

Press Release

Findings from the DEKRA Road Safety Report

How modern truck technology can save lives

- ▶ Study by Daimler Truck Accident Analysis, VUFO, and DEKRA
- ▶ Potential protection of vulnerable road users highlighted
- ▶ Different focus for pedestrians, cyclists, and motorcyclists

Whether on foot, by bicycle, or on a motorcycle: For vulnerable road users, a collision with a truck often results in death or severe injuries. “But tragedies of this kind don’t have to happen,” says DEKRA accident researcher Stefanie Ritter. Driver assistance systems – along with mutual consideration and responsible behavior – play a particularly important role. This is demonstrated by a joint study conducted by Daimler Truck’s Accident Analysis department, Verkehrsunfallforschung an der TU Dresden GmbH (VUFO – Traffic Accident Research Unit Dresden), and DEKRA Accident Research. The result: the potential of driver assistance systems to prevent such accidents is significant.

For the project, 75 accidents from the years 2015 to 2024 involving a truck (ECE Class N2 or N3) and a vulnerable road user were selected from the databases of the three project partners. In each of these accidents, at least one person – whether on foot, by bicycle, or on a motorcycle – was killed or suffered serious injuries.

“After processing the relevant accident data, the cases were evaluated uniformly according to a defined scheme to assess the potential contribution of different driver assistance systems to accident prevention or the mitigation of accident consequences,” explains Stefanie Ritter. The outcome were reliable findings regarding the effectiveness and relevance of the system for the analyzed scenarios.

The result is clear: Many accidents can be prevented or at least significantly mitigated if the vehicles involved are equipped with modern driver-assistance and safety systems. The findings are particularly dramatic when it comes to pedestrians. Good direct visibility for truck drivers is crucial, as it can positively influence the severity of an accident’s consequences in 93% of cases. If a dangerous situation does arise, collision warning systems can help in 94% of cases – and emergency braking assistants in as many as 100% of the analyzed accidents. “Surround-view systems and brake assist systems also show enormous potential; at the same time, passive safety

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systems such as wheel underride guards or front underrun protection can significantly reduce the consequences of a collision,” explains the DEKRA accident researcher.

A similar picture emerges in accidents involving cyclists. Systems that warn truck drivers in a timely manner have an enormous impact. Direct visibility shows potential to reduce the severity of accident consequences in 80% of cases, while emergency braking assistants do so in 81%. It is particularly important that cyclists are not run over – side underrun protection systems and wheel guards can make a decisive contribution here.

Truck accidents involving motorcycles can be positively influenced primarily by blind-spot warning systems. These systems show a high potential for preventing serious or fatal injuries in 83% of cases. As with the other groups studied, it is also important that motorcyclists can be seen from the truck in time. Although motorcycle accidents are often associated with high speeds, the analysis also shows that passive systems – such as the protection of vulnerable road users against sharp corners and edges, as defined by UNECE R61 – can mitigate the consequences of accidents.

Further background information on this topic, as well as on many other aspects related to “road traffic as a workplace,” can be found in the DEKRA Road Safety Report 2026. It is available online at www.dekra-roadsafety.com.

Picture caption

Among other things, truck safety systems are tested at the DEKRA Lausitzring.

About DEKRA

For more than 100 years, DEKRA has been a trusted name in safety. Founded in 1925 with the original goal of improving road safety through vehicle inspections, DEKRA has grown to become the world's largest independent, non-listed expert organization in the field of testing, inspection, and certification. Today, as a global partner, the company supports its customers with comprehensive services and solutions to drive safety and sustainability forward. In 2025, DEKRA generated revenue of 4.4 billion euros. More than 48,000 employees are providing qualified and independent expert services in approximately 60 countries across five continents. DEKRA holds a Platinum rating from EcoVadis, placing it among the top 1% of the world's most sustainable companies.