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Heavy Truck Casualty Collisions 2001 - 2005

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HEAVY TRUCK CASUALTY COLLISIONS 2001 - 2005

This document reviews casualty collisions (fatalities and injuries) involving heavy trucks in Canada from 2001 to 2005. Collisions involving heavy trucks include all vehicles in these collisions, such as passenger cars, light trucks and vans, heavy trucks, buses, motorcycles/mopeds and bicycles, as well as all other road users in these collisions including pedestrians. The report presents the heavy truck travel exposure, heavy truck involvement rates in fatal and injury collisions, and the victims in these heavy truck collisions. The report also presents collision characteristics for all heavy truck casualty collisions and separately for single-vehicle heavy truck casualty collisions. Examples of the collision characteristics are the number of vehicles in heavy truck collisions, hour and month of the collision, weather and road surface environmental conditions, road classification, and collision configuration.

The collision data in this report were obtained from Transport Canada's National Collision Database (NCDB). The NCDB comprises data on all police-reported motor vehicle collisions in Canada and is provided annually to Transport Canada by the thirteen provinces and territories. The collisions are those deemed reportable, that is, they occur on public roads and they incur bodily harm and/or property damage exceeding a stipulated dollar threshold, $1,000 for all jurisdictions since 1998. Not all jurisdictions report *all* data elements in the NCDB. Those that do report all data elements do not necessarily report them each year and those that collect a specific data element do not necessarily use all the codes for the data element.

To summarize the report, the heavy truck involvement rate in fatal collisions per 100 million vehicle kilometres travelled (VKT) decreased from 2001 to 2005, despite an increase in heavy truck traffic. Straight truck fatal collision rates were higher than tractor-trailer fatal collision rates. For injury collisions, involvement rates for heavy truck collisions combined increased, but decreased for straight truck collisions alone. The raw data show that fatal straight truck collisions increased while tractor-trailer fatal collisions decreased, for an overall increase in heavy truck fatal collisions. Injury collisions increased for straight trucks and tractor-trailers. Fatality rates declined in both straight truck and tractor-trailer collisions; however, the raw data showed that fatalities increased in straight truck and tractor-trailer collisions. This increase was due partly to an increase in straight truck occupant fatalities and pedestrians involved in these straight truck collisions. The increase was also due to an increase in fatalities of occupants of the other vehicles involved with tractor-trailers, and pedestrians and bicyclists involved in the tractor-trailer collisions. Note that there was a decrease in pedestrian and bicyclist fatalities in collisions involving all vehicles other than heavy trucks, but the occupant fatalities increased in these other vehicle collisions. Injuries increased for all road users involved in straight truck and tractor-trailer collisions and decreased for all road users involved in collisions that did not include heavy trucks.

SUMMARY FINDINGS

Over the five-year period:

- Heavy trucks travelled an annual average of about 24 billion kilometres (7.4 billion kilometres for straight trucks and 16.6 billion kilometres for tractor-trailers). Heavy truck traffic increased 16.0 percent (22.3 percent for straight trucks and 13.6 percent for tractor-trailers).

- About 19 percent of all road users killed were in heavy truck collisions (13.0 percent for tractor-trailers and 6.3 percent for straight trucks).

- About 73.6 percent of fatalities in heavy truck collisions were occupants of other vehicles involved with heavy trucks, 15.9 percent were heavy truck occupants, 8.7 percent were pedestrians, and 1.8 percent were bicyclists.

- There were 2.5 fatalities in straight truck collisions and 2.2 fatalities in tractor-trailer collisions per 100 million heavy truck VKT, on average.

- There were 2.2 straight trucks and 2.1 tractor-trailers involved in fatal collisions per 100 million heavy truck VKT, on average.

- There was an annual average of 8,985 heavy truck casualty collisions, with averages of 4,792 and 4,339 for straight trucks and tractor-trailers, respectively.

- The majority of heavy truck casualty collisions occurred during daytime hours, in clear weather on dry, undivided roads, and in higher speed zones. Two-thirds of straight truck casualty collisions occurred in urban areas. About 56 percent of tractor-trailer collisions occurred in areas deemed “rural”.

- Single-vehicle fatal heavy truck collisions occurred mostly during the daytime, in clear weather on dry, straight, level, and undivided roads, and in areas deemed “rural”.

- There were 23 pedestrians killed in heavy truck single-vehicle *reversing* collisions. Eighteen of these pedestrians were killed by straight trucks and 5 were killed by tractor-trailers.

HEAVY TRUCK EXPOSURE AND INVOLVEMENT RATES

Vehicle Kilometres Travelled (VKT)

In this report, heavy truck exposure was calculated using VKT. VKT were obtained from the "Canadian Vehicle Survey", a Statistics Canada publication available since 2000. VKT is the best measure of exposure because the distances travelled by the heavy trucks are more informative about their activity than other measures such as heavy truck registrations. Heavy truck registrations are presented in Table 2 for information only.

A. Vehicle Kilometres Travelled for Heavy Trucks

Table 1 shows the changes in heavy truck traffic from 2001 to 2005. Heavy truck traffic increased 16.0 percent overall despite some annual fluctuations. Individually, tractor-trailer traffic was more than twice that of straight trucks. Straight trucks had the higher overall increase (22.3 percent) in traffic while tractor-trailer traffic increased 13.6 percent. The source of the data is the Canadian Vehicle Survey.

Table 1. Vehicle Kilometres Travelled

Heavy Truck Type	2001	2002	2003	2004	2005	Average
	(millions)					
Straight Trucks > 4,500 kg	6,272.2	5,887.4	7,959.7	9,182.2	7,673.0	7,394.9
Tractor-Trailers ≥15,000 kg	16,111.6	15,690.0	15,670.4	16,984.3	18,295.0	16,550.3
Heavy Trucks	22,383.8	21,577.4	23,630.1	26,166.5	25,968.0	23,945.2

B. Heavy Truck Registrations

There were 36.7 percent more straight trucks than tractor-trailers registered, on average. With the exception of straight trucks in 2002, the heavy truck registrations increased over the five years. Tractor-trailers had a larger overall increase (12.4 percent) compared with straight trucks (5.2 percent). The source of the data is the Canadian Vehicle Survey.

Table 2. Heavy Truck Registrations

Heavy Truck Type	2001	2002	2003	2004	2005	Average
	(millions)					
Straight Trucks > 4,500 kg	387,330.0	366,962.0	378,251.0	389,810.0	407,405.0	385,951.6
Tractor-Trailers ≥15,000 kg	267,129.0	277,339.0	282,185.0	285,154.0	300,180.0	282,397.4
Heavy Trucks	654,459.0	644,301.0	660,436.0	674,964.0	707,585.0	668,349.0

Involvement Rates for Heavy Trucks in Casualty Collisions

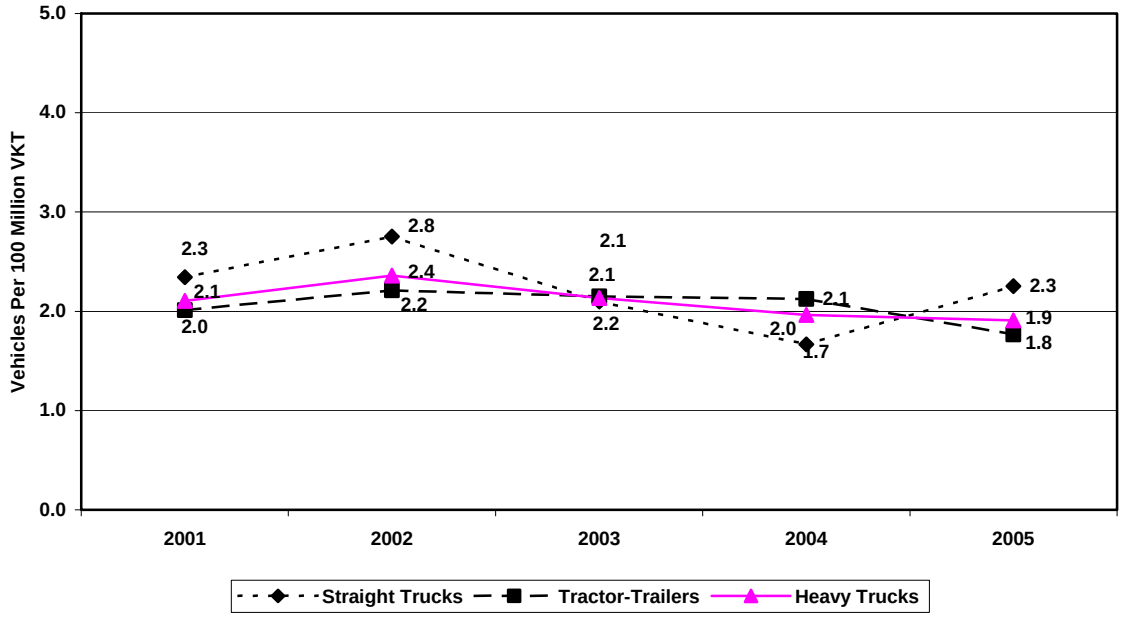
As shown in Figures 1 and 2, straight trucks had higher collision rates than tractor-trailers in both fatal and injury collisions, except for fatal collisions in 2004. Tractor-trailers generally had lower collision involvement rates than straight trucks despite travelling more than twice the distance.

