



# TIPPING POINT

Eight-wheelers, tipping trailers, ejectors and moving-floor units all have pros and cons, but changing materials and engineering solutions are moving the goal posts. Steve Banner reports

**A**nxious not to turn away work in a tough economic climate, a growing number of eight-wheel tipper operators are opting for single-skinned lightweight bodies, made from special steels like Hardox. So says Simon Shields, a director of tipper builder Thompsons. These bodies can cope with the hammering dished out by loads, such as construction site rubble that would rapidly destroy aluminium bodies more used to hauling aggregates, he points out. At the same time, they offer a higher payload capacity than traditional heavy-duty, double-skinned steel muck-away bodies.

"A lightweight special-steel body on an eight-wheeler chassis will handle around 20 tonnes, compared with the 19 tonnes offered by a traditional steel body," says Shields. At 20.5 to 20.8 tonnes, an alloy body will carry more than either, he adds, but the limitations on the type of load it can carry make it less versatile.

There is a price to pay for going the special steel route, though. "We charge about £800 to £1,000

more for a body made from it than we would charge for a double-skinned body, but that includes a three-year warranty," concedes Shields. And eight-wheeler alloy bodies cost £2,000 to £3,000 more than their steel equivalents.

Dick Woods, a director of Abba Commercials – which constructs everything from tipper bodies to mobile clinics – agrees that interest in tipper bodies made from Hardox is increasing. "We've just spent £200,000 developing the latest version of our Predator lightweight body," he reports. "It uses Hardox and can transport 20 tonnes... We charge a £600 premium for the lightweight steel bodies we make, over and above the double-skinned steel ones, and offer them with a longer warranty, too. We're talking five years, as opposed to three."

None of this is to suggest that alloy bodies are in terminal decline. That is far from the case, agrees Peter Angell, sales manager at tipping gear manufacturer Edbro, which was acquired by Jost late last year. "All tipper body builders are busy at present and makers of alloy bodies seem to be the





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busiest of all,” he observes. “I think a lot of the fleets that haul aggregates have decided that they need to replace vehicles and want to do so ahead of Euro 6 [heavy-duty diesel engine emissions legislation]. They worry, among other things, that Euro 6 could add up to 200kg to the weight of a [Euro 5] eight-wheeler’s chassis.”

No matter what sort of material is used to build their tipper bodies, operators tend to favour front-end tipping gear, unless they have specified a front-

end grab. If that is the case, then under-floor gear is usually favoured instead. Boweld Truck Bodies, however, offers a universal bolted sub-frame designed to make it easier for front-end grabs and gear to be installed, thereby saving up to 40% of the cost of an under-floor mechanism, the company says. “Remember that, if you go the under-floor route, then you have to strengthen the body’s floor and that can add 220kg to 250kg to the weight,” Angell remarks.

Boweld is also marketing an adjustable hanger bracket suitable for most tipper chassis, designed to make it easier to fit lateral side protection, to prevent injuries to pedestrians and cyclists. More and more tipper operators are under pressure to fit similar cameras and sensors to their vehicles – Groeneveld’s Greensight package combines both – as well as side-protection and warning signs to help avoid collisions with the more vulnerable road users. That’s particularly the case in London: “If you are going to send vehicles there to work on the Crossrail contract, for example, they’ve got to be safety compliant,” advises Abba’s Woods.

### Semi-trailer moves

So what about tipping trailers? Well, there are pros and cons. While even the lightest eight-wheeler only offers around two-thirds of the payload capacity of a tipper semi-trailer operating at 44 tonnes, it has the advantages of better traction. It also enjoys a greater ability to get into sites where access is restricted. “It’s a more stable tipping platform, too,” adds Woods.

But tipper semi-trailers are coming under increased pressure from moving-floor semi-trailers, especially in the waste industry, says Andrew Smith, a director of Newton Trailers. “I would estimate that around 150 lightweight and 150 heavyweight moving-floor trailers are sold in the UK annually these days, compared with 600 to 700 tipper trailers,” he suggests. But while the latter still outsell the former, they have been largely supplanted in the waste sector by moving-floors, Smith contends. That’s despite the difference in price.

“You’ll pay approximately £34,000 for a tipper, as opposed to around £39,000 for a moving-floor,” he says. And although they have the ability to discharge loads quickly, with tipper trailers there is always the risk that they might topple over, if the ground is uneven. Clearly, there is no such risk with a moving-floor, says Smith, who sells Dutch-made Knapen moving-floor trailers.

There is also a major difference in cubic capacity, he adds. “With a tipper body, you can get up to 90 cubic yards, but you can have a 130 cubic yard moving-floor body. We’re getting a 145 cubic yard example constructed for a customer and we could increase that to 150, if the customer specified smaller wheels. With an ejector trailer, however, you’re limited to 115 cubic yards, because of the





space taken by the blade.”

So why the preference for moving-floor trailers in the waste industry?

“Whereas moving-floor trailers weigh from 7.0 to 9.5 tonnes unladen, the ejector trailers weigh more like 12 to 14 tonnes,” Smith points out. “As a consequence, you are talking about a very considerable payload difference.”

However, ejector trailers have a role to play, if mixed waste – that could include everything from newspaper to a concrete post or two – is being transported, or if it is being discharged on a muddy landfill. The shuffling action of moving-floor trailers as they unload can embed them in sticky surfaces.

“But waste is increasingly being pre-sorted into separate streams for recycling and transported over longer distances, which means payload is more of a concern,” insists Smith. It is also increasingly likely to be discharged while the trailer is on a concrete pad, which means there is no risk of these vehicles becoming mud-bound.

If you have to unload on an uneven surface, however, then you should specify a stronger heavyweight moving-floor – although, by doing so, you will reduce your payload capacity by 2–2.5 tonnes. “Moving-floor trailers can cope with pretty much all types of load and can transport palletised goods, too, if required,” observes Smith. Such versatility can be invaluable, if an operator is sourcing backloads, although transporting some of the messier types of waste may make the acceptance of some backloads problematic.

While tipper builders are working hard to fulfil orders as operators clamour to get Euro 5 chassis bodied in advance of the arrival of Euro 6 next January, 2014 could be much tougher. Next year will also see European Community Whole Vehicle Type Approval really start to bite, says Woods, adding that its impact is likely to be severe.

“I believe that the tipper body building sector will contract by 20% to 30%, with the pressures Type Approval imposes driving a lot of the smaller firms out of the market,” he states. “There is going to be carnage. It is a huge pity, because small firms tend to be the source of so much innovation... It’s certainly going to be a lot more difficult to find somebody willing to design and build something out of the ordinary.” **TE**



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