

Fleet Engineer

Wednesday 19th June 2024

Fleet Engineer 2024 LOGISTICS UK







Welcome and scene setting

Phil Lloyd

Head of Engineering Policy Logistics UK

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**



Domestics

LOGISTICS UK



Got to Go

EXIT



Got to listen





Use Sli.do for your questions Connect to free WiFi network: Username: britishmotormuseum

Join at: <u>www.sli.do</u> #FE24



Today's sponsors

LOGISTICS UK

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Today's programme



Session starts	Session ends	Session name
9:15	9:25	Chair's welcome & Logistics UK introduction
9:25	9:55	Changing Legislation for our future transport
9:55	10:25	What workshops need to do to meet with today's O'Licence expectations and to prepare for the future
10:25	11:00	Enhanced technology and what you need to do to maintain it
11:00	11:25	Coffee break & networking
11:25	11:55	More than just a trailer
11:55	12:15	Hydrogen for Logistics
12:15	12:40	Training and the next generation
12:40	13:10	Making the most of Auditing
13:10	14:10	Lunch break & networking
14:10	14:15	Chair welcome back
14:15	14:50	Managing serious and fatal incidents in workshops
14:50	15:35	Enforcement and meet the challenges of autonomy
15:35	15:40	Chair's close & open discussion

Theme for 2024:

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Preparing the maintenance environment for the future.





People



Places





Parking







"The combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone's competence. (The Health & Safety Executive) People – jobs

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People – training

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Check bag for crack



Premises

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DSEAR Assessment

(Dangerous Substances and Explosive Atmospheres Regulations)

- Risk Assessment: when working with Dangerous Substances.
- Produce technical and operation solutions: to eliminate or reduce identified risks.
- Produce procedures and procure equipment: to deal with accidents and emergencies.
- Provide: training and information.
- Identify: explosive atmospheres areas and classify into zones.

Additionally: Tools, equipment and PPE.

Power

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<image>



- ➢ What's the risk with parking all Diesel its BAU!
- > What about parking:
 - ✤ All electric?
 - ✤ All hydrogen (Liquid or Fuel Cell)?
 - Electric and hydrogen next to each other?





If you're not moving forward, then you're falling behind.



Capability Brown (1716-1783)



Fleet Engineer

19th June 2024

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Changing legislation for our future transport

Lawrence Thurbin CCAV, Department for Transport

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24** Centre for Connected & Autonomous Vehicles

Automated Vehicles Act 2024

Lawrence Thurbin – Head of Trials and Licensing Centre for Connected and Autonomous Vehicles



Overview

- Background to the Automated Vehicles Act
- Key legislative changes
- What these changes mean





To what extent do you think self-driving vehicles will be part of your fleet within the next 10-years?

(i) Start presenting to display the poll results on this slide.

The road to Royal Assent

Law Commissions' joint report published 2022, recommending new legislation

Brought together four years of legal review, three consultations, and hundreds of responses from the public and organisations

75 recommendations setting out shape of new legal framework for safe deployment of self-driving vehicles

Government's CAM2025 report accepted and committed to future legislation

Legislation called for by industry, stakeholder groups, and Transport Select Committee

Automated Vehicles Bill introduced in November 2023, securing Royal Assent as Automated Vehicles Act in May.



The AV Act created legislation to account for roles and responsibilities in automated vehicles



A framework has been developed to assure the safety of automated vehicles throughout their lifecycle

- Use of remote operations may be assessed at multiple stages:
 - **Approval** is the vehicle technically safe?
 - Authorisation should the vehicle be permitted to drive itself?
 - Operator licensing where the vehicle has no driver at all, is there a responsible operator behind it?
 - In-use regulation is the vehicle safe when operating on Britain's roads?
 - Incident investigation how can we use real-world evidence to improve our assessment requirements?



New legal entities have been created to ensure clear liability for operators and users

- To be authorised a vehicle must pass the "selfdriving test".
- The test is whether the vehicle can legally and safely travel autonomously without:
 - An individual controlling its motion.
 - It, or its surroundings, being monitored by an individual with a view to "immediate" intervention its driving.



Responsibilities change with the introduction of the AV act...







...and vary depending on automated feature availability



A new licensing process has been introduced to account for responsibilities for automated services

- There is a requirement for no user in charge vehicles to be overseen by a licensed NUIC operator.
- Good repute, financial standing and competence will need to be demonstrated to secure NUICO licence, overlapping with O licence.
- NUICOs will have responsibility for the detection of and response to problems that may arise during a journey.
- Implementation detail to be developed through secondary legislation.
- User in charge vehicles will follow pre-existing legislative requirements.







How ready do you think you would be to operate selfdriving vehicles as part of your fleet if available within the next 5-years?

(i) Start presenting to display the poll results on this slide.





How long do you think it would take you to get ready to operate these vehicles?

(i) Start presenting to display the poll results on this slide.

Ś Centre for Connected & Autonomous Vehicles

Questions?



k lawrence.thurbin@ccav.gov.uk



gov.uk/ccav



Changing Legislation for our future transport



Q&A

To ask your question please use the link:

https://www.sli.do/ #FE24





What workshops need to do to meet with today's O Licence expectations and to prepare for the future

Kevin Rooney

Traffic Commissioner for the west of England

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**

This morning



- Rating your maintenance (provider)
- Making the TM CPC exam more relevant
- Brake testing 2025
- From the Public Inquiry room


Maintenance Rating Scheme





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NFDA



IRTE

CPt Driving the UK forward Driver & Vehicle Standards Agency



Traffic Commissioners for Great Britain

Department for Transport

24 Safety inspectors

Name	External?	Workshop address	
Adams Morey Bournemouth	Yes	Yeomans ind Park, Bournemouth	Remove
Adams Morey Portsmouth	Yes	ADAMS MOREY LTD, PORTSMOUTH	Remove
Adams Morey Saltash	Yes	HMG House, Saltash	Remove
Adams Morey Southampton	Yes	Redbridge Causeway, Southampton	Remove
Chard Trucks	Yes	KINGFISHER HOUSE, CHARD	Remove
Cormac Solutions Bodmin	Yes	CORMAC SOLOUTIONS LTD, BODMIN	Remove
Harwoods Southampton	Yes	HARWOODS TRUCK CENTRE, SOUTHAMPTON	Remove

12,153 unique workshop postcodes on 65,535 licences



Workshop addresses by number of operators





- Jointly owned by the industry, supported by the regulators
- Multiple levels
- Aim to be open to as many as possible starting level is "qualified"
- Trials starting soon
- If successful launch next April
- Find out more at IRTE workshop rating scheme page

Transport Manager CPC





"From April 2025 there will be an expectation that a laden roller brake test or EBPMS will be the only accepted methods to assess brake performance"

• A brave commitment – what now?