A. Involvement Rates for Heavy Trucks in Fatal Collisions

Figure 1 shows the number of heavy trucks in fatal collisions per 100 million heavy truck VKT. These involvement rates are displayed for heavy trucks combined and individually for straight trucks and tractor-trailers.

There were 2.2 straight trucks and 2.1 tractor-trailers involved in fatal collisions per 100 million heavy truck VKT, on average over the five years. From 2001 to 2005, there was an average of 2.1 heavy trucks involved in fatal collisions as compared to an average of 1.4 heavy trucks in the United States, based on 100 million heavy truck VKT. The U.S. figure is based on statistical information obtained from the Large Truck Crash Facts 2006 published by the U.S. Department of Transportation.

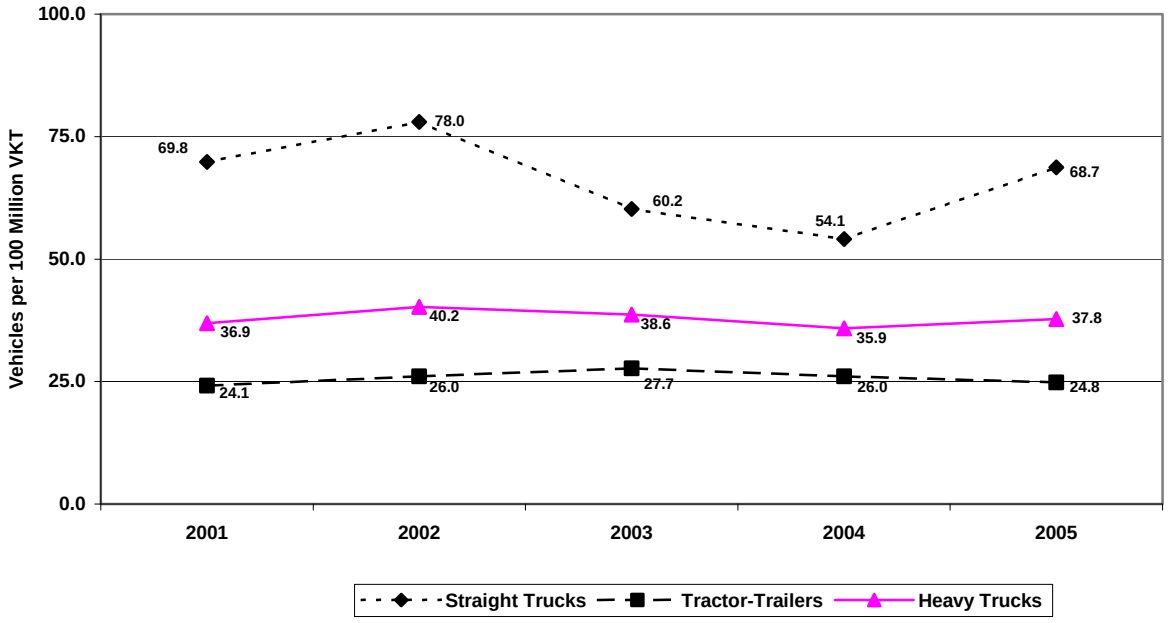
Figure 1. Involvement Rates for Heavy Trucks in Fatal Collisions 2001 - 2005



B. Involvement Rates for Heavy Trucks in Injury Collisions

Figure 2 shows the number of heavy trucks in injury collisions per 100 million heavy truck VKT. There were 66.2 straight trucks and 25.5 tractor-trailers involved in injury collisions per 100 million heavy truck VKT, on average over the five years. From 2001 to 2005, there was an average of 37.9 heavy trucks combined involved in injury collisions as compared to an average of 25.1 heavy trucks in the United States, based on 100 million heavy truck VKT. The U.S. figure is based on statistical information obtained from the Large Truck Crash Facts 2006 published by the U.S. Department of Transportation.

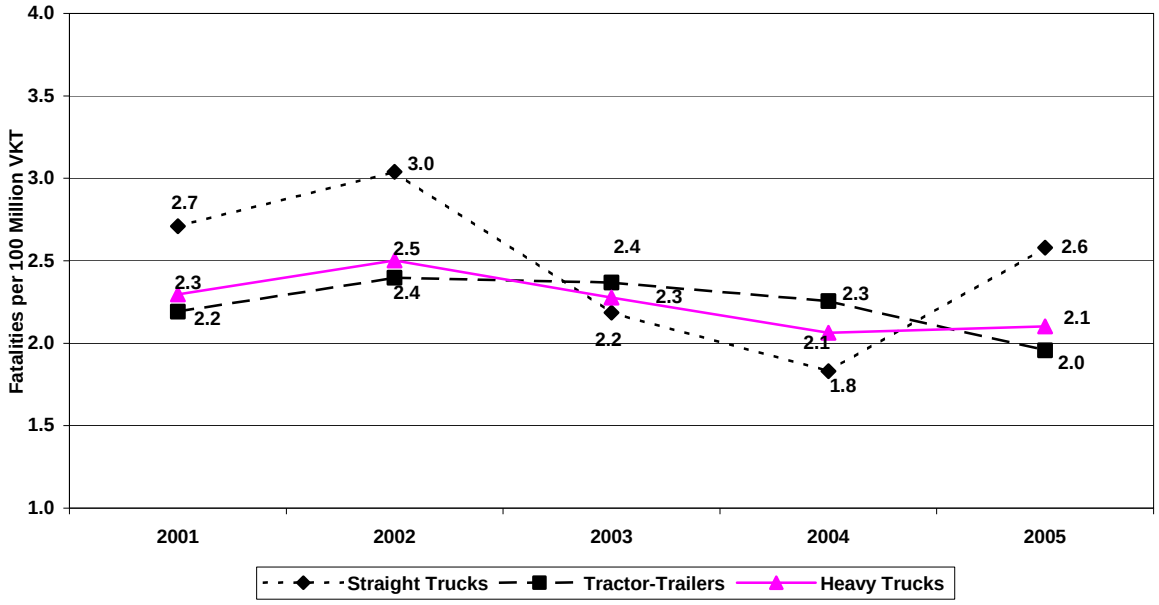
Figure 2. Involvement Rates for Heavy Trucks in Injury Collisions 2001 - 2005



Fatality Rates in Heavy Truck Collisions

Figure 3 shows the fatalities in heavy truck collisions per 100 million heavy truck VKT. The average fatality rates for straight trucks and tractor-trailers were 2.5 fatalities and 2.2 fatalities per 100 million VKT, respectively. From 2001 to 2005, there was an average of 2.2 fatalities in heavy truck collisions as compared to an average of 1.5 fatalities in the United States, based on 100 million heavy truck VKT. The U.S. figure is based on statistical information obtained from the Large Truck Crash Facts 2006 published by the U.S. Department of Transportation.

Figure 3. Fatality Rates in Heavy Trucks Collisions
2001 - 2005



HEAVY TRUCK CASUALTY COLLISION CHARACTERISTICS

Heavy Truck Involvement in Collisions

As shown in Table 3, from 2001 to 2005, there was an annual average of 8,985 heavy truck casualty collisions[1], with averages of 4,792 straight truck casualty collisions and 4,339 tractor-trailer casualty collisions. Straight truck casualty collisions comprised 53.3 percent of heavy truck casualty collisions and tractor-trailers comprised 48.3 percent. Straight truck collisions and tractor-trailer collisions are not mutually exclusive because a straight truck collision may involve a tractor-trailer, and vice versa.

Heavy truck collisions accounted for 18.3 percent of fatal collisions and 5.7 percent of injury collisions, on average per year. Of the fatal collisions, straight truck collisions comprised 6.3 percent and tractor-trailers comprised 12.4 percent, on an annual average.

