

Traffic Safety Facts

2016 Data

May 2018 (Revised)

DOT HS 812 497



Key Findings

- In 2016, there were 4,317 people killed in crashes involving large trucks, a 5.4-percent increase from 2015.
- In 2016, 72 percent of people killed in large-truck crashes were occupants of the other vehicles.
- Seventy-nine percent of the fatal crashes involving large trucks in 2016 occurred on weekdays (6 a.m. Monday to 5:59 p.m. Friday).
- Two percent of the large-truck drivers involved in fatal crashes in 2016 had blood alcohol concentrations (BACs) of .08 g/dL or higher, much lower than drivers of other vehicle types (21% for passenger cars, 20% for light trucks, and 25% for motorcycles).
- In 2016, drivers of large trucks in fatal crashes were less likely to have previous license suspensions or revocations than were passenger car drivers.
- Large-truck drivers involved in fatal crashes in 2016 had the highest percentage (20.3%) of previously recorded crashes compared to drivers of other vehicle types (21% for motorcycles, 17.9% for passenger cars, and 16.3% for light trucks).



U.S. Department of Transportation
**National Highway Traffic Safety
Administration**

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Large Trucks

A large truck, as defined in this fact sheet, is any medium or heavy truck, excluding buses and motor homes, with a gross vehicle weight rating (GVWR) greater than 10,000 pounds. In 2016, 80 percent of the large trucks involved in fatal traffic crashes were heavy large trucks (GVWR > 26,000 lbs.).

In this fact sheet for 2016, large-truck information is presented as follows:

- Overview
- Large-Truck Drivers
- Crash Characteristics
- States

This fact sheet contains information on fatal motor vehicle crashes and fatalities, based on data from the Fatality Analysis Reporting System (FARS). FARS is a census of fatal crashes in the 50 States, the District of Columbia, and Puerto Rico (Puerto Rico is not included in U.S. totals). Injury estimates for 2016 were not available at the time of publication, thus no injury estimates will be presented. For more information, read *Crash Report Sampling System (CRSS) Replaces the National Automotive Sampling System (NASS) General Estimates System (GES)* at the end of this publication.

Overview

In 2016, there were 4,317 people killed in crashes involving large trucks.

Table 1 provides an overview of people killed in crashes involving large trucks from 2007 to 2016.

Fatalities in crashes involving large trucks increased by 5 percent, from 4,094 in 2015 to 4,317 in 2016. Over a 10-year period, there was a 10-percent decrease in the total number of people killed in large-truck crashes, from 4,822 fatalities in 2007 to 4,317 fatalities in 2016. Of the fatalities in 2016:

- 72 percent (3,127) were occupants of other vehicles,
- 17 percent (722) were occupants of large trucks, and
- 11 percent (468) were nonoccupants (pedestrians, pedalcyclists, etc.).

From 2015 to 2016, there was a 4-percent increase in the number of occupants of other vehicles killed, and a 13-percent increase in the number of nonoccupants killed. This is the highest number of other occupants killed since 3,151 died in 2008, and is the highest number of nonoccupants killed in the last 10 years.



Table 1
People Killed or Injured in Crashes Involving Large Trucks, by Person Type and Crash Type, 2007–2016

