

SHOW REEL

Visitors to the IAA 2012 commercial vehicle show were treated to new vehicles and technology that aim to cut fleet costs and improve efficiency. **John Challen** rounds up some of the many highlights



Catering to the bus and hybrid heavy duty truck markets, Wabco showcased its new, electrically-driven air compressor, dubbed e-comp. Claiming to help improve fuel efficiency by up to 35%, its 6kW motor is currently undergoing testing on hundreds of prototypes around the world, according to the company. Most of these vehicles can be found in China, but Europe is also trialling the technology, with positive feedback so far. Wabco says that some operators are concerned about the levels of vibration and noise from the system, especially when mounted on bus roofs, but confirms that packaging solutions are being investigated ahead of e-comp's promised launch date, late in 2013.



There was plenty to see in the Daimler halls, with the new Actros truck, a range of products set for launch in the BRIC (Brazil, Russia, India and China) countries, and a concept electric Sprinter van. However, one of the most interesting developments was the company's aerodynamic truck and trailer combo, parked outside. A joint development with trailer manufacturer Schmitz Cargobull, this concept is, according to Georg Weiberg, Mercedes-Benz's head of truck product engineering, "a semi-trailer for 2013". Weiberg claims tests have revealed that the new design helps reduce wind resistance by up to 18% and cut fuel consumption by 4.5%. Comprising a standard Actros tractor unit with StreamSpace cab, together with a conventional 13.6m freezer box body, the combination features a spoiler on the bulkhead, plastic side trim panels and a plastic air diffuser at the rear. A boat tail has also been added at the rear, measuring 400mm and claimed to improve air resistance by 7%.

The latest tyre range for trucks and trailers from Hankook was revealed in Germany. The e-cube MAX – standing for maximum efficiency and environmental friendliness – offers options for steering and drive axles (AL10+ and DL10+), as well as for trailers (TL10+). Three new tread patterns have been developed, but the AL10+ also features what Hankook is calling spiral coil technology – a wound steel belt placed between the high tensile steel belts, helping to improve durability and reduce tyre rolling resistance. A new tread compound also features throughout the e-cube MAX range, designed to reduce energy losses while driving. The compound is also claimed to increase tyre life and mileage.



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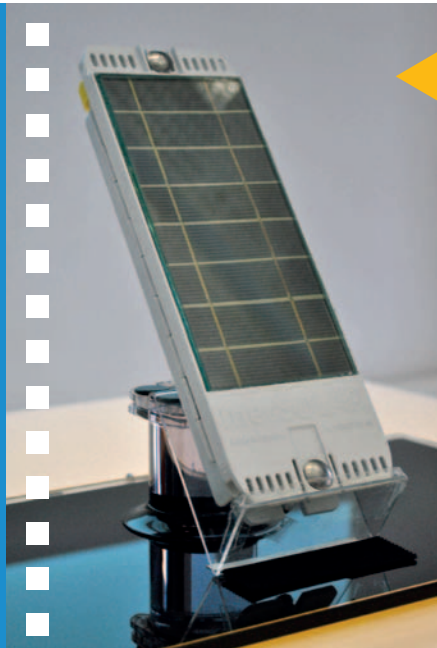
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Cummins was just one of many engine manufacturers talking about its Euro 6-compliant products.

Details of the ISB 4.5 and ISB 6.7 were already in the public domain, but visitors got their first chance to see the ISL 9-litre unit, which completes Cummins' medium duty powerplant family. The engine offers 380bhp for bus and coach applications (330bhp for buses) and a peak torque of 1,700Nm. It features EGR (exhaust gas recirculation) and a VGT (variable geometry turbocharger), as well as the same after-treatment as the new ISB engines. Also on the stand were two natural gas-powered options – another 9-litre engine, generating 320bhp, and a 12-litre unit, offering 400bhp. Based on its ISX12 diesel engine, the new unit will operate with CNG (compressed natural gas) or LNG (liquefied natural gas), using spark ignition, and is based on stoichiometric combustion, using cooled EGR technology. The company believes that demand for gas-powered engines will grow in Europe, matching the success already achieved in the US. It also revealed in Hannover, that its gas engine duo will be joined by a larger, 15-litre engine to complete the range.