Table 3. Casualty Collisions Involving Heavy Trucks and Other Vehicles 2001 - 2005 and Average

	2001	2002	2003	2004	2005	Average	Average %
Fatal Collisions Involving:							
Straight trucks	145	156	165	148	169	157	6.3
Tractor-trailers	303	313	316	316	296	309	12.4
Heavy trucks	441	457	475	453	457	457	18.3
Vehicles other than heavy trucks	1,989	2,137	2,011	1,977	2,101	2,043	81.7
Total Fatal Collisions	2,430	2,594	2,486	2,430	2,558	2,500	100.0
Injury Collisions Involving:							
Straight trucks	4,223	4,452	4,635	4,801	5,065	4,635	3.1
Tractor-trailers	3,714	3,879	4,105	4,162	4,290	4,030	2.7
Heavy trucks	7,830	8,216	8,587	8,801	9,207	8,528	5.7
Vehicles other than heavy trucks	141,125	145,634	141,886	136,455	136,397	140,299	94.3
Total Injury Collisions	148,955	153,850	150,473	145,256	145,604	148,828	100.0
All Casualty Collisions Involving:							
Straight trucks	4,368	4,608	4,800	4,949	5,234	4,792	3.2
Tractor-trailers	4,017	4,192	4,421	4,478	4,586	4,339	2.9
Heavy trucks	8,271	8,673	9,062	9,254	9,664	8,985	5.9
Vehicles other than heavy trucks	143,114	147,771	143,897	138,432	138,498	142,342	94.1
Total All Casualty Collisions	151,385	156,444	152,959	147,686	148,162	151,327	100.0

[1] The total of collisions involving heavy trucks is not the sum of collisions involving straight trucks and tractor-trailers. Refer to the explanatory note at the end of the document.

Number of Vehicles Per Heavy Truck Casualty Collision

Table 4 shows that, on average, the majority of heavy truck casualty collisions were two-vehicle collisions, regardless of collision severity and truck type. The greatest number of vehicles in the same fatal heavy truck collision during the five-year period was 56 in 2002, followed by 41 and 46 in 2001, and 36 in 2005.

Table 4. Heavy Truck Casualty Collisions by Number of Vehicles per Collision and Collision Severity, Average 2001 - 2005

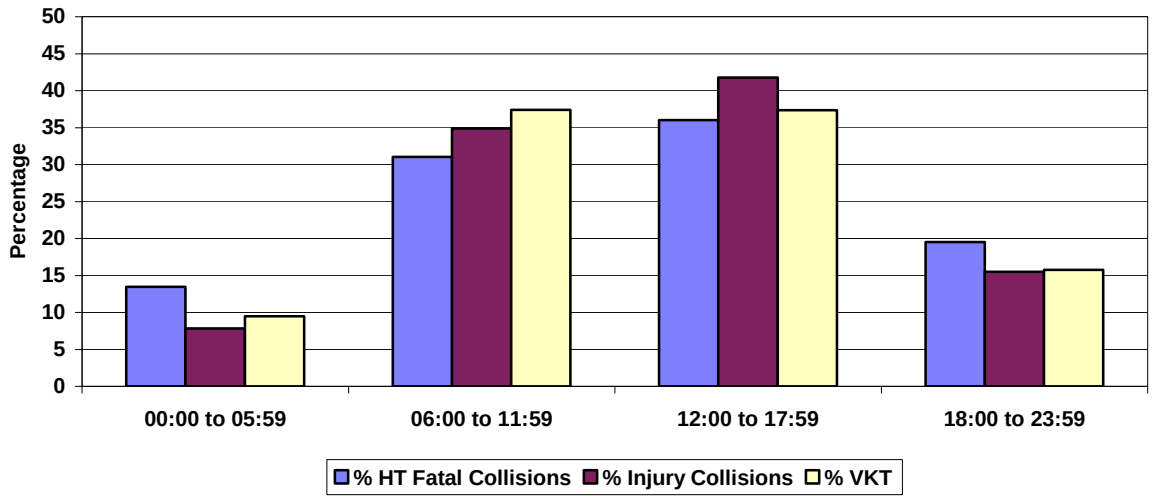
Number of Vehicles in a Heavy Truck Collision	Heavy Trucks		Straight Trucks		Tractor Trailers		Light-Duty Vehicles	
	Fatal %	Injury %	Fatal %	Injury %	Fatal %	Injury %	Fatal %	Injury %
One vehicle	19.3	20.0	22.0	18.1	17.4	21.4	46.3	28.9
Two Vehicles	65.7	64.7	64.5	65.8	65.5	63.1	44.6	60.5
Multiple vehicles	15.1	15.3	13.5	16.1	17.2	15.5	9.1	10.6
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Frequency	2,283	42,640	783	23,175	1,544	20,150	11,045	706,278

Records with unknown Number of Vehicles were excluded from the table calculations.

Hour of Collision for Heavy Truck Casualty Collisions

Figure 4 shows the percentages of fatal collisions, injury collisions and heavy truck VKT by hour of collision. Heavy truck *fatal* collisions were higher than heavy truck exposure from 6:00 PM to 6:00 AM. Heavy truck *injury* collisions were greater than heavy truck exposure during the afternoon. Records with unknown Hour of Collision were excluded from the calculations.

Figure 4. Percentage of Heavy Truck Collisions and Heavy Truck Exposure by Hour of Collision, Average 2001 - 2005



Month of Collision for Heavy Truck Casualty Collisions

Figure 5 and Table 5 show the distribution of heavy truck fatal and injury collisions according to month of occurrence. Heavy truck casualty collisions declined from January to April and increased throughout the remaining five-year average. There were more fatal heavy truck collisions (57.1 percent) from July to December as compared to injury collisions (52.6 percent), on average.

Figure 5. Month of Collision for Heavy Truck Casualty Collisions Average 2001 – 2005

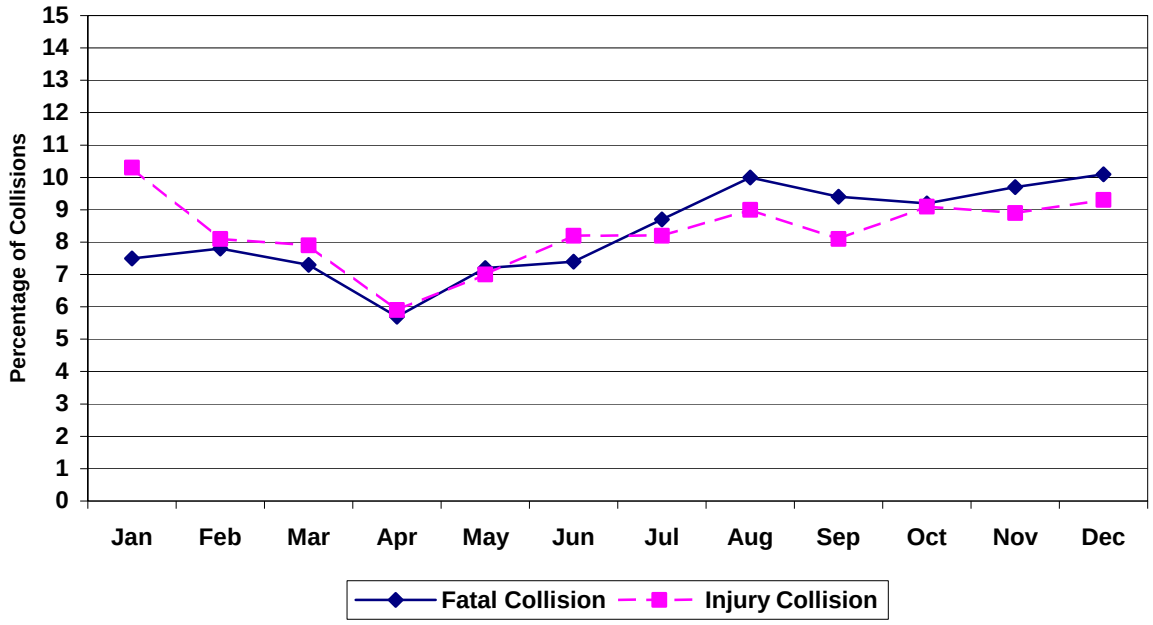


Table 5. Month of Collision for Heavy Truck Casualty Collisions, Average 2001 - 2005

Month of Collision	Collision Severity	
	Fatal %	Injury %
January	7.5	10.3
February	7.8	8.1
March	7.3	7.9
April	5.7	5.9
May	7.2	7.0
June	7.4	8.2
July	8.7	8.2
August	10.0	9.0
September	9.4	8.1
October	9.2	9.1
November	9.7	8.9
December	10.1	9.3
Total Percent	100.0	100.0
Total Frequency	2,283	42,641

Records with unknown Month of Collision were excluded from the table calculations.

Weather Conditions for Heavy Truck Casualty Collisions

The weather at the collision site was recorded as *clear* for the majority of heavy truck casualty collisions. Clear weather should not be interpreted as a dry road surface. The road surface may have been dry, snow-covered, wet or slippery.

