

Worth the weight

Tail lift manufacturers are putting their products on a stiff diet. Steve Banner finds out how lighter lifts are leading to operational cost savings and efficiency gains

In what is seen as a fairly revolutionary move, Penny Hydraulics may soon decide to make key components in its tail lifts out of plastic, in a bid to achieve further weight savings, according to sales director Richard Short. The company also produces a variety of products for the mining industry, including sophisticated pit props, which already make use of plastics, he explains. "You can achieve as much strength out of this material as you can out of certain metals, but they have the advantage of lightness," he observes. Furthermore, they do not corrode.

The business has already re-engineered its mostly cantilever-style lifts, substituting mild steel for either thinner-section (but strong), high-tensile

Regulatory framework

Tail lift makers and their customers are already subject to a variety of bodies of rules, not the least of them being EC Whole Vehicle Type Approval. "One of the things we've got to do is provide a certificate of conformity for the rear under-run bar, if it forms part of the tail lift," explains Maxon's Kevin Woods.

Tail lifts are also covered by both LOLER (Lifting Operations and Lifting Equipment Regulations 1998) and PUWER (Provision and Use of Work Equipment Regulations 1998). The former obliges employers to ensure, among other points, that tail lifts and their mountings are strong enough for the task in hand, and that the lift is periodically thoroughly examined by a competent person whose findings must be fully recorded.

PUWER's requirements include making sure that the tail lift is in good condition and properly maintained, and, if necessary, repaired by properly trained technicians.

It should not be forgotten that failure to comply with LOLER and PUWER is a criminal offence. Such a failure could also make it extremely difficult to mount a credible defence against a corporate manslaughter charge, should the worst happen.



steel or aluminium wherever possible. "As a consequence of some of the work we've done, we've cut the weight of the 125kg-capacity single-wheel lift we supply to ATS Euromaster, for example, from 99kg to 60kg," states Short.

That has to be good news for payload capacity and fuel consumption. And although greater use of high-tensile steel and aluminium makes tail lifts more expensive, Short advises that, in Penny's case, the company has absorbed that cost.

Either way, could reducing the weight of cantilever tail lifts yet make them more appealing, compared with traditional British column lifts, such as those manufactured by Ratcliff Palfinger and DEL – especially at around 3.5 tonnes? DEL marketing manager Paul Kelly thinks not. "Whereas a 500kg-capacity column lift for a 3.5-tonner typically weighs around 140kg, an equivalent cantilever can tip the scales at as much as 260kg," he explains. "Demand for our [cantilever] Tuckunder lifts has increased slightly year-on-year over the past four years, but column lifts still represent our main area of activity," he comments.

That said, he agrees that material choices are changing, in line with the fight to trim weight, and will continue to do so. He points to the steep decline in demand for heavy steel platforms, in favour of aluminium. "The former now account for less than 2% of our output, because they can be as much as 100kg heavier than the latter," he says. "Even the steel mesh platforms we produce are dropped into an alloy frame."

And Anteo sales director Ilmer Maietti adds that it's not just about weight reduction. "One of the problems with steel platforms is that they can start to go rusty and that's not what you want to see on a truck that's carrying food," he comments. "Bear



in mind, too, that there are alloys around now that are just as strong as steel, if not stronger."

Quite apart from light weighting, though, there has also been some design evolution, particularly with column lifts. Maxon, for one, has been busy promoting a new model, already available in the USA, that uses a synchronised cylinder in each column, rather than the conventional chains or ropes. "Such an approach can offer lower maintenance bills and a longer life, and we're now settling on the final specifications for the UK," states product manager Kevin Woods, who also believes that Maxon's slider lift will soon start to win friends on this side of the Atlantic.

"Installation does not require any cutting into the vehicle or its body, and in the case of a fridge body, this means there is no loss of thermal efficiency," he explains. "Admittedly, sliders take up a lot of room behind the rear wheels and are comparatively expensive, but we've come up with a shorter model that will suit one of the new longer semi-trailers with positive rear steer," he adds.

Rising demand

Meanwhile, demand for tail lifts in general has been rising steeply over the past six months, according to DEL's Kelly. "The first half [year] has been remarkably buoyant – the first quarter was the best we've had in the last 25 years – and we're heading towards our best year ever," he states. "I think it's a consequence of the number of old trucks that are now being replaced."

Matthew Terry, managing director of tipper body builder Tipmaster, also reports healthy demand, in his case for the company's Tommy Lift tail lift. "It seems that every tipper we deliver has got a tail lift fitted to it. I suspect part of the reason is that a lot

of local authority fleets, in particular, want vehicles to be capable of doing more than one job, in order to cut costs," he reasons.

The market remains highly competitive, however, with Dhollandia also battling for business alongside the aforementioned companies. **TE**

Security gates

No matter which brand or design of lift is selected, considerable emphasis is now being placed on user safety, with safety gates often designed in such a way that they are deployed automatically when the tail lift is operated. "Customers are now regularly asking us for features such as side guards and wireless remote controls, which allow the driver to operate the tail lift from a safe distance," says Penny Hydraulics' Richard Short.

Regulations state that side guards or safety gates must always be used on platforms that can be raised to a height of 2m above the ground. Accidentally falling from a height of, say, 1.8m because no guard was present, could also result in injury, however, and Anteo's Ilmer Maietti believes that European law should be strengthened to make more widespread use of safety devices compulsory.

There is even an argument that failing to provide them as standard could mean that a manufacturer is in breach of the European Machinery Directive, section 1.1.2, principles of safety integration, paragraph (e). The point here is that, if a viable safety system is available, it should always be built into the product, rather than made an extra-cost option.

"This is not our interpretation of the ruling and, in this context, it is worth referring to British Standard EN1756, which specifies the requirements for conformity with the directive," cautions Maxon's Kevin Woods. "Just because a roll stop is available, for instance, it cannot be the case that it has to be fitted under all circumstances. It may not be appropriate for the application." Roll stops are, however, required, if the platform is designed to lift or lower wheeled loads.