From the PI Room



Consistency is everything

Licence plate: C280 Dtp Number : 313877 TYPE APPROVED Vehicle Make : Vehicle Type : 3 Axle Semi-Trailer		GVTS: M&M Trailers Avonmouth, BS11 0YB			
		Date: 24/06/22	Time: 09:38		
		GVW : 39000 kg	TAW : 24000kg		
AXLE 1 -	3159kg				
		BIND	IMBALANCE	MAX. FORCE	
Service	N/S	PASS	914kgf	914kgf (L)	
· · · · · · · · · · · · · · · · · · ·	0/5	PASS	842kgf (8%)	842kgf (L)	
Parking	N/S		1055kgf	1055kaf (L)	
	0/5		911kgf (14%)	911kgf (L)	
AXLE 2 - 3	3234kg				
		BIND	IMBALANCE	MAX, FORCE	
Service	N/S	PASS	920kgf	920kgf (L)	
	0/5	PASS	862kgf (7%)	862kgf (L)	
Parking	N/S		1057kgf	1057kaf (L)	
	O/S		928kgf (13%)	928kgf (L)	
XLE 3 - 3	324 kg				
		BIND	IMBALANCE	MAX FORCE	
ervice	N/S	PASS	1026kgf	1026kgf (I.)	
	0/5	PASS	816kgf (21%)	816kgf (L)	
arking	N/S		11046~5	11041	
110-110 (11-10) (1 -4	0/5		1050L S VER	1104kgf (L)	

Consistency is everything

Licence plate: C280		GVTS:	GVTS: M&M Trailers		
Dtp Number : 313877 TYPE APPROVED Vehicle Make :		0,10,	Avonmouth, BS11 OYB		
		Date	30/07/22	m' 00-30	
Vehicle Ty	ype : 3 A	xle Semi-Trailer	GVW :	39000 kg	TAW : 24000kg
AXLE 1 -	3159kg				
		BIND		IMBALANCE	MAX. FORCE
Service	N/S	PASS		914kgf	914kgf (L)
	0/5	PASS		842kgf (8%)	842kgf (L)
Parking	N/S			1055kgf	1055kaf (L)
	0/5			911kgf (14%)	911kgf (L)
AXLE 2 - 3	234kg				
		BIND		IMBALANCE	MAX. FORCE
Service	N/S	PASS		920kgf	920kgf (L)
	0/5	PASS		862kgf (7%)	862kgf (L)
arking	N/S			1057kgf	1057kaf (I.)
	0/5			928kgf (13%)	928kgf (L)
XLE 3 - 33	324 kg				
	A A A A A A A A A A A A A A A A A A A	BIND		IMBALANCE	MAX FORCE
ervice	N/S	PASS		1026kgf	1026kgf (L)
	0/S	PASS		816kgf (21%)	816kgf (L)
urking	N/S			1104kgf	1104kgf (L)
	0/S			1059kgf (5%)	1059kgf (L)
ST SUMMAR	Y			INSUPPICTENT T	

It's all about control

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🚺 🔕 🛅 🖂

A Wiltshire haulage firm has had its licence revoked after an investigation found the vast majority of its drivers were employed through a limited company.

The decision to remove the operator licence held by Quick Road Transport by the traffic commissioner Kevin Rooney followed a warning by the senior TC that employment arrangements by hauliers would continue to be scrutinised.

According to Rooney, a DVSA investigation into the firm, which ran 15 HGVs out of two operating centres in Cricklade and Swindon, found that all bar one of its drivers had set up a limited company

Legit?

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CERTIFIED TRUE COPY

ssued to:		issued by:
RICHARD ANTHONY S T/A 1ST TRAVEL 13 HEMPLANDS CHEDWORTH CHELTENHAM GL54 4NH	GAUNDERS	Office of the Traffic Commissione West of England Jubilee House Croydon Street Bristol BS5 0GB 0300 123 9000
Public Service Vehicle	Restricted	Licence number: PH1105614 Not transferable
Date of issue:	11/01/2012	
Next checklist date	31/12/2026	

The Traffic Commissioner hereby authorises the holder of this licence to use on a road public service vehicles, which have their operating centres in this Traffic Area, for carrying passengers for hire or reward, subject to the condition that the total number of vehicles used under this licence at any time does not exceed the maximum number of discs issued & any other conditions which are set out overleaf.

The maximum number of Public Service Vehicles authorised in accordance with the Public Passenger Vehicles Act 1981 (as amended) is:

Public service vehicles authorised	4	
Number of discs issued	4	

Or not?

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Public Service Vehicle Restricted		Licence number: PH1105614 Not transferable
Date of issue:	11/2012]
Next checklist date	31/12/2026	7

The Traffic Commissioner hereby authorises the helder of this licence to use on a read public service vehicles, which have their operating centres in this Traffic Area, for carrying passengers for hire or reward, subject to the condition that the total number of vehicles used under this licence at any time does not exceed the maximum number of discs issued & any other conditions which are set out overleaf.

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Number of discs issued	4	_

And finally, we're moving...



What workshops need to do to meet with today's O Licence **LOGISTICS UK** expectations and to prepare for the future

Q&A

To ask your question please use the link:

https://www.sli.do/ #FE24





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Enhanced technology and what you need to do to maintain it

Roger Clarke

Head of Electromobility & Customer Advanced Solutions, Renault Trucks

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**

Workshops of the future Roger Clarke – Head of Electric Mobility & Customer Advanced Solutions, Renault Trucks UK & Ireland

FLEET ENGINEER CONFERENCE, LOGISTICS UK June 19th, 2024



The Decarbonisation Revolution

"Our Industry is likely to change more in the next 10 years than it has in the last 100 years"





Decarbonisation Legislation (Global/ EU)

Climate Change, Air Quality & the Paris Agreement

- Limit Global Warming to 1.5 degrees (190 countries in agreement)
- 7% of European CO2 is generated by Road Haulage IEA (International Energy Agency)

EU Legislation

- EU framework: VECTO Vehicle Energy Consumption Calculation Tool
- Limit HGV CO2 vs 2019 (by 15% for 2025 and by 30% for 2030)
- Fuel efficiency tyres and aero-dynamics and move from fossil fuel

Customer & Project Demands

- New business tenders
- Green credentials increasing focus







Decarbonisation Legislation (UK)

Legislation

- National commitment to reaching net zero by 2050 – 2045 in Scotland.
- Local environmental policies including:
 - ULEZ
 - Clean Air Zones
 - Congestion zones
 - Low Traffic Neighbourhoods
 - Zero emissions streets.





- National commitment to Net Zero
 - 2050 England, Wales & Northern Ireland
 - 2045 Scotland
- Introduction of LEZ, ULEZ and ZEZ
- Ban on sales of new, non-zero emission HGVs
 - From 2035 <26T
 - From 2040 All new HGVs

- Build awareness & experience
- Set decarbonisation strategies & objectives
- 11 years is not far away



Renault Trucks Today



Targets:

- 2030 50% of trucks sold to be EV
- 2040 100% non-fossil fuel new trucks
- 2040 Carbon Neutrality

UK Dealer Readiness:

Many UK dealers already equipped, trained and resourced to maintain electric HGVs and have been since 2020

- Compressors & Air Guns ×
- Solar Panels ✓

UK Network Sustainability Project: >42% reduction in Scope 1 & Scope 2 emissions from 2019 to 2023



57

100% Fossil Free Transport Solutions by 2040



A wide electric vehicle range from 650kg to 44 tons

Renault Trucks today!

Rate

- E-Tech D & D Wide 16-26t Serial production since March 2020
- E-Tech T & C Serial production since November 2023
- E-Tech Vans Trafic & Master and Kleuster E-Cargo Bikes
- And a complete range of HVO compatible ICE vehicles from 2.7-44t





























What does the revolution mean for workshops?

We will start to see a growing number of "mixed fleets"

Today's Fleet Mix:

- Mainly diesel
- Some HVO/CNG vehicles
- Minimal EV's

In the next 20 years:

- Gradual diesel phase out
- Penetration of new technologies
 - = increased complexity



Why increased complexity?

- Various fuel types
- Different skills required
- Different ways of working
- BUT much remains the same
- More to an inspection/ service than just the engine

$\langle \rangle$ RENAULT TRUCKS What does the revolution mean for workshops? Key Steps Key Areas • Understanding • Strategy Funding 61 Site/Workshop Training Tools **Process** Preparation Fee Structure • Implementation • Other (Parts, Paint,

Site Adaption

Washing, etc.)

