

Crashes by Number of Units Involved

While crashes involving a single vehicle occur less frequently than crashes involving multiple vehicles, the resulting injuries are often more severe. Single-vehicle crashes were 2.4 times as likely to result in a fatality as multiple-vehicle crashes were in 2017. Table 6 shows the number of crashes and injuries involving both single and multiple vehicles by the severity of the crash and injury. Multiple-vehicle crashes include crashes between more than one motorized vehicle and crashes between a motor vehicle and a pedestrian, bicyclist, train, or equestrian.

Type of Crash	Single Vehicle		Multiple Vehicles	
	Crashes	Injuries	Crashes	Injuries
Fatal	111	116	113	129
Serious Injury	352	419	612	827
Visible Injury	893	1,117	2,015	2,744
Possible Injury	1,168	1,617	3,778	6,245
Property Damage	4,976		11,833	
Total	7,500	3,269	18,351	9,945

In 2017, single-vehicle crashes represented only 29% of all crashes, yet accounted for 50% of all fatal crashes. Of the 111 fatal single-vehicle crashes, 99 (89%) occurred on rural roadways.

Of the 113 multiple-vehicle fatal crashes, 17 involved a pedestrian, 3 involved a bicycle, and 3 involved a train. The other 90 (80%) involved two or more motor vehicles. Of the 113 fatal multiple-vehicle crashes, 71 (or 63%) occurred on rural roadways.

Figures 2 and 3, on the following page, show the most prevalent contributing circumstances for single- and multiple-vehicle crashes. The “all other contributing circumstances” category combines the remaining contributing circumstances, i.e., contributing circumstances with percentages less than 2%. Contributing circumstances of none, not applicable and unknown were excluded from the total in the percentage calculation.

Speed played the biggest role in single-vehicle crashes, contributing to 25% of single-vehicle crashes. Failure to Maintain Lane was the second most prevalent contributing circumstance for single-vehicle crashes at 14% as well as contributing to 3% of multiple vehicle crashes. Animal(s) in Roadway also contributed to 14% of single-vehicle crashes.

Follow Too Close was the most prevalent contributing circumstance for multiple vehicle crashes, with Fail to Yield and Inattention/Distraction with just slightly fewer occurrences. Each of the three was a contributing factor to 1 in 5 multiple vehicle crashes. Inattention/Distraction also contributed to 12% of single vehicle crashes.

Impaired driving contributed to 9% of single vehicle crashes and 3% of multiple vehicle crashes.

