

# Safety and security

The operator's guide to running a safe and compliant fleet



Dawsongroup truck and trailer MD John Fletcher: safety comes as standard



Mercedes-Benz is looking at the long-term future of truck safety



Earned recognition – the DVSA puts pressure on rogue operators

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# Don't turn a blind eye to safety

**So why** is the UK's leading contract hire and rental firm Dawsongroup truck and trailer supporting this special supplement on safety and security? After all, aren't hired vehicles all the same – workhorses specced to the legal minimum standard, designed to make the most profit from the least capital outlay?



Well, in Dawsongroup's case, they certainly aren't. It has taken the lead in investing in the safest vehicles and systems available, not as premium products but as standard fleet vehicles that do not cost the operator a penny more.

Safety is a three-legged stool and so this supplement covers safe vehicle specification, repair and maintenance, and operation – including safe driving policies. It may be a cliché, but even with all the modern safe driving aids, the most dangerous part of a vehicle remains a loose nut behind the wheel.

A key part of this supplement is an in-depth interview with the DVSA on earned recognition. This forms one of the central planks of future regulation of the HGV sector by letting compliant operators go about their business without unnecessary checks, freeing up scarce resources to crack down on the rogue operators that represent the most serious risk to road safety.

Operators wanting to take part in the earned recognition pilot will need sophisticated electronic systems to report on the maintenance of their fleet, and this is another benefit of hiring vehicles from Dawsongroup. It is making the substantial investment required in these systems on behalf of its customers, making it far simpler for them to benefit from earned recognition.

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# Earn your stripes

**E**arned recognition is a flagship DVSA scheme designed to drastically reduce the time wasted checking on compliant operators, in order to free up limited enforcement resources to improve road safety by focusing on the seriously and serially non-compliant.

The aim is for the best operators to self-certify their compliance and notify the DVSA of any non-compliances outside set key performance indicators (KPIs), which DVSA managers will then work with operators to correct. To qualify for earned recognition they must demonstrate by means of an audit that they have robust, validated electronic transport management systems in place.

DVSA enforcement policy manager Dave Wood is the man in charge of earned recognition, which was launched as a pilot scheme involving 26 operators – 18 in the freight sector – with 100 operator licences and 6,000 vehicles in January. The pilot scheme is still open for more operators to join.

The DVSA categorises operators into exemplar; compliant; mostly satisfactory; non-compliant; and serially non-compliant. Naturally, earned recognition is aimed squarely at the exemplar and compliant operators, where enforcement can be done remotely, with the middle ground covered by inspections and visits, while the non-compliant will be targeted with increasingly disruptive enforcement activity designed

to push them into compliance or out of the industry.

“Our vision is to deal with these various sectors of the industry in a different way,” says Wood. “We have set up an office looking at remote enforcement products, and that is where earned recognition is going to sit.

“If we’ve got indications that an operator might be moving from compliant into non-compliant, we can perhaps make an intervention – not necessarily a visit – but it could be remote enforcement activity such as writing to them asking for more information. A lot of the time that’s enough to put them on the right path.”

This approach of educating operators and helping them do the right thing rather than simply punishing minor non-compliance is an important cultural shift at the DVSA, and is why so much time and effort has been put into earned recognition.

It has been partly forced on the agency by a lack of resources needed to actively regulate all 73,000 UK O-licence holders. Remote enforcement frees up these scarce resources to target the real rogue operators that put the public at serious risk of death and injury through badly maintained vehicles and excessively tired drivers.

“That’s a lot more efficient than having somebody turn up at the operator and disrupt the business for a few days,” says Wood.

“Obviously, the opposite to that is being completely disruptive, highly targeted on the

really bad guys who we want to either get out of the industry or get to a point where they can’t possibly operate like that, and force them to be compliant.”

While the entire O-licence process is largely based on the trust placed in operators to abide by the terms of their licence, earned recognition takes this trust to a higher level. Operators in the scheme will not be entirely outside the regulatory regime, but the DVSA is promising significantly reduced enforcement and so it is important that the process of getting and maintaining earned recognition status is robust and transparent.

“We will do an application review and there are certain criteria that we are looking for,” says Wood. “There must have been no regulatory action from the traffic commissioner above a warning for the past two years.

“It isn’t a precondition that their OCRS [Operator Compliance Risk Score] is all green, but compliance history is looked at and if an operator is in the red, then we’d look to see why they were red. OCRS is a risk-rating system, and we use it that way as part of the application review. Have there been any bad encounters? Have they had a prohibition? Have they had offences? If they have, we will look into that a bit more.”

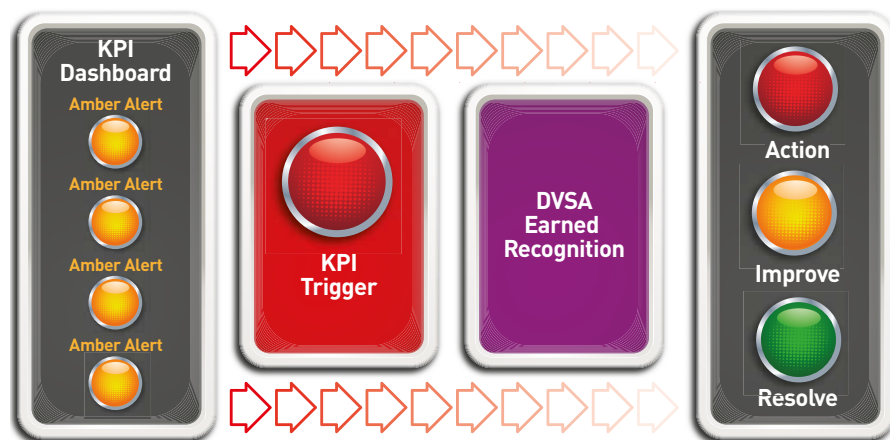
## Grey matters

OCRS was amended in 2017 to reduce the number of operators in the grey, unrated band.

“Grey is where there have been no encounters at all,” explains Wood. “Last year we incorporated the two scores for Traffic and Roadworthiness together to drastically reduce the number of greys.

“The operator gets a combined score and that’s what we use for targeting. They can still see both types on their reports so they can understand what they are getting from each type of encounter.”

Most operators would regard a green OCRS as a good indicator that they are a legally compliant operator, so why should they go to the extra effort of voluntarily going for earned





recognition, which will be colour-coded blue to set it apart from OCRS green?

“It has been one of the challenges because operators think if they are green, everything is fantastic,” admits Wood. “But OCRS is a fairly basic score, as it is only looking at the DVSA’s historical encounters with the operator. We are looking at changing how we deal with OCRS green in the future.”

Once the operator passes the initial application review, they will be invited to seek an audit from one of the DVSA’s approved third-party auditors, a list of which can be found on the DVSA website. At the time of writing in January 2018, there were 12 approved auditors including the FTA, RHA and CILT. While entry into earned recognition is free, the auditors can set their own fees, so shop around.

The audit will be against a standard written by the DVSA in association with industry bodies and the traffic commissioners (TCs).

“We got the industry together and wrote a set of standards that we said ‘this is what we think good looks like’,” says Wood. “Then there’s a code of practice for an auditor to

make sure we’re getting a consistent quality of audit. We’ll sample the audits as they’re coming in and do an annual check with the auditor as well. Anyone can apply and the price will be commercially driven.”

Once within the scheme, operators must pay for re-audits every two years except where they have been given a concession for maintenance systems that do not fully comply with the KPI reporting requirements; then the maintenance module must be audited every year.

Operators with a clean bill of health may be allowed to extend or self-assess audits in future.