Year	Truck Occupants by Crash Type						Other People						Total
	Single Vehicle		Multiple Vehicle		Total		Occupant of Other Vehicle		Nonoccupant		Total		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Killed													
2007	502	10%	303	6%	805	17%	3,608	75%	409	8%	4,017	83%	4,822
2008	430	10%	252	6%	682	16%	3,151	74%	412	10%	3,563	84%	4,245
2009	333	10%	166	5%	499	15%	2,558	76%	323	10%	2,881	85%	3,380
2010	339	9%	191	5%	530	14%	2,797	76%	359	10%	3,156	86%	3,686
2011	408	11%	232	6%	640	17%	2,713	72%	428	11%	3,141	83%	3,781
2012	423	11%	274	7%	697	18%	2,857	72%	390	10%	3,247	82%	3,944
2013	431	11%	264	7%	695	17%	2,845	71%	441	11%	3,286	83%	3,981
2014	405	10%	251	6%	656	17%	2,859	73%	393	10%	3,252	83%	3,908
2015	395	10%	270	7%	665	16%	3,015	74%	414	10%	3,429	84%	4,094
2016	460	11%	262	6%	722	17%	3,127	72%	468	11%	3,595	83%	4,317
Injured													
2007	10,000	7%	13,000	12%	23,000	18%	75,000	79%	2,000	2%	78,000	82%	101,000
2008	10,000	8%	13,000	12%	23,000	20%	64,000	78%	3,000	3%	67,000	80%	90,000
2009	7,000	7%	9,000	12%	17,000	19%	56,000	79%	1,000	2%	57,000	81%	74,000
2010	9,000	6%	11,000	12%	20,000	19%	58,000	78%	2,000	3%	60,000	81%	80,000
2011	7,000	6%	15,000	13%	23,000	19%	64,000	79%	2,000	2%	65,000	81%	88,000
2012	9,000	6%	17,000	13%	25,000	19%	76,000	78%	3,000	3%	79,000	81%	104,000
2013	9,000	8%	15,000	16%	24,000	25%	69,000	72%	2,000	3%	71,000	75%	95,000
2014	10,000	9%	17,000	14%	27,000	23%	82,000	74%	2,000	3%	84,000	77%	111,000
2015	10,000	8%	19,000	15%	30,000	24%	84,000	73%	3,000	4%	86,000	76%	116,000
2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: Injury totals may not equal the sum of components due to independent rounding.
 Sources: 2007–2015 Fatality Analysis Reporting System (FARS) Final File, 2016 FARS Annual Report File (ARF)
 2007–2015 National Automotive Sampling System (NASS) General Estimates System (GES)
 N/A – 2016 Crash Report Sampling System (CRSS) data not available.

In 2016, large trucks accounted for 8 percent of all vehicles involved in fatal crashes. Large trucks also accounted for 4 percent of all registered vehicles and 9 percent of the total vehicle miles traveled (VMT) in 2016. For comparison, passenger vehicles (passenger cars, SUVs, pickup trucks, and vans) accounted for 93 percent of all registered vehicles and 90 percent of the total VMT.

Table 2 summarizes the number of large trucks involved in fatal and injury crashes, the number of registered large trucks, involvement rates for every 100,000 registered large trucks, large-truck miles traveled, and the involvement rates for every 100 million large-truck miles traveled from 2007 to 2016.

Table 2

Large-Truck Involvement in Fatal and Injury Crashes, and Involvement Rates, 2007–2016

Year	Number of Large Trucks Involved in Fatal Crashes	Number of Large Trucks Registered	Involvement Rate per 100,000 Registered Large Trucks	Large-Truck Miles Traveled (millions)	Involvement Rate per 100 million Large-Truck Miles Traveled
2007	4,633	10,752,019	43.09	304,178	1.52
2008	4,089	10,873,275	37.61	310,680	1.32
2009	3,211	10,973,214	29.26	288,306	1.11
2010	3,494	10,770,054	32.44	286,527	1.22
2011	3,633	10,270,693	35.37	267,594	1.36
2012	3,825	10,659,380	35.88	269,207	1.42
2013	3,921	10,597,356	37.00	275,017	1.43
2014	3,749	10,905,956	34.38	279,132	1.34
2015	4,074	11,203,184	36.36	279,844	1.46
2016	4,213	11,498,561	36.64	287,895	1.46
Year	Number of Large Trucks Involved in Injury Crashes	Number of Large Trucks Registered	Involvement Rate per 100,000 Registered Large Trucks	Large-Truck Miles Traveled (millions)	Involvement Rate per 100 million Large-Truck Miles Traveled
2007	76,000	10,752,019	705	304,178	25
2008	66,000	10,873,275	608	310,680	21
2009	53,000	10,973,214	487	288,306	19
2010	58,000	10,770,054	541	286,527	20
2011	63,000	10,270,693	609	267,594	23
2012	77,000	10,659,380	719	269,207	28
2013	73,000	10,597,356	690	275,017	27
2014	88,000	10,905,956	811	279,132	32
2015	87,000	11,203,184	779	279,844	31
2016	N/A	11,498,561	N/A	287,895	N/A

Note: In 2011, the Federal Highway Administration implemented an enhanced methodology for estimating registered vehicles and vehicle miles traveled by vehicle type. These revisions were applied to data after 2006. In some cases, the changes were significant and should be taken into account when comparing registered vehicle counts and/or vehicle miles traveled for 2006 and earlier years with the numbers for 2007 and later years.