Table 6. Weather Conditions for Heavy Truck Casualty Collisions, Average 2001 - 2005

Weather Conditions	Collision Severity	
	Fatal %	Injury %
Clear	62.4	66.3
Cloudy	13.9	11.6
Snow	9.5	9.1
Rain	7.7	8.5
Bad Visibility	4.1	2.8
Sleet, Hail	1.1	0.9
Wind	0.8	0.7
Other	0.3	0.3
Total Percent	100.0	100.0
Total Frequency	2,275	42,185

Records with unknown Weather Conditions were excluded from the table calculations.

Road Surface Condition at Collision Site for Heavy Truck Casualty Collisions

Table 7 shows that the majority of heavy truck casualty collisions had *dry* road surface conditions, on average. This percentage was highest for fatal collisions (65.1 percent). *Wet* roads ranked second from 15 to 17 percent, followed by *ice or packed snow* from 7 to 8 percent, and *fresh show* at about 6 percent, on average.

Table 7. Road Surface Environmental Conditions for Heavy Truck Casualty Collisions Average 2001 - 2005

Road Surface Environmental Conditions	Collision Severity	
	Fatal %	Injury %
Dry	65.1	62.2
Wet	15.8	16.8
Ice/Packed Snow	7.1	7.7
Fresh Snow	5.6	6.6
Other (e.g. slush, sand, gravel, muddy)	6.4	6.8
Total Percent	100.0	100.0
Total Frequency	2,272	42,178

Records with unknown Road Surface Condition were excluded from the table calculations.

Collision Configuration for Heavy Truck Casualty Collisions

Table 8A shows the percentage distribution of heavy truck casualty collisions by collision configuration. The percentages for specific configurations are likely understated because only one- and two-vehicle collisions are coded separately in the database. Collisions involving three or more vehicles are included in the "All other collision configurations" category.

Of the fatal heavy truck collisions, the largest percentage was for two-vehicle head-on collisions (30.8 percent), followed by two-vehicle right-angle collisions (13.8 percent), two-vehicle rear-impact collisions (9.3 percent).

For injury collisions, the highest percentage was for rear-impact collisions (27.3 percent), followed by right-angle collisions (11.8 percent).

Tables 8B and 8C show the percentage distributions separately for straight trucks and tractor-trailers.

Table 8A. Collision Configuration for Casualty Collisions Involving *Heavy Trucks*
Average 2001 - 2005

Collision Configuration	Collision Severity	
	Fatal %	Injury %
2V 2D: Head-on	30.8	4.6
2V 2D: Right Angle	13.8	11.8
2V 1D: Rear Impact	9.3	27.3
All other collision configurations	7.9	8.8
1V: Other configurations	7.3	7.7
1V: Run Off Right Side	4.7	6.3
2V 1D: Side-swipe	4.2	8.3
2V 2D: Left Turn across Traffic	3.6	4.0
2V 2D: Approaching Sideswipe	3.6	2.4
1V: Run Off Left Side	3.5	4.3
1V: Hit Moving Object	3.4	1.4
2V 2D: Other configurations	3.3	4.5
2V 1D: Passing to Left	1.5	2.5
2V: Hit Parked Vehicle	1.4	2.0
2V 1D: Passing to Right	0.6	2.3
1V: Hit Stationary Object	0.5	0.9
2V 2D: Right Turn	0.4	0.5
2V 1D: Other configurations	0.1	0.3
1V: Rolled	0.0	0.3
Total Percent	100.0	100.0
Total Frequency	2,283	42,641

Records with unknown Collision Configuration were excluded from the table calculations.

1V -- Single vehicle 2V -- Two vehicles 1D – Same direction of travel 2D – Different directions of travel

Table 8B. Collision Configuration for Casualty Collisions Involving *Straight Trucks*
Average 2001 - 2005

Collision Configuration	Collision Severity	
	Fatal	Injury
	%	%
2V 2D: Head-on	28.2	4.1
2V 2D: Right Angle	15.3	14.4
2V 1D: Rear Impact	10.2	30.5
All other collision configurations	9.2	9.8
1V: Other configurations	5.5	5.9
1V: Run Off - Right	5.2	5.0
1V: Run Off - Left	4.2	3.7
2V 1D: Hit Moving Object	4.2	2.0
2V 1D: Side-swipe	3.7	5.5
2V 2D: Other configurations	3.7	4.4
2V 2D: Left Turn across Traffic	3.1	4.9
2V 2D: Approaching Sideswipe	2.7	1.9
2V 1D: Passing to Left	1.5	2.1
2V: Hit Parked Vehicle	1.3	2.2
2V 2D: Right Turn	0.6	0.4
2V 1D: Passing to Right	0.5	1.9
1V: Hit Stationary Object	0.5	1.0
2V 1D: Other configurations	0.3	0.3
1V: Rolled	0.0	0.2
Total Percent	100.0	100.0
Total Frequency	783	23,176

1V -- Single vehicle 2V -- Two vehicles 1D – Same direction of travel 2D – Different directions of travel

Table 8C. Collision Configuration for Casualty Collisions Involving *Tractor-Trailers*
Average 2001 - 2005

Collision Configuration	Collision Severity	
	Fatal	Injury
	%	%
2V 2D: Head-on	32.1	5.0
2V 2D: Right Angle	13.0	8.7
2V 1D: Rear Impact	9.5	24.3
1V: Other configurations	8.0	9.5
All other collision configurations	7.3	7.7
2V 1D: Side-swipe	4.5	11.4
1V: Run Off - Right	4.3	7.6
2V 2D: Approaching Sideswipe	4.2	3.1
2V 2D: Left Turn across Traffic	3.9	2.9
2V 2D: Other configurations	3.1	4.7
1V: Run Off - Left	3.0	4.9
1V: Hit Moving Object	2.9	0.7
2V 1D: Passing to Left	1.6	2.9
2V: Hit Parked Vehicle	1.4	1.8
2V 1D: Passing to Right	0.6	2.9
1V: Hit Stationary Object	0.5	0.9
2V 2D: Right Turn	0.2	0.5
2V 1D: Other configurations	0.1	0.2
1V: Rolled	0.0	0.4
Total Percent	100.0	100.0
Total Frequency	1,544	20,150

1V -- Single vehicle 2V -- Two vehicles 1D – Same direction of travel 2D – Different directions of travel

Road Classification (Urban/Rural) at Collision Site for Heavy Truck Casualty Collisions

In the NCDB, *road classification* (i.e. urban/rural) is an indicator of population density and hence traffic density adjacent to the collision site. The definition of road classification is not consistent across all provinces and territories, but is the best data currently available. Generally, "**Urban"** is defined as metropolitan roads, streets and other urban areas, or a speed limit at the collision site of 60 km/h or less. "**Rural"** includes primary or secondary highways, as well as local roads, or a speed limit at the collision site exceeding 60 km/h. For example, on a multilane highway such as the 401 that passes through the city of Toronto, the classification would be deemed rural, even though a collision might occur within the city's geographic boundaries. In Alberta and Saskatchewan, "urban" includes any area within the boundaries of a city, town, village, or hamlet. "Rural" includes any area outside of what is defined as "Urban". Manitoba did not provide this data from 2002 to 2005.

Table 9 shows that 51.0 percent of all heavy truck casualty collisions occurred in areas deemed "rural" or in speed zones over 60 km/h. Of the heavy truck fatal collisions, the highest percentage (78.1 percent) occurred in "rural" areas or in speed zones over 60 km/h. Of the straight truck fatal collisions, 71.9 occurred in rural areas compared with 81.1 percent of tractor-trailer fatal collisions.

Heavy truck injury collisions averaged roughly a 50/50 split between rural and urban areas. Straight truck injury collisions occurred most frequently in urban areas (62.4 percent), and tractor-trailer injury collisions occurred most often in rural areas (62.8 percent).

Table 9. Road Classification (Urban/Rural) for Heavy Truck Casualty Collisions Average 2001 - 2005

	Heavy Trucks			Straight Trucks			Tractor Trailers		
	Fatal	Injury	Total	Fatal	Injury	Total	Fatal	Injury	Total
Road Classification	%	%	%	%	%	%	%	%	%
Urban / 60 km/h or less	21.8	50.4	48.9	28.1	62.4	66.9	18.7	37.1	43.9
Rural / over 60 km/h	78.1	49.5	51.0	71.9	37.4	33.1	81.1	62.8	56.0
Other	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Frequency	2,193	39,543	152,777	730	20,707	81,695	1,502	19,485	73,256

Records with unknown Road Classification were excluded from the table calculations.