“If monitoring is 100% clear for two years, they may be able to extend that audit period or maybe even have a self-audit, but that isn’t signed off at the moment,” says Wood. “It’s an evolving product.”

The consequences of failing an audit or reporting too many monthly non-compliances are clear.

“If an operator comes out of earned recognition, they just drop into the normal enforcement regime,” says Wood. “There is

an exit. That’s got to be there to maintain the integrity of the scheme.

“If an operator decided to fraudulently produce the data, it wouldn’t be just ‘exit the scheme’. It would be ‘exit the scheme, and we’d prosecute you’. We hope that wouldn’t happen.”

### Feeling blue

So after all the hype and rumour, what does an operator actually have to do to move up from merely green to the heights of blue?

“There have been a lot of misconceptions around this,” says Wood. “Initially people were saying we wanted to have access to the operator’s data and log onto their systems. When we looked at the feasibility of that, it was just completely impractical. It wouldn’t work.

“The key things they need to have are electronic systems able to report key performance indicators for both the driver and vehicle activities.”

“Driver activities come into the operator’s system where they are analysed and the KPIs monitored. Vehicles are the same but this

is the tricky bit. One reason the launch has been delayed was getting all the different maintenance systems to talk to one other, report on one dashboard and give the operator one view of the whole fleet.

“We are making good progress on this now but if you’ve got a big fleet, then it becomes a challenge. This is why we’ve made some concessions.”

The problem with electronic systems is the old adage, ‘garbage in, garbage out’. How can the DVSA be sure that those clean monthly compliance reports are an accurate reflection of day to day reality?

“This is one of the things we audit,” says Wood. “An operator, if they were so-minded, could corrupt the data on their system. As part of the validation process we will take raw data from the operator’s application. We’ll run it through our own analysis, and we’ll check against what is coming off their system.”

“We validate the system to make sure we’re happy it’s reporting the KPIs correctly. What it doesn’t do is stop the driver deciding to put a magnet on the tachograph. That’s where the audit of the operator systems comes in to establish if there are problems with the drivers. Nothing is infallible, but it’s as much as we can do.”

The driver and maintenance systems must

be set up to report to the DVSA every four weeks in arrears. “They’ve got chance for their systems to catch up if there are records that it needs to bring up, particularly maintenance,” says Wood.

“They then measure the KPIs and if there are no problems, we just get two monthly blank emails from the driver and maintenance systems, basically a nil return, just to make sure they are still connected.

“If we don’t get an email, then we go back to the operator to check if something is gone wrong with the system. Or we could get a trigger email, flagging up that the operator has dropped below a certain threshold of one of the KPIs. We don’t get the data. All we get is an email that says this KPI has been triggered.”

### Extensive consultations

The operator should be aware that they have missed a KPI as they have the data four weeks before the DVSA, so it should be no surprise that the DVSA will be in touch to find out what has gone wrong.

“They’ll say, ‘we’ve triggered and we know what it is. We’ve put X, Y, and Z in place’. We’ll just check that and make sure that we’re happy with what they’re doing. That’s how it works. To reiterate, we don’t have access to

the data. All the data is held in their systems. We have no access to it.”

The KPIs for drivers and maintenance have been hammered out in extensive consultation with the industry and trade bodies, and set a high benchmark, as you would expect for exemplar operators (see tables).

The bands are aligned to the fixed penalty system, so the higher the band, the more serious the offence, which is why the permitted percentage failure rate is reduced for the higher bands. This raises the tough issue of when will a KPI failure be deemed serious enough to merit a report to the TC rather than just a chat with the operator?

“It was quite a difficult process, setting the KPIs,” says Wood. “Why don’t we just

report everything to the traffic commissioner? That’s what we used to do in the days when we would go in, investigate an operator, find all the offences and put a report together for the traffic commissioner.

“This is now accepting there will be a level of infringements going on, and the operator needs to manage that. With the best will in the world, you will never have 100% compliance all the time. What this has done is given an allowance to the operator to say, ‘yes, we recognise that things will happen, but you’ve got to be able to manage that.’”

The KPIs have been set as a good operator industry average after analysing offending rates in various sectors of the transport industry, and in future Wood would like to see the allowed failure rates come down.

“As we prove the concept, if everybody is managing at 4% overall offence rate then let’s challenge that, because we don’t want people to offend,” he says, “but we understand that at the minute it’s not realistic to say there’s 100% compliance.

“Operators do not lose earned recognition just because of the KPI trigger. They get a tolerance of 2%, so if a vehicle misses a safety inspection that would trigger a KPI, and we will then have that conversation with the operator.

“We’re not asking for any more than the traffic commissioner is expecting. If we set that KPI at 80%, it makes it easy for them to comply, but I’m sure the traffic commissioners wouldn’t be very happy if we did that.”

### Amber alerts

The 95% first time MoT pass rate is also a stretch, as this is the initial pass rate, not the final rate after rectification of minor defects. Wood says that 62% of operators are already meeting that KPI, based on DVSA analysis.

The electronic systems used to report on earned recognition must also give the operator an amber alert that a KPI is starting to drift before the four-weekly email to the DVSA.

“This helps them manage the business,” says Wood. “They will get an amber alert if one of the KPIs has started to come out of the tolerance. They can get this as quickly as they like. This can be weekly for them so they have a very early view of what’s going on. This is one of the benefits that the operators have now fed back to us – that this is really helping them get a good view of their whole fleet,

## Driver offence rate KPIs (based on number of tachograph days)

Band	Percentage (%)
1	1.30
2	1.20
3	0.80
4	0.70
Overall	4
Working time	4

## Maintenance KPIs

Band	Percentage (%)
Complete set of safety records	100
Safety inspection records completed correctly and signed off	100
Safety inspections are completed within the stated frequency	100
Driver defect reports where road safety-related items have been reported are appropriately actioned	100
Vehicle and trailer initial pass rate	95

and to be able to target where they've got a problem very quickly.”

The amber alert will flag where a KPI is between 1% and 1.9% out of tolerance. When it hits 2% this produces a trigger that is emailed to the DVSA.

“We will then have a conversation with the operator,” says Wood. “One of the key things around this is building a different relationship with an operator where there's this element of trust. This is quite a challenge for us because of our status as the enforcement agency. A lot of operators have said ‘as soon as we've triggered an infringement, we'll be straight to the traffic commissioner’. That's not the case.

“Essentially these are really good operators, running at a very strict tolerance on these KPIs. So let's have a look, see what's the problem and then resolve it. But of course, if they keep triggering every month and we're spending quite a bit of time on them, then earned recognition isn't working and they come out into normal enforcement.”

The premise of earned recognition is that it frees the DVSA from checking up on largely compliant operators to focus on the serially non-compliant. So if it turns out too much resource is being allocated to helping earned recognition operators correct minor problems it will have failed.

“One of the things we've been doing in the pilot is seeing how many triggers we get,” says Wood. “That was a concern for us, obviously because if every operator is triggering every month, then it's wasting time. If those KPIs aren't working for us, then we'd have to look at them. But, as it's working so far, we're not getting that many triggers.”

### Workable system

In the pilot phase before the launch in January, two measures were dropped to make the system workable.

“One was missing mileage, and the other was repeat offenders,” says Wood. “We tried to capture where a driver was continually offending month after month. Although that is still reported for the operator, because it is information the operator needs to deal with, it was triggering false alerts.”

Equally, enough operators must be included in earned recognition to justify the effort and expense in setting up the system. At the launch of the pilot in January, 26 operators with 6,000 vehicles were included.



“Our staff know who they are and are treating them differently as far as roadside inspections and so on,” says Wood. “They could still get stopped and checked.

