

# STAR SAFETY

Ahead of launching its next-generation Sprinter van later this year, Mercedes-Benz has revealed some of the advanced safety technologies due for introduction. John Challen reports from the Boxberg track, in Germany

Having refreshed its heavy duty truck range and introduced the small Citan van, Mercedes-Benz is now turning its attention to the Sprinter – a panel van that has sold 2.5 million since 1995, notching up 600 billion km in the process.

Safety will be, as it always has, a priority, says the company. Sprinter was the first van to feature ABS, and to offer Bosch's ESP (electronic stability program), back in 2002. Since then, the number of accidents per annum involving Sprinters has dropped by 64%, but the German manufacturer is keen to do more and better.

"We have a vision of accident-free driving and, step-by-step, we are getting closer to making this a reality," confirms Dr Sascha Paasche, head of product engineering for Mercedes-Benz vans. Helping achieve this goal are five key safety systems, which will be offered on all new Sprinter vans in the future, he says.

First up on the third generation of Mercedes' ESP for vans is Crosswind Assist. Designed to minimise the impact that strong winds can have on a van's position on the road, this system is automatically activated at speeds at or above 80km/h. The system is based on sensors that measure yaw rate and lateral acceleration to determine crosswind forces. The automated unit then applies the brakes on relevant wheels, causing the vehicle to adjust direction and correct itself, so avoiding potential accidents.

Mercedes says the system is designed to prevent vehicles from veering more than 50cm sideways during strong gusts. It also states that vehicle speed, cargo load and location within the van, as well as driver steering inputs, are all taken into account in real time, as the system calculates the scale of intervention required.



Next, however, is Collision Prevention Assist, which harnesses sensors on the van's bumper to continuously measure the distance of vehicles ahead, as well as their relative speeds. When it predicts an impending impact, the system delivers an audible warning, with the noise intensifying as the target distance reduces.

### Spot the vulnerability

Mercedes stresses that, while this system won't prevent all minor low-speed accidents in cities, for example, it will make a difference in reducing the number of severe impacts at speed.

Similar technology to Mercedes-Benz's Blind Spot Assist – the third innovation – has already been introduced by Volvo on its new FH truck, but this is the first time such a system has been seen on panel vans. At speeds above 30km/h, short-

**Mercedes-Benz has taken safety technologies from the passenger car market into the CV world. Clockwise from above: Crosswind Assist; Blind Spot Assist; Lane Keeping Assist**



**Collision Prevention Assist is designed to cut accidents. Sensors located around the vehicle alert the driver to potential dangers**

range sensors located at the side of the vehicle can detect a car or motorcycle in the driver's blind spot. When a vehicle is sensed, a red warning light appears in the wing mirror on the relevant side, alerting the driver to the danger. Again, should he or she attempt a lane change when a hidden vehicle is in the way, another warning alarm will sound.

Moving on to the fourth active safety system brings us to an equivalent to lane departure warning systems (LDWS), again being introduced

on large vehicles, but to-date not vans. However, Mercedes argues that unintended lane departures, caused by driver distraction or inattention, can be even more dangerous than sudden lane changes.

Hence the introduction of Mercedes' Lane Keeping Assist on the new Sprinter. This comprises a camera viewing the lane ahead and an ECU measuring data. Yet again, a warning sounds when the van is about to leave its lane, if the indicators are not active.

And finally we come to Highbeam Assist, described by Mercedes as ensuring "optimal illumination of the road". The manufacturer says it is designed to give drivers a better view of corners, pedestrians and dangers ahead, when travelling at 60km/h and above. This system, too, uses a camera, in this case mounted on the inside of the windscreen, scanning the road and traffic ahead. It will be offered with halogen, as well as bi-xenon, headlights.

So what about availability? Mercedes has confirmed that Crosswind Assist will debut as standard on the new Sprinter when it is launched in the second half of 2013. It is expected that the remaining safety technologies will be cost options. However, according to a company spokesperson, it is too early to talk about prices. **TE**

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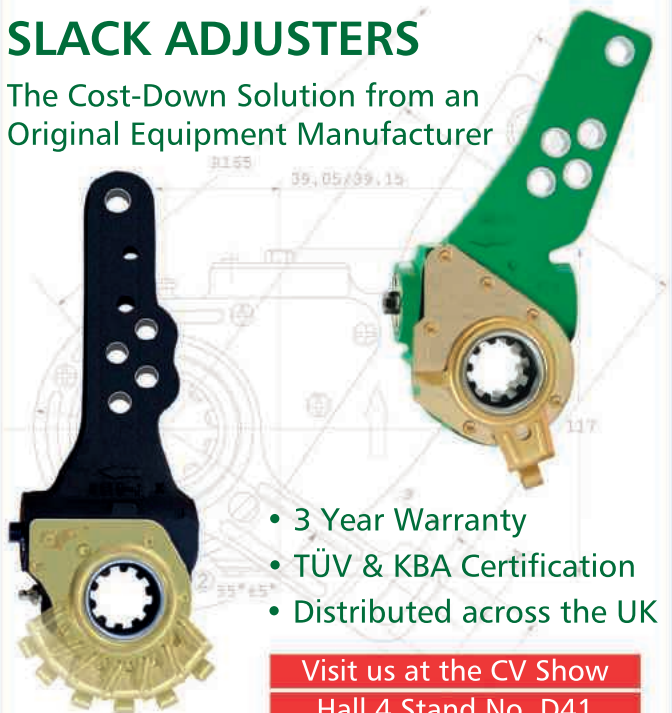
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