Sources: 2007–2015 FARS Final File, 2016 FARS ARF, 2007–2016 NASS GES, Vehicle miles traveled and registered vehicles – Federal Highway Administration.
N/A – 2016 CRSS data not available.

Crash Characteristics

In 2016, large trucks were more likely to be involved in fatal multiple-vehicle crashes as opposed to fatal single-vehicle crashes than were passenger vehicles (80% of fatal crashes involving large trucks are multiple-vehicle crashes, compared with 61% for fatal crashes involving passenger vehicles).

Table 3 presents percentages of two-vehicle fatal crashes involving large trucks by initial impact point of the large truck and the other vehicle in 2016. Both vehicles were impacted in the front 31 percent of the time. The trucks were struck in the rear 3 times more often than the other vehicles (22% and 7%, respectively).

Table 3

Percentage of Two-Vehicle Fatal Crashes Involving Large Trucks, by Initial Impact Point of the Large Trucks and Other Vehicles, 2016

Impact Point on Large Truck	Impact Point on Other Vehicle				
	Front	Left Side	Right Side	Rear	Total
Front	31%	13%	10%	7%	60%
Left Side	9%	1%	1%	0%	12%
Right Side	6%	1%	0%	0%	6%
Rear	21%	0%	0%	0%	22%
Total	66%	15%	11%	7%	100%

Note: Totals may not equal the sum of components due to independent rounding.
Source: 2016 FARS ARF

According to the data (not shown above), in 43 percent of the two-vehicle fatal crashes, both the large truck and the other vehicle were proceeding straight at the time of the crash. In 9 percent of these crashes, the other vehicle was turning left or right regardless of the

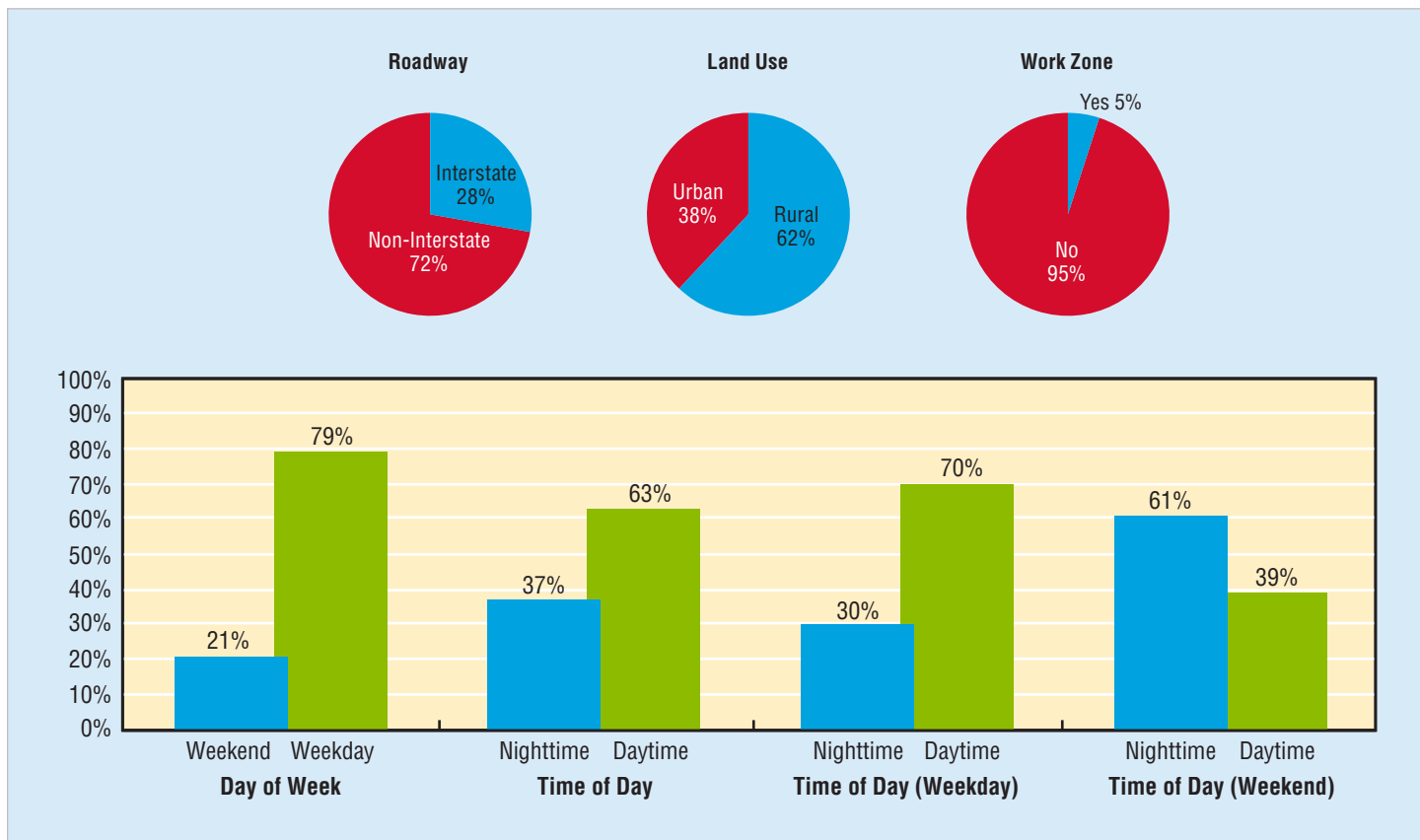
large trucks maneuver. In 10 percent of the crashes, the truck and the other vehicle were negotiating curves. In 7 percent, either the truck or the other vehicle was stopped in a traffic lane (5% and 2%, respectively).

