

Press Release

IAA Commercial Vehicles in Hanover

Truck Assistance Systems Save Lives – DEKRA Calls for More Action

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- Emergency braking assistance systems can prevent or mitigate the severity of rear-end collisions
- Turning assistance systems should quickly become more widespread
- Despite assistance systems, awareness-raising campaigns remain crucial

High-performance, in-truck driver assistance systems can save lives, but they are still not as widespread in fleets as they should be. And in some areas, further technological advances are still required. The expert organization DEKRA is calling on manufacturers, politicians, haulage companies and drivers to leverage the potential safety benefits of systems such as lane keeping assistance, emergency braking assistance or turning assistance. “The trend in accident figures is currently heading in the right direction, but we must not let up in our efforts to improve road safety,” says DEKRA Management Board member Clemens Klinke ahead of the opening of IAA Commercial Vehicles in Hanover. DEKRA experts have once more shown the potential benefit of assistance systems in driving tests at the DEKRA Technology Center in Klettwitz, Germany.

DEKRA's accident experts are all too frequently called to serious rear-end collisions involving commercial vehicles, particularly at the end of traffic jams on highways. “The sheer mass of a fully laden truck of course means that the consequences of any accident they are involved in are particularly serious,” says Klinke. “In many cases, modern emergency braking assistance systems can prevent, or at least substantially mitigate the severity of, such accidents.” The emergency braking assistance system (EABS) first warns the driver in time before a looming collision with an obstruction detected by radar and/or a camera. If the driver does not react, the system automatically initiates braking.

Emergency braking systems perform much better than required to date

Since 2015, emergency braking assistance systems have been mandatory throughout the EU for most newly registered, series-produced trucks weighing 8 metric tons or more. In November 2018, the requirement to equip newly registered,

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series-produced commercial vehicles weighing 3.5 metric tons or more entered into force. However, the regulation merely requires a reduction in speed – with pneumatic brake systems, for example, a 20 km/h reduction is stipulated when the vehicle is approaching a stationary obstruction.

But many of the systems available today perform much better than the requirements laid down in this regulation. “Depending on the initial speed, the vehicles can in most cases come to a complete standstill even before a stationary obstruction, thereby preventing a collision. This was demonstrated in our latest series of test drives involving various makes of truck at our test site on the Lausitzring race track,” explains DEKRA Management Board member Klinke. “In the other cases, the systems reduce most of the kinetic energy through automatic emergency braking, with the result that a collision is ultimately much less severe.”

The first positive effects of emergency braking assistance systems on the accident statistics can already be detected. This is illustrated by a recent analysis from the road safety screening program in Baden-Württemberg concerning accidents on the federal state’s highways in which articulated vehicles were identified as the principal cause. According to the analysis, the proportion of rear-end collisions here fell from 61% to 54% between 2015 and 2017. While almost 73% of all deaths and serious injuries were attributed to rear-end collisions in 2015, the proportion by 2017 had fallen to just over 66%. The material damage figures estimated by the police show a similar trend (2015: 73% in rear-end collisions, 2017: 63%).

To ensure that the current emergency braking assistance systems can have an even greater impact on safety, they have to be fitted on the largest possible scale in fleets. “We are therefore calling on the transport industry – and above all our DEKRA members – to equip their vehicles with the best emergency braking systems available and not to limit themselves to the minimum legal requirements,” says Klinke. Some manufacturers offer systems that satisfy the minimum specification as standard, with the latest and most powerful emergency braking systems available as an optional extra. “This is why we are also calling on commercial vehicle manufacturers to install the latest generation of safety systems as standard. In addition, we are counting on development work moving ahead to make the systems even better.”

Drivers should not blindly rely on assistance systems

In order for emergency braking assistance systems to have any impact at all, however, it is crucial that they are not deactivated during a journey. “You have to ask yourself why it should be possible to deactivate these systems at all, let alone by means of a simple switch in the cockpit. This means that these systems could even be deactivated accidentally,” says the DEKRA Management Board member. It is also important that drivers are fully aware of the functions of their emergency braking system. “Some might mistakenly deactivate their emergency braking assistance system because they find the adaptive cruise control (ACC) function annoying while driving. Imagine if the worst comes to the worst and an accident occurs that active emergency braking assistance could have prevented.”

