



MAN's technologists have been focusing on some of the more demanding operator niches. Ian Norwell reports from its Munich Trucknology event

SPECIALIST VEHICLES

The truck makers' march on niche engineering continues. MAN Truck & Bus recently invited 4,500 customers in the fire and agricultural sectors to its Munich HQ to sample developments. And with 170 trucks to test drive and 80 sector-specific bodybuilders climbing aboard, this was quite an event. Several innovations stood out – ranging from a re-optimised transmission to a hybrid drive with a twist.

First up, MAN is now offering a new gearshift programme for emergency services using its TGL and TGM trucks. Essentially, a 'Ds' programme designed for outbound emergency travel on blue lights can now be added to the TipMatic selector. MAN says it's all about faster shifting, and advanced downshifting logic, to enable better acceleration response after deceleration.

Stressed out

The company concedes that the new system generates greater stresses on the driveline, but says 'Ds' is reserved exclusively for fire and rescue vehicles. Interestingly, it adds only €400 to the chassis cost: very small beer in the fire chassis arena.

Next, MAN demonstrated its hydraulic part-time four-wheel drive, designed to provide occasional extra grip where fleet engineers can't justify the expense of a 4x4. It's not dissimilar to Renault Trucks' OptiTrack and Mercedes-Benz's HAD (hydraulic auxiliary drive). MAN's HydroDrive temporarily converts a 4x2 rigid into a 4x4 using engageable wheel hub motors.

There's no doubting the considerable weight saving, compared to a conventional driven axle, but there will also be some extra cost, and a possible



impact at re-sale. Basically, when engaged, the front axle is powered by a pair of hydraulic motors, supplied with fluid by an engine-driven pump. While this arrangement does allow continuous drive to be fed to the front axle, with none of the transmission breaks that result from a conventional gearbox, there is a deal of pipework and a

hydraulic pump that will eventually need maintenance. Renault and Mercedes-Benz have struggled to make an impact. The jury's out on whether MAN will fare any better.

Moving on to the quasi-hybrid, of all the trucks that might claim green credentials, the brutish four-axle rigid mixer is certainly not up there. But a plug-in hybrid from Italian CIFA – its Energya series – may soften the image. PTOs are infamous for debilitating fuel economy, but this unit has an induction motor designed to run the mixer barrel, either using an on-site plug-in, or on-board lithium-ion batteries. The latter can be charged by a PTO generator, with additional contributions from a KERS (kinetic energy recovery system). The two options mean that low batteries will not leave operators high and dry, with product going off in a static barrel.

In operation, the truck's diesel is silenced during concrete loading and unloading – meaning fuel savings and lower noise (10dB) that will go down well in urban environments, as well as zero emissions.

Battery management will be key to this, but a CIFA charging column apparently replenishes charge in 18 minutes. Batching plants may look at them, but sites will stick with conventional 380V industrial plug-ins. Go-ahead fleet managers can also get peace of mind with extended warranties: five years on the batteries, four on the drum and two on the frame kit. **TE**