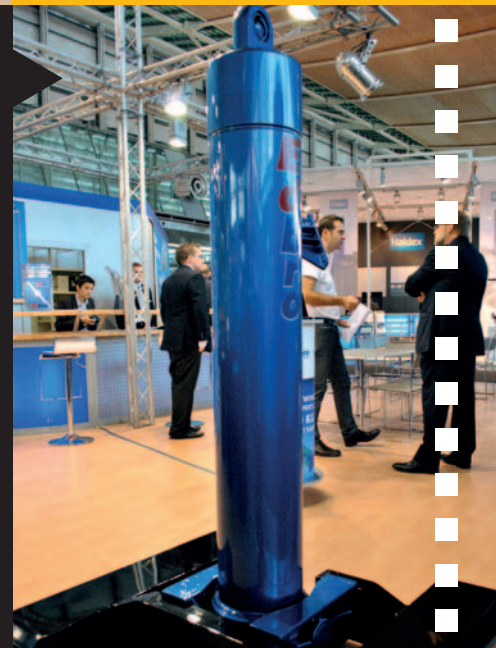


A solar-panel tracking solution for operators is being proposed by Mecomo,

which arrived in Germany looking for customers for its new technology. The inventor of the GPS Solar product debuted the smaller, but more powerful, MecSolar system, highlighting its usefulness on reefers and other large trailers. The new unit has a longer battery life, and features temperature, humidity, shock, light sensors and proximity sensors to avoid manipulation. Power comes from a rechargeable 20Ah lithium-ion battery – double the power of the unit found on GPS Solar. The company, which developed the product with Nanotron Technologies, also explained the importance of its modularity. The casing design allows connections vertically and horizontally, meaning two modules could run for up to six months without sunlight.

Edbro used IAA to announce an expansion of its product range

and developments of its existing lightweight tipping cylinders. Its C22 cylinder now has a load capacity of 90 tonnes, which, according to Edbro, is the largest produced by a UK operation. This capacity has been made possible, thanks to a laser welding machine, which allows larger diameters and thicker wall sections to be joined. Elsewhere, improvements to the other cylinders in the CS range have also been made – principally cutting weight in a bid to help operators boost payload. The weight savings, together with the integration of new mounting brackets, add up to a 20% lighter cylinder – with obvious benefits for tipper operators.



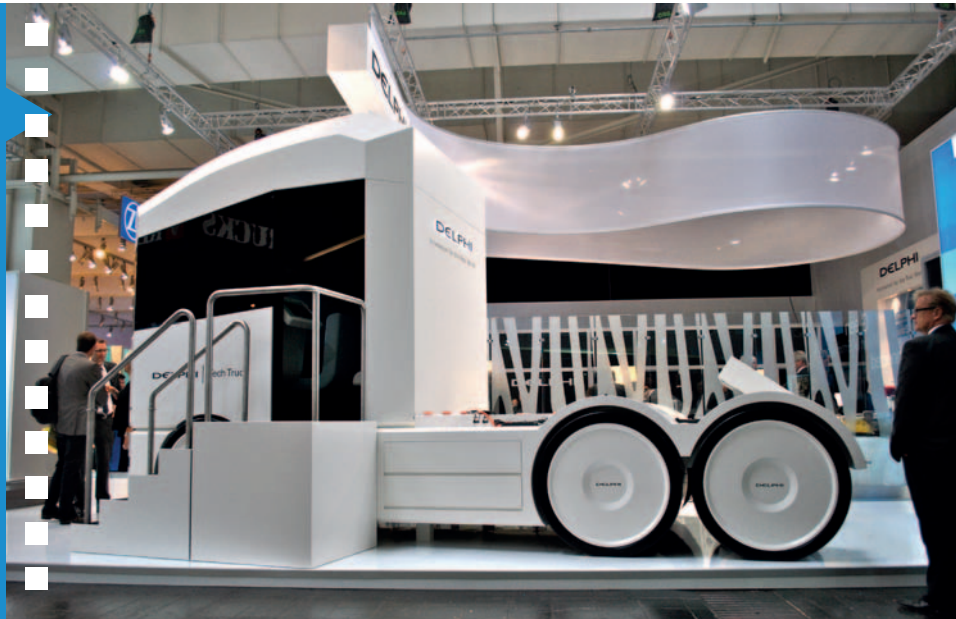
ATDynamics announced its arrival in Europe by introducing its TrailerTail

folding aerodynamic kit, of which more than 10,000 units have been sold in the US, covering some 500 million km since launch. In this time, equipped trailers have helped to save a claimed seven million litres of diesel and ATDynamics is hoping that its products will have a similar effect in Europe. On-road trials have already been carried out with TNT ahead of a market launch, due in the near future. Results reveal fuel savings of around 6%. The tail uses an origami style folding panel design, which allows it to collapse when the semi-trailer's rear doors are opened. It is fabricated from thermoplastic composite materials, helping to cut weight, and is available as original equipment or as a retrofit.