Road Classification (Divided/Undivided) at Collision Site for Heavy Truck Casualty Collisions

Table 10 shows that 72.0 percent of fatal heavy truck collisions and 56.9 percent of injury collisions occurred on undivided, two-way traffic roads.

Table 10. Roadway Classification (Divided vs. Undivided) for Heavy Truck Casualty Collisions Average 2001 - 2005

	Heavy Trucks		Straight Trucks		Tractor Trailers	
	Fatal	Injury	Fatal	Injury	Fatal	Injury
Road Classification	%	%	%	%	%	%
One-way traffic	1.4	3.4	1.9	3.9	1.1	2.8
Undivided, two-way traffic	72.0	56.9	76.6	60.2	69.7	53.4
Divided	26.0	39.2	20.5	35.3	28.8	43.3
Other	0.6	0.5	1.0	0.6	0.4	0.5
Total Percent	100.0	100.0	100.0	100.0	100.0	100.0
Total Frequency	1,319	24,754	415	12,405	930	12,759

Only 5 jurisdictions were included because they either do not provide this data or do not code all levels.
Records with unknown Road Classification were excluded from the table calculations.

Posted Speed Limit at Collision Site for Heavy Truck Casualty Collisions

For heavy trucks, the highest percentage of fatal collisions occurred in the higher speed zones of 90 km/h (28.1 percent), 100 km/h or greater (26.1 percent), and 80 km/h (21.8 percent). For heavy truck injury collisions, the highest percentage occurred in the lower speed zones of 50 km/h (30.2 percent).

For straight trucks, the highest percentage of fatal collisions occurred in 80 km/h speed zones (27.2 percent), followed by 90 km/h zones (25.0 percent). For injury straight truck collisions, the highest percentage of collisions occurred in the lower 50 km/h zones, as it did for the heavy trucks combined.

For tractor-trailers, the highest percentage of fatal collisions occurred in the higher speed zones of 100 km/h or more (31.0 percent), 90 km/h zones (29.6 percent), and 80 km/h zones (19.1 percent). Injury tractor-trailer collisions had the highest percentage of collisions also in the 100 km/h or more zones at 32.1 percent.

Table 11. Posted Speed Limit at Collision Site for Heavy Truck Casualty Collisions Average 2001 - 2005

Posted Speed Limit for Heavy Truck Casualty Collision, Average 2001-2005						
	Heavy Trucks		Straight Trucks		Tractor-Trailers	
	Fatal	Injury	Fatal	Injury	Fatal	Injury
Posted Speed Limit	%	%	%	%	%	%
<40 km/h	1.0	3.9	1.9	6.1	0.7	1.5
40 km/h	0.6	1.0	0.9	1.2	0.5	0.7
50 km/h	11.2	30.2	16.1	39.9	8.7	19.6
60 km/h	5.1	9.8	5.7	11.4	4.7	8.1
70 km/h	6.0	8.1	7.2	7.6	5.6	8.7
80 km/h	21.8	12.8	27.2	12.1	19.1	13.7
90 km/h	28.1	11.7	25.0	8.6	29.6	15.1
100 km/h and over	26.1	22.0	16.1	12.9	31.0	32.1
Other	0.1	0.4	0.0	0.3	0.2	0.5
Total Percent	100	100	100	100	100	100
Total Frequency	1,773	33,684	584	17,598	1,225	16,632

Records with unknown Posted Speed Limit were excluded from the table calculations.

VEHICLES IN HEAVY TRUCK CASUALTY COLLISIONS

Collision Severity

As shown in Table 12, there were 274,186 vehicles in fatal and injury collisions on average each year: 4,081 vehicles in fatal crashes, 270,106 vehicles in injury crashes. Of all vehicles in fatal collisions, an average of 23.4 percent were involved with heavy trucks, compared with 6.4 percent in heavy truck injury collisions. Heavy trucks comprised 12.2 percent of vehicles in fatal collisions, and 3.4 percent of vehicles in injury collisions.

Of the total vehicles in heavy truck fatal collisions, there were more tractor-trailers (8.3 percent) than straight trucks (3.9 percent), on average. In heavy truck injury collisions, straight trucks comprised an average of 1.8 percent and tractor-trailers comprised an average of 1.6 percent of all vehicles.

Table 12. Vehicles Involved in Heavy Truck Casualty Collisions, 2001 - 2005 and Average

Collision Severity Vehicles Involved	Collision Year					Average	Average %
	2001	2002	2003	2004	2005		
Fatal Collisions							
Straight trucks	147	162	167	153	173	160	3.9
Other vehicles involved with straight trucks	141	221	167	179	163	174	4.3
Total vehicles involved with straight trucks	**288**	**383**	**334**	**332**	**336**	**335**	**8.2**
Tractor-Trailers	324	347	337	361	323	338	8.3
Other vehicles involved with tractor-trailers	295	377	299	360	311	328	8.0
Total vehicles involved with tractor-trailers	**619**	**724**	**636**	**721**	**634**	**667**	**16.3**
Heavy Trucks	471	509	504	514	496	499	12.2
Other vehicles involved with heavy trucks	414	491	448	478	448	456	11.2
Total vehicles involved with heavy trucks	**885**	**1,000**	**952**	**992**	**944**	**955**	**23.4**
All other vehicles in collisions	3,061	3,259	3,022	3,060	3,228	3,126	76.6
Total of all vehicles involved	**3,946**	**4,259**	**3,974**	**4,052**	**4,172**	**4,081**	**100.0**
Injury Collisions							
Straight trucks	4,378	4,591	4,793	4,966	5,271	4,800	1.8
Other vehicles involved with straight trucks	4,436	4,465	4,836	4,936	5,076	4,750	1.8
Total vehicles involved with straight trucks	**8,814**	**9,056**	**9,629**	**9,902**	**10,347**	**9,550**	**3.5**
Tractor-Trailers	3,889	4,086	4,340	4,424	4,540	4,256	1.6
Other vehicles involved with tractor-trailers	3,631	3,738	4,029	4,136	4,192	3,945	1.5
Total vehicles involved with tractor-trailers	**7,520**	**7,824**	**8,369**	**8,560**	**8,732**	**8,201**	**3.0**
Heavy Trucks	8,267	8,677	9,133	9,390	9,811	9,056	3.4
Other vehicles involved with heavy trucks	7,694	7,866	8,376	8,597	8,810	8,269	3.1
Total vehicles involved with heavy trucks	**15,961**	**16,543**	**17,509**	**17,987**	**18,621**	**17,324**	**6.4**
All other vehicles in collisions	256,288	263,243	256,024	244,749	243,604	252,782	93.6
Total of all vehicles involved	**272,249**	**279,786**	**273,533**	**262,736**	**262,225**	**270,106**	**100.0**
Total Casualty Collisions							
Straight trucks	4,525	4,753	4,960	5,119	5,444	4,960	1.8
Other vehicles involved with straight trucks	4,577	4,686	5,003	5,115	5,239	4,924	1.8
Total vehicles involved with straight trucks	9,102	9,439	9,963	10,234	10,683	9,884	**3.6**
Tractor-Trailers	4,213	4,433	4,677	4,785	4,863	4,594	1.7
Other vehicles involved with tractor-trailers	3,926	4,115	4,328	4,496	4,503	4,274	1.6
Total vehicles involved with tractor-trailers	8,139	8,548	9,005	9,281	9,366	8,868	**3.2**
Heavy Trucks	8,738	9,186	9,637	9,904	10,307	9,554	3.5
Other vehicles involved with heavy trucks	8,108	8,357	8,824	9,075	9,258	8,724	3.2
Total vehicles involved with heavy trucks	16,846	17,543	18,461	18,979	19,565	18,279	**6.7**
All other vehicles in collisions	259,349	266,502	259,046	247,809	246,832	255,908	93.3
Total of all vehicles involved	**276,195**	**284,045**	**277,507**	**266,788**	**266,397**	**274,186**	**100.0**

VICTIMS OF HEAVY TRUCK CASUALTY COLLISIONS

Vehicle Type by Collision Severity and Injury Outcome

Tables 13 and 14 present the victims of heavy truck collisions and of all other collisions for 2001 to 2005 and average. The tables show the fatalities and injuries by year of collision, average number and average percentage of victims for 2001 to 2005. It is not known how many pedestrians and bicyclists were struck by heavy trucks in multiple vehicle collisions, as the pedestrian is not necessarily associated with the striking vehicle in the database. These non-occupant victims are presented in the single-vehicle fatal collisions section of the report.

Fatalities in Heavy Truck Collisions

An average of 19.0 percent (536) of all road users killed were in heavy truck collisions, while 81.0 percent were fatalities in collisions not involving heavy trucks. Tractor-trailer fatalities (368) comprised 13.0 percent and straight trucks fatalities (178) comprised 6.4 percent of the total road user fatalities.

