

Tight manoeuvre

Truck and trailer steering are seeing significant improvements, as technology moves up a gear.

Dave Young travels to Eindhoven to test drive Tridec's latest hydraulic and electronic innovations

Rear steers are far from new: operators have specified them and trailer builders constructed them for years. But most have been mechanical, driven from the kingpin by simple levers and built to lock in straight at high speed and in reverse.

While these have worked well enough, there has always been the bulk and weight – and hence also payload – penalty. And there has been that irksome maintenance problem: never easy when we all know that semi-trailers are among the most neglected vehicles on many haulage fleets.

That is why independent truck steering maker Tridec's latest products are so interesting. Starting with its HF-S, for lightweight distribution trailers, it scores over previous designs, because it is hydraulic. That means lower maintenance, less weight and less space; in fact, it occupies a small area on the swan neck above the fifth wheel. Further, it can be bolted on, rather than welded in, meaning that, if there is a failure, it's much easier to whip out.

Light and active

The HF-S also works without electronic control and, according to Tridec, gives "high directional stability and precise steering". Using single master and slave cylinders and hydraulic stub axle steering, rather than a rim bearing, not only means negligible payload penalty, but also the potential for fitment where positively steered axles would be impossible – for example, on sliding floor trailers or tankers.

What's more, it can be used as a steered single axle or third axle in a triple-axle suspension or mounted on a tridem set-up, with steered first and third axles and a reversed steering angle. This latter gives an axle spread of four metres, which is handy since it reduces the likelihood of axle overload, due to multiple deliveries from the rear of the trailer.

This steering equipment is going to be attractive from forestry to supermarkets, where the yards are often not quite big enough. It's not just about manoeuvrability, but also reducing tyre scrub, saving damage to the yards, and reducing strain on the half shafts and kingpin. Be advised, though: HF-S can only be used with single tyre equipment.

Moving on, however, Tridec's WST electronically-controlled, hydraulically-activated steering could



soon feature in the UK, since it is designed for rigid trucks with tandem axles. Yes, there are plenty of lift and steering axles designed for manoeuvrability on three-axle 24 tonners that are increasingly replacing two-axle 18-ton rigids, for example, but these, too, are all mechanical. So this is a useful development that could also work well on 6x4 and 8x4 chassis used by utility contractors in tight urban settings.

That's not what WST was designed for. Dutch C&U regulations allow a four tonne payload increase, if the two drive axles are more than 1.81m apart. However, the long wheelbase reduces manoeuvrability, and increases turning circle and tyre scrub. So, by designing a steering system for the last drive axle, driveability is significantly improved.

That said, also of interest to UK operators, if the proposed EU regulations restricting trailer height to 4.0 metres are enforced, will be Tridec's HF-O steerable single wheel suspension, aimed at double-deck trailers. Because of the absence of axle beams, a floor level of around 320mm becomes possible, which allows two 1.80m high loading decks, each offering space for 1.75m euro-pallets. An option also allows the loading floor to be lowered flat onto the road surface, using the air suspension.

Tridec claims that HF-O is easy to fit. All parts – controller, pneumatic springs and shocks – are supplied as modules, with the geometry pre-set. **TE**

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