Figure 1 shows the percentages of fatal crashes involving large trucks by roadway, land use (urban/rural), work zone, day of the week (weekday/weekend), and time of day (nighttime/daytime) in 2016.

- One out of every four fatal large-truck crashes (28%) occurred on an interstate.

- Sixty-two percent of the fatal large-truck crashes occurred in rural areas.
- Five percent of the fatal large-truck crashes occurred in a work zone.
- Seventy-nine percent of the fatal large-truck crashes occurred on weekdays.
- Of those weekday large-truck fatal crashes, 70 percent occurred during the daytime hours of 6 a.m. to 5:59 p.m.

Figure 1
Percentage of Fatal Crashes Involving Large Trucks, by Roadway, Land Use, Work Zone, Day of Week, Time of Day, Time of Day (Weekday), and Time of Day (Weekend), 2016



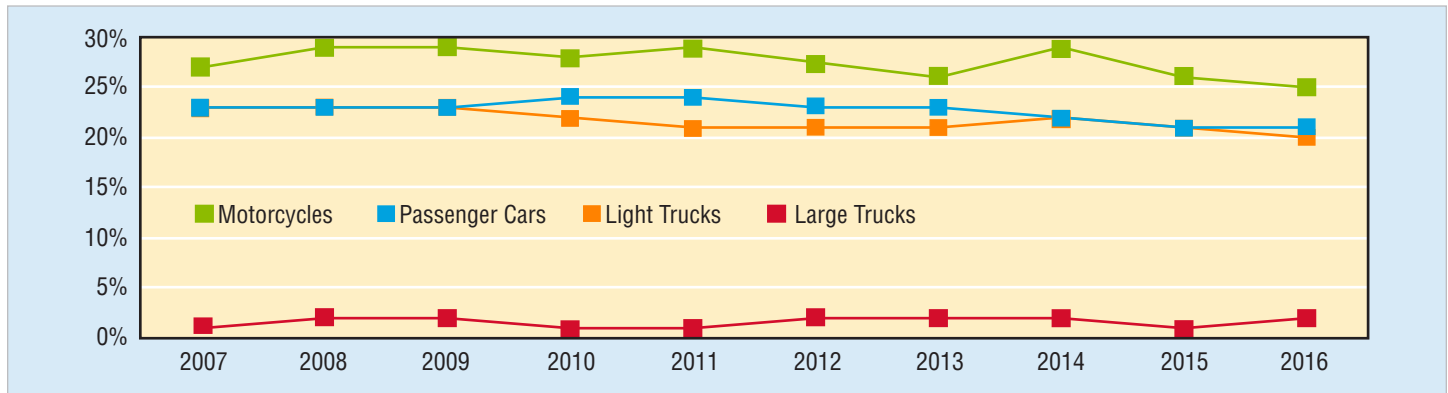
Note: Unknowns were removed before calculating percentages.
 Weekday: 6 a.m. Monday to 5:59 p.m. Friday
 Weekend: 6 p.m. Friday to 5:59 a.m. Monday
 Daytime: 6 a.m. to 5:59 p.m. Nighttime: 6 p.m. to 5:59 a.m.
 Source: 2016 FARS ARF

Large-Truck Drivers

The percentage of large-truck drivers involved in fatal crashes who had blood alcohol concentrations (BACs) of .08 g/dL or higher was 2 percent in 2016. For drivers of other types of vehicles involved in fatal crashes in 2016, the percentages of drivers with BACs of .08 g/dL or higher were 21 percent for passenger cars, 20 percent for light trucks, and 25 percent for motorcycles.