That said, the DEKRA expert warns that truck drivers should not just blindly rely on their emergency braking system. “The worst thing that could happen would be for drivers to become complacent and do other things behind the wheel, in the mistaken belief that the emergency braking assistance system will get them out of any trouble,” says Klinke. “Assistance systems are designed to assist drivers if they make a mistake – no more and no less.”

DEKRA: safety partner to the German Federal Minister of Transport

That also applies to turning assistance systems. DEKRA is a safety partner to the German Federal Minister of Transport in a special campaign focusing on turning assistance systems and is committed to seeing the large-scale introduction of these systems in fleets as soon as possible. “It’s true that accidents in which a turning truck driver cannot see a cyclist or pedestrian in their blind spot and hits them as a result are relatively rare – we are talking about approximately 30 deaths per year in Germany. That said, this kind of accident nearly always has particularly grim consequences.”

Only one truck manufacturer currently offers a factory-installed turning assistance system; others are in development. In addition, various retrofit solutions are available in the marketplace. They all use radar sensors or cameras to monitor the blind spot alongside the truck – an area that the driver can see neither directly nor using their mirrors – and warn the driver accordingly if they detect a person. “We are currently trialling a number of retrofit solutions in cooperation with DEKRA member companies,” says Klinke. “For the medium term, we are also planning a larger-scale series of tests to enable us to make specific recommendations.”

Despite its safety potential, the turning assistance system alone cannot eliminate the risk of accidents occurring when a truck turns, stressed the DEKRA Management Board member. As early as 2004, when electronic assistance systems were still a far-off prospect, DEKRA experts highlighted room for improvement to prevent turning-related accidents in a research report for the German Federal Highway Research Institute (BAST). Proposals included in-truck acoustic warning signal generators and full phase separation or phase delay between the green light for motor vehicles and cyclists at traffic lights.

“We have also long called for flashing side marker lights, telling cyclists and pedestrians alongside the truck that the truck driver intends to turn.” Since October 2015, additional side direction indicators have been mandatory for trucks and buses over 9 meters in length as well as with heavy trailers for new vehicle types. Alternatively, this requirement is considered fulfilled if the side marker lights that are likewise mandatory also flash. DEKRA also advocates accelerating the process of retrofitting this safety function in vehicles currently on the road.

Need for legislative action

Klinke also sees a need for lawmakers to take action. In his view, the provision laid down in Section 5 (8) of the German Road Traffic Act is problematic. “It allows

cyclists and moped riders to pass trucks – for example, trucks waiting at traffic lights – on the right if sufficient space is available. The problem here, however, is that this space is available at all only if the truck is positioned a little further to the left so that it can turn right,” explains Klinke. “This means that vulnerable road users are being lured into a trap by this regulation. We have been calling for Paragraph 8 to be deleted for years to keep cyclists safe.”

DEKRA also ultimately believes that it is important to raise awareness among cyclists and pedestrians of the dangers of blind spots. This could be done using, for example, eye-catching stickers on the back of trucks. At the IAA, DEKRA is also presenting its campaign to promote this. Other important measures, in the view of Clemens Klinke, include awareness-raising activities in schools: “Our 75 DEKRA branches throughout Germany are launching a school campaign this fall. Our experts will take schoolchildren in and around a truck to show them what truck drivers can see outside their cab – and, more importantly, what they cannot see.”

DEKRA booth at the IAA in Hall 17

Trade show visitors will also have the opportunity to find out more about this issue from DEKRA in Hall 17 at IAA Commercial Vehicles in Hanover. By getting behind the wheel of the tractor unit at booth B07, they can experience for themselves the visibility conditions from inside the truck cab, even when the mirrors are optimally adjusted. They will also have the chance to witness a retrofitted turning assistance system in action.

“For more than 90 years, we have dedicated ourselves to continuously enhancing road safety,” says DEKRA Management Board member Klinke. “We believe that assistance systems in trucks in particular offer huge potential here. But it is crucial that all those concerned never let up in their efforts to ensure that this potential is also properly leveraged – all in the interests of road safety.”

More information: www.dekra-roadsafety.com.

About DEKRA

DEKRA has been active in the field of safety for more than 90 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world's leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group's operating business. In 2017, DEKRA generated sales totalling more than 3.1 billion Euros. The company currently employs more than 44,000 people in more than 50 countries on all five continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temporary work. The vision for the company's 100th birthday in 2025 is that DEKRA will be the global partner for a safe world.