



Relative Contribution/Fault in Car-Truck Crashes

February, 2013

The principal policy reason for evaluating fault, and the nature of errors that increase crash risk, is to design and implement cost-effective truck safety programs that yield the greatest safety benefits. In the context of prevention, it's critical to understand relative fault since cars are involved in the majority of truck crashes. Over time, numerous studies have been conducted by federal agencies, universities, trade associations and independent researchers that utilized, at least in part, Police Accident Reports (PAR) to investigate contribution/fault, informing the design and implementation of fleet safety programs nationwide. The following summary highlights the results of four preeminent organizations in the field of vehicle crash causality.

University of Michigan Transportation Research Institute (UMTRI): UMTRI is a leader in truck-related crash research. The highlighted study assigns driver factors to 8,309 fatal car-truck crashes as a proxy for fault.

- Car drivers were assigned factors in 81% of crashes versus 27% of truck drivers
- The totals are greater than 100% because 10% of crashes assigned both the car and truck driver factors
- Cars were the encroaching vehicle in 89% of head-on crashes, 88% of opposite-direction sideswipes, 80% of rear-end crashes, and 72% of same-direction sideswipes—obvious indicators of fault

National Highway Traffic Safety Administration (NHTSA): Tasked with “reducing deaths, injuries and economic losses resulting from motor vehicle crashes,” NHTSA has undertaken extensive research on the topic. Their 2003 study assigned causal driver factors in 10,092 fatalities.

- Cars were assigned driver factors in 91% of head-on crashes, 91% of opposite-direction sideswipes, 71% of rear-end crashes, and 77% of same-direction sideswipes
- Trucks were the encroaching vehicle in 98% of backing accidents (represents less than 1% of sample set)

AAA Foundation for Traffic Safety: The foundation’s mission is “to identify traffic safety problems, foster research that seeks solutions and disseminate information and educational materials.” This study, one of over 250 projects they’ve funded to discover the causes of crashes, examined 10,732 fatal accidents.

- 36% of car drivers were cited for two or more unsafe acts
- 11% of truck drivers were cited for two or more unsafe acts

Federal Motor Carrier Safety Administration (FMCSA): FMCSA is the primary regulating agency for the trucking industry whose stated mission is “to prevent commercial motor vehicle-related fatalities and injuries.” Two studies are noted below.

Annual Large Truck and Bus Crash Facts: Cites driver factors in 6,131 car-truck fatal crashes

- 2007: 85% of cars were assigned driver factors versus 26% of trucks
- 2008: 85% of cars were assigned driver factors versus 26% of trucks
- 2009: 81% of cars were assigned driver factors versus 22% of trucks

Large Truck Crash Causation Study (LTCCS): A more thorough analysis of a smaller data set of 221 fatal accidents

- 77% percent of cars were assigned with driver factors
- 23% of trucks were assigned with driver factors