55	59	7	1	36	0	158		
Laurentides	72	41	7	8	10	5	143		
Lanaudière	75	20	10	4	18	2	129		
Outaouais	51	19	9	18	7	0	104		
Saguenay-Lac-Saint-Jean	37	44	4	5	5	3	98		
Laval	42	19	2	21	6	3	93		
Estrie	42	29	5	9	6	1	92		
Bas-Saint-Laurent	28	43	1	4	12	0	88		
Centre-du-Québec	30	34	9	2	9	0	84		
Mauricie	31	25	5	9	11	1	82		
Abitibi-Témiscamingue	23	35	2	1	4	0	65		
Côte-Nord	15	26	2	1	2	1	47		
Gaspésie-Îles-de-la-Madeleine	8	9	1	1	3	0	22		
Nord-du-Québec	4	7	0	0	0	0	11		
All of Québec	1,014	755	105	385	214	38	2,511		

Source: Bilan 2013 des taxis, des autobus, des camions lourds et des tracteurs routiers + Accident reports (2013)

For each type of vehicle, the proportion of accidents resulting in bodily injury involving one or more heavy vehicles varies according to road type.

The road types where the greatest number of accidents resulting in bodily injury involving one or more heavy vehicles occur (see bolded values in table) are:

- numbered roads for trucks and road tractors;
- main roads for school buses;
- main roads for other buses; and
- other road types for tool and equipment vehicles.

Road type	Proportion of accidents resulting in bodily injury involving one or more:						
	Trucks and road tractors	School buses	Other buses	Tool or equipment vehicles	All accidents		
Main road	24.7%	31.4%	<b>↑</b> 63.6%	17.5%	32.5%		
Highway	<b>1</b> 20.0%	3.8%	3.1%	2.4%	9.4%		
Numbered road	↑ 33.7%	<b>↑</b> 30.5%	8.6%	22.3%	27.0%		
Residential street	5.7%	<b>↑</b> 21.9%	<b>↑</b> 18.7%	<b>↑</b> 15.1%	14.1%		
Other	15.9%	12.4%	6.0%	<b>1</b> 42.6%	17.1%		

This symbol indicates that for the road type in question, accidents resulting in bodily injury involving one or more heavy vehicles of a given type are overrepresented among all accidents resulting in bodily injury.

Source: Bilan 2013 des taxis, des autobus, des camions lourds et des tracteurs routiers

30% of fatal accidents involving one or more pedestrians and one or more heavy vehicles take place off the road network.

Analysis of the 47 accidents fatal accidents involving one or more pedestrians and one or more heavy vehicles that took place between 2007 and 2009 has revealed that 30% of such accidents took place off the road network.

Source: Analyse des accidents mortels impliquant au moins un véhicule lourd (2007-2009) –

Principaux constats, Groupe de travail multisectoriel lié à la Table de concertation
gouvernement-industrie sur la sécurité des véhicules lourds