Pressinformation

Intelligent safety systems to minimise risk of traffic accidents

**More vehicles on the roads, a faster traffic flow and a distracting stream of information all impose considerable demands on both commercial vehicle drivers and car drivers. On the other hand, there has never been more opportunities for the person behind the wheel to drive more safely than there is today. The active safety systems found in many modern cars and trucks make it far easier to avoid incidents and accidents.**

As of November 2015 there is an EU-wide legal requirement for new two- and three-axle heavy trucks to be equipped with the function automatic emergency brake. The aim is to reduce accidents in which a truck drives into the back of a vehicle in front of the truck , an accident scenario that accounts for about one-fifth of all road accidents involving trucks. At present, legislation requires that the emergency braking system must reduce the truck´s speed by 10 km/h. Next year, this will be tightened to 20 km/h.

“It’s great that the legislation is becoming stricter but I still feel the legal requirements are too low. If you are driving at 80 km/h when the emergency braking system is deployed , you need to cut your speed by far more than just 20 km/h to avoid a massive collision if the vehicle in front has come to a standstill,” says Carl Johan Almqvist, Traffic & Product Safety Director at Volvo Trucks.

Volvo Trucks has developed a system that goes well beyond both current and future legal requirements. The system, which was introduced in 2012, focuses primarily on alerting the driver to the risk of a collision.

“In many cases this is enough for the driver to quickly assess the situation and avoid an accident,” explains Carl Johan Almqvist.

The emergency brake is only used if it is absolutely necessary, and it is deployed extremely quickly. The braking speed – or retardation to use the correct technical term – is about 7 m/sec2 , which is on par with what many passenger cars can manage. In practice this means that the truck’s speed can be cut from 80 to 0 km/h in about 40 metres.

The system monitors the vehicles in front with the help of camera and radar technology and functions irrespective of whether it is sunshine, mist, fog or darkness. If there is a risk of collision, the driver is alerted via gradually escalating light and acoustic signals. If the system does not detect a response from the driver, the truck automatically starts braking gently. If the driver still does not respond, the emergency brake is deployed until the vehicle comes to a complete standstill. After a further five seconds without any movement of the steering wheel or other reaction, the handbrake is automatically engaged, a safety measure to prevent the truck from rolling if the driver is in shock or is unconscious.

When the emergency brake is deployed, the brake lights start flashing to warn vehicles to the rear, and when the truck’s speed drops to 5 km/h the flashing emergency warning lights are also activated.

Volvo’s system also functions on curvy roads and can differentiate between roadside guard rails and genuine obstacles such as vehicles including motorbikes. In order to gain the full benefit of the system, it is essential to ensure that all functions, such as the ABS brakes, are activated on both truck and trailer.

Considering the short period that has passed since the introduction of emergency brake legislation, it will take some time before its positive effects are reflected in accident statistics. However, Volvo Trucks is convinced of the benefits of the emergency braking system and other active safety devices.

“Our active safety systems are part of a holistic solution that clearly helps reduce risks in traffic, but it is important to bear in mind that technology alone cannot do the job. A safe traffic environment requires active interaction between all road users. An experienced, attentive driver who handles his or her vehicle responsibly is still the best form of accident prevention,” says Carl Johan Almqvist.

**Examples of Volvo Trucks’ intelligent safety systems**

* *Adaptive Cruise Control*, active cruise control that helps the driver maintain a set timegap to the vehicle in front.
* *Collision Warning with Emergency Brake*, alerts the driver if there is a risk of collision with a vehicle in front, activating the brakes if necessary.
* *Driver Alert Support*, notifies the driver to take a break if it detects any sign of driver inattentiveness or drowsiness.

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[**Link to high-resolution images**](http://images.volvotrucks.com/latelogin.jspx?recordsWithCatalogName=Volvo+Trucks:28110,Volvo+Trucks:28104,Volvo+Trucks:28101,Volvo+Trucks:28100)[**Film that describes Collision Warning with Emergency Brake**](https://www.youtube.com/watch?v=dqNtzncxxcI)

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