“If we see something dangerous such as the driver on a mobile phone then we'll stop it – it doesn't matter if they're in earned recognition.

“It's all looking positive to go live in the spring. If we get 10% of the UK fleet included, then that starts making quite a big difference for us, as far as releasing resources, and that is what we have predicted for the first year. That would start making quite a significant contribution to diverting resources into targeting the bad guys.”

Earned recognition could not work without the support of the TCs, as they have to accept that the DVSA is making a judgement call on which offences to report for operators within the scheme.

“The traffic commissioners have been fully engaged with how we build the product,” says Wood. “We still have our legal obligations if we find offences. What we want to do is make sure that these are the exemplar operators that really do care about compliance.

“It is going to be aspirational for a lot of operators. As it rolls out, and people see that it's working, the confidence will come in the industry to want to be in it.”



# Best foot forward

**S**afety is part of the DNA of Wincanton, Britain's largest logistics operator, with more than 200 locations, 4,000 vehicles and 18,000 staff, and a long-standing customer of Dawsongroup.

Named Haulier of the Year at the 2017

Motor Transport Awards, Chris Fenton, MD, Industrial and Transport, said last year: "We have made a significant improvement in terms of our safety performance. From a health and safety perspective, Wincanton is a market leader."

This is no empty boast, as Wincanton's

impressive safety statistics show.

"Over the past five years we have reduced lost time injuries by more than 40%," says Dean Clamp, Wincanton HSEQ director, pictured. "Our aspiration, though, is to be pioneering, and be not just good but great."

## Health and safety

While every person is ultimately responsible for their own safety, the culture has to start at the top, and Wincanton's management take health and safety seriously.

"We have great buy-in and engagement by the board and senior executives, and safety is always the first item on the agenda," says Clamp. "I have a quarterly review with our CEO [Adrian Colman], where we talk about strategy, innovation, and how far we are down the road to being pioneering. He is as proud of our safety stats as he is of any other numbers in our business."

Anonymous employee surveys also reveal the majority of staff believe that health and safety is a priority for the company.

The cornerstone of an effective safety system is doing the basics well, Clamp





believes. “You would expect us to have good risk assessments and safe systems of work in place, which we do,” he says.

“We have a near-miss reporting system and regular forums to engage with and listen to the concerns of our colleagues. We learn from any issues we have and communicate that learning back.”

Clamp is a great believer in simple messages that every member of staff can understand and use, rather than asking people to read through and memorise reams of paperwork. These include two easy-to-remember campaigns: STAR (stop, think, assess, react); and GOAL (get out and look).

“Everyone in the business will have been inducted and signed off safe systems of work, but when people are in a position of risk they may not remember all that,” says Clamp. “STAR is about giving people the opportunity to recall what they were told or make a risk-based decision.

“GOAL came from our site in Huntingdon. One of our key metrics is collisions per million kilometres, and most accidents happen not in the last mile but in the last 10 feet, reversing or manoeuvring,” says Clamp. “GOAL has helped us substantially reduce our collisions per million kilometres in the last 12 months. We do fit reversing cameras and sensors but you can never completely rely on them.”

As well as employee safety, Wincanton has a clear focus on reducing risks for vulnerable road users such as pedestrians and cyclists.

“We launched a vulnerable road user programme three and a half years ago,” says Clamp. “We do fit cameras but it is more about improving our drivers’ roadcraft and observation skills. Once you cross the line to being wholly reliant on technology, that is a dangerous place to be.”

### Safety standards

Wincanton is a CLOCS champion and a big supporter of FORS, as it believes these voluntary accreditation schemes raise standards and improve safety. Clamp also chairs the Transport and Logistics Safety Forum, a professional group within the CILT for members engaged in all aspects of transport and logistics safety, where FORS is a frequent topic.

“FORS drives a consistent standard across the industry,” he says. “If it was required everywhere and every operator had to meet

it, that would put everyone on a level playing field.”

Wincanton constantly monitors the skills and behaviour of its 5,000 drivers, using online risk assessment programmes as well as forward-facing cameras and telematics to identify areas for improvement by further training.

Clamp knows, however, that even the best drivers can have the occasional lapse – which is where the latest passive safety systems such as Mercedes-Benz’s Active Brake Assist 4 (ABA4) and Proximity Control Assist (PCA) come in.

ABA4 applies full braking in an emergency stop to prevent or greatly reduce the impact speed if the system detects the vehicle is about to collide with an object or person, while PCA automatically adjusts the speed of the vehicle in traffic to maintain a safe distance from the vehicle in front.

“There is absolutely a place for this technology,” says Clamp. “We embrace these passive systems, but we link them through the telematics so we can understand when and why these events happen. If there is a harsh braking event, we want to be able to sit down with [the driver] and find out what happened so we help them improve.”

Together with a driver’s airbag, ABA4 and PCA form the Mercedes-Benz Safety Pack that Wincanton has specified on two batches of 100 Mercedes-Benz Actros tractor units. The first, ordered last year, has just been followed by a further 100 Actros 2545 units, which will be used to haul containers.

Wincanton group fleet director Carl Hanson says: “These Actros tractor units are among the safest trucks available and will help to protect other road users as well as our own drivers. These systems react quicker than even the best human driver, and half a second can make the difference between life and death.

“Mercedes has come to the market quicker than anybody else with this, so why wouldn’t we take advantage of those safety features? There is a lot more traffic on the roads and more distractions for the driver, so if we can save someone’s life, it’s fantastic.”

ABA4 has already prevented at least one collision that Hanson is aware of, having seen camera footage of a car driver on a dual carriageway cutting in front of a Wincanton truck so quickly that the driver would have had no chance of reacting. “The brakes



activated very quickly and there is every chance the truck would have hit the car without it,” he says.

“That is the standard we want to set, and it is a difficult decision when we are looking at vehicles that don’t have these systems fitted. I would like to see this become a standard spec across the rental market.”

### Getting the full picture

Wincanton is fitting in-cab cameras linked to telematics to most of its fleet to build the full picture of what led to any incident. “We are trialling a MiX telematics solution that integrates with a forward-facing camera,” says Hanson. “There is more power in having an integrated camera system to help manage driver behavior.”

The operator likes the fact that it can also get short-term rental vehicles from Dawsongroup truck and trailer that are already fitted with forward-facing cameras and telematics.

“One of the challenges around managing the drivers is making sure we can see every driver in every one of our fleet vehicles, even those on hire,” says Hanson. “Having access to Fleetboard, which ties in with the vehicle hire agreement rather than needing a 6-month commitment, is key.”

Wincanton is also working with Dawsongroup to improve the safety of its trailer fleet, using the Axscend TrailerMaster system (see page 18 for more details).

“We are about to take some EN 12642-XL curtain-sided trailers from Dawsons, fitted with Axscend telematics,” says Hanson. “The dynamic brake check constantly monitors the trailer brake performance, which the DVSA has authorised as a suitable alternative to the four loaded brake tests per year, as prescribed in the Guide to Maintaining Roadworthiness. Dawsons have included this in the trailer specification for us, and provided an all-encompassing rental solution.”

# The man with the plan

All contract hire and rental trucks and trailers are the same vanilla variety, right? Wrong – Dawsongroup truck and trailer has led the way in specifying extra safety features not found on competitor vehicles as standard.

It must be tempting for the MD of one of the UK's largest contract hire and rental companies to buy the cheapest vehicles that comply with the legal minimum standards. After all, customers won't pay any more for extra safety features, so why give away margin by adding cost?

According to Dawsongroup truck and trailer MD John Fletcher the answer is simple – he sees it almost as a moral duty to supply the safest possible trucks to his customers and their drivers.