Charging

Training #1

Technicians - Nationally Accredited Courses:

- IMI Level 1 EV Awareness
- IMI Level 2 Hazard at Recovery, Routine Maintenance
- IMI Level 3 System Repair & Replacement
- IMI Level 4 HV Fault Diagnosis

Supported by e-learning courses

Manufacturer Specific Product Training

• Renault Trucks: LCV, D, C & T Ranges

Apprenticeship Programmes:

- **Opportunity** to attract younger, more diverse workforce
- EV, Data & Connectivity vs Oil & Filter Changes

Not just Technicians – Develop a Plan for the Whole Team

- Sales, Reception, Valeters...
- Processes, Ways of Working & different risks



Training #2

Health & Safety

- Risk assessments, safe systems
 - Working with HV = risks of electric shocks
 - Components retaining high voltages even when off
 - Safety buddies, manual handling of batteries
 - Quieter movement of vehicles
 - Effects on personal medical equipment (eg pacemakers)

Consider First Aiders & Second Responders

- Potential increased risk of previously less likely events
 - Shocks & burns
 - Calcium Gluconate gel for Hydrofluoric Acid contact

Use & Refresh

- Consider phasing/ timing of training
- Use it or Lose it Principle
- E-Learning Refreshers





Tooling

Lock Out Systems

Work Bay Demarcation

PPE

- Insulated electrical gloves
- Over gloves
- Glove tester
- EV face shield visor
- Anti-static non-metallic boots
- First Aid Insulated Rescue Hook
- Multi-Meters
- Thermal Thermometer
- RPE for vehicle recovery/incident attendance



Processes

Booking In

- Pre booking a time slot or a technician slot?
- How are holidays & sickness covered?

In Workshop

- Bay demarcation/ barriers
- Vehicle lock out/ key security
- De-commission & in-cab signage
- Sign-off processes (especially across shift changes)
- Managing software updates OEM central systems
- Don't print work instructions potential for regular changes

Vehicle & Battery Storage

- Regular EV checks for longer term storage
- SoC monitoring Battery run down, inc. when in build
- Managing defective batteries



Charging

Customer Uptime is essential

 Do you charge the vehicle? or inspect and return for your customer to charge?

Ability to Charge

- Site infrastructure (Supply, Capacity, Usage, Headroom)
- Planning for today, future and the long term
- Defining correct charging capacity;
 - 1 vehicle @ 400kWh + 22kW charger = 18 hours
 - 1 vehicle @ 400kWh + 40kW charger = 10 hours
 - Multiple vehicles as transition develops

Installation Process

- DNO engagement & timescales
- Investment / Capital Requirements
 - Build in to forecast and investment plans
 - Charging as a Service developing
 - Consider grant availability



Site Management / Adaption #1

Placement of a charger

- Ability to charge multiple vehicles at the same time
- New revenue stream?
 - Make available to the public?
 - BUT H&S implications of having 3rd parties on site •

Workshop Format

- Vehicle design developments
 - Chassis design and battery pack layout may change
 - Effect on weight distribution
 - Lift design

Segregated EV areas?

- Space management
- Maximising throughput with growing mixed fleet penetration



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angle$

Site Management/ Adaption #2

Storing Accident Damaged Vehicle (possibly with battery damage)

- Initial risk assessment eg fire / chemical
- Demarcation/ signage
- Regular monitoring eg thermal runaway
- Evacuation plan
- Impact on site space & parking
 - 15m exclusion zone for 48 hours (Government advice)
 - Then 2m gap recommended

EV Fire risk vs ICE?

May 23 Swedish Report



 ICE vehicles 20x more likely to catch fire than EV

In Sweden

- 611,000 ECVs (23 fires) 0.004%
- 4.4m ICE (3,400 fires) 0.08%





Other considerations... and developments!

Body Builder Relationships

- Bodybuilder Agreement
- Training to safely work on vehicles
 - Knowledge of vehicle architecture
 - Ability to safely de & re-commission
- OEM specific training
- Storage checks process

Parts

- Understand key fast moving parts
- Balance of Component costs vs stocking levels
 - Balance of cash flow vs uptime

Painting

- High temperatures in paint oven curing cycle can damage battery cells
- Longer, lower temperature cure may reduce throughput levels

Washing

Avoiding HV areas with jet wash

RT Virtual Reality Goggles

- Now more mature product range
- 2% may need goggle assistance

Data & Connectivity

- Over the Air (OOA) software updates
- OEM Central System access to non-OOA updates
 - Book slot with OEM to complete
- Maximising Uptime by OEM
 - PREDICT
 - Geo-Fencing

In Summary

Key Steps

- Understanding
- Strategy
- Funding
- Site/Workshop Preparation
- Fee Structure •
- Implementation •



 $\langle\!\!\langle\rangle\!\!\rangle$ RENAULT TRUCKS



"The decarbonisation revolution is here!"

We need to increase...





Awareness

Understanding

Engagement

3

11 years is not far away...





Thank you!


Enhanced technology and what you need to do to maintain it LOGISTICS UK

Q&A

To ask your question please use the link:

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Fleet Engineer

19th June 2024





More than just a trailer

Owen Jenkins Engineering Manager, BPW

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**



More Than Just A Trailer

BPW Limited | Owen Jenkins | Engineering Manager June 2024





More Than Just A Trailer **Overview**

1 Suspensions, Brakes and Axles

- What do they do?
- How do they do it (brake calculations)?
- What else can they do (EBS, EBPMS)?
- Drum vs disc

2 Maintenance and Technical Training

- Maintenance schedule
- Scheduled/preventative maintenance
- Correct maintenance
- Technical training

3 Electric Power

- Decarbonisation
- eAxle / ePower / eTrailer



More Than Just A Trailer **Overview**

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What do they do?

- Support the trailer and weight of the load
- Stop the trailer in a controlled manner
- Balanced braking
- Harmonised with tractor unit
- Controlled by ABS







How do they do it? – Brake calculations

UN ECE document "Consolidated Resolution on the Construction of Vehicles (R.E.3) (Revision 6)" – ECE/TRANS/WP.29/78/Rev.

UN-ECE R13 – Brake Performance Tests (Annex 4,11,19) Type O semi-trailer

Specification of trailer = braking force required





How do they do it? – Brake calculations

- Controlled by ABS (roll stability, check braking event)
- Harmonised with tractor unit





Trailer over-braking



Truck over-braking



Harmonised braking



What else can they do? – EBS, EBPMS

- Electronic Braking System modern ECU-controlled braking system
- Electronic Brake Performance Monitoring System uses data from EBS and telematics to continually monitor the brake performance Compares actual braking to expected performance Warns of underperforming brakes Sharing EBPMS data demonstrates compliance with the current DVSA requirements Can be used as an alternative to Roller Brake Testing







Drum vs disc – the right product and application



- Brake shoes can be changed without removing the wheel
- Low-cost spares and lower whole life cost
- Greasing of camshaft and slack adjuster required
- Excellent brake efficiency and longevity of friction material
- Enclosed brake with components protected giving greater environmental resilience

- Able to remove disc without removing caliper Higher costs to replace modular parts
- No additional greasing required
- Less susceptible to brake fade at high temperatures
- Open brake with exposed components



Overview

Suspensions, Brakes and Axles

- What do they do?
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More Than Just A Trailer Maintenance and Technical Training

Maintenance Schedule

• Every manufacturer will have a defined schedule for part inspection and part replacement

Scheduled / Preventative Maintenance

- Maintenance guidelines are based on keeping moving parts in the best condition
- Parts in a well-maintained condition will perform better, last longer, and give the best TCO



More Than Just A Trailer Maintenance and Technical Training

Correct maintenance

- Carrying out maintenance in line with the manufacturers guidelines is the most important aspect of keeping a trailer on the road and productive for the operator
- Trained technicians and the correct workshop tools



Right people Right tools Right parts

 Vehicle compliance and warranty cover









More Than Just A Trailer Maintenance and Technical Training

Technical training

- OEM-developed training course
- Delivered at our fully equipped training centre in Leicester
- Supported by a week-long mobile training suite 'Infomobil'
- Led by BPW technicians with extensive experience at BPW and in the real world



training@bpw.co.uk



Overview

1 Suspensions, Brakes and Axles

- What do they do?
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2 Maintenance and Technical Training