Table 13. Fatalities in Collisions Involving Heavy Trucks and All Other Vehicles 2001 - 2005 and Average

Collisions Involving:	2001	2002	2003	2004	2005	Average Number	Average Percent
Straight Trucks							
Occupants	20	25	37	30	41	31	17.2
Occupants of Other Vehicles	136	131	106	112	132	123	69.4
Pedestrians	9	19	26	19	21	19	10.6
Bicyclists	5	4	5	7	4	5	2.8
All Victims	170	179	174	168	198	178	100.0
Tractor-Trailers							
Occupants	50	59	55	70	40	55	14.9
Occupants of Other Vehicles	270	292	280	281	282	281	76.3
Pedestrians	28	22	31	29	30	28	7.6
Bicyclists	5	3	5	3	6	4	1.2
All Victims	353	376	371	383	358	368	100.0
Heavy Trucks							
Occupants	70	84	92	100	81	85	15.9
Occupants of Other Vehicles	397	408	379	382	405	394	73.6
Pedestrians	37	41	57	48	50	47	8.7
Bicyclists	10	7	10	10	10	9	1.8
All Victims	514	540	538	540	546	536	100.0
All Other Vehicles							
Occupants	1,911	2,008	1,873	1,818	2,020	1,926	84.3
Pedestrians	299	328	322	318	297	313	13.7
Bicyclists	50	56	35	46	42	46	2.0
All Victims	2,262	2,392	2,230	2,182	2,359	2285	100.0
All Victims of All Collisions	2,776	2,932	2,768	2,722	2,905	2,821	100.0

Note: Occupants of other vehicles include drivers and passengers of all other vehicles, motorcyclists, and unknown road users.

Injuries in Heavy Truck Collisions

An average of 5.7 percent (12,052) of all road users injured were in heavy truck collisions. Straight truck injuries (6,549) comprised 3.1 percent and tractor-trailer injuries (5,747) comprised 2.7 percent of the total road user injuries in all collisions.

Table 14. Injuries in Collisions Involving Heavy Trucks and All Other Vehicles 2001 - 2005 and Average

Collisions Involving:	2001	2002	2003	2004	2005	Average Number	Average Percent
Straight Trucks							
Occupants	1,610	1,796	1,935	1,944	2,103	1,878	28.7
Occupants of Other Vehicles	4,186	4,299	4,314	4,522	4,529	4,370	66.7
Pedestrians	177	201	200	219	232	206	3.1
Bicyclists	88	98	75	106	111	96	1.5
All Victims	6,061	6,394	6,524	6,791	6,975	6,549	100.0
Tractor-Trailers							
Occupants	1,369	1,462	1,462	1,560	1,571	1,485	25.8
Occupants of Other Vehicles	3,904	4,058	4,153	4,297	4,387	4,160	72.4
Pedestrians	70	83	83	75	77	78	1.4
Bicyclists	23	15	22	26	37	25	0.4
All Victims	5,366	5,618	5,720	5,958	6,072	5,747	100.0
Heavy Trucks							
Occupants	2,979	3,258	3,397	3,504	3,674	3,362	27.9
Occupants of Other Vehicles	7,885	8,118	8,208	8,554	8,673	8,288	68.8
Pedestrians	245	284	281	292	309	282	2.3
Bicyclists	111	113	97	132	148	120	1.0
All Victims	11,220	11,773	11,983	12,482	12,804	12,052	100.0
All Other Vehicles							
Occupants	184,512	190,612	183,825	173,943	171,721	180,923	89.9
Pedestrians	13,102	13,002	12,871	12,123	12,688	12,757	6.3
Bicyclists	7,607	7,319	7,410	7,684	7,538	7,512	3.7
All Victims	205,221	210,933	204,106	193,750	191,947	201,191	100.0
All Victims of All Collisions	216,441	222,706	216,089	206,232	204,751	213,244	100.0

Note: Occupants of other vehicles include drivers and passengers of all other vehicles, motorcyclists, and unknown road users.

Notes:

1. Total percentages may not add up due to rounding.
2. Straight truck collisions and tractor-trailer collisions are not mutually exclusive because a straight-truck collision may include a tractor-trailer. Therefore, the number of heavy truck victims is not the sum of straight truck and tractor-trailer victims.

SINGLE-VEHICLE HEAVY TRUCK COLLISIONS

Casualty Collisions

As shown in Table 15, single-vehicle tractor-trailer fatal collisions comprised 60.9 percent of single-vehicle heavy truck fatal collisions.

Table 15. Heavy Trucks in Single-Vehicle Casualty Collisions 2001 - 2005 and Average

Collision Severity by Vehicle Type	2001	2002	2003	2004	2005	Average Number	Average %
Fatal Collision							
Straight Trucks	21	30	47	32	42	34	39.1
Tractor-Trailers	50	57	60	59	42	54	60.9
Total Heavy Trucks	**71**	**87**	**107**	**91**	**84**	**88**	**100.0**
Injury Collision							
Straight Trucks	732	810	822	870	967	840	49.3
Tractor-Trailers	825	836	839	876	944	864	50.7
Total Heavy Trucks	**1,557**	**1,646**	**1,661**	**1,746**	**1,911**	**1,704**	**100.0**
Total Casualty Collisions							
Straight Trucks	753	840	869	902	1,009	875	48.8
Tractor-Trailers	875	893	899	935	986	918	51.2
Total Heavy Trucks	**1,628**	**1,733**	**1,768**	**1,837**	**1,995**	**1,792**	**100.0**

SINGLE-VEHICLE COLLISION CHARACTERISTICS

This section focuses on collision characteristics for *fatal* single-vehicle heavy truck collisions.

Hour of Collision – Fatal Single-Vehicle Heavy Truck Collisions

Figure 6 shows the percentages of single-vehicle heavy truck fatal collisions and heavy truck VKT by hour of collision. Single-vehicle heavy truck *fatal* collisions were higher than heavy truck exposure from 6:00 PM to 6:00 AM. Table 16 shows that 64.3 percent of fatal single-vehicle straight truck collisions occurred between 6:00 A.M. and 6:00 P.M., on average, compared with 57.2 percent for tractor-trailers. Records with unknown Hour of Collision were excluded from the table calculations.

Figure 6. Percentage of Single-Vehicle Heavy Truck Fatal Collisions and Heavy Truck Exposure by Hour of Collision, Average 2001 to 2005

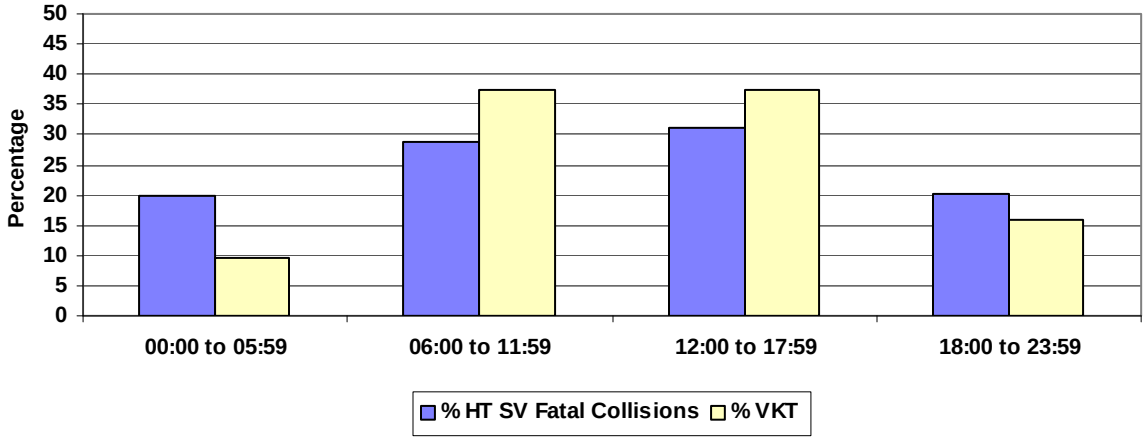


Table 16. Hour of Collision for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Hour of Collision	Straight Trucks %	Tractor-Trailers %	Heavy Trucks %
Midnight to 00:59	2.4	4.9	3.9
01:00 to 01:59	4.2	3.4	3.7
02:00 to 02:59	3.6	2.7	3.0
03:00 to 03:59	2.4	3.0	2.8
04:00 to 04:59	2.4	4.6	3.7
05:00 to 05:59	3.0	2.7	2.8
06:00 to 06:59	3.0	4.9	4.2
07:00 to 07:59	2.4	3.4	3.0
08:00 to 08:59	7.7	4.2	5.6
09:00 to 09:59	4.8	3.8	4.2
10:00 to 10:59	7.1	7.2	7.2
11:00 to 11:59	7.1	3.4	4.9
12:00 to 12:59	4.2	4.9	4.6
13:00 to 13:59	6.0	4.9	5.3
14:00 to 14:59	7.7	4.2	5.6
15:00 to 15:59	4.8	3.4	3.9
16:00 to 16:59	3.6	7.2	5.8
17:00 to 17:59	6.0	5.7	5.8
18:00 to 18:59	3.0	4.2	3.7
19:00 to 19:59	2.4	3.8	3.2
20:00 to 20:59	3.6	4.2	3.9
21:00 to 21:59	1.2	3.0	2.3
22:00 to 22:59	4.2	3.8	3.9
23:00 to 23:59	3.6	2.7	3.0
Total Percent	100.0	100.0	100.0
Total Frequency	168	264	432