Figure 2 displays the 10-year proportions of drivers in fatal crashes with BACs of .08 g/dL or higher by vehicle types (large trucks, passenger cars, light trucks, and motorcycles).

Figure 2
Estimated Proportions of Drivers in Fatal Crashes With BACs of .08 g/dL or Higher, 2007–2016



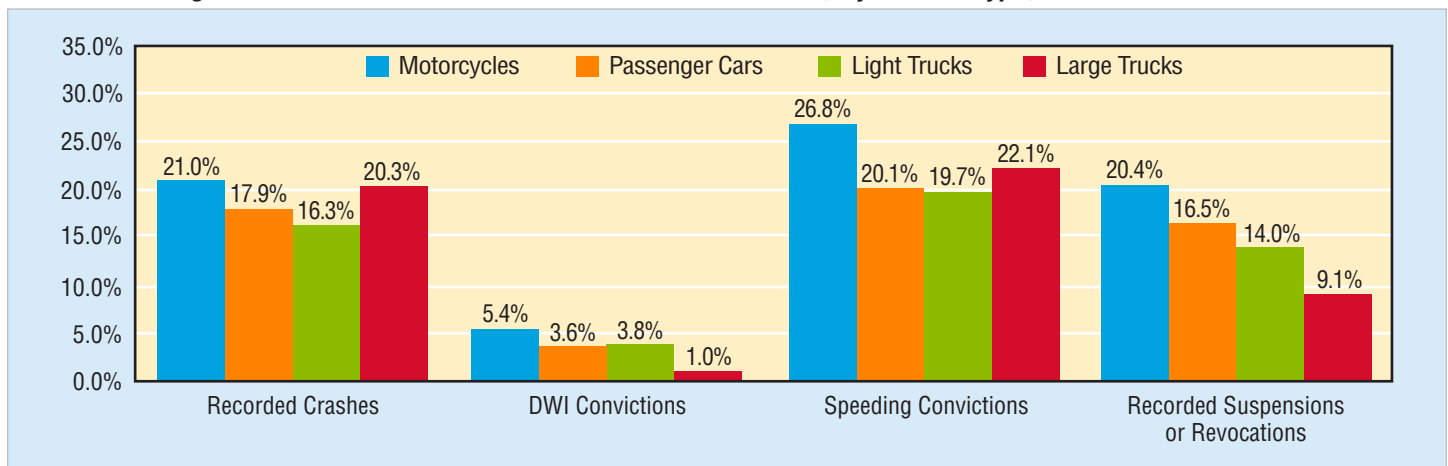
Source: 2007–2015 FARS Final File, 2016 FARS ARF

Figure 3 presents the percentages of drivers involved in fatal crashes with previous driving records (recorded crashes, driving while intoxicated [DWI] convictions, speeding convictions, and recorded suspensions or revocations) by vehicle types (motorcycles, passenger cars, light trucks, and large trucks) in 2016.

- Motorcycle riders had the highest percentage (21%) of previously recorded crashes, followed closely by large-truck drivers (20.3%). Passenger car and light-truck drivers had the lowest percentages (17.9% and 16.3%, respectively).

- More than 22 percent of all large-truck drivers involved in fatal crashes had at least one prior speeding conviction, almost the same as passenger car drivers involved in fatal crashes.
- Drivers of large trucks in fatal crashes were less likely to have previous license suspensions or revocations than were passenger car drivers (9.1% and 16.5%, respectively).

Figure 3
Previous Driving Records of Drivers Involved in Fatal Traffic Crashes, by Vehicle Type, 2016



Note: Excludes all drivers with previous records that were unknown. Starting in 2015, the time period for qualifying events was expanded from the previous three years of driving records to the previous five years.

Source: 2016 FARS ARF

States

For each of the 50 States, the District of Columbia, and Puerto Rico, Table 4 presents the large-truck involvement in fatal crashes in 2016. Puerto Rico is not included in the overall U.S. total.

