

AAA Foundation for Traffic Safety

FACT SHEET

The Prevalence of Motor Vehicle Crashes Involving Road Debris, United States, 2011-2014

Background

- Previous research by the AAA Foundation for Traffic Safety found that debris deposited on the roadway by motor vehicles contributed to an estimated 25,000 crashes which resulted in 81-90 deaths in 2001

Objective

- The objective of this study was to provide updated information about the prevalence of motor vehicle crashes in the United States involving road debris

Methods

- Road debris is defined in the current study as debris from any source, including but not limited to vehicles, that can pose a significant safety hazard (animals in the road, trees that fell onto vehicles, debris caused by a previous crash, and construction-related materials in active work zones were not counted as debris)
- A crash was considered to have been debris-related if it involved a vehicle that:
 - Struck or was struck by an object that fell from another vehicle
 - Struck a non-fixed object in the travel lane of the roadway
 - Attempted to avoid a non-fixed object in the travel lane of the roadway and subsequently crashed
- Data from crashes reported in three publicly-available databases from the National Highway Traffic Safety Administration (years 2011 – 2014) were examined
 - A sample of in-depth crash investigations was examined to identify the prevalence of debris involvement in the types of crashes listed above
 - Results of the in-depth case examination were used to weight data from two larger national databases to estimate the number of crashes nationwide that involve debris

Key Findings

- Between 2011-2014, road debris was a factor in a total of more than 200,000 police-reported crashes
 - Resulted in a total of approximately 39,000 injuries and 500 deaths
- Compared to crashes that did not involve debris, debris-related crashes were approximately 4 times as likely to occur on Interstate highways
- Nearly 37 percent of all deaths in road debris crashes resulted from the driver swerving to avoid hitting an object

(continued)



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Key Findings (continued)

- About two-thirds of debris-related crashes are the result of items falling from a vehicle due to improper maintenance and unsecured loads. The most common types of vehicle debris are:
 - Parts becoming detached from a vehicle (tires, wheels, etc.) and falling onto the roadway
 - Unsecured cargo like furniture, appliances and other items falling onto the roadway
 - Tow trailers becoming separated and hitting another vehicle or landing on the roadway
- More than one in three crashes involving debris occur between 10:00 a.m. and 3:59 p.m., a time when many people are on the road hauling or moving heavy items like furniture or construction equipment

Recommendations

Drivers can decrease their chances of being involved in a road debris crash by:

- **Maintaining Their Vehicles:** Badly worn or underinflated tires often suffer blowouts that can leave pieces of tire on the roadway. Exhaust systems and the hardware that attach to the vehicle can also rust and corrode, causing mufflers and other parts to drag and eventually break loose. Potential tire and exhaust system problems can easily be spotted by trained mechanics as part of the routine maintenance performed during every oil change.
- **Securing Vehicle Loads:** When moving or towing furniture, it is important to make sure all items are secured. To properly secure a load, drivers should:
 1. Tie down load with rope, netting or straps
 2. Tie large objects directly to the vehicle or trailer
 3. Cover the entire load with a sturdy tarp or netting
 4. Don't overload the vehicle
 5. Always double check load to make sure it is secure
- **Driving Defensively:** Drivers should avoid tailgating and continually search the road at least 12 to 15 seconds ahead for debris. If you see you are about to make contact with debris, safely reduce your speed as much as possible prior to making contact.

For more information on this study and the AAA Foundation's other traffic safety research and materials, please visit AAAFoundation.org.

Established in 1947 by AAA, the AAA Foundation for Traffic Safety is a not-for-profit, publicly funded, 501(c)(3) charitable research and educational organization. The AAA Foundation's mission is to prevent traffic deaths and injuries by conducting research into their causes and by educating the public about strategies to prevent crashes and reduce injuries when they do occur. This research is used to develop educational materials for drivers, pedestrians, bicyclists and other road users. Visit www.AAAFoundation.org for more information.

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