“The technology is out there, and we undoubtedly have the ability to save lives,” he says. “We started adopting the extra safety features 18 months ago, and they have been mainstream on every order we placed through 2017. Some customers absolutely love it; others are worryingly indifferent to it.

“All I know is that I wouldn't want to be the guy who didn't tick the safety box. Once you've seen it, you can't unsee it. Our view is that we've got the operator's back and, if they come to us, we know we are supplying some of the safest vehicles we can possibly specify.

“We changed our mindset entirely from managing our fleet down to a cost, to managing it up to the highest levels of compliance. Compliance drives operators, so it drives us too.”

Ticking the safety box costs Dawsongroup around £2,500 extra for each of the 850 trucks and £1,500 on each of the 900 trailers it bought in 2017.

“It's a bit early to be seeing any benefit yet on residual value of vehicles,” says Fletcher. “Encouragingly, truck take-up based on these

safety specifications is beginning to pick up and trailers have been extremely successful already. I guess it's going to be a little like the change from analogue to digital tachographs. For ages everyone thought it would be better to steer clear of digital, but then the early adopters started seeing major benefits and the stampede began. So it's still hard to be overly positive at this stage, particularly when some elements of the industry are still quite cynical in some respects.

“However, a growing number of operators, once you get to them, are evangelical about it. They demand it, they want it, and they are really keen on it.”

## Belt and braces

The extra safety features include Mercedes-Benz's Active Brake Assist 4 automatic emergency braking system, driver's airbag, nearside proximity sensors to alert drivers of cyclists in their blind spot, lane departure warning, and fifth-wheel sensors to ensure the trailer is properly connected.

“Although we specify tractors with full-width catwalks, we are increasingly supplying trailers with a ground-level coupling system, to make coupling up as safe as possible. Right now I see it as a belt and braces option, but one that will eventually move to just the ground-level system. The sooner drivers don't have to get between cab and trailer for any reason, the better,” says Fletcher.

Since 2013, Dawsongroup has also fitted all its trailers with the Haldex TrCM+ system, which helps prevent trailer roll-aways by automatically activating the parking brake when the red air-line is disconnected. The driver must then manually release the parking brake when the suzies are reconnected. The system also gradually applies the trailer brakes in the event of a sudden loss of air pressure, rather than the brakes locking. More recently the



company has also been fitting the Axscend TrailerMaster Junction box as standard to every trailer (see p18). This provides the flashing side repeater functionality and allows operators to specify further safety features, including a tyre pressure monitoring system (TPMS) and continuous brake efficiency monitoring.

“We've offered TPMS on trucks as an option for some time, and now we're offering it on trailers as well,” says Fletcher. “We're looking at systems that could perhaps use a compressor within the hub; so it's not just monitoring, it is keeping the tyre at the right pressure as well.”

Many of Dawsongroup's fleet customers are now FORS-accredited, meaning vehicles joining their fleet must meet the FORS technical specification including extra mirrors, side underrun protection, and warning signage.

“Quite a lot of customers do ask for FORS; many of our fleet are already compliant and



## Terrorism prevention

**Even before the** spate of trucks used as terrorist weapons, Dawsongroup had strict policies in place to check the credentials of anyone hiring vehicles from its 23 rental locations.

“We have always been diligent to a fault about who we rent the vehicles to,” says truck and trailer MD John Fletcher. “If you haven’t got an O-licence you are not a bona fide operator, and we will not deal with you because we don’t want our truck impounded.

“We are even more diligent now, to the point where we require verification of the individuals collecting the trucks on behalf of the company. If we’re in doubt about their identity, they don’t get the vehicle until we get some written authority from the company that they are legitimate.”

The company also has strict policies in place to ensure vehicles are always secure on its sites.

“We’ve always had very tight control over our asset security,” says Fletcher. “For example we have zero tolerance on vehicles being left unlocked. It’s regularly audited and we have a unique system of key management that enables us to keep control over the vehicles while they’re on our premises.”

■ See page 22 for more on preventing vehicles being used as terrorist weapons.

all of our fleet can be made FORS-compliant easily,” says Fletcher. “Our standard vehicles only need minor additions.”

Fletcher is looking at going a step further and offering camera systems as standard.

“We would like to build a camera system into the trucks, and we’re looking to bring that in this year,” he says. “The problem is standardising on something that suits everyone.

“The silly thing is that our lane departure cameras are already fitted, and it strikes me that it would be a relatively simple job to extend the angles of coverage these afford to do the whole job.”

### Direct Vision Standard

A less well-understood specification coming down the track is London’s Direct Vision Standard, which started out requiring drivers to be given direct line of sight into nearside blind spots, but may now allow this to be achieved using cameras.

“I understand that quite a few of the manufacturers are working on replacing mirrors with cameras, which makes sense and will help with the aerodynamics as well,” says Fletcher. “So we will wait and see, but for someone to actually tell us what Direct Vision is would definitely be useful.

“But if you were to build a truck from scratch knowing what we know now about Direct Vision, logically it will probably end up something like the new Scania [L-series] or the Volvo [FE Low Entry].”

There has been a lot of publicity recently about the move from passive safety systems that assist drivers to fully autonomous vehicles that require no driver input. In this transition phase, is there a danger that drivers could become complacent and rely too much on the truck systems?

“A good driver can outperform any safety feature on a truck, absolutely, without a shadow of a doubt,” says Fletcher. “But can you guarantee he will be a good driver 100%

of the time? You can’t. A good driver doesn’t need it most of the time, but what about that one time?

“We’ve got 40 drivers ourselves, we employ a driver trainer to teach road craft, but people still bump into things. They still make mistakes. Same for our customers – no matter how good their training philosophy, people will still make mistakes.”

Since 2017, Dawsongroup truck and trailer has been specifying extra features to make its trucks and trailers as safe as possible



- 1 Haldex TRCM+:** Helps prevent driver injury, or worse, from trailer roll-aways by automatically activating the parking brake when the red air-line is disconnected.
- 2 Red seat belt:** An ever-present visual reminder to drivers to buckle-up.
- 3 Air bag:** Mounted in the steering wheel, a major contribution to driver protection.
- 4 Active Brake Assist 4:** Exceeds the 2018 General Safety Regulations and automatically brings the vehicle to a stop when an accident hazard is detected. ABA4 carries out full and partial braking brake applications in response to stationary and moving objects, including pedestrians in motion.
- 5 Full-width catwalk:** Reduces risk of slips and falls for drivers working behind the cab.
- 6 Ground-level coupling:** Allows drivers to couple all lines at ground level, avoiding putting themselves in the potentially dangerous area between cab and trailer.
- 7 Repeating indicator lighting:** Flashing repeater lights along the trailer's side display the vehicle's indicator warnings clearly to pedestrians, cyclists and other road users.
- 8 Lane departure warning:** Video cameras detect lane markings and monitor the vehicle's position. If the vehicle appears to be about to move unintentionally out of its lane, the driver is alerted through the steering wheel.
- 9 Nearside proximity sensors:** Visual alerts draw the attention of drivers to hazards in the nearside blind-spot.
- 10 Forward-facing cameras:** Standard fit from mid-2018, enabling incidents to be captured to assist with claim-handling, driver training and fact corroboration.



