

Buckle down!

Operators are now on the horns of a dilemma. Most loads must be secured, but health and safety regulations dictate that climbing on the vehicle or load to secure or release is dangerous and should only be done - if at all - with fall-arrest systems in place, writes Richard Simpson

The load securing safety situation is resolved in all kinds of ways. Some operators simply refuse to let drivers strap up on their premises, and make them drive out of the gate with the load unsecured, then throw the straps over in the public road. As it's not on their premises, incidents are not their problem!

For many years, the industry's standard approach to curtainsider load security was the roof-suspended black strap. It was quick and easy to use from the ground because it ran on the kind of extruded rail more suitable for supporting a greenhouse door than securing a load weighing several tonnes. Such systems are now widely accepted as being useless at securing any item weighing over 400kg, but are still sometimes specified on new equipment.

Richard Owens, technical support specialist at manufacturer Don-Bur Bodies and Trailers, explains that demand for black straps can often be a legacy from previous equipment, given the long service life of trailers. "Some people will try to order replacement equipment on a like-for-like basis, not realising that guidelines and technology have moved on from 10 or more years ago.

"There's no law that states per se that black straps can't be used on items of over 400kg; the law just states that the load must be secure and not cause a danger. However, operators should follow best practice guidelines. These include the capacity to withstand 1g of

force to the front and 0.5g to the sides.

"In reality, even a medium-weight load could collapse a strap-retaining roof rail. Shed a load in those circumstances, and it will be plain that the system was not up to the job.

"The current DfT guidance states that items of over 400kg must either be restrained by suitable straps running rave-to-rave or be a positive fit within an EN12642XL trailer. DVSA will issue a PG9 if they judge a pallet secured by black straps to weigh more than 400kg." (The latest version of DVSA's Categorisation of Road Defects, from April, includes load security revisions: see www.is.gd/odujon.)

Owens states that most of Don-Bur's curtainsider production now conforms to the EN12642XL standard, but warns that there are some trailers in circulation that either have EN12642XL curtains on an untested body structure, or just bear spurious XL stickers.

Don-Bur's rave-to-rave strapping system has the straps suspended in the roof via bungees when not in use, but the roof plays no part in securing the load, which can extend to five tonnes.

Customers need to carefully consider the type of load they will carry: "Various nets and straps can be specified for delicate or flexible cargoes," Owens states. "'Problem' cargoes can include open 'dumpy' bags, and stacked bags



or sacks, plus anything that might be damaged by having a strap tensioned down on it. In some cases, boxes for instance, extended 90° corner sections can be positioned under the strap to spread the load and avoid crush damage."

Lightweight insulation sheets can be problematic. The temptation is to load



“There’s no law that states per se that black straps can’t be used on items of over 400kg; the law just states that the load must be secure and not cause a danger”

Richard Owens



these items to the roof, and strapping them will cause damage, while they present a minimal safety hazard in themselves. Owens recommends an XL trailer for these.

Rave-to-rave straps can be used on the lifting decks of double-deck trailers, Owens points out. They can be tensioned before the deck is raised, and released after it is lowered – although a limit of 400kg per pallet still applies. He cautions that side nets are a wise fitment on such trailers to contain items that may have shaken out en route when the curtains are drawn back for unloading.

Straps themselves are covered by standard EN12195. Part One of this covers calculation of number of straps used, and Part Two the straps themselves.

“It can take some time to work out whether a load is secure according to

EN12195-1,” Owens admits. “Variables including the coefficient of friction of the floor and the angle of the strap have to be included. The properties of the floor can vary from day to day, and even along the length of the trailer. What if an anti-slip coating on the floor is worn, or part of the floor is wet?

“Where rave-to-rave straps are used, the general rule of thumb is one tonne of lashing capacity for every tonne of load. There are ways of testing whether a load will slip or fall...we use a tilt-table and a strain gauge on the load, but this isn’t practical in day-to-day use.”

KITES

Brewers’ kegs present an obvious challenge, and Don-Bur offers fabric ‘kites’ mounted horizontally in the roof (pictured, left) which can be drawn down and secured over the kegs by at least two straps to the rave, then two more straps pass over the load and under the rave. This method is similar in principle to the ropes and sheets that were regularly used to secure many loads up until the 1980s. “A significant difference is that the straps are rated to a given load, while ropes weren’t,” Owens points out.

Similar systems (pictured lower left) can also be used to secure part-loads longitudinally. Typically, these will be loaded to the headboard, and need to be secured against sliding backwards on acceleration. They are needed to achieve compliance where unsecured loads are carried in an XL trailer but are not a positive fit against the rear doors.

Owens cautions operators specifying new trailers to ensure they get their information on suitable load restraint from a reliable source.

“Don’t just rely on Google, or a self-appointed expert who has set themselves up as a consultant. Professional bodies and reputable OEMs who work closely with the HSE and DVSA are your best sources.” **TE**



SUPPLY OPTIONS

Although best known for axles, BPW offers a couple of load security systems for the aftermarket. The CargoMaster uses kites suspended from the trailer roof by bungees and secured by rave-to-rave strapping offering both side-to-side and end-to-end security, while the iGURT (pictured) is a ‘smart’ restraint system which measures the preload tension on the lashing strap. Bluetooth connections allow the driver to monitor the tension while the system is in use. Elsewhere, Schmitz Cargobull offers different systems to suit its bodywork range. These include adjustable straps for the Freepost curtainsider with continuous fastening points in the outer frame and the option of 16 pairs of four-tonne lashing rings. The Power Curtain (pictured below) and rigid wall Dry Freight trailers can be specified with vertical and horizontal sheets to secure a wide variety of cargoes.

