

# Safe System sorted

The Direct Vision Standard requires trucks to have all manner of safety systems fitted - from sensor systems to side underrun barriers. Dan Parton examines how fleets can ensure that they are working properly

**N**obody can accuse London mayor Sadiq Khan of lacking ambition. The health and safety of pedestrians and road users in the capital has been a priority for him since he was elected to office in May 2016, and part of this is his 'Vision Zero' for road danger in London.

The mayor's aim is for all deaths and serious injuries to be eliminated from London's streets by 2041. It's an ambitious target, but one he is pursuing with gusto, and part of that is the safety permit that is mandatory for all HGVs over 12 tonnes entering or operating in Greater London from 26 October 2020 - the same dates as even stronger low emission zone standards are brought into operation. Both schemes will be enforced at all times.

The safety permit scheme is part of the direct vision standard, which measures a driver's view through the windows of the cab. This is calculated as a star rating from zero (poor) to five (excellent), which indicates the level of risk to vulnerable road users near to the vehicle. Vehicles that do not meet the



minimum one-star direct vision rating will need to have front and side blind spots completely eliminated or minimised as far as possible, through the use of a camera monitoring system, Class V and VI mirrors, a sensor system with driver alerts and an audible alert system, according to the TfL Guide ([www.is.gd/udokew](http://www.is.gd/udokew)).

While operators may grumble about having to install these, they are all readily available as aftermarket solutions from a variety of providers. However, once installed, it is up to operators to make regular checks and take reasonable measures to ensure all indirect vision systems and driver alerts remain fully operational. Given that they are all external, they will need to be checked for wear and damage.

For instance, side underrun protection or lateral side protection (LSP) is now compulsory. While these

systems are quite robust and should last for the life of the vehicle or trailer, where damage does happen, it's usually due to driver or loading machine operator error, according to James Dawes, managing director of LSP supplier Dawes Highway.

Repairing damaged LSPs can be relatively straightforward, Dawes adds. "When required, flat panel covers are also easy to change or replace without removing the whole LSP from the chassis. Side rails are put together as a kit using coach bolts. The curved plate on their leading edge, known as the 'return', is often affixed using rivets," he says. "The whole frame is mounted to a set of legs that is bolted or welded on to the chassis. Most competent mechanics are able to replace part of or even a whole system in under an hour."

In terms of maintenance, vibration is the biggest day-to-day factor affecting LSPs. "Nyloc nuts and spring washers can help reduce the effects of vibration; however, coach bolts and rivets should

be checked periodically to ensure they have not become loose or are likely to fail. Another notable area is the point at which the mounting legs are affixed to the chassis or underside of the side-rave, as this is where the highest stresses are exerted."

### SOUNDING OFF

Audible turn indicators are now becoming more common on trucks - not just in London but around the country, according to Emily Hardy, marketing manager of supplier Brigade Electronics. On a truck, the indicator systems are generally durable and require little day-to-day maintenance, other than being kept clean, Hardy says. While systems can generally tolerate water, "if they are caked in cement they aren't going to work as well. Walk-around checks are important for ensuring everything is clean." However, Hardy did warn to avoid high pressure washers on the audible warning systems when cleaning a truck.

Brigade is also one of many suppliers of external camera systems. While these cameras are quite durable, they can be damaged by environmental hazards such as tree branches. And the lenses and monitor need to be kept clean at all



times to ensure a quality picture, so daily checks should focus on that.

### ON REFLECTION

Wing mirrors - Class V and VI are compulsory with Direct Vision - have always been one of the most easily damaged parts of a truck. While mirrors and casements become ever stronger, they still can't survive striking another object at speed. An impact repair will often involve replacing the glass or casing, which any technician can do, and parts are readily available from OEMs or specialist online retailers such as Wingmirrorman. A spokesperson for that site noted that as truck wing mirrors include electronic componentry, the mechanic will need to reset the ECU after repair. Otherwise, with a Class VI

(Cyclops) mirror, maintenance involves ensuring that it is clean and remains adjusted so it covers the blind spot.

### TECH DECK

Maintaining technology is also something that is of crucial importance for dash cameras and the like, explains Chris Pflanz, product director of vehicle CCTV and safety systems provider SmartWitness. "Fleet owners who have installed camera systems expect their investment to be reliable and capture recordings during safety-critical road events." One particular protection employed by SmartWitness devices is for high temperatures. The unit incorporates a thermo-sensor to detect high system temperatures and the devices will turn off the cellular modem (a high heat-generating component) to reduce the system temperature and ensure video recording continues.

He adds: "Even with all the precautions taken, devices can still fail, and it's usually the SD card. SD cards are resistant to heat, cold and vibrations, but also removable and affordable. However, the nature of SD NAND flash memory requires it to be 'initialised' every so often, especially when it's being used in a recorder which has a lot of overwrite cycles."

SmartWitness devices recognise such SD card faults and will automatically alert customers. Then all they need to do is click a button to 'initialise' the card and ensure it goes back to a healthy recording state. [TE](#)