- 11 Rear nearside warning sign:** Delivers clear warnings to cyclists about the danger of riding up the nearside of the vehicle.
  - 12 Hill-Start Roll Control Assist:** Reduces or helps prevent rolling back on hill starts and the associated safety risk, additionally reducing potential damage caused by driveline shock loads.
  - 13 EN 12642 XL:** Compliance and roadside checks demand load safety standards that are higher than ever, so on all its curtainside trailers Dawsongroup specifies the exacting EN12642XL load-securing safety standard, independently certified by TUV Nord.
  - 14 Rear offside warning signs:** Alerts following drivers to the fact that they are visible to vehicle's driver only if they can see the vehicle's own rear-view mirrors.
  - 15 Axcend system:** The TrailerMaster Junction box provides functionality for flashing indicator repeating side lights and allows operators to specify further safety features, including tyre pressure monitoring and continuous brake efficiency monitoring.
  - 16 Tyre pressure monitoring/balancing:** Already an option on Dawsonrentals trucks, tyre pressure monitoring is now offered on trailers as well. The company is also trialling systems within the hub to keep tyres at the right pressure as and when needed.
  - 17 Proximity Control Assist:** Automatically adapts vehicle speed and proximity to changing driving situations.
- Dawsongroup truck and trailer also offers the following safety features as options: Driver Attention Assist, Stability Control.**



# Keeping compliant

**S**pecifying and operating vehicles safely are only two-thirds of the battle – the third has to be effective repair and maintenance (R&M) procedures.

One increasingly important reason that contract hire and rental with a reputable provider like Dawsongroup truck and trailer is growing in popularity, is that the operator has peace of mind that every vehicle will be maintained in safe and compliant condition.

As the traffic commissioners frequently remind the operator, under the terms of their O-licence they remain responsible for the R&M of their vehicles – even if they contract it out to their vehicle supplier. One key measure of knowing a company has a good maintenance regime and maintains high standards is its first-time annual test pass rate, and Dawsongroup does not disappoint here. It maintains an average of 97%, way ahead of the national average of 82%.

This is achieved by setting high standards of preparation, sharing best practice, and making suppliers accountable for their individual performance. Performance-monitoring and rigorously vetting its network of more than

1,100 R&M providers to make sure they and their technicians are up to the high standards Dawsongroup truck and trailer engineering director Peter Snowden demands.

“When we take on a new workshop – even if it’s a main dealer – we are still checking their service levels, including the current MoT performance,” he says. “If we appoint an independent workshop that hasn’t got the internal auditing that goes with the relevant manufacturer’s standards, prior to appointment we carry out a complete assessment of the services they can provide, how long they have been trading, and look for evidence to support what qualifications the technicians have along with tools and equipment and references.

“Then, after we’ve gone through that process, our fleet engineers go in and do an on-site appraisal. Once they become an approved supplier, we have an ongoing auditing process where the fleet engineers will go and inspect those workshops and the quality of the work.

“That process applies equally to operators doing their own maintenance in-house as it does to third-party providers.”

Snowden is aware of the shortage of skilled

commercial vehicle technicians, especially as modern Euro-6 trucks are now complex vehicles requiring sophisticated diagnostic abilities.

“It is a real problem,” says Snowden. “Vehicles are getting increasingly technical now with emission control and additional safety features. Technicians require a level of expertise beyond just practical ability, even though this does have its place. They need be able to use a computer, look at data, interpret what is going on and fix the vehicle.

“So yes, I am concerned about the skills shortage. It doesn’t mean vehicles are not being maintained to the same safety standards, but less resource equates to protracted repair lead times, and it is affecting vehicle downtime. It takes longer to get a vehicle booked in and through the workshops, and lack of knowledge can affect the reliability of a first-time fix.”

## A helping hand

Although setting and sticking to periodic maintenance inspection (PMI) intervals remains the responsibility of the operator under the terms of its O-licence, Dawsongroup is there to help ensure

maintenance schedules are met.

“The benefit of hiring from us is that we act as a policing mechanism,” says Snowden. “We send service schedules and chase equipment down to reduce any chance of slippage. If the operator needs a replacement vehicle, we can swap one over. So they have us as a helpful reminder and partner in maintaining good compliance.

“We understand their core business is delivering goods and getting to their customers on time. Ours is supplying vehicles in compliant and safe condition.”

The same rigorous processes apply to trailers just as to trucks, as good maintenance is equally important for the safety of trailers.

“Generally, the servicing regimes and the way in which we do things are no different for trucks and trailers,” says Snowden. “It may be more of a challenge to locate the trailer, but when I look at the figures, the trailer fleet is not lagging behind the truck fleet.”

A key part of ensuring vehicles are safe and compliant at all times is the daily driver walkaround check, which has to be carried out before each shift. It is essential that any defects that are discovered before the vehicle leaves the depot are corrected quickly.

“When a driver reports a defect, their call comes through to our 24/7 maintenance control here in Milton Keynes, or our local branch,” says Snowden. “That report is recorded electronically and the repair agent is dispatched. Whether or not the vehicle needs to be moved into the workshop for the repair depends on the nature of the defect. Our first-time fix rate is currently 95% with an average ATA of 86 minutes nationwide.

“In the rare event the repair will take more than four hours, the option to take a replacement vehicle is there.”

**The road ahead**

Dawsongroup is working on an improved online R&M management system that should be ready later this year. This will include greater transparency and live information of the progress of vehicle repairs, breakdowns and compliance, and it is also working on a driver defect reporting app for smartphones.

“At the moment, the company reports the defect to us, we record it electronically and deal with it,” says Snowden. “With the driver defect app they will be able to check the truck and then just send the report to us.”

Finally, Dawsongroup provides a 24/7

# Earned recognition made easy

**Several of Dawsongroup’s** fleet customers are taking part on the DVSA’s earned recognition pilot scheme, so it is essential that data on their vehicles’ defect rectification and R&M is up to date and presented in the necessary format (see p4 for more on earned recognition).

“It’s a challenge, because providing the correct level of compliance documentation requires us all to move into the digital age,” says Snowden. “We’ve developed systems of operation to check that the compliance paperwork comes into us from our third-party service providers in the right timescales to monitor our performance.”

Using Dawsongroup gives customers the peace of mind that not only are their vehicles are always fully compliant, but they can demonstrate it to the DVSA for earned recognition.

“There’s a lot of investment required in systems to do that, and not many operators have the fleet management resource that we have,” says Snowden. “There are 30 people in my department dealing with the manufacturer, looking at the specification of the vehicle, authorising the repair and maintenance and providing 24-hour breakdown services.

“We also have 27 rental branches that play a part in delivering this service. They chase and help the operator to make sure their service schedule is adhered to.”

Dawsongroup is already working on the next generation of fleet management software that will automate the process even more.

“We know we’ve still got to move things on, and we’re working with a number of software companies,” he says. “We’re looking at improving the way we authorise repairs so we have got complete visibility of the workshop online in real-time.

“Once they have completed the work, the only way they can finish it and close that job is if the documentation is there for all to see. The customer has visibility of it, and we can check it and pass it to the DVSA.

“For customers using multiple suppliers with different platforms it could be a nightmare. Though it’s vital, R&M is not truly their core business, but for us it is and we are working on it day and night. Developing digital systems to meet the new age of compliance takes time and is costly, and with so many other legislative and operating distractions it’s hardly surprising hiring from us is the preferred choice for fast-growing numbers of operators. They know that with us they have compliance covered.

“Today, with just a click of a button they can confirm that and enjoy peace of mind. There are companies that still provide documentation weeks later, but with Dawsongroup they can see the fleet we operate and the compliance scores we’ve got immediately, and that is what’s offered to the DVSA.

“With our track record for innovation and safety, we were disappointed not to take part in the current trials, but as and when earned recognition becomes more mandatory than voluntary and our customers want help, we are ready.”

all-year-round breakdown service for every vehicle it supplies, ensuring no driver is left stranded by the roadside.

