

Although overshadowed by their larger rivals for general construction work, 26t small tippers still play a role in niche jobs, reports Steve Banner

Once familiar visitors to construction sites, 26-tonne three-axle tippers have grown much rarer in recent years. They have been eclipsed by their bigger 32-tonne four-axle rivals. "The latter are more productive, and if you are for example a franchised operator delivering construction industry materials using a rigid then you want to be able to carry as much as possible," says Volvo's UK head of truck product management, John Comer.

"A 32-tonner can carry a payload of 19 to 20 tonnes compared with 14 to 15 tonnes for a 26-tonner," points out DAF's UK marketing manager, Phil Moon. In both cases much depends whether a hefty steel body for muck-away work has been fitted, or a lighter alloy body to haul aggregates.

"With an eight-wheeler, you get a lot of payload gain for what can be quite a modest kerb weight increase," says Phil Rootham, UK pre-sales technical manager at Scania.

On the other hand, a six-wheeler is more manoeuvrable, which gives it an advantage if the driver has to wriggle into and out of difficult-to-access locations. Operators can approach the same degree of manoeuvrability with an eight-wheeler, however, if they opt for a tridem configuration with twin steer axles – and might even improve on it.

A typical tridem employed on tipper work offers a wall radius (the radius of the smallest circle within which the entire truck can turn) of 9.5m, says Rootham. That increases to 9.8m with a 6x4 tipper – although a tridem will swing out more at the rear, he warns – and to 11.3m with a standard 8x4 tipper, he adds. "A 6x2



tipper's wall radius is slightly smaller than that of a 6x4," he observes.

"Getting the centre of gravity right with a tridem is more of a challenge than it is with a conventional eight-wheeler, though," warns Moon. "It's a bit like a large see-saw, and you can end up over- or under-loading the front axle quite easily. A standard 8x4 is a lot more tolerant."

TRACTION CONTROL

Firms that have gone the 26-tonne route have tended to opt for a 6x4 to give them the necessary traction if they have to plough through mud. A 6x2 has some advantages, however, including the weight-saving associated with switching from a double-drive bogie to a single driven axle and improved fuel consumption, as well as better manoeuvrability.

Plus, a 6x2 can be specified with a lift axle, which mean less tyre wear. Lifting the axle also means that more weight can be switched to the drive axle to aid traction if the site conditions are slippery, although the load imposed must not exceed the permitted axle weight by more than 30%. Furthermore, the axle must lower once the truck reaches 30kph/18.75mph.

Another way of saving weight is by looking more closely at the engine you choose, Moon says. "Broadly speaking, you can opt for an 8.0- or 9.0-litre diesel producing around 345bhp, or an 11-, 12-, or 13-litre diesel at from 395bhp to 444bhp," he says. Choose the former and you can save around 500kg to 700kg, but at the expense of power. DAF's Cummins-built PX-7 6.7-litre diesel is available at up to 321bhp in 6x2 (but not in 6x4) chassis while its





a sleeper cab, the DAF typically carries a 15.5- to 15.7-tonne payload. Fuel consumption is usually from 8.5mpg to 10mpg, Little reports, improving to 12mpg on motorway runs. He has looked at a tridem, and would like to trial one against a six-wheeler, but is concerned about axle loadings.

To the east, the G series sleeper-cab Scania tipper acquired by Robinson Road Planing Services in 2018 hauls a road planer on a tri-axle drawbar trailer (pictured, p24, bottom, second from left). Without the need for the traction offered by Little's field-crossing 6x4, it is a lift-axle 6x2, and was fitted with a single-skinned Thompsons Loadmaster Lite steel tipper body tapered to the rear. The 493bhp delivered by the truck's 13-litre diesel is invaluable, says the Ripon, North Yorkshire operator, given that it is regularly required to drag a 20-tonne-plus load through hilly terrain.

ELECTRIC DRIVELINE OPTION?

Towards the end of last year, Volvo unwrapped a working concept electric FMX tridem tipper. It uses the same technology as the e-FE and e-FL models already unveiled for urban distribution and refuse collection work.

An electric DAF CF 6x2 bin wagon is on trial in the Netherlands, and Moon believes that bodying a similar vehicle as a tipper which could be used to deliver aggregates to construction sites in environmentally-sensitive urban areas would be feasible. An alternative could be to use the electric CF 4x2 tractor unit DAF has also developed coupled to a tipping trailer.

Cost, range and payload limitations imposed by the weight of the battery pack would all be issues. Yet the ability of the battery pack fitted to the CF 6x2 to cope with the requirements of a refuse collection body suggests that it should be able to cope with a tipper body too. **TE**

10.8-litre MX-11 goes up to 443bhp. The latter is 700kg heavier than the former, says Moon.

Not all customers require the sort of tonnages a 26- or a 32-tonne tipper can deliver, especially if they are carrying out domestic renovation work. "A lot of tipper operators keep a little 4x2 around with this in mind," says Comer.

Moon adds: "Smaller loads are likely to be handled by 18-tonners, or they arrive in jumbo bags dropped off by a 6x2 flatbed fitted with a grab."

Ryton, Newcastle-upon-Tyne-based alloy tipper body builder Aliweld still builds on 26-tonne chassis, but director Trevor Marshall has seen a move in favour of trailers and eight-wheelers. "A lot of customers are still sceptical about the benefits of tridems, though," he observes.

Among his customers is K Little

Haulage. Based just outside Penrith in Cumbria, it acquired an Aliweld-bodied DAF CF 440 FAT 6x4 tipper in 2017 (pictured, second from right, below). "We use it to haul a variety of loads including aggregates, topsoil, agricultural lime, and sand which farmers use as cattle bedding," explains Mark Little. Some of the small building sites and farms the company delivers to are difficult to access, with tight gateways – "we go to places where we only have inches to spare," he observes – so the manoeuvrability the DAF offers is vital, he says. "The countryside we operate in isn't built for big wagons," Little remarks. The traction offered by a 6x4 is vital, he continues. "We sometimes have to cross five or six fields to reach the delivery point," he comments.

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