RISE & SHINE

Tail-lift technologies continue to develop, albeit subtly, but changing operations and a growing focus on safety are changing specification, inspection and maintenance considerations. Toby Clark reports

The pace of change in tail-lifts is not rapid – many look like the first 'hydraulic tailboard lifts' offered in the 1940s. However, there have been technology developments and certainly market consolidation. Ross & Bonnyman went into receivership in 2012, while Maxon, having acquired Ray Smith Group, withdrew from the UK in 2013. Fortunately, plenty of suppliers support both firms' products.

Arguably, the most dramatic change is in the way tail-lifts are inspected and treated – and users need to be aware of legal issues in specifying and operating them. Dave Conman, managing director of Humberside Tail Lifts, says 25 years ago, his business was 95% breakdown and repair, and 5% preventative maintenance. "Nobody got them serviced or weight tested... But now it's 25% repairs and 75% inspection and maintenance."

As with any equipment, tail-lifts must be type approved for the vehicle to comply with Whole Vehicle Type Approval (WVTA). As far as Construction & Use is concerned, the main concerns are the positions of lights and number plate, and rear underrun protection. Fitting a tail-lift can be complex: Zepro, among others, offers downloadable CAD files to allow bodybuilders to get it right first time, as well as Excel files for overhang calculations.

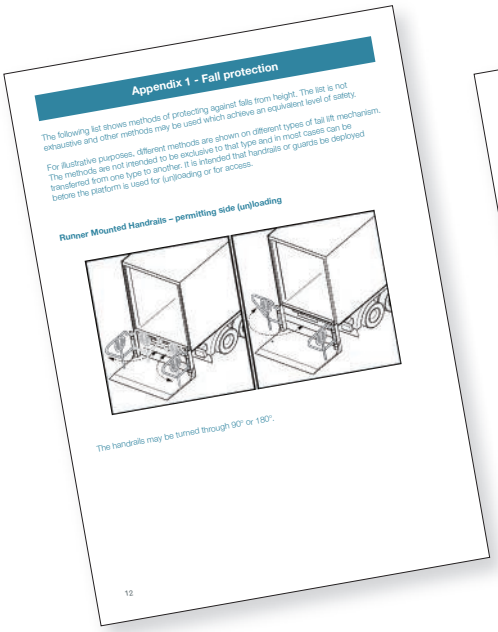
New lifts also need to be weight tested, with a certificate included in the customer's documentation. Safe working load (SWL) needs to be clearly marked, but that is not all. For example, on cantilever lifts, the load centre of gravity should typically be within 600mm of the platform heel, while lifts with a platform depth over 1,200mm must display a 'load centre' indicator.

Beyond those, LOLER (Lifting Operations and Lifting Equipment Regulations) applies, so tail-lifts are subject to statutory thorough examinations (STE) in accordance with set examination schemes. These must be carried out by an independent competent person, who issues a report of thorough examination (RTE). The HSE also points out that tail-lifts can suffer hard use between examinations, so you need a system for routine checks and defect rectification. The FTA (Freight Transport Association) recommends that it be part of the daily check. LOLER also requires an STE 'each time that exceptional circumstances liable to jeopardise the safety of the lifting equipment have occurred'.

"Customers get their tail-lifts LOLER tested every six months, followed by a service at 12 months," says Conman. "It's the same plus a weight test." The latter consists of a 25% static overload, followed by tests at full SWL, in which the lift is operated through its full working cycle. The rate of descent is measured, as is platform deflection.

"You are trying to make it fail under controlled conditions," explains Conman, who adds that LOLER test intervals are likely to be reduced to four months or less if the vehicle is in excessive use or prone to misuse. Examples include "heavy multi-drops, deliveries at the side of road, or if the tail-lift is approaching the end of its life".

That said, other reasons for failure include use of non-genuine parts. These


Appendix 1 - Fall protection

The following list shows methods of protecting against falls from height. The list is not exhaustive and other methods may be used which achieve an equivalent level of safety.

For illustrative purposes, different methods are shown on different types of tail lift mechanism. The methods are not intended to be exclusive to that type and in most cases can be transferred from one type to another. It is intended that handrails or guards be deployed before the platform is used for (un)loading or for access.

Runner Mounted Handrails – permitting side (un)loading

The handrails may be turned through 90° or 180°.