“All 1,100 of our repair agents are part of our breakdown network as well,” says Snowden. “The customer’s driver calls direct to us or our branch.

“This gives us one of the largest repair and

recovery networks in the UK, and, with a great average age profile of well-maintained equipment, our first-time fix rate is 95%.”

For fleet operators that have gradually scaled back their in-house engineering resources, taking vehicles from Dawsongroup is like having a 30-strong fleet and compliance management team. Peace of mind is built in.

# CUT COST & SAVE TIME



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"Our Electronic Brake Performance Monitoring System (EBPMS) was developed to help operators overcome the compliance challenge associated with frequent, laden roller brake tests. The DVSA introduced guidelines for the use of EBPMS in 2016"

Tim Steer MD, Axscend Limited

[gov.uk/government/publications/electronic-braking-performance-monitoring-systems](http://gov.uk/government/publications/electronic-braking-performance-monitoring-systems)



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## Safety, Efficiency, Environment





# Striving for safety

**W**hen it comes to developing new technology – including safety features – Daimler is in an enviable position.

Such development is hugely expensive, and the wider the application of new technology, the lower the unit cost.

Not only is Daimler the world's largest commercial vehicle manufacturer, with



brands including Mercedes-Benz, Fuso, BharatBenz, Freightliner, Western Star and Thomas Built Buses, it is also a significant manufacturer of cars and vans. This means it is able to develop tomorrow's technology and get it on the road much quicker than many of its rivals.

Bob Gowans, product and sales technical manager at Mercedes-Benz Trucks UK, pictured, is responsible for keeping an eye on key developments in active and passive safety systems in the next five to 10 years.

Much of the safety technology agenda is set by legislation, and consultation has just been completed for the next level (see box opposite). However, Daimler's usual approach is not to wait until legislation forces progress. Gowans's crystal ball foresees big advances in sensor technology, beyond that already used by ABA4 (fourth-generation Active Brake Assist) and Proximity Control Assist, to detect pedestrians and other vulnerable road users. He points out that today's systems could be made even faster in

operation if they didn't have to include the driver warning stages.

## Information flow

One key requirement that was identified is an advance in more intelligent transfer of information to the driver to prevent cognitive overload. This occurs when there are so many sources of information, such as multiple mirrors, cameras and windows, that it is impossible for the human brain to fully process it all. Information flow needs to be more integrated, with more emphasis on exception reporting. Many of today's systems still depend on a response from a potentially tired and error-prone driver. One of the best returns on investment is training on safe urban driving, and training and technology should complement each other.

The changes to overall vehicle length that are currently being assessed present opportunities to include deformable structures at the front of cabs. Although this will have obvious benefits in terms of impact



absorption, Gowans also sees the opportunity to move vulnerable road users further forward, and into the driver's sight line, as potentially even more important. However the legislation ends up, he is convinced that it should be worded in a way that gives designers the flexibility to solve the problem in their own way, rather than being too prescriptive.

Given that any legislation will need to meet current turning circle rules, it is unlikely that the solution will be a simple flat front mounted further forward, but instead some kind of polygonal shape.

## Back to basics

Safety research is not limited to the obvious. One area being by tested by Daimler is the Daylight+ programme, which is experimenting with the use of simulated natural light within cabs. Initial results of the testing, carried out in the darkness of the Finnish winter, look positive, with measurable improvements in driver alertness, and a better quality of normal sleep.

Nor does safety have to be high-tech. Getting back to basics, a good handover is essential to the safe and efficient use of a new vehicle, whether it is provided by the

## Axscend's TrailerMaster keeps it simple

**Not so long** ago, trailers were the orphans of the connected fleet, with the lack of permanent electrical power meaning a battery-powered tracker was the only option. The growth in popularity of electronic braking systems (EBS), and consequent constant electrical supply when the trailer is hooked to a tractor unit, has led to a wide range of options for trailer electronics. To keep things simple, British manufacturer Axscend has developed TrailerMaster, a single system for managing every essential trailer function, which Dawsongroup is now fitting as standard to every trailer it buys.

Tim Steer, MD of Kent-based Axscend, says: "We've been around since 2006, when we had a tracker that you stuck on top of the trailer and it gave three pings a day. It was battery-operated, and that's all you could do back then because you didn't have EBS on the trailer. When we got a permanent guaranteed power supply on the trailer we could start moving towards telematics and away from just tracking."

In recent years, there has been a proliferation of electrical systems on trailers, leading to extra cost and complexity as they are added piecemeal by different manufacturers according to customer specification. Axscend developed TrailerMaster to simplify the installation of this equipment and also introduce

useful new features across braking, tyres, lighting, reversing and location. There are three levels of functionality: the basic Junction box (already fitted to more than 1,000 Dawsongroup trailers); the Function box; and the all-singing TrailerMaster Connect control unit with built-in GSM mobile phone and Bluetooth connectivity.

"It's an integrated system that supports trailer management operation and compliance," explains Steer. "We designed it to replace several other systems so we can say 'put that on, and take those six boxes off'."

Dawsongroup is now specifying the Junction box on every new trailer to be ready for any future legal requirement for flashing side repeaters, and by taking this initiative customers such as Wincanton can specify the addition of the TrailerMaster Connect unit for access to the full range of functions.

"By putting the Junction box on trailers as standard, Dawsongroup is really demonstrating their commitment to the development of the whole industry," says Steer.

One unique feature of TrailerMaster that could save operators a small fortune is Electronic Brake Performance Monitoring (EBPMS). This constantly checks the efficiency of the trailer brakes, alerting the transport manager to any problems, improving safety and compliance and potentially avoiding



the need for routine roller brake testing, because the DVSA has recognised the system as an acceptable check on brake performance.

"EBPMS alone pays for the entire system by avoiding four or five roller brake tests every year," says Steer. "We're measuring the braking every time the driver hits the brake pedal, so you're taking all that resource and money that's spent looking at trailers with nothing wrong with them, and focusing it on trailers where there is a potential problem."

Depending on the system fitted, other functions can include tyre pressure monitoring, remote weight measurement via the air suspension, lifting deck auxiliary battery-monitoring, fridge-monitoring, soft docking using a visual indication of the distance from rear obstacles and automatic braking, lighting fault detectors and, of course, tracking.



## Driven by legislation

There are notable exceptions, but by and large, adoption of advanced safety is the result of legislative compulsion. A period of consultation has just ended that is likely to lead to the introduction of a significant volume of new rules, mostly intended to come into force on 1 September 2020. These are some of the most relevant highlights. Operators can download the full document from [ec.europa.eu](http://ec.europa.eu)

- New standards for frontal design and direct vision
- Upgraded rear and side under-run protection, including reduced exemptions for off-road vehicle
- New standards for interface for alcohol interlock devices
- Enhanced forward-facing detection of vulnerable road users for autonomous emergency braking systems
- Compulsory detection of persons behind reversing vehicles
- Compulsory tyre pressure monitoring
- Driver distraction and drowsiness monitoring

manufacturer or a properly trained in-house instructor. At a similar level, customer concerns over simple things like catwalk safety means Gowans is surprised that ground-level trailer connection is not yet compulsory, to eliminate the inherent dangers during coupling. He suggests that maybe this is a case for domestic legislation, given that UK operations tend to feature more frequent trailer swaps than neighbouring countries. On the subject of our neighbours, Gowans doesn't think Brexit will have a great effect on vehicle legislation, as much of it is created under the wider auspices of the United Nations Economic Commission for Europe (UNECE), rather than the EU.

Moving to the pan-European hot topic of autonomous trucks, Gowans says there is definitely more to come on the journey to driverless autonomy.