Records with unknown Hour of Collision were excluded from the table calculations

Month of Collision – Fatal Single-Vehicle Heavy Truck Collisions

Table 17 shows that on the five-year average, fatal single-vehicle heavy truck collisions increased overall for both truck types over the averaged months. For straight truck collisions, March had the lowest percentage of collisions (3.5 percent), while the lowest percentage for tractor-trailers was in January and April (5.6 percent each). The highest percentage was recorded in November for both straight trucks (16.3 percent) and tractor-trailers (12.3 percent). A majority of single-vehicle fatal collisions occurred from July to December -- 62.8 percent for straight trucks and 60.8 percent for tractor-trailers.

Figure 7. Months of Collision for Fatal Single-Vehicle Heavy Truck Collisions Average 2001 - 2005

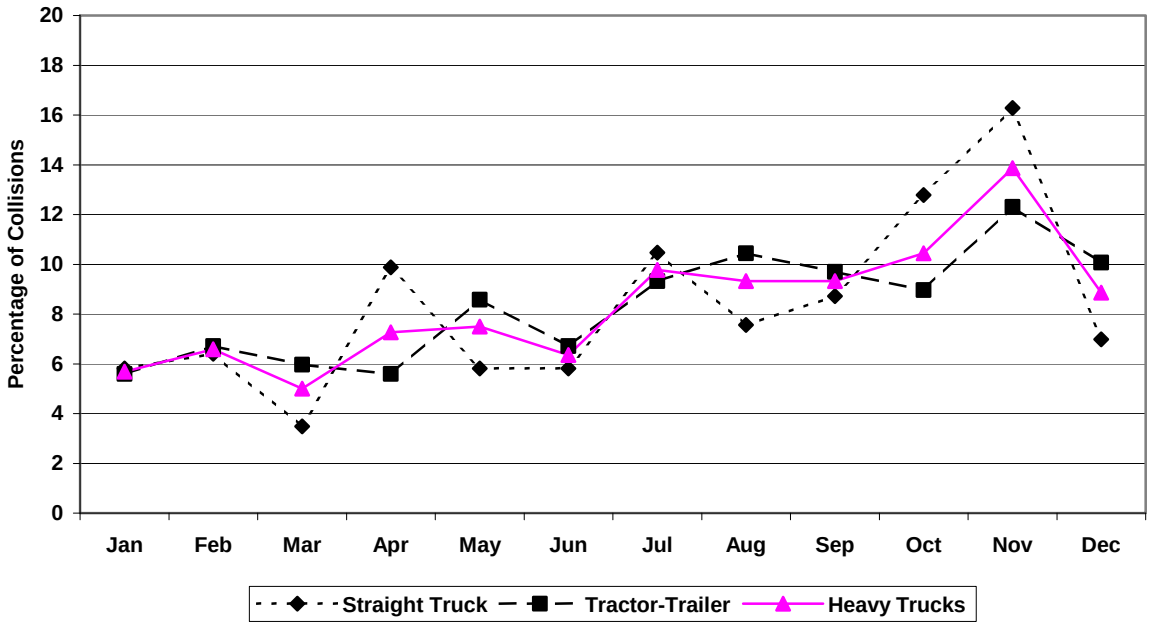


Table 17. Month of Collision for Fatal Single-Vehicle Heavy Truck Collisions Average 2001 - 2005

Month of Collision	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
January	5.8	5.6	5.7
February	6.4	6.7	6.6
March	3.5	6.0	5.0
April	9.9	5.6	7.3
May	5.8	8.6	7.5
June	5.8	6.7	6.4
July	10.5	9.3	9.8
August	7.6	10.5	9.3
September	8.7	9.7	9.3
October	12.8	9.0	10.5
November	16.3	12.3	13.9
December	7.0	10.1	8.9
Total Percent	100.0	100.0	100.0
Total Frequency	172	268	440

Records with unknown Month of Collision were excluded from the table calculations.

Weather Conditions – Fatal Single-Vehicle Heavy Truck Collisions

For fatal single-vehicle collisions, the weather was clear for 70.2 percent of the straight truck collisions and 64.9 percent of the tractor-trailer collisions.

Table 18. Weather Conditions for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Weather Conditions	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
Clear	70.2	64.9	67.0
Cloudy	15.2	17.0	16.3
Rain	7.6	7.9	7.8
Snow	0.6	6.4	4.1
Sleet, Hail	1.8	0.0	0.7
Bad Visibility	3.5	2.6	3.0
Wind	1.2	0.8	0.9
Other	0.0	0.4	0.2
Total Percent	100.0	100.0	100.0
Total Frequency	171	265	436

Records with unknown Weather Conditions were excluded from the table calculations.

Environmental Road Surface Condition at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions

About 73.0 percent of single-vehicle fatal collisions involving heavy trucks happened where the road surface was reported as *dry*.

Table 19. Environmental Road Surface Condition at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Environment Road Surface	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
Dry	73.5	72.3	72.8
Wet	11.8	14.2	13.3
Fresh Snow	4.7	4.5	4.6
Ice/Packed Snow	4.7	5.2	5.0
Other (e.g. slush, sand, gravel muddy)	5.3	3.8	4.3
Total Percent	100.0	100.0	100.0
Total Frequency	170	267	437

Records with unknown Road Surface Condition were excluded from the table calculations.

Collision Configuration – Fatal Single-Vehicle Heavy Truck Collisions

The collision configuration is a description of the *entire* collision. Table 20 shows that the largest configuration category was *ran off the road* (41.7 percent). O*ther single-vehicle* configurations include collision events in which the vehicle hit a pedestrian or a road barrier, jackknifed, caught fire, spilled the cargo, or rolled over on the roadway.

Table 20. Collision Configuration for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Collision Configuration	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
Ran Off Left or Right Side	41.7	40.1	40.7
Other single vehicle	37.5	39.3	38.6
Hit Moving Object	18.5	17.9	18.1
Hit Stationary Object	2.4	2.8	2.6
Total Percent	100.0	100.0	100.0
Total Frequency	168	252	420

Records with unknown Collision Configuration were excluded from the table calculations.

Road Classification (Urban/Rural) at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions

The majority of fatal single-vehicle heavy truck crashes occurred in areas deemed "rural". See page 15 for the definition of "urban" and "rural". Tractor-trailers had more fatal single-vehicle crashes in rural areas (68.5 percent) than did straight trucks (59.7 percent). Straight trucks had more fatal single-vehicle crashes in urban areas (40.3 percent) than did tractor-trailers (31.5 percent). Manitoba did not provide this data from 2002 to 2005.

Table 21. Road Classification (Urban/Rural) for Fatal Single-Vehicle Heavy Truck Collisions Average 2001 - 2005

Road Classification	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
Rural / over 60 km/h	59.7	68.5	65.2
Urban / 60 km/h or less	40.3	31.5	34.8
Total Percent	100.0	100.0	100.0
Total Frequency	154	260	414

Records with unknown Road Classification were excluded from the table calculations.

Road Classification (Divided/Undivided) at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions

About 67.3 percent of the fatal single-vehicle heavy truck collisions happened on undivided roads with two-way traffic.

Table 22. Roadway Classification (Divided vs. Undivided) for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Road Classification	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
Undivided, 2-way traffic	66.0	68.1	67.3
Divided	25.5	29.2	27.8
One-way traffic	4.2	2.0	2.8
Other	4.3	0.7	2.0
Total Percent	100.0	100.0	100.0
Total Frequency	94	154	248

Only five jurisdictions provide this data. The other jurisdictions either do not provide it or do not code all levels of the data element. Records with unknown Road Classification were excluded from the table calculations.

