



# Actros goes up a level

**W**hile the absence of conventional external rear-view mirrors is the most obvious change between the latest iteration of the Mercedes-Benz Actros heavy truck and its predecessor, technically the most significant development is that it is the first production truck in the world to offer Level 2 autonomous driving as defined by the Society of Automotive Engineers: multiple systems combining to control speed and steering independently of the driver.

It is no surprise that Mercedes is first to market this technology in trucks: it got there three or four years ago with the S-Class car.

The new Actros features Active Drive Assist: this extends current lane-keeping and active cruise control technology beyond motorways and on to many other roads where the carriageway is defined by white lines. It works at all speeds, and combines longitudinal (speed and distance) with lateral (steering) control using a combination of radar and camera technology. (Mercedes cautions that it is not ready for mountain passes and narrow lanes yet!) For legal reasons, the system will not steer for more than one minute without input from the driver.

**The enhanced truck brain in Mercedes-Benz's big artic offers semi-automated driving, plus digital mirrors. Richard Simpson slips into the driver's seat**

Self-steering is enabled mechanically by the Bosch Servotwin steering system, which combines conventional hydraulics with electronic control. This also makes low-speed turning fingertip-sensitive.

Bosch also cooperated with Mercedes in producing the major talking-point of the new Actros: cameras and screens replace rear-view mirrors. Aerodynamic gains from this make a substantial contribution to fuel consumption reduction. Mercedes claims a 3% saving (half from the mirrors) on motorways over the previous Actros, while 5% is possible on rural roads when the truck's predictive powertrain control (PCC) is turned on.

This uses truck-specific mapping from TomTom to read the road ahead and prevent unnecessary braking, acceleration or gear-changing, while the Proximity Control Assist also inputs information about vehicles on the road in front. The PPC adjusts the vehicle's speed to accommodate varying legal speed limits, as well as bends and other

obstacles on the road. It recognises posted speed limit signs, too, and each time the truck is driven on a route it updates its knowledge of the road.

Other changes that improve fuel performance are a higher-ratio drive axle for the OM 471 engine, and new concave cab corner deflectors.

From the driver's point of view, the 'virtual' mirrors are clearly better than the physical components they replace. There are no blind spots at all: the monitors fit inside the A-pillars. Screen images appeared clear in all light conditions encountered. The wide-angle portion of the screen gets bigger when reverse gear is engaged, and adjustable yellow guidelines indicate the end of the trailer, plus safe margins for pulling in after overtaking. It takes just seconds to adjust to looking at the screen inside the cab rather than outside when checking mirrors. Cornering, the camera pans automatically to continue to show the side of the trailer.

Inside, conventional instruments and dashboard switches have been replaced by interactive screens. Older hands will be relieved to still find conventional switches on the door, steering wheel and stalks for most of the truck's major controls. **TE**