THE LOWDOWN ON TIEDOWN

The humble ratchet tie-down strap can be vitally important when it comes to ensuring that cargo does not part company with the truck that is transporting it, and finish up on the highway, reports Steve Banner

Wayward loads may land on pedestrians and cyclists, and cause serious accidents if a vehicle collides with them. Yet there is no legislation in force that specifically obliges hauliers to have tie-down straps regularly inspected so that they know they are fit to be used, says David Young, chairman of the Bureau of Engineering Surveyors, a sister organisation to IRTE. Nor are they specifically compelled to have load-securing chains and shoring poles examined periodically, he adds.

That is not to say that such tackle inhabits a legislative vacuum, he warns. "PUWER - the Provision and Use of Work Equipment Regulations 1998 - applies here," he says. It places a general duty on employers to ensure the work equipment they own, operate and have control over is safe to use at all times.

Operators and drivers should also ensure that they observe the Department for Transport's Safety of Loads on Vehicles Code of Practice (*www.is.gd/bedaxo*). It advises that anything that is used to keep a load in place should be regularly checked for wear or damage (see box).

Failure to comply with the code is unlikely to endear the individuals concerned to the DVSA or the Traffic Commissioner, especially if there is an incident. Bear in mind that under Section 40A of the Road Traffic Act 1988, it is an offence to use a vehicle on the public highway if it involves a danger of injury to any person.

The penalty is likely to involve a hefty fine and points on the driver's licence, and could have implications for the company's O licence, especially if this is not the first time Section 40A has been breached. The situation could be especially awkward for a business that has achieved Earned Recognition status and is anxious to hang on to it.

Fortunately for them, all ratchet tie-down straps should have a label stitched into them that shows they have been made in accordance with standard EN 12195-2. So says Sean Spelman, group director, strategy, product and technology at Cargo Control Company, best known in the UK for its LoadLok brand.

READ THE LABEL

The strap should not be used if the label is missing or illegible; it should bear the manufacturer's name and address and the month and year the strap was made, along with a code which allows it to be traced back to the production batch if it proves faulty.

The label should also show the LC – lashing capacity – which is expressed in daN; dekaNewtons. A daN is equivalent to 1.02kgf (kilogramme-force). The LC figure is sometimes misunderstood. An LC of 2,500 daN for instance does not mean that the strap is restricted to restraining 2,500kg of cargo. The strap can in fact handle double that load.

Also worth noting are the strap's STF (standard tension force) and SHF

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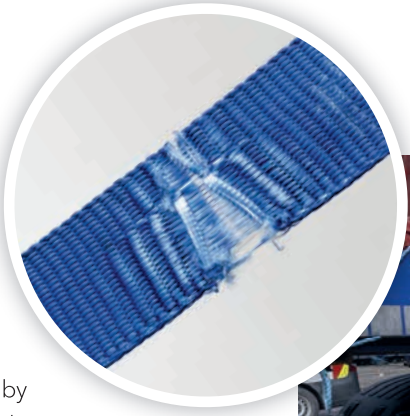


(standard hand force), both of which are shown in daN. The former refers to the tension created by the ratchet and strap when tying down cargo: the higher the figure, the fewer the number of straps needed. The latter denotes the amount of force that can be applied to a ratchet before it suffers damage or breaks, and is typically set at 50daN. (The ratchet should always be tightened by hand; never by standing on it or forcing it with a crowbar.)

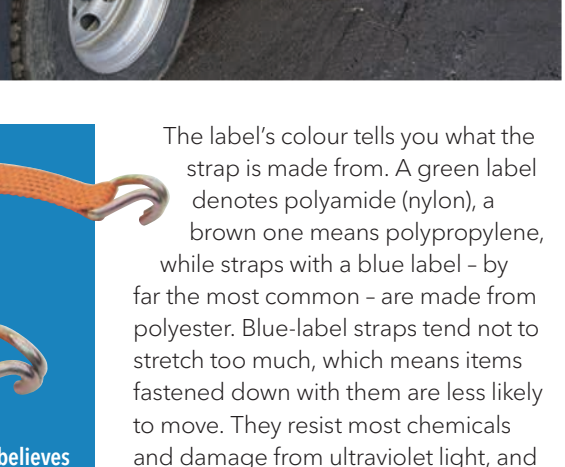
The label should also state the strap's total length and its permitted elongation – the maximum it should stretch when fully tightened. This is usually set at 7% of its length, in line with EN 12195-2. Some strap makers err on the side of caution, however, and cite a maximum of 4%. Straps may be anywhere from 4m to 15m long.

The label should also bear the words, 'Not for lifting'. Restraint straps are not designed to be used as improvised slings.

Similarly, "a strap should never be knotted, frayed or have any cuts in it," advises Simark Engineering sales engineer Phil Maltby – such as that pictured above. He adds: "If there is any risk of a strap becoming abraded in use, then you should use protective corners or sleeves when the cargo is being secured."

Maltby continues: "You should also keep an eye on the integrity of the metal fittings. If the ratchet is damaged and the hooks bent out of shape, then the strap has got to go."

Ratchets and hooks are usually made from zinc-plated mild steel, says Spelman. "We offer 40 or 50 different types of hook, but it's the double-J one that's the most popular," he adds.



INSPECTION

Phil Maltby of Simark Engineering believes that straps should be examined regularly by the operator. The frequency is likely to depend on the type of business the firm concerned is engaged in – some types of traffic are rougher on straps than other – but one option could be to include straps in the driver's daily walk-around check.

If a strap is, say, 50mm wide and has nicks in it that are more than 2mm to 3mm long, then it should be taken out of service. Those that are unfit for use can be reported – possibly photographed if the check is being carried out using a smartphone – and replaced prior to the truck's departure.

Any chains and shoring poles should be examined at the same time. "If a pole is bent it should no longer be used, and a pole should certainly not be employed as a lever to, say, lift up a pallet," Maltby comments. For government guidance, see *www.is.gd/lowuza.*

The label's colour tells you what the strap is made from. A green label denotes polyamide (nylon), a brown one means polypropylene, while straps with a blue label – by far the most common – are made from polyester. Blue-label straps tend not to stretch too much, which means items fastened down with them are less likely to move. They resist most chemicals and damage from ultraviolet light, and withstand water absorption, which makes them less prone to rotting or shrinking in time.

How long a strap lasts depends on the work it is on, and how it is treated. If the work is not too arduous, and the strap is looked after, then it could stay in service for five years or more. "We say six to 12 months, however," says Spelman; and that is no reflection on LoadLok's product quality or its customer base. He cites that short lifespan because of the number of straps that are stolen. "Theft is the number-one reason for replacement," he remarks.

That is not to suggest that straps are valuable. Says Maltby: "Typically, they cost £12.50 each and some may be cheaper in volume," he observes. "These days they tend to be treated rather like consumables." TE

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