Daimler is pursuing a four-pronged strategy called CASE (connected, autonomous, shared and electric). While most manufacturers are working on a few of these elements, Daimler is involved in all four at once. Full driverless autonomy is certainly feasible now within controlled environments, as demonstrated by the platoon of four Mercedes-Benz Arocs snow-ploughs under the control of one driver, already in service at a German airport (see above).

### Platooning

Platooning has moved off the front pages for now, having been proven to work technically, including with the presence of multiple brands within a convoy. However, questions remain over how to make it financially attractive for all participants. In particular, there is the tricky question of which members of a convoy go in the middle and gain the greatest fuel savings. Gowans suggests that it would be relatively easy to solve under

Germany's MAUT road tolling system, by adjusting the cost per kilometre to reflect the position in the convoy, charging the less fuel-efficient front truck less than the ones behind. Further afield, he suggests that the function could easily be incorporated into the next generation of digital tachographs working in conjunction with any future road tolling system.

Turning to the influence of local regulators such as TfL and city mayors on truck safety, Gowans stresses it is important that all stakeholders should participate in the discussion over direct vision standards, working together towards a common purpose. He expresses concern over the implementation of ill-considered local standards, such as cutting window apertures in passenger doors with no thought for the effect on the type-approved crash performance. He suggests a set of unified national standards but with local implementation, similar to the way that urban emissions are controlled in countries like Germany and France.

### Challenges

Gowans admits there are challenges in applying some of the latest technology to UK vehicles. For example, the Side Guard Assist (SGA) of ABA4 is not yet available on right-hand-drive (RHD) Actros models, although a version is available on the



Econic. He explains that, in some cases, it is not just a question of swapping existing sensors and cameras to the opposite side. The UK market's love of 6x2 tractors, with their limited free space along the chassis, is a significant factor, but he did confirm that SGA is definitely coming on RHD Actros, although he could not say when.

Gowans says that while UK operators have traditionally not been strong in investment in safety, there has been a recent increase to similar levels to other European markets. He puts this down in part to the number of practical demonstrations of the latest systems in action, but mostly due to greater professionalism in the industry. Some operators are leaders on safety alone, while others do what they have to do to balance risk against cost. For their part, manufacturers need to demonstrate the benefits without appearing to be selling anything.



# Better safe than sorry

**A** safe driving culture requires a comprehensive understanding of what causes collisions and how those risks can be mitigated or eliminated.

Road conditions, adverse weather and other external factors can be contributory factors in a collision, but a driver who is alert will be less likely to fall victim to them.

Skills-based training is therefore only one part of safe driving, says head of safety at the Royal Society for the Prevention of Accidents Kevin Clinton.

“Increasing a driver’s skills will not make him safer if it’s all you do,” he says. “You need to look at the structure of the task, the environment, the attitudes and behaviours brought to it.”

There are several specific factors road transport operators should consider:

## Qualification

All drivers’ licences should be checked, their skills assessed and a system for checking points or convictions put in place. Recently, however, at least one high-profile collision involved an HGV driver whose licence had been revoked, presumably without the knowledge of his employer.

## Fatigue

Fatigue is thought to contribute to 20% of all collisions, and 40% of fatigue-related collisions involve commercial vehicles.

“Fatigue-related crashes tend to be the most serious because drivers do nothing to mitigate the impact, and they tend to occur on high-speed roads,” says Clinton.

The drivers’ hours requirements, which specify a 45-minute break every 4.5 hours,

are a legal minimum. They do not ensure every driver will remain sufficiently alert for an entire shift. Companies must educate drivers about physical and mental fatigue and the absolute need for a driver to stop if he becomes drowsy. This requires a cultural shift. Companies must be positive and flexible if a driver reports as too tired to drive, and take appropriate steps to help him identify the cause and solution.

## Distraction

Distraction is a growing concern and a major cause of collisions. Most modern dashboards are littered with potential distractions, including communications and entertainment devices, cup-holders and sat-navs.

“It only takes a split second to have a collision,” says Clinton. “Drivers must focus on driving, and employers must emphasise that.”

Analysis of the footage from more than 200 million commercial vehicle incidents by SmartDrive has shown a clear correlation between driver distraction and near misses and collisions. Drivers who have collisions are 63% more likely to be eating, twice as likely to be using a handheld mobile, and twice as likely to be trying to do some other task while they drive than average.

## Communications

Mobile phones are a major distraction and the safest position for a phone is off. Hearing it ring is distracting; answering it, even on Bluetooth, can be fatal.

“Using a phone hands-free does not reduce the risk in any appreciable way because the major distraction is cognitive,” says Clinton. “The government didn’t include hands-free calls in legislation because they didn’t know

how it could be enforced, but that’s led to confusion over its legality. Driving when distracted, or carelessly, is not legal.” Some logistics firms still allow work calls to drivers, although many tell drivers not to respond unless it is safe to do so. This probably is not sufficient to ensure safety. “If a driver is distracted by a call, however it is made, and has a collision, the police will still see the time of that call from records,” says Clinton. “I would urge companies to look at their telematics data at the time of those calls and see for themselves how it affects driving.”

## Speeding

As suggested with drivers’ hours, keeping within the legal speed limit is a minimum requirement. Education is vital here. The World Health Organisation reports that an increase in average speed of 1 km/h typically results in a 3% higher risk of a crash involving injury, with a 4% to 5% increase for crashes that result in fatalities.

## Vulnerable road users

VRUs have been the biggest focus in terms of HGV safety for several years now, not least because of the high-profile cycling lobby in London. There are camera and alarm systems that can help the driver to detect the presence of hazards at various points around the vehicle, but having to check too many screens, displays or mirrors can become a distraction in a constantly moving traffic environment.

Some of the most successful interventions are not technology-based but educational. ‘Trading places’ courses can help HGV drivers to understand the behaviours of other road users and how to anticipate and compensate for them.

# Under pressure

Steve Howat, general manager - technical services at Continental Tyres (UK), looks at the safety implications of incorrect tyre pressure

**H**ighways England figures show there were 61,405 wheel- and tyre-related incidents across all vehicles on major UK roads between April 2013 and September 2014, and of those 9% were blowouts. Of these approximately 12,000 were commercial vehicle tyre failures, and more than 5,800 of those affected live traffic lanes.

Drilling down into these statistics, 35% of tyre-related incidents were caused by punctures, and 29% by flat tyres. Despite this, it is rare for a tyre to hit something sharp on the road and suffer an immediate failure. Usually it is a gradual loss of pressure that causes the problem, taking trucks off the road, disrupting schedules, and ultimately costing hauliers money. This is why tyre pressure management systems (TPMS) really work and are a valuable addition to a fleet's safety arsenal.

## The cost of underinflation

A TPMS is not just about preventing blow-outs – underinflated tyres also flex more and work harder. This extra flex creates higher tyre distortion, and that creates greater tyre wear, which ultimately decreases tyre life.

A tyre that is 20% underinflated results in a loss of mileage of around 18% – so around a fifth of its total mileage. And 20% is not a dramatic underinflation figure – we regularly find tyres that are 40% or 50% underinflated, and their loss of mileage will be far greater.

An underinflated tyre also creates more rolling resistance, raising fuel consumption, and fuel is by far the biggest cost for any fleet. TPMS is a proven way to help lower fuel usage, with technology developments in this area now creating affordable solutions for any fleet operator.

## Zipper failure

Zipper failure is one of the major safety issues when a tyre is reinflated after a puncture has been repaired. A tyre dealer replacing a tyre that has been severely stressed because it has been running underinflated, or because a penetration has occurred in the tread causing gradual deflation, has no idea how long that tyre has been running in that condition, and therefore cannot get a picture of how stressed that tyre is.