Posted Speed Limit at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions

Fatal single-vehicle straight truck collisions occurred most often in 50 km/h speed zones, followed by zones of 100 km/h or more, 90 km/h, and 80 km/h. Fatal single-vehicle tractor-trailer collisions occurred most often in 100 km/h or more zones, followed by 90 km/h, 50 km/h zones, and 80 km/h zones.

Table 23. Posted Speed Limit at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Posted Speed Limit	Straight Truck %	Tractor-Trailer %	Heavy Trucks %
<40 km/h	5.5	1.9	3.2
40 km/h	0.9	1.9	1.6
50 km/h	30.0	22.3	25.0
60 km/h	8.2	6.3	7.0
70 km/h	3.6	5.3	4.8
80 km/h	13.6	12.6	13.0
90 km/h	14.6	22.8	19.9
100 km/h and over	23.6	26.7	25.6
Total Percent	100.0	100.0	100.0
Total Frequency	110	206	316

Only 12 jurisdictions provide this data element.
Records with unknown Posted Speed Limit were excluded from the table calculations.

Road Alignment at Collision Site for Fatal Single-Vehicle Heavy Truck Collisions

The majority of fatal single-vehicle collisions involving heavy trucks occurred most frequently on roads reported as *"straight, level"*. About 34.2 percent of tractor-trailer and 24.8 percent of straight truck fatal single vehicle collisions happened on curved roads.

Table 24. Road Alignment at Collision Site for Fatal-Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Road Alignment	Straight Trucks %	Tractor-Trailers %	Heavy Trucks %
Straight, Level	62.7	53.1	56.8
Straight, Grade	10.8	10.4	10.6
Curved, Level	11.5	14.2	13.2
Curved, Grade	13.3	20.0	17.4
Top of Hill	0.6	1.2	0.9
Bottom of Hill	1.2	1.2	1.2
Total Percent	100.0	100.0	100.0
Total Frequency	166	260	426

Records with unknown Road Alignment were excluded from the table calculations.

Vehicle Manoeuvre for Fatal Single-Vehicle Heavy Truck Collisions

Table 25 compares heavy trucks with light-duty vehicles for vehicle manoeuvre in fatal single-vehicle collisions. All these vehicle types were most often travelling straight ahead when the crash occurred. About 13.5 percent of straight trucks were reversing when the collision occurred. There were 23 pedestrians killed in these reversing collisions – 18 by straight trucks and 5 by tractor-trailers. By comparison, about 1.2 percent of light-duty vehicles were reversing at the time of the collision killing 42 pedestrians. Alberta does not provide this data element.

Table 25. Vehicle Manoeuvre at Moment of Impact for Fatal Single-Vehicle Heavy Truck Collisions, Average 2001 - 2005

Vehicle Manoeuvre	Straight Truck %	Tractor-Trailer %	Heavy Trucks %	Light-Duty Vehicles %
Travelling Straight Ahead	60.9	77.5	71.4	85.0
Turning Left	3.8	3.5	3.6	2.6
Turning Right	9.8	5.3	6.9	1.1
Changing Lanes	1.5	0.4	0.8	1.1
Merging	0.0	0.9	0.6	0.3
Reversing	13.5	2.2	6.4	1.2
Passing	1.5	0.0	0.6	2.0
Slowing/Stopping in Traffic	0.8	0.9	0.8	0.5
Starting in Traffic	2.3	2.6	2.5	0.1
Left Roadside	0.0	1.3	0.8	0.2
Stopped/Parked Legally	0.0	0.4	0.3	0.1
Stopped/Parked Illegally	0.0	0.4	0.3	0.0
Swerved	2.3	0.4	1.1	0.3
Unspecified Manoeuvre	0.8	0.0	0.3	0.1
Other Manoeuvre	3.0	4.0	3.6	5.4
Negotiated a Curve	0.0	0.0	0.0	0.1
Making a U-turn	0.0	0.0	0.0	0.0
Total Percent	100.0	100.0	100.0	100.0
Total Frequency	133	227	360	4,374

Records with unknown Vehicle Manoeuvre were excluded from the table calculations.

DRIVERS OF HEAVY TRUCKS IN SINGLE-VEHICLE CASUALTY COLLISIONS

Driver Age

As shown in Table 26, drivers aged 35-44 years were the largest age group of drivers in heavy truck casualty collisions. Among fatal collisions, about 9.7 percent of straight truck drivers and 5.1 percent of tractor-trailer drivers were under 25 years old.

Table 26. Drivers of Heavy Trucks in Single-Vehicle Casualty Collisions by Age Group, Average 2001 - 2005

	Straight Truck			Tractor Trailer			Heavy Trucks		
	Fatal	Injury	Total	Fatal	Injury	Total	Fatal	Injury	Total
Age	%	%	%	%	%	%	%	%	%
Under 25	9.7	12.8	11.5	5.1	5.7	5.6	6.6	9.4	8.8
25-34	21.4	23.4	23.2	21.5	24.4	24.1	21.5	23.9	23.6
35-44	30.4	28.8	29.2	31.6	31.5	31.1	31.2	30.1	30.1
45-54	23.0	21.3	22.2	25.7	24.5	25.1	24.8	22.8	23.6
55-64	12.5	10.8	11.1	14.2	12.5	12.4	13.7	11.6	11.7
65 and older	2.9	2.9	2.8	1.9	1.5	1.6	2.2	2.2	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Frequency	782	22,223	116,884	1,653	19,970	101,660	2,435	42,193	218,544

Records with unknown Driver Age were excluded from the table calculations.

Jurisdiction of Driver's Licence

About 98.9 percent of heavy truck drivers held Canadian licences and 0.9 percent held U.S. licences. The remaining 0.2 percent was foreign, unlicensed, or other type of licensees. Thirteen heavy truck drivers were unlicensed; one of the unlicensed drivers was in a fatal collision.

Over the five-year period, 24 U.S. drivers were involved in fatal collisions: 7 drivers in 2004, 6 drivers in 2003, 5 drivers in 2002, 4 drivers in 2001, and 2 drivers in 2005.

VICTIMS OF SINGLE-VEHICLE HEAVY TRUCK COLLISIONS BY ROAD USER TYPE

Table 27 shows that 57.8 percent of fatalities and 88.3 percent of the injuries in these single-vehicle collisions were occupants of the heavy trucks; the remainder were pedestrians.

Table 27. Victims of Single-Vehicle Heavy Truck Collisions by Vehicle Type Average 2001 - 2005

	Straight Truck			Tractor Trailer			Heavy Trucks		
	Fatal	Injury	Total	Fatal	Injury	Total	Fatal	Injury	Total
Road User Type	%	%	%	%	%	%	%	%	%
Occupants of Heavy Trucks	56.8	82.6	81.7	58.5	94.2	92.2	57.8	88.3	86.9
Pedestrians	43.2	17.4	18.3	41.5	5.8	7.8	42.2	11.7	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Frequency	176	4,869	5,045	272	4,754	5,026	448	9,619	10,067

Explanatory Notes:

Casualty collisions include all reportable motor vehicle crashes that result in fatalities or injuries. Fatalities include all those who die as a result of involvement in a reportable traffic collision within 30 days of its occurrence, except for Quebec (8 days). Injuries include all those who suffer any visible injury or complain of pain.

The collisions shown for heavy trucks are not the sum of straight trucks and tractor-trailers. If a straight truck and a tractor-trailer were involved in a collision, a collision would be shown under each truck type. Under the category of heavy trucks, that same collision would be counted as one collision. The collisions shown for vehicles other than heavy trucks are those collisions not involving heavy trucks.

The other vehicles in collisions with heavy trucks are not the sum of other vehicles involved with straight trucks and tractor-trailers. If a straight truck, tractor-trailer and other vehicle(s) were involved in a collision, a double count(s) would occur in one of the truck types, and in other vehicles involved in collisions with straight trucks and/or tractor-trailers. Under the category of other vehicles involved with heavy trucks, each vehicle was counted once. Double counts would occur in other vehicles involved in collisions with straight trucks and/or tractor-trailers. All other vehicles in collisions were those not involved in collisions with heavy trucks.

Sources:

National Collision Database (NCDB), 2000-2005, Transport Canada, Road Safety.
Road Safety Vision 2010, Annual Report 2002, Canadian Council of Motor Transport Administrators (CCMTA).
Canadian Vehicle Survey, Statistics Canada, 2001-2005.
Large Truck Crash Facts 2006, U.S. Department of Transportation, January 2008.

To find out more about national road safety programs and initiatives, call Transport Canada toll free at **1-800-333-0371** or **(613) 998-8616** if you are calling from the Ottawa area, or e-mail comments or questions to **roadsafetywebmail@tc.gc.ca**. You can also visit the Transport Canada website at **www.tc.gc.ca**