- On average in the country, large trucks made up 8.1 percent of all vehicles involved in fatal crashes.
- The percentage of large trucks involved in fatal crashes ranged from none in the District of Columbia, to 17.8 percent in Wyoming.
- In 10 States, large-truck involvement in fatal crashes was higher than 10 percent.
- Texas had the highest number of large trucks involved in fatal crashes at 539, and the largest number of total vehicles involved in fatal crashes.

Table 5 presents an overview of the people killed in large-truck crashes for each of the 50 States, the District of Columbia, and Puerto Rico by the person type in 2016. Puerto Rico is not included in the overall U.S. total.

- The number of occupants of other vehicles killed ranged from none in the District of Columbia, to 403 in Texas. Seven States each had more than 100 occupants of other vehicles killed in large-truck crashes.
- The highest number of occupants of large trucks killed was 108 in Texas. The second highest was 49 in California.

Additional State/county-level data is available at NHTSA's State Traffic Safety Information website at <https://cdan.nhtsa.gov/stsi.htm>.

Crash Report Sampling System (CRSS) Replaces the National Automotive Sampling System (NASS) General Estimates System (GES)

NHTSA's National Center for Statistics and Analysis (NCSA) redesigned the nationally representative sample of police-reported traffic crashes, which estimates the number of police-reported injury and property-damage-only crashes in the United States. The new system, called CRSS, replaced NASS GES in 2016.

The 2016 CRSS data was released the last week of March 2018. For more information, see the Additional Resources section of the CRSS web page at: www.nhtsa.gov/national-center-statistics-and-analysis-ncsa/crash-report-sampling-system-crss.

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For more information

Information on traffic fatalities is available from the National Center for Statistics and Analysis (NCSA), NSA-230, 1200 New Jersey Avenue SE., Washington, DC 20590. NCSA can be contacted at 800-934-8517 or by e-mail at ncsaweb@dot.gov. General information on highway traffic safety can be found at www.nhtsa.gov/NCSA. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

Other fact sheets available from the National Center for Statistics and Analysis are *Alcohol-Impaired Driving*, *Bicyclists and Other Cyclists*, *Children*, *Motorcycles*, *Occupant Protection*, *Older Population*, *Passenger Vehicles*, *Pedestrians*, *Rural/Urban Comparisons*, *School Transportation-Related Crashes*, *Speeding*, *State Alcohol Estimates*, *State Traffic Data*, *Summary of Motor Vehicle Crashes*, and *Young Drivers*. Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System*. The fact sheets and annual Traffic Safety Facts reports can be found at <https://crashstats.nhtsa.dot.gov/>.



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Table 4
Large-Truck Involvement in Fatal Crashes, by State, 2016

State	Total Vehicles Involved in Fatal Crashes	Large Trucks Involved in Fatal Crashes		
		Number	Percentage of Total Vehicles	Percentage of U.S. Total for Large Trucks
Alabama	1,357	126	9.3%	3.0%
Alaska	109	5	4.6%	0.1%
Arizona	1,326	79	6.0%	1.9%
Arkansas	752	64	8.5%	1.5%
California	5,072	322	6.3%	7.6%
Colorado	884	88	10.0%	2.1%
Connecticut	433	32	7.4%	0.8%
Delaware	171	9	5.3%	0.2%
District of Columbia	38	0	0.0%	0.0%
Florida	4,597	275	6.0%	6.5%
Georgia	2,162	183	8.5%	4.3%
Hawaii	155	5	3.2%	0.1%
Idaho	325	35	10.8%	0.8%
Illinois	1,569	149	9.5%	3.5%
Indiana	1,197	112	9.4%	2.7%
Iowa	546	59	10.8%	1.4%
Kansas	559	64	11.4%	1.5%
Kentucky	1,177	94	8.0%	2.2%
Louisiana	1,084	86	7.9%	2.0%
Maine	206	15	7.3%	0.4%
Maryland	746	61	8.2%	1.4%
Massachusetts	501	25	5.0%	0.6%
Michigan	1,536	104	6.8%	2.5%
Minnesota	571	52	9.1%	1.2%
Mississippi	923	80	8.7%	1.9%
Missouri	1,294	108	8.3%	2.6%
Montana	213	20	9.4%	0.5%
Nebraska	304	45	14.8%	1.1%
Nevada	465	27	5.8%	0.6%
New Hampshire	174	5	2.9%	0.1%
New Jersey	833	58	7.0%	1.4%
New Mexico	506	38	7.5%	0.9%
New York	1,372	103	7.5%	2.4%
North Carolina	2,023	152	7.5%	3.6%
North Dakota	139	14	10.1%	0.3%
Ohio	1,640	124	7.6%	2.9%
Oklahoma	934	125	13.4%	3.0%
Oregon	665	52	7.8%	1.2%
Pennsylvania	1,698	169	10.0%	4.0%
Rhode Island	66	2	3.0%	0.0%
South Carolina	1,402	100	7.1%	2.4%
South Dakota	139	6	4.3%	0.1%
Tennessee	1,467	114	7.8%	2.7%
Texas	5,297	539	10.2%	12.8%
Utah	402	22	5.5%	0.5%
Vermont	77	7	9.1%	0.2%
Virginia	1,046	90	8.6%	2.1%
Washington	765	51	6.7%	1.2%
West Virginia	363	30	8.3%	0.7%
Wisconsin	799	61	7.6%	1.4%
Wyoming	152	27	17.8%	0.6%
U.S. Total	52,231	4,213	8.1%	100.0%
Puerto Rico	347	13	3.7%	100.0%