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More Than Just A Trailer Electric Power



Decarbonisation

Carbon Pricing
 Fuel costs
 Emissions charges





CO

reduction

90

\odot Carbon Reduction through Legislation

 \circ CO₂ emissions reduction:

15% for trucks in 2025 compared to 20197.5% for trailers10% for semi-trailers in 2030

\circ VECTO

- <u>V</u>ehicle <u>Energy</u> <u>Consumption</u> calculation <u>To</u>ol
- software simulation of CO₂ emissions and fuel consumption



More Than Just A Trailer Electric Power

eAxle – a light commercial electric drive axle

- Phase 1 conversion of existing vehicles (since 2020)
 - 40 units in daily use with customers since 2021 (goods transport, municipal vehicles, couriers)
 - Test mileage of more than 1,000,000 km
 - Individual vehicle mileage of more than 60,000 km
- Phase 2 electrification of 7.5t chassis to build experience with integration of driver assistance systems and current safety standards
 - EU type approved
 - Gen 2 axle and power control and distribution unit
 - eDrive and vehicle control software package





we think transport

More Than Just A Trailer Electric Power

ePower – a generator axle

- A project with **THERMO KING**
- Generators recover energy
- Charge a trailer-based battery
- Replace trailer-based powerplants







2x generator transmission

More Than Just A Trailer Electric Power

ePower – a generator axle

 Refrigeration units become emission-free saving the operator on both fuel and maintenance costs

Technical data



More Than Just A Trailer Electric Power

ePower – a generator axle

- Product differentiators and USPs
 - Double generator power
 - Optimal system engineering in terms of current laws
 - Compliant with automotive safety standards (ISO 26262) – protection against failure modes of axle and inverter according to ASIL Level A*





Advantages

- Recuperation starts at 15 km/h
- Slope detection for recuperation when driving downhill
 - Due to the features above, there is only
 - a slight increase in fuel consumption

No stationary charging is needed





More Than Just A Trailer Electric Power

eTrailer – a driven axle trailer, controlled by the tractor unit

• '... trailer means any non-self-propelled vehicle on wheels designed and constructed to be towed by a motor vehicle." VO2018/858



More Than Just A Trailer **Contacts**

BPW Limited

- Website <u>www.bpw.co.uk</u>
- Technical Services 0116 281 6100 Opt. 4
- Email <u>info@bpw.co.uk</u>

Find us on social media

- LinkedIn @BPWLimited
- Facebook @BPWLimited
- YouTube BPWUK
- Instagram @wearebpwuk



Service and Maintenance training

- Website <u>www.bpw.co.uk/training</u>
- Email <u>training@bpw.co.uk</u>





Thank you for your attention.

Are there any questions?



More than just a trailer



Q&A

To ask your question please use the link:

https://www.sli.do/ #FE24



Hydrogen for Logistics

Celia Greaves CEO, Hydrogen Energy Association

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**

The role for Hydrogen in transport logistics

Celia Greaves, Hydrogen Energy Association Wednesday 19th June





About us





- The leading UK Hydrogen trade group
- Over 110 member organisations, encompassing all aspects of hydrogen and its applications
- A key focal point for national and international engagement on hydrogen and its activities for UK plc and UK businesses.
- Convening the Hydrogen Coordination Forum.

Hydrogen is widely recognised as an essential component of a future low carbon economy in the UK

Hydrogen demand and proportion of final energy consumption in 2050



Source: Hydrogen Strategy, BEIS, August 2021

410,000

Hydrogen Enerav

Association

Jobs that could be created UK hydrogen technology supply chains by 2050

£13-£24bn

Saving to the electricity system that could be delivered through long term storage between 2030 and 2050

(Source: https://hydrogeninnovation.co.uk/reports/ukhydrogen-innovation-opportunity/

£46bn Value that could be generated for the UK economy by the hydrogen industry

50TWh

Level of demand in industry that could be met by low carbon fuels, primarily hydrogen, in 2035

(Source: https://hydrogeninnovation.co.uk/reports/ukhydrogen-innovation-opportunity/

Scaling Up Supply



- Hydrogen production target of 10GW by 2030, with 6GW from electrolytic hydrogen
- £240 million Net Zero Hydrogen Fund to provide capital support





- Hydrogen Business Model providing price and volume support to de-risk operation
- Low Carbon Hydrogen Standard provides basis of certification scheme

UK Hydrogen projects map



Hydrogen for Domestic Heating Projects

- Over 70+ low-carbon hydrogen production projects, post FEED, mapped
- Aberdeen H2 Hub (400MW), Cromarty Hydrogen Hub (300MW), Lowestoft hydrogen production facility (200MW) and Hybont (250MW) are some of these pioneering projects will be the first at scale electrolytic projects online
- Many industrial use projects advancing rapidly with HEA members and their partners across the country e.g. JC pears, Kimberly-Clark, Budweiser Brewery
- Key hydrogen mobility examples such as Fleetwide Conversion for Aberdeen City Council, and Teesside Transport Hub with various HEA members involved, including ULEMCo



https://ukhea.co.uk/uk-hydrogen-project-map/

Main hydrogen uses







Illustrative hydrogen demand in 2030 / 2035



Source: Hydrogen Production Delivery Roadmap, DESNZ, December 2023





Hydrogen for Transport: the opportunity (1)

- The transport sector accounted for over a third of final energy consumption in 2019
- Up to 45TWh of demand in transport could be met by hydrogen in 2035
- Applications include road transport, rail, shipping and planes
- Both fuel cells and combustion are options





Hydrogen for transport: the opportunity (2)

The Need to Decarbonize

- The Zero Emission Vehicle (ZEV) Mandate
 - 80% new cars and 70% of vans sold in UK must be zero emission by 2030, increasing to 100% by 2035.
- HGVs Decarbonization Roadmap
 - New HGVs <26 tonnes must be ZE by 2035 heavier HGVs by 2040.

The Challenge

- The Government already accepts 44 ton HGVs travelling >100km is a problem - an articulated HGV travels 400km/day at high speed with high power demands (Catapult, 2021).
- 3.5 ton LGVs to be ZEVs by 2035 many journeys with large payloads cannot rely solely on batteries.





Hydrogen vs electric for HGVs

Pros
Quick refuelling
High energy density
Seamless transition experience

Cons Infrastructure developments Up front costs


Hydrogen for transport: status



• £23 million investment to establish the UK's first multi-modal hydrogen transport hub, with others to follow.

- £200m zero carbon freight trials recently announced.
- £30 million project to demonstrate a viable solution with hydrogen deployment along the M4 corridor.
 Minimum of 4 HRS and 30 / 300 HGVs to be deployed / established by 2026 / 2030.



Sources (Clockwise from top left: ITM Power and Shell, ULEMCo, Fuel Cell Systems

HEA survey of fleet operators' decarbonication

Respondents' Fleets

- Long haul lorries of towing capacity 26-44 tones, loader cranes, buses, vans of varying sizes, and cars.
- The average daily range of all types of fleet vehicles = **250 miles**.

Hydrogen's Role in Decarbonization

- Expected solutions ranged from Biodiesel to CNG. hydrogen solutions most popular (**50%** of respondents) with battery electric and Biodiesel each noted by **28%** of respondents.
- 85% planning to increase the use of alternative fuel solutions by 2035, of which 15% said contingent on price, technology availability, and performance.
- Hydrogen fundamental role in achieving zero emission transport by **2035** and **2040** phase out dates.

Challenges of Decarbonization

- 1/3 respondents: finding zero emission solution is as hard as it can be. 2/3 respondents ranked the difficulty in top 3 levels out of 10.
- Notable barriers: Vehicle range, costs, large payloads, refueling infrastructure, availability and choice, funding, roadmap uncertainty, lack of hydrogen ecosytem, safety norms.