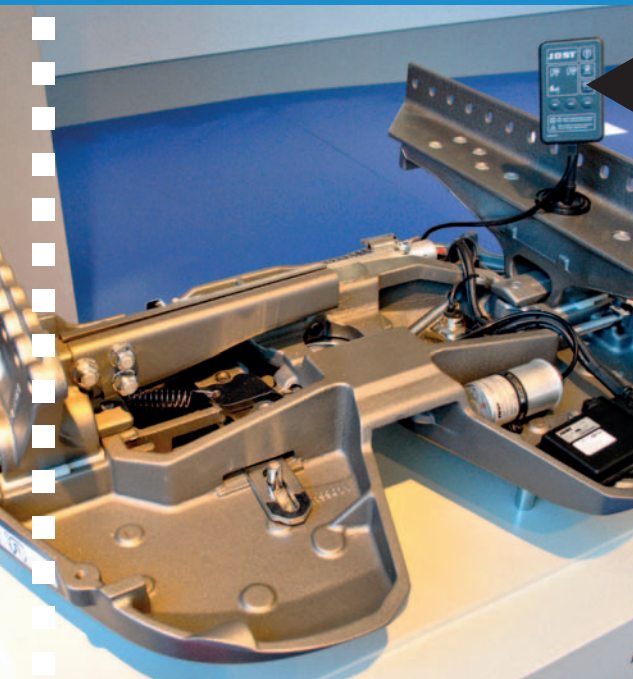


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More Euro 6 talk could be found on the Delphi stand, where discussions centred around production of its heavy-duty common-rail systems. Delphi will offer three systems for engines, with capacities ranging from six to nine litres. The trio are: a remote pump common rail; and two systems with distributed pumps – one for overhead cam-driven pumps, the other for pumps driven by a cam in the block. Delphi's whole product range for CVs was displayed on a 'Tech Truck', including its latest active safety solutions. One is a 65Ghz radar-based detection module for the rear and side of the truck, which builds on the unit already available for frontal detection, and has a range starting at just 10cm. The module analyses the potential for impact and, if a collision is set to occur, it will stop the vehicle or slow it down automatically. Delphi says it has signed a deal with one truck maker and is now in talks with others about OE fitment. The firm also hinted that a variant – which would provide an audible warning for the driver to help avoid a potential impact – could also be made available.



A host of fifth wheel options was on the Jost stand in Hannover. One of the main two innovations, however, was its SKS sensor coupling technology, which uses three sensors to ensure a safe coupling/uncoupling process. The first sensor measures the correct coupling height, while the two remaining sensors monitor kingpin position and locking status. The system is supported by a display in the cab, enabling the driver to see when successful coupling has been completed.



Following the E-NV200 van, Nissan displayed another electric vehicle in its range, albeit in concept form. The Cabster refrigerated van uses a diesel engine, in combination with a 48kw/h battery pack – comprising two of the packs found in the Nissan LEAF car. The vehicle offers a range of 140km, making it ideal for operators involved in city distribution. Nissan also confirmed that, while the Cabster is likely to make it to production, the plan is not to electrify every vehicle in the range.



New axle technology was unsurprisingly centre stage on the Valx stand. First up was the company's self-steering axle which, following a successful introduction in Italy last July, is now moving to a full European launch. The axle features an improved knuckle layout, bearings instead of the standard pin, and a new cover design. It's a cleaner and maintenance-free solution, says Valx. Elsewhere on the stand was the E2 energy axle, which aims to overcome the problem of keeping tail lift batteries charged. The system sees a 0.5kW motor mounted on the suspension, which is linked to the wheel, keeping a flow of current to the tail lift. Valx is claiming a payback time of around three years, thanks to less downtime spent changing batteries.