Note: Percentage of U.S. total for large trucks may not equal the sum of components due to independent rounding.

Source: 2016 FARS ARF

Table 5
Fatalities in Motor Vehicle Traffic Crashes Involving Large Trucks, by State and Person Type, 2016

State	Truck Occupants by Crash Type			Other People			Total
	Single Vehicle	Multiple Vehicle	Total	Occupant of Other Vehicle	Nonoccupant	Total	
Alabama	21	12	33	93	10	103	136
Alaska	1	1	2	1	1	2	4
Arizona	12	5	17	55	11	66	83
Arkansas	8	3	11	51	6	57	68
California	32	17	49	221	52	273	322
Colorado	13	5	18	56	12	68	86
Connecticut	4	3	7	19	4	23	30
Delaware	1	0	1	7	1	8	9
District of Columbia	0	0	0	0	0	0	0
Florida	16	14	30	225	38	263	293
Georgia	23	10	33	128	18	146	179
Hawaii	1	0	1	5	0	5	6
Idaho	3	1	4	28	2	30	34
Illinois	13	10	23	106	17	123	146
Indiana	5	9	14	80	13	93	107
Iowa	8	3	11	57	1	58	69
Kansas	11	3	14	56	4	60	74
Kentucky	14	2	16	77	7	84	100
Louisiana	7	4	11	67	11	78	89
Maine	0	0	0	20	0	20	20
Maryland	7	4	11	42	10	52	63
Massachusetts	0	2	2	14	9	23	25
Michigan	6	6	12	83	12	95	107
Minnesota	6	3	9	46	6	52	61
Mississippi	8	5	13	61	4	65	78
Missouri	19	2	21	84	9	93	114
Montana	4	1	5	18	0	18	23
Nebraska	5	7	12	43	0	43	55
Nevada	7	0	7	17	4	21	28
New Hampshire	0	0	0	4	1	5	5
New Jersey	3	3	6	39	11	50	56
New Mexico	1	4	5	29	4	33	38
New York	8	3	11	60	33	93	104
North Carolina	15	5	20	112	20	132	152
North Dakota	7	2	9	3	1	4	13
Ohio	6	8	14	99	10	109	123
Oklahoma	17	10	27	87	12	99	126
Oregon	6	3	9	43	1	44	53
Pennsylvania	17	9	26	122	17	139	165
Rhode Island	1	0	1	0	1	1	2
South Carolina	11	6	17	75	12	87	104
South Dakota	1	1	2	3	0	3	5
Tennessee	12	9	21	93	6	99	120
Texas	57	51	108	403	45	448	556
Utah	1	3	4	16	0	16	20
Vermont	0	0	0	6	1	7	7
Virginia	18	7	25	55	11	66	91
Washington	9	1	10	33	8	41	51
West Virginia	4	2	6	19	2	21	27
Wisconsin	6	1	7	55	7	62	69
Wyoming	5	2	7	11	3	14	21
U.S. Total	460	262	722	3,127	468	3,595	4,317
Puerto Rico	0	0	0	12	3	15	15

Source: 2016 FARS ARF