

With the Department for Transport's 10-year trial of longer vehicles now well underway, John Challen talks to operators, developers and manufacturers about their performance so far



It's a long story

When the DfT (Department for Transport) announced last year that there was finally to be a trial of longer semi-trailers, the benefits seemed attractive – greater efficiency, through larger loads, and savings, in terms of fuel and operating costs, to boot. The trial began in January 2012 and, nearly 15 months on, reports are positive from operators and trailer manufacturers alike – some of whom are now keen for the scheme to be expanded.

Whether that will happen remains undecided, as we go to press. However, the numbers so far tell a story. Trailer manufacturer Gray & Adams, for example, has already deployed nearly 200 longer semi-trailers with the likes of Tesco, Morrisons, FreshLinc and Waitrose. These use a mix of self-steer, command-steer and double command-steer, depending on the operator's requirements.

"If they can run at 38 tonnes, they get a self-steer axle, because that's all they need," asserts Lionel

Curtis, engineering manager at Gray & Adams. "But the 44-tonne, 15.65m-long semi-trailer versions have twin command steer, if they've got a uniformly distributed load," he adds.

That said, it's not just about length, and this manufacturer has built a variety of semi-trailer types, right up to and including double-deck units. Curtis says experience to date has been good. The longer units, combined with their independent steering systems, can take some getting used to, he concedes, but Gray & Adams' staff are on hand to help. "We provide driver training, using our own drivers and tractor units," he states. "We've also produced a video from the drivers' perspective, explaining where they need to be on the road. We've filmed it from the cab, from behind and also as the truck drives towards them."

As for designing the new vehicles, that was relatively straightforward, he continues. "We did some engineering work, in terms of calculating load distribution and load bearing on the chassis, and worked out the dimensions of the chassis and bodywork to suit. As a result, these vehicles are no less stable than conventional trailers," explains Curtis. "Long trailers are also just as robust and have the same lifecycle as traditional length trailers."

More please, sir

And the feedback from customers? "Operators that have got these 15.65m trailers ask: 'Can we have some more, please?' But they haven't got any more licences, so they can't," replies Curtis. "The problem at the moment is that additional permits are not available." And that's despite the commonly held understanding that the DfT's full allocation of 900 15.65m longer trailers is not yet on the road.

Curtis is clearly frustrated and blames the DfT for a lack of communication around the longer trailer trial. "It is a pity we have not been given more frequent updates by the DfT, to tell us how many are in use, for example, and what the savings are," he

Above right:
FreshLinc is running longer semi-trailers from Gray & Adams
Below: TNT's Steve Davis with one of his company's two 15.65m-long trailers





complains. "We are not getting any market information from the trial, despite participating. From a financial point of view, there is no gain for us and it is costing money for those in the trial to provide the reports to the DfT."

That aside, Curtis says there have been no problems so far. "Issues, if any, are more likely to come after two or three years, when we can inspect self-steer axles and understand how they are surviving, given the different maintenance regime that operators apply," he reasons. "There are differences in the ways they need to be maintained, compared to conventional axles, so it will be interesting to see how that runs on."

Satisfied operators

One operator successfully running longer trailers – in this case, supplied by Cartwright – is TNT. The logistics company currently has four in service, with two double-deck units having recently joined a pair of 'standard' 15.65m-long trailers. The latter two have been in service on its fleet since August and Steve Davis, national engineering manager at TNT, is pleased with their performance so far.

"They have been running between our Llantrisant depot in Mid-Glamorgan and the primary hub in Kingsbury, Staffordshire, and we've had no issues," says Davis. "We've adopted command-steer, rather than self-steer, and, apart from the mandatory check

mid-way through the first maintenance interval, we've had no problems whatsoever with the steering system.

"We've had some experience over the years with steering axles, but more on the self-steer side. So we went through a driver training programme, but, fortunately, that's been easier for us, because we're operating these trailers in a 'closed loop'. Colleagues in more general haulage will have their trailers operating on more varied routes, which means a wider driver training programme." And Davis adds that reporting back to the DfT is easier, too, for TNT, again because of the repetitive nature of these trailers' operations, which means very little variation.

And the benefits are clear, he says. "We have reduced the number of trailers that depart from Llantrisant every day by one," reveals Davis. "We can get 15% more on each trailer. We had to make changes to the loading process to accommodate this, but we are saving about 320 miles a day, which is quite a lot over time."

For him, the company's double-deck units are expected to yield even bigger savings. Next, TNT has an option of obtaining another nine trailers, which it expects to order by May and get operational by September. With operators having until the end of this year to take advantage of the total 1,800 longer trailer allocation, the onus is on them to start saving quickly. ^{1E}

CV Show to reveal new path-following steer technology

The CV Show (9–11 April 2013 at the NEC, Birmingham) will give visitors a chance to see the latest developments in the computer-controlled path-following steer system, designed and developed by the team under David Cebon, professor of mechanical engineering at Cambridge University and director of the Cambridge Vehicle Dynamics Consortium.

CVDC's efforts have been well documented in *Transport Engineer* (December 2010) – as well as at last October's (2012) IRTE conference – and now the system will be on show. "Our new vehicle has Tridec steering hardware, designed to work with the Cambridge control software," states Cebon. And although it won't be fully operational in time for the CV Show, the vehicle will be entering service directly afterwards, with Wincanton. "The hardware is ideal for this application," continues Cebon. "There are differences in its implementation,

compared to a standard Tridec, but the basic axle hardware is standard. We've used king-pin axles, so each can steer independently, and on every steer axle there's a computer-controlled hydraulic actuator, which moves the track rod."

The initial plan is for Wincanton to run the trailer for three months, as part of the government's longer semi-trailer trial, before the product is offered generally to the market. But development work won't stop there, according to Cebon.

"There are some modifications we're likely to make for the final commercial version," he reveals. "At the moment, we steer all three axles to get perfect path-following, both forwards and in reverse, with near zero tyre wear. But we will probably fix one of the axles to simplify the system and reduce cost. Even with this simplification, we expect the path-following performance to remain excellent." Head for the SDC stand in Hall 5.