Figure 3
Single-Vehicle Crashes – Contributing Circumstances: 2017

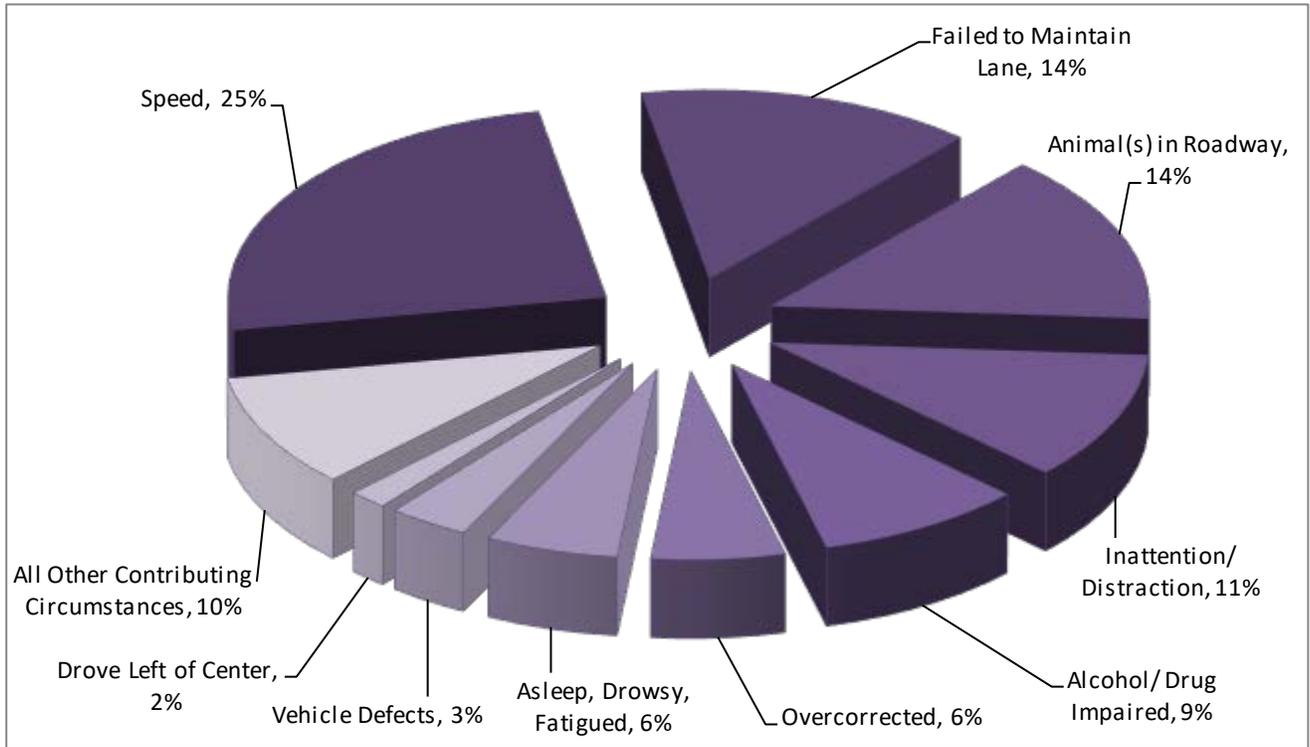


Figure 4
Multiple-Vehicle Crashes – Contributing Circumstances: 2017

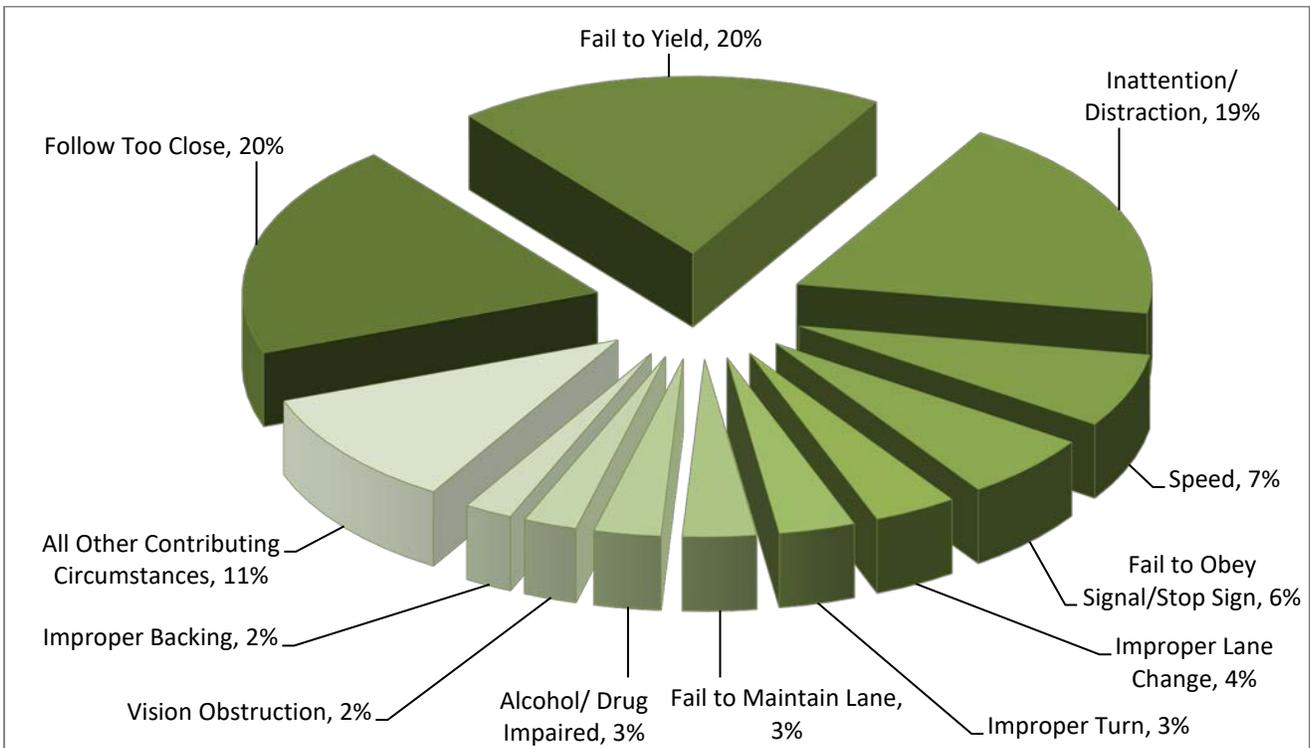


Table 7 shows the most harmful events for fatal single- and multiple-vehicle crashes.

Table 7	
Most Harmful Events for Fatal Crashes Involving Single and Multiple Vehicles: 2017	
Single-Vehicle Crashes	Multiple-Vehicle Crashes*
Overturn (60.4%)	Head On (24.4%)
Tree (9.9%)	Pedestrian (15.0%)
Immersion (6.3%)	Angle (10.2%)
Embankment (4.5%)	Head On - Turning (7.5%)
Concrete Traffic Barrier (2.7%)	Overturn (5.9%)
Ditch (2.7%)	Rear-End (5.9%)
Other Fixed Object (2.7%)	Side Swiped Opposite (5.9%)
Guardrail End (1.8%)	Angle - Turning (5.5%)
Wild Animal (0.9%)	Parked Car (3.5%)
Building Wall (0.9%)	Side Swiped - Same Direction (2.8%)
Curb (0.9%)	Other (2.4%)
Fence (0.9%)	Pedalcycle (2.4%)
Fire / Explosion (0.9%)	Railroad Train (2.4%)
Guardrail Face (0.9%)	Fire / Explosion (1.6%)
Other Object - Not fixed (0.9%)	Same Direction Turning (1.6%)
Traffic Sign Support (0.9%)	Non-Contact Unit (0.8%)
Traffic Signal Support (0.9%)	Utility/Light Support (0.8%)
Utility/Light Support (0.9%)	Concrete Traffic Barrier (0.4%)
	Embankment (0.4%)
	Immersion (0.4%)
	Struck by Falling/Shifting Cargo (0.4%)

*The percentages represent the number of vehicles the most harmful event was attributed to. Multiple units involved in a single crash may not have the same most harmful event. In 2017, there were 254 units involved in the 113 fatal multiple vehicle crashes.

Overturn was the leading most harmful event for fatal single-vehicle crashes. Single-vehicle rollovers accounted for 59% of the single vehicle fatalities and 28% of all fatalities in 2017.

Of the 59 passenger motor vehicle occupants killed in single-vehicle rollovers, 11 (or 19%) were wearing seat belts or were in a child safety seat. Of the 45 passenger motor vehicle occupants who were killed in single-vehicle rollovers and not wearing a seat belt, 44 (or 98%) were totally or partially ejected from their vehicle.

Seat belts are estimated to be more effective in preventing fatalities in rollover crashes. Seat belt use reduces fatalities by 74% in rollover crashes involving passenger cars and by 80% in rollover crashes involving light trucks³. By these estimates, 35 of the 45 unbelted passenger motor vehicle occupants killed in rollover crashes may have survived if they had been wearing their seat belt.