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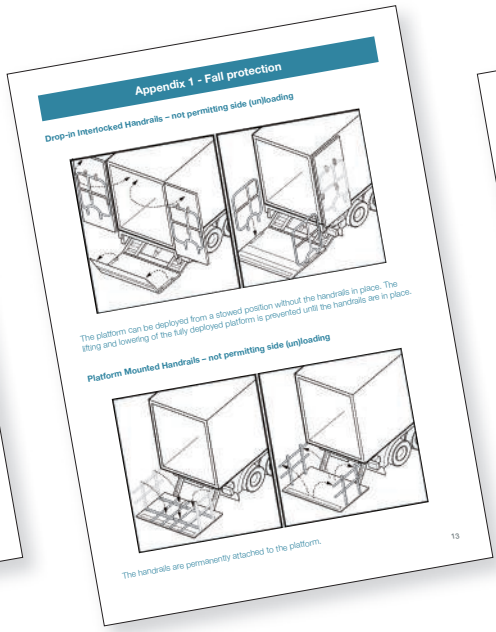
Appendix 1 - Fall protection

Drop-in Interlocked Handrails – not permitting side (un)loading

The platform can be deployed from a stowed position without the handrails in place. The lifting and lowering of the fully deployed platform is prevented until the handrails are in place.

Platform Mounted Handrails – not permitting side (un)loading

The handrails are permanently attached to the platform.

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IRTE guide

The SOE/IRTE guide 'Preventing Falls and Falling Loads from Tail Lifts' was published in 2009 and is still valid (see graphics below). So is the FTA's compliance guide 'Preventing Falls from Vehicles'. Installation is covered in the SOE's 'Tail Lift Specification Guide for Road Vehicles', while more general information can be found in the SOE publication 'A simple guide for Tail Lift Operators'. All documents can be downloaded from the respective websites

are more readily available than ever, and go way beyond routine items, such as bearings and seals, to include everything from motors to column-lift runners. As for causes of accidental damage, the most common is reversing into loading docks. Another is using the platform as a bridge for a forklift truck.

Incidentally, testing is the responsibility of the vehicle operator's employer, whether the vehicle is owned, leased or under contract hire. It is only the responsibility of a rental company if the vehicle is on short-term rental (meaning for less than a year). If you are renting a vehicle, you should ask for a copy of a valid RTE.

Anybody likely to use a lift must be trained, and a safe system of work established and circulated.

Falls are a major cause of death and injury in the transport industry, and around half of reported tail-lift accidents are attributed to people falling from, or slipping on, the lift, or being struck by a falling load. As the FTA puts it: "Drivers are required to work on a small platform while managing roll cages or pallet trucks, which creates a potentially difficult working environment with numerous trip and fall opportunities".

The HSE suggests that a safe system of work could include: providing a tail-lift suitable for the goods and allowing space for the operator; planning loads to minimise time spent on the tail-lift; designing loading/unloading patterns to allow operators to push goods from the vehicle, rather than pulling them on to the lift; maintenance of handling equipment such as roll cages; and securing goods so they do not topple towards the operator during unloading.

WHICH TYPE?

When specifying tail-lifts, you need to first decide which type suits your application. Column lifts run in an H-frame mounted to the body, with a manually opened platform. Operation time is quick, so these are ideal for multi-drop vehicles. "Column lifts tend to be a bit more prone to damage but drivers love them," comments Conman. Meanwhile, chassis-mounted cantilever lifts can have a larger platform, which may also act as the body's rear closure. Then tuckaway lifts are also chassis-mounted, and are particularly useful for loading dock operations. Retractable lifts are similar but require larger chassis overhangs.

Moving on, boom-type lifts and pillar lifts have been offered for panel vans for some time, but they take up space inside the load compartment and usually run with small platforms. Now there are also cantilever tail-lifts for panel vans, including Zepro's ZHZ 600 and the Bär VanLift FreeAccess, each with 600kg capacity. In both models, the platform folds in half along its length, giving enough clearance to open the right-hand rear door normally when the lift is in the upright stowed position. Cantilever lifts like these still allow a towing ball to be fitted. However, Bär warns that this should be fitted along with the tail-lift: retrofitting is "complex and expensive".

Some panel vans are also being fitted with side-mounted lifts to help unloading from the side door. Perhaps surprisingly, these do not include stabilising jack legs, but generally have SWLs of only 300kg. Similarly, more 1-tonne pick-up trucks feature tail-lifts these days – usually column-type lifts such as the Del DL400.

Palfinger MBB now offers an all-electric cantilever tail-lift, the 1,000kg capacity C 1000 E, which uses an electromechanical drive with no hydraulics. The claim is more maintenance-free components and longer service intervals – and that it functions well down to -25°C.

As night-time loading becomes more popular, low-noise tail-lifts are also appearing: Dhollandia's Silent variant of its DH-SKS slider lift cuts noise levels to 60dB(A), by using a quiet power-pack in a casing with damped panels and a sound-damping anti-slip platform coating. But arguably its most significant development is that some manual operations (such as deploying the front and side loading ramps) have been automated. TE