Truck tyres are inflated to pressures of 125psi to 130psi. When a tyre is reinflated during repair, if it has experienced long-term underinflation, it can cause an instantaneous break in the mid-sidewall area, causing zipper failure and an immediate loss of pressure. This is dangerous and can result in injury to the technician conducting the repairs.

A tyre fitted with TPMS will give the tyre fitters a much fuller picture of the condition of the tyre. They will have a full indication of how long the tyre has been running underinflated and can therefore make an informed decision about whether or not the tyre is past the point of repair.

## Telematics

TPMS integration into telematics either via OEM-developed systems or retrofitted units is something which Continental Tyres is working on with a variety of technology partners.

Telematics now provide a broad spectrum of operational data, and we predict that tyre temperature and inflation data will become



a standard addition to this in the near future. We are already seeing simple text and email alerts becoming a useful additional function when a tyre reaches an underinflation or temperature threshold.

This helps give fleet managers a tool to instigate further interrogation of the vehicle and understand how quickly the tyre is losing pressure and what specific action is required.

## Emerging technologies

Connected motorways will prove very useful for tyre safety and TPMS systems. Highways England is already exploring how TPMS can work within new connected routes. For example, traffic management systems could be linked so that a trigger is sent when a tyre is going down, and a gantry warning sign could advise the driver.

With TPMS, the existing pressure sensors are just the start. The next step will be more sophisticated sensors measuring tread depth and lateral force – true intelligent tyres, allowing operators to fully understand how the tyre is being driven and where potential failures may occur.

These smart tyres will be manufactured to communicate a wealth of performance criteria, to show wear and loading. A tyre with the ability to understand how it has been used throughout its life, as a predictive model, will allow manufactures to tailor recommendations based on real-time working figures.



# Tackling terrorism

The use of vehicles by terrorists to cause death or destruction can be traced back to the 1970s, so it is not a new phenomenon.

However, the recent trend of using HGVs or vans for such activity poses an extra security challenge for commercial vehicle operators and hire companies.

Vehicle-borne improvised explosive devices (VBIED) are used to carry large quantities of explosives to a target and can cause significant damage.

These devices can be delivered at a time of the terrorist's choosing with reasonable precision and can be detonated from a safe distance using a timer or remote control, or on the spot by a suicide bomber.

According to the National Counter Terrorism Security Office (NACTSO), the UK has a history of VBIED-based terrorist attacks, which used fertiliser-based explosives, dating back to the early 1970s.

However, recently the use of vehicles as a weapon (VaaW) attacks has become a popular choice for terrorists in European cities.

In a 19-month period, starting with the Bastille Day attack in Nice in July 2016 through to the Las Ramblas incident in Barcelona in August 2017, Europe was subjected to nine separate VaaW incidents.

As attacks such as the Westminster Bridge incident in March 2017 – which killed five people and injured 49 – proved, a car can cause significant loss of life. But it is undoubtedly those using a large vehicle, be it

van or lorry, that are most feared; the Nice and Berlin attacks between them saw 99 people killed (including the drivers), with more than 500 injured.

The UK's terrorist security level remains at severe, which means an attack is highly likely, so it is no surprise that national counter terrorism officials have looked to the freight sector to help reduce the risk of VaaW attacks.

The government's counter terrorism strategy, dubbed CONTEST, focuses on four areas: Pursue; prevent; protect (by strengthening the UK's defences against a terrorist attack; and prepare (stopping an attack and minimising its effect).

The latter two areas are where hauliers can play an important role.

"These two strands are very important, and you will see more and more of this work than you would have done a few years ago, since we've had this string of attacks – especially talking about VaaW attacks," Scott Gibbons from the National Counter Terrorism Policing Headquarters told delegates at a recent FTA Transport Manager conference.

It is impossible to make all public spaces free from the risk of a vehicle attack, so it is important to do everything possible to prevent terrorists gaining access to an HGV or van.

According to NACTSO, significant numbers of public service vehicles and HGVs are stolen every year, with one-third taken from the owner's premises. The primary reason is crime, however there is a crossover with terrorism

where vehicles can be used as a weapon or to fund terrorist activities.

"Most instances of crime are opportunist, however even simple precautions can make a difference," states NACTSO. "It's important that a senior manager in a company has responsibility for security."

NACTSO has created guidelines to help those in charge of HGV fleets to ensure their security practices are robust, which can be found at [gov.uk/government/organisations/national-counter-terrorism-security-office](http://gov.uk/government/organisations/national-counter-terrorism-security-office).

This covers advice for fleet owners on thorough driver vetting and adopting a robust security strategy, through to social media advice for staff.

There is also key advice for drivers, including vehicle security, safe parking and the importance of varying your route and stops to deter criminals from planning an attack. Each region across the UK has its own counter terrorism security adviser, who is on hand to help protect against the threat of terrorism and advise on any relevant training, such as Project ARGUS, an initiative delivered by counter terrorism security advisers throughout the UK.

This involves a three-hour multimedia simulation that poses questions and scenarios for participants working in groups on how to deal with the prevention, handling of, and recovery from an attack. Work is taking place to adapt the programme to the needs of the road transport sector, with talks taking place between the RHA, FTA, and security services.

## Safety First

One of Lawrence David's signature safety features is the **Curved Ground Coupling** device. It allows operators to safely hook up while stationed to the side of the trailer. Its sliding capabilities come into play when cornering, the cables are able to shift along the rail, reducing tension in the cables and therefore increasing lifespan. Other features such as warning stickers illustrate Lawrence David's desire to go beyond guidelines and regulations to ensure safety is paramount on all their vehicles.



## Securing Your Load

Lawrence David's DVSA compliant "**Roof Suspended**" Load Securing System has been designed to ensure the load is secured to the bed of the trailer via the side rave. This ensures a downward force which maintains friction with the bed, therefore reducing the risk of lateral movement. The load straps are suspended at all times within the roof of the trailer and enable the driver to secure the load from ground level, thus keeping the driver off of the bed and reducing risk. The rated straps which are suspended between the roof beams can be pulled down and tensioned from ground level via ratchet tensioners. This system can be retro-fitted and its functional design allows for stowage in the bulkhead.



## We're Fully Compliant

We strive to be at the forefront of compliance within the trailer manufacturing industry. On 26th April 2011 Lawrence David commissioned TUV to carry out **EN 12642-XL** tests on a Pillarless Curtainside trailer. We are proud to offer EN 12642-XL ratings, a European standard for "load containment", on our trailer and rigid bodywork. The XL Standard covers the complete trailer/rigid, therefore the rating is not limited to the curtains and is applied to the supporting bodywork also. The curtains are able to withstand a force in excess of 40% of the payload and negate the need for further load restraints.



## Come Have a Chat!

Lawrence David will be returning to this year's CV Show at the NEC in Birmingham 24th – 26th April. The show marks a year since Lawrence David headlined with new product releases such as Trailer-Eye and our moving double-deck trailer. This year we welcome you to join us on **stand 5D80** to find out the latest from the UK's premium trailer and rigid truck body manufacturer.

If you are interested in discussing load securing or compliance further, please contact Lawrence David and one of our specialists will be in touch.



# Active Brake Assist 4

With pedestrian detection technology.

Active Brake Assist 4\* is a major development in Active Brake Assist technology and includes pedestrian detection technology.

For more information visit [mbtrucks.co.uk/safety](http://mbtrucks.co.uk/safety)

\*Active Brake Assist 4 is included in the Safety Pack which is an additional cost, or can be purchased as a stand-alone option.

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