Case Study – Wales and West Utilities

- 2,370 strong commercial fleet, including 1.400 light commercial vehicles which account for 85% of fuel use (all vehicles owned not leased)
- Challenge: full decarbonization by 2035
- Way forward for light duty vehicles:
 - < 50% of journeys could be completed by a BEV (assuming overnight recharging)

> 95% of journeys could be completed by a hydrogen FCEV (assuming daily refuelling)

 'We need H to act as an 'and' technology. It offers a more acceptable option for decarbonisation?



Accelerating progress



Hydrogen is at the heart of the UK's energy transition





- Hydrogen has a key role to play in decarbonisation, including across transport logistics
- It offers a number of benefits over alternative low / zero carbon options including range, energy density, payload and refuelling times
- Progress with costs and refuelling infrastructure will be vital to accelerating progress



Thank you ukhea.co.uk



Hydrogen for Logistics



Q&A

To ask your question please use the link:

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LOGISTICS UK

Training and the next generation

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**





LOGISTICS UK

Colin Gleghorn

Managing Director, Kaizen 247 **Phil Roe**

President, Logistics UK

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**

Opening slide

- 1. Purpose and Objective Engineers The future 5 years.
- 2. Content for today:
 - i) Industry position
 - ii) Opportunity for change
 - iii) Help that is available
- 3. CPD Our progression.
- 4. Call to Action What action is needed, now.
- 5. Training Courses offered by LUK, incl Gas.

Industry Dilemma

Workforce no longer fit for purpose

Ageing Engineers not being replaced

Drop off rate faster than infill

Lack of apprentices to fill the funnel

Largest increase in vehicle, fuel and propulsion technology since industry inception

Curriculum no longer fit for purpose

Electric

Hydrogen

Gas

Alternative fuels

Technology not mature enough for firm industry decisions

Quotations

"Industry struggles to find suitably qualified engineers and mechanics" Logistics UK Skills review 2023

"IMI predicts 160,000 shortfall across UK automotive sector by 2031" The IMI March 2023

"Industry facing biggest skills challenge of the last two decades" Steve Nash IMI April 2024

"only 16% of 16-18yr old consider career in automotive" The IMI Automotive Sector report Aug 2022

"Euro NCAP Vision Zero road safety, highlights the skills gap" Euro NCAP April 2023

"The shortage of fully trained engineers is affecting the whole UK transport industry" Total People Nov 2023

"Coach and Bus sector facing engineering skill shortage" CBW April 2024

Industry Statement

The UK automotive sector faces a critical labour and skills shortage.

With an expected shortfall of 642,000 technicians by 2024, the impact is multifaceted Car prices have risen, affecting sales for manufacturers, dealers, and workshops. However, strategic investment in training and technology can be a game-changer. By upskilling the workforce, fostering innovation, and embracing digitalisation, the industry can enhance competitiveness, drive efficiency, and create a safer, more sustainable future for automotive manufacturing and services

Engineer training in next 5 years

TODAY'S ISSUE

Compounding problem; changing product with ADAS, Alternative fuels, Remote Diagnostics

Ageing workforce/retirement favoured

Migration of workforce

Occupancy mobility

Lack of investment

Slow on uptake of technology at workshop level

Tooling is expensive / hard to justify

Rapid changing product

Diverse employee needed for the future

Legislative demands

WORK TOGETHER

Employers

Educational providers – Primary and Further

Government – Local and National

Industry recruitment and training organisations

TRAINING NEEDS

Different skill set

Dynamic approach to work

Technology based

Highly focussed on diagnostics

CPD

Engineer Qualification

Set number of hours every year to maintain qualification

- Upskill with continuous improvement
- Best practice shared with peers
- Investment in your people
- Fantastic retention technique

People Development Quote

"Train them and they may leave. Don't train them and they will definitely leave."

Action points now

Priorities for now

What new products are you committed to and how does the training for your staff become realised?

Start the process of looking at next 5-year training needs

Identify what your staffing levels look like between now and 2029

Communicate with local colleges and begin process of right people on right training

Do not wait for arrival of new tech, before you decide to train your people

Do it now

Action points back at work

Priorities when back at work

Perform a skill gap analysis of existing workforce

Identify key future tasks for engineers

Change skills gap regularly

Invest in tooling and equipment for the future

Train existing staff in new technology

Firm up the commitment to work with FE's / Colleges

Reach out to specialist recruitment agencies

Communicate with manufacture/importer/suppliers on new technology

Call to action

Priorities

Skill gap analysis

	SKILLS										
S		Skill 1	Skill 2	Skill 3	Skill 4	Skill 5	Skill 6	Skill 7	Skill 8	Skill 9	Skill 10
	Name 1										
	Name 2										
	Name 3										
ER	Name 4										
Ч	Name 5										
ß	Name 6										
É	Name 7										
	Name 8										
	Name 9										
	Name 10										

Call to action

Priorities		
<u>1 110111105</u>	Score / Level	Definition
Skill gap analysis	0 = Unaware	o Does not consi
		o Is new to role, r
		o No knowledge
	1 = Aware	o Has an appreci
		practice.
		o Knows what ne
		o Can't do it yet
	2 = Knowledge	o Has an increase
		task under sup
		o Is usually capat
		o Can do it, with
	3 = Understanding	o Knowshow the
		the practice of
		o Able to perform
		o Can doit
	4 = Competent	o is fully conversa
		through applic

	Score / Level	Definition
5	0 = Unaware	o Does not consider the task in its entirety to be part of their role.
		o Is new to role, never seen the task performed.
		o No knowledge
	1 = Aware	 Has an appreciation for the subject but has yet to put it into
		practice.
		o Knows what needs to be done but requires continual guidance.
		o Can't do it yet
	2 = Knowledge	o Has an increased level of knowledge in the subject and performs the
		task under supervision.
		o Is usually capable of doing the task but has supervision.
		o Can do it, with help
	3 = Understanding	o Knows how the subject is to be performed and has experience in
		the practice of its operation under limited supervision.
		o Able to perform the task with little to no supervision.
		o Can do it
	4 = Competent	o Is fully conversant with the subject matter and confirms their ability
		through application.
		 Fully capable of carrying out the task.
		o Can supervise and coach others

Logistics UK Engineer training offer

TRAINING COURSE DEVELOPMENT

TRAINING COURSES

		Complete	In	In
		Complete	development	discussion
EV/Hybrid Awareness	Level 1	✓		
EV/Hybrid Service & Maintenance	Level 2/3	✓		
Hydrogen Awareness	Level 1		×	
Hydrogen Service & Maintenance	Level 2/3			\checkmark
Gas Vehicles Safety Awareness	Level 1			\checkmark
Gas Vehicles Service & Maintenance	Level 2/3			✓
ADAS - Diagnosis and Recalibration	Level 2			✓
CPD for Engineers - Maintain IMI accreditation				✓

Level 1 - All employees Level 2/3 - Engineers





INSPIRING THE NEXT GENERATION

Phil Roe, President Logistics UK









HERATO BUSH YOUR BOUNDARIES TOGISTICS

WHY NOW?

- 1.7 million jobs in the logistics sector, rising to 2.8 million
- Fifth largest sector but a well-kept secret
- Skills shortage gaps fitters, mechanics and technicians
- Ageing workforce 47.2% of managers and directors in warehousing are set to retire by 2027
- Competing with our own sector AND others that need the same skills, e.g. tech sector

Logistics UK Skills Report (2023) and LMI for All (2024)

WHAT IS THE CAMPAIGN?

- Launched 10.08.22
- Created Generation Logistics Hub
- Integrated social media and PR campaign
- Year 1 figures (to 30.09.23):
- 822m opportunities to see
- 789,000 site sessions
- 3.7m engagements on social media
- Ambassador network launched in December 2022 now over 330 people nationwide

Awareness increased by 11% and sentiment by 170%

1 40% increase in those giving a positive score for the appeal of a logistics career





GENERATION LOGISTICS: SPONSORS





TRADE ASSOCIATIONS



SUPPLY CHAIN GROUP

TRS Training Ltd

YEAR 2 – SUCCESS

- Created Education Hub
- Launched 2024 careers booklet
- Year 2 figures (to 31.05.24):
 - 470,000 website visits (93% of target)
 - Over 2.2 million engagements on social (76%)
 - Over 1000 downloads on the Education Hub (40% of target, with Generation Logistics Week to come)









On my first day the Managing Director gave me a

full tour, walked me round the workshop and

warehouses and talked me through everything. I

love the people I work with and the whole

working environment.

66



Samuel Morris-Nicholls Kinaxia Apprentice Mechanic



It's great to earn while you learn, and I would urge anyone to consider becoming a mechanic. My advice would be that if it's something you have an interest in, find out what's needed and apply. It's a great industry with so many amazing people that you'll get to know.

> Olivia Kavanagh Swain Group Apprentice HGV Mechanic

WHAT'S NEXT

- Become the knowledge gateway into logistics
- Expand the visibility of all routes into logistics
- Leverage relationships across
 Government
- Extend logistics knowledge in education including primary education
- Address sector shortage areas







NOW GET INVOLVED





Training and the next generation



Q&A

To ask your question please use the link:

https://www.sli.do/ #FE24



LOGISTICS UK

Making the most of Auditing

Neil Walton MBE

Managing Director A1 Fleet Compliance Safety Ltd

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**

Making the most of Auditing



Logistics UK Fleet Engineer Conf

Neil Walton MBE- MIRTE MSOE MCMI MARRM



Benefits of auditing

As a result of an audit, stakeholders may evaluate and improve the effectiveness of risk management, control, and governance over the subject matter.



The benefits of Auditing

- An effective and well-planned set of audit questions can be used to guide the SMT/SLT/CEO/COO to do what is required, not what they think is required.
- Don't forget the audit is only a snapshot of what was witnessed/evidenced/measured/assessed at that moment in time......
- SNAP, unannounced are the best "real time" audits to measure effectiveness.
- Good communications across the workforce being audited is key for buy in.





- Measure efficiency
- Are based on a best practice model for maintenance which supports
 ISO 55001


Example of a question

- Does the operator hold an operative Licence Y/N
- What does that measure?... What if it said what type of operator licence is held... a much more useful measurement and not a tick box response.
- Some audits are designed not to invade and ask too many questions this is so wrong and a dangerous game to play as a CEO with Corporate Manslaughter and Homicide Act obligations to abide by and to answer to IF...it or when, all goes Pete tong.



Government direction Daily Safety Defect Checks

AN UN-ROADWORTHY VEHICLE - IS AN UN-INSURED VEHICLE

Check your vehicle is safe to drive

You're responsible for making sure your vehicle is always safe to drive ('roadworthy'). It can be unsafe even if you have a current MOT certificate.

You can be fined up to £2,500, be banned from driving and get 3 penalty points for driving a vehicle in a dangerous condition.

There are different rules for commercial vehicles

Checks you should carry out

Every time you drive you should check:

- · the windscreen, windows and mirrors are clean
- all lights work
- the brakes work

Your vehicle's handbook will tell you how often to check the:

- engine oil
- water level in the radiator or expansion tank
- brake fluid level
- battery
- windscreen and rear window washer bottles top up with windscreen washer fluid if necessary
- tyres they must have the correct tread depth and be free of cuts and defects

The handbook will also tell you when your vehicle needs to be serviced.

Tyre tread

Tread must be a certain depth depending on the type of vehicle:

- cars, light vans and light trailers 1.6 millimetres (mm)
- motorcycles, large vehicles and passenger-carrying vehicles 1mm

Mopeds only need to have visible tread.

There must be tread across the middle three-quarters and around the entire tyre.

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Companies have a legal and moral responsibility to take effective action to manage workrelated road safety, in a structured and coherent fashion.

Auditing External Maintenance Providers (MPs)

- A: I am personally involved in conducting external audits on our MPs
- B: My company sub-contracts MP audits to an external company
- C: We don't currently audit our MPs at the level discussed
- D: Unsure how this works within our company
- E: Would like more info/support to create/conduct MP audits



External Maintenance Provider Audits

- A: I think this is a critical and worthwhile spend of our funds
- B: I do not think we need this as we only have a small fleet of HGVs
- C: We are considering taking this initiative forward imminently
- D: This is not a requirement so no need to be concerned
- E: Once we have an incident, we will look at progressing to MP audits



Good VS the Bad ways to Audit

- Just answer all questions = Tick box exercise
- Take their word = No real evaluation or measurement
- Don't view assets or vehicles = No integrity of those items
- Don't ask to see calibration/destruction registers = As above
- Always turn up when expected = Miss out non-compliant/hidden assets
- Allow yourself to be distracted/cakes/brews/chats = Miss vital clues
- Take gifts = Open yourself to bribery accusations
- Authoritarian, dictator, power trip, know all Build rapport, empathy, understanding, be a listener not a talker, use the audit to assist the struggling often ignored workforce to make improvements by bringing management onside.



Benefits of internal self-Audits VS External

- Assess in house practical performance Unbiased feedback gained
- Assess in house Processes in place ID gaps for improvement
- Assess in house Policies ID out of date legislation/regulatory information
- Assess vehicle and assets status -
- Assess external supply chain/service providers –



- SNAP Audits VS planned Audits Far outweigh due to real time unrehearsed performance and measurement of systems/vehicles/policies/calibrated items/SLAs in place
- External Accreditations DVSA ER/ Mission ZERO/FORS/MiRTE/ROSPA/ISO



Audits can highlight benefits & areas for improvement or failure of service provisions





Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk



Measured against SLAs which are often not in place

- Clearly defined SLA standards need to be in writing, explained in detail and agreed by both parties:
 - E.G Wheel nut checking during PMIs are you assured they are being checked? Have you asked for them to be checked?
 - If those tasks are not requested, they will only be checked and torqued when wheels are removed.
 - Audits can establish actual works undertaken from perceived work conducted
 - Important to know what the torque policy of the maintainers is and whether it suits your needs as the Fleet Engineer.
 - When was it last physically tested or checked?



戀 Office of the

Maint

Agreement

Traffic Commissioner

GV79: ANNEX D Maintenance contract

between

Agreement between the operator and a garage or agent for safety inspections and/or repair of vehicles and trailers subject to operator licensing

The Agreement is made the day of 20 ('the operator'), whose address/registered office is to be completed in full in box (a) below

-					
		of the one part, and			
	('the contractor'), whose address/registered office is to be completed in full in box (b) below:				

b.		
		of the other part.
	The contractor correction that ha fit will be caleforn to average the	de mestioned is the Cohedula holow on

The contractor agrees that he/it will, in relation to every vehicle mentioned in the Schedule below, on every occasion when that vehicle is submitted by the operator as mentioned in Article 2 below on or after the date of this Agreement -

- a. inspect all the items specified in the maintenance record in the form for the time being approved by the Department for Transport which relate to the vehicle;
- the vehicle and every part of it specified in that meals and repairs as may be necessary to ensure that the vehicle and every part of it specified in that maintenance record is in good working order and complies with every statutory requirement applying to it; and
 complete that maintenance record to show -
- (i) which items were in good working order and complied with the relevant statutory requirements when the vehicle was submitted;
- which (if any) items were not in good working order or failed to comply with those requirements when the vehicle was submitted but have been replaced or repaired so that (ii) those requirements are satisfied; and
- which (if any) items were not in good working order or failed to comply with those requirements when the vehicle was submitted and which have not been so replaced or (iii) repaired.
- d. provide the operator with a copy of every completed maintenance record.
- 2. The operator agrees that he/it will
 - a. submit to the contractor each vehicle mentioned in the Schedule below in order that the contractor may, as regards that vehicle, comply with the provisions of Article 1 above -

weeks of the Agreement, and, thereafter;



weeks of the date of the last safety inspection.

- b. pay to the contractor such reasonable charges as the contractor may make pursuant to his / its pay to be contactor such resolution to the contactor may make pursuant to mark to obligations under Article 1 above; and retain, and make available for inspection by an officer mentioned in Section 42 of the Goods Vehicles (Licensing of Operators) Act 1995 or Public Passenger Vehicles Act 1981, every maintenance record mentioned in Article 1 above for a period of at least 15 months commencing C.
- with the date of its issue.

This Agreement may be ended by either party giving the other intention to end it.

months written notice of his /its

Signature(s), or seal, of contractor

As witness (etc) Signature(s), or seal, of operator

3.

Please ensure that the form is FULLY completed at sections (a) (b), 2 (i) (ii) and 3. Please also ensure that it is signed by BOTH parties and the date is noted at the head of the form

The	Agre	ement i	s made the	5	day of	March	20	18	between	
a. Your Transport Co Ltd ('the operator'), whose address / registered offi					office is:					
	123	Regis	tered St	treet, City	, AB1 20	D				
							of	the one	part, and	
b .	Maintenance Co Ltd ('the contractor'), whose address / registered office is:									
	567	Gara	ge Road	l, Town, E	F3 4GH					
							0	f the oth	ner part.	
l. DCCa	The asion	ontra when the	actor agre at vehicle	es that he / is submitted	it will, in re by the op	elation to every ve erator as mention	ehicle mer ned in Art	tioned i icle 2 be	in the Sche slow on or	edule below, on after the date
Agre	emen	t -	t ell the it		d in the sec		d in the f		the first h	
	a.	Depar	tment for T	ransport whi	ich relate to	the vehicle;	a in the fi	orm tor	the time b	eing approved
	b.	if the operator so consents, carry out such renewals and repairs as may be necessary to ensure th vehicle and every part of it specified in that maintenance record is in good working order and complie every statutory requirement applying to it; and								
	c.	c. complete that maintenance record to show -								
		 which items were in good working order and complied with the relevant statutory requirem the vehicle was submitted; 							ory requirements	
		 (ii) which (if any) items were not in good working order or failed to comply with those requires the vehicle was submitted but have been replaced or repaired so that those requires satisfied; and (iii) which (if any) items were not in good working order or failed to comply with those requires the vehicle was submitted and which have not been so replaced or repaired. 							se requirements ose requirement	
									oly with tho epaired.	se requirements
	d.	provide the operator with a copy of every completed maintenance record.								
2.	The	The operator agrees that he / it will -								
	a.	submit to the contractor each vehicle mentioned in the Schedule below in order that the contractor m regards that vehicle, comply with the provisions of Article 1 above -								
		(i)	within	8	weeks of	the Agreement, a	nd, therea	fter;		
		(ii)	within	8	weeks of	the date of the las	st safety in	spection	L	
	b.	pay to the contractor such reasonable charges as the contractor may make pursuant to his / its oblig under Article 1 above; and								
	c.	retain, and make available for inspection by an officer mentioned in Section 42 of the Goods V∉ (Licensing of Operators) Act 1995 or Public Passenger Vehicles Act 1981, every maintenance mentioned in Article 1 above for a peniod of at least 15 months commencing with the date of its issue.								

[your signature]	[garage signature
Please ensure that the form is FULLY completed at se	ctions (a) (b), 2 (i) (ii) and 3.
Please also ensure that it is signed by BOTH parties a	nd the date is noted at the head of the form.

Signature(s), or seal, of contractor

As witness (etc)

Signature(s), or seal, of operator

Making the most of Auditing



Q&A

To ask your question please use the link:

https://www.sli.do/ #FE24





LOGISTICS UK

Lunch break



LOGISTICS UK

Fleet Engineer

19th June 2024



Sponsor Prize Draw





Smart Tablet





LOGISTICS UK

Managing serious and fatal incidents in workshops

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**





LOGISTICS UK

Chris Powell

Partner, Weightmans Elliott Kenton Partner, Weightmans

Use Sli.do for your questions Join at: <u>www.sli.do</u> **#FE24**



Weightmans

Managing serious incidents in workshops

19 June 2024

Elliott Kenton (Partner) & Chris Powell (Partner) Health and Safety and Transport Regulatory Group – Weightmans LLP

> <u>elliott.Kenton@weightmans.com</u> / <u>chris.powell@weightmans.com</u>



Why it matters

- There were 15 fatal injuries to workers and 16 fatal injuries to members of the public in 2022/23 in the T&L sector.
- Fatal injury rate in transport is **2.2** times that of the all industry rate.
- **29,000** workers sustained non-fatal injuries between 2020 2023.
- The total cost to the sector is estimated to be **£1 billion** (lost output, healthcare costs, monetary valuation of human injury).



The hazards of vehicle workshops (Non-Exhaustive)

- Vehicle workshops have a variety of hazards:
 - Crushing incidents from under-vehicle access;
 - Impact from moving vehicles;
 - Fire and explosion from mishandling of flammable substances, including petrol or compressed gas.
 - Trips/falls/manual handling
 - Falls from height
 - Occupational disease from exposure to chemicals (paints, glues, sealants).





What are the hazards in your workshop?





Cutting Corners Limited – a Case Study

© Weightmans LLP



Cutting Corners Limited (CCL) – a case example

- An explosion occurs at a workshop of Cutting Corners Limited following the discharge of a vehicle battery whilst a workshop technician is inspecting a vehicle, alongside an area where hot works were being conducted.
- The worker loses consciousness and suffers severe burns to his face and neck.
- The police and an ambulance are called. The worker is kept in intensive care in hospital with life changing injuries.



CCL- the response

- In the immediate aftermath, CCL's representatives are notified by the workshop manager, and attend site
- CCL's representatives take the view that to demonstrate compliance, they permit the following:
 - Key individuals on the scene being interviewed by the police.
 - The police seize and take away evidence.
- CCL then decide that they should contact their local lawyers who have previously assisted them on a real estate matter for advice.

Is there anything wrong with this approach?



CCL- the investigation

- The HSE take primacy of the investigation from the police.
- They find the following features:
 - Inadequate risk assessments in place in relation to workshop hazards.
 - Limited training undertaken in relation to workshop activities.
 - Failure to implement simple control measures segregation of areas for hot work and areas where there is flammable liquid/gas.
 - Inadequate supervision and Board oversight.



The outcome....

- Prosecution
 - Company prosecution under s.2 / s.3 of the Health and Safety at Work Act 1974 and associated Health and Safety Regulations.
 - Director prosecution under s.37 of the HSWA 1974.
- (Very) likely outcome:
 - Conviction either after trial or following guilty plea.
 - Sentence An unlimited fine for CCL and the director and up to 2 years imprisonment for director.



Let's start from scratch





How to respond to incidents

- The best advice that a health and safety lawyer can give you is to prepare for the worst.
- Operators can:
 - Be complacent that a serious health and safety incident may occur.
 - Consider that they have 'golden' standard health and safety systems, policies and procedures when they have the bare minimum.
 - (Occasionally) consider that it is too expensive, and requires too much time / management cost to implement health and safety policies and procedures.



Response begins with preparation

- How can I prepare?
 - Health and safety policy
 - Health and safety risk assessments/ safe systems of work.
 - Training
 - Board level oversight
 - Health and safety incident response protocol
 - Mock incident response incidents.
 - Use of technology/ external support for the above.

When an incident occurs – the first 60 minutes

- We would recommend the following:
 - Taking prompt emergency action to the injured person.
 - Ensuring the area is made safe.
 - Preserve the scene, note the names of people, equipment involved and witnesses.
 - Report the incident to the operator's health and safety team / legal team / external (specialist) lawyers.
 - NEVER obstruct a police officer/health and safety inspector but ensure lawyers are on scene when police/HSE are.



The internal investigation

- Regardless of any external investigation, we would recommend the operator conduct an internal investigation.
- The benefits are numerous:
 - If an investigation is properly set up, the investigation and findings are likely to be privileged.
 - An operator can benefit from 'lessons learnt'
 - An internal investigation cements an operator's good faith response, and will usually lead to positive change to health and safety culture.

Weightmans

When a (health and safety) inspector calls?

- In a case like CCL, you will likely have a HSE investigation following the incident.
- The HSE's role is to review how the operator protects the safety of its workers and anyone else who may be impacted by its work activities.
- This may involve a site inspection, where they wish to speak to relevant people, observe workplace activities, inspect machinery or request and inspect documentation (voluntarily or under compulsion)
- They also have the power to conduct interviews under caution under PACE.



Interviews under Caution

- The HSE conduct interviews under caution differently to the police. They have no power of arrest, so instead they will be invited to attend an interview, with the operator asked to nominate a representative.
- The operator may decline, but if convicted, such a refusal may be brought to the court's attention at sentencing.
- We would strongly recommend that a specialist health and safety lawyer is instructed, to ensure that any interview is conducted properly and the operator's rights are protected.



Enforcement Action

- HSE investigations can be protracted. They have a range of enforcement options, which can be utilised during and / or at the conclusion of the investigation:
 - Providing information and advice
 - Issuing simple cautions
 - Issuing an improvement notice
 - Issuing a prohibition notice
 - Criminal Prosecution.
- To prosecute, the HSE must be satisfied that there is sufficient evidence and it is in the public interest.



Commencement of prosecution

- Health and safety prosecutions are commenced by an inspector laying an information at the local Magistrates' Court. The *information* sets out the charges brought and some basic details in relation to the alleged criminal offending.
- This is accompanied by a summons, to secure the defendant to court for the first appearance hearing, which will also take place in the Magistrates' Court.
- A defendant can either enter a plea of guilty or elect a trial. In reality, the majority of health and safety prosecutions result in a guilty plea, because of the quasi-strict liability of the primary offences.



Sentencing Health and Safety Cases

- Unlimited fines for companies.
- Sentencing is formulaic and prescribed by Health and Safety Sentencing Guidelines and is based on turnover up to 'Large' organisation.
- Orders to pay Prosecution Costs
- Defence legal costs
- Up to 2 years imprisonment for individuals (up to life for grossnegligence manslaughter)
- Criminal record
- Significant reputational damage

Sentencing Guidelines for Health and Safety – an example

Large					
Turnover or equivalent: £50 million and over					
	Starting point	Category range			
Very high culpability Harm category 1 Harm category 2 Harm category 3 Harm category 4	£4,000,000 £2,000,000 £1,000,000 £500,000	f2,600,000 - f10,000,000 f1,000,000 - f5,250,000 f500,000 - f2,700,000 f240,000 - f1,300,000			
High culpability Harm category 1 Harm category 2 Harm category 3 Harm category 4	£2,400,000 £1,100,000 £540,000 £240,000	f1,500,000 - f6,000,000 f550,000 - f2,900,000 f250,000 - f1,450,000 f120,000 - f700,000			
Medium culpability Harm category 1 Harm category 2 Harm category 3 Harm category 4	£1,300,000 £600,000 £300,000 £130,000	£800,000 - £3,250,000 £300,000 - £1,500,000 £130,000 - £750,000 £50,000 - £350,000			
Low culpability Harm category 1 Harm category 2 Harm category 3 Harm category 4	£300,000 £100,000 £35,000 £10,000	f180,000 - f700,000 f35,000 - f250,000 f10,000 - f140,000 f3,000 - f60,000			



Some recent case studies in the T&L sector

- A national logistics company received a fine of £6.5 million in 2021 for two health and safety offences.
- This followed a fatality of a child who had gained access to the Daventry International Rail Freight Terminal and received a fatal electric shock from an overhead line.
- Transport for London (TfL) were fined £10 million in 2023 after pleading guilty to health and safety offences for the Croydon tram crash.


Top Tips

- Managing health and safety risk is about being proactive, not reactive.
- Ensure you have the appropriate policies, procedures and systems to control risk. Ensure it is embedded in the culture of your operation and comes from the 'top down'.
- Be prepared for the worst have an incident response protocol in place for dealing with the immediate aftermath of the incident before your lawyers are by your side.
- Take early specialised legal advice on your health and safety operations. Complacency can lead you to court.



Regulatory (Health & Safety and Transport Regulatory) Team



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Q&A

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Enforcement and meet the challenges of autonomy

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LOGISTICS UK

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Dave Wood

CAMS Project Lead, DVSA

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Self-driving vehicles – What's all the fuss about?



Ensuring safety and security: the Self-Driving Threshold



Driver assistance Normal responsibilities Authorised self-driving entity (ASDE) will be responsible for the self-driving task

> Self-driving Changed responsibilities

User-in-Charge (UiC) No User-in-Charge (NUiC)

			S	Self-driving vehicle	
Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
No automation	Driver assistance (DA)	Partial automation (PA)	Situational automation (SA)	Conditional automation (CA)	Full automation (FA)
Driver behaviour	Speed or steering support	Speed and steering support	کیٹ کیٹ Eyes off in some situations	Self-driving in limited conditions	Self-driving ; anywhere

User-in-Charge (UiC) Example



No-User-in-Charge (NUiC) Example







Drivers are one of your most valuable assets but present some of your greatest risks

Driver Assets v Risks

Fix

Assets

- Care for the vehicle walkaround checks
- In-use vehicle performance monitoring
- Drives legally, carefully and competently
- Ensures load security and weight
- Enables load delivery
- Reacts safely to unpredicted circumstance
- Care and considerate to other pr
- Professional approach organisation

Risks

- Don't care about the vehicle •

me law

- 88% of road collisions involve human error Don't give a monkeys about anyone else •
 - Unprofessional approach brings disrepute

Now let's look at these for a NUiC automated vehicle

Assets

- Care for the vehicle walkaround checks
- Drives legally, carefully and competently 🧭
- **Enables load delivery**
- Reacts safely to unpredicted circumstance
- Care and considerate to other r

Risks

- Don't care about the vehicle •

- AV incidents will attract high public interest

 - Unprofessional approach brings disrepute •

Maintenance considerations for AVs

- Level 3 User-in-charge (UiC) we can think more conventionally
- Level 4/5 No-user-in-charge (NUiC) needs a different approach
- Relationship of Authorised Self-Driving Entity (ASDE) & NUiC operator
- Automated driving system (ADS)
 - performance monitoring data
 - defect reporting
 - software updates
 - ADS maintenance, calibration & on-going validation
- Vehicle roadworthiness monitoring (NUiC)
 - walkaround checks
 - in-use defect monitoring & reporting (not ADS sensed)
 - in-use maintenance moving from preventative to predictive

Considerations for AVs

- Safety inspections ADS additional check items
- Competency of Transport Manager
- Competency of Fleet Engineer
- Nominated Individual Responsible for AV safety case and information
- Engineering technicians' skills and training
- Future maintenance facilities and suitable arrangements
- Operating centre management operational design domain (ODD)
- Load security monitoring and arrangements
- Incidents and complaints management
- Remote operations

Remote Operators

- Monitoring supervision but no intervention
- Assistance support but no direct control
- Driving direct remote control of the vehicle



Final key message

Stakeholder collaboration will be the key to success





To what extent do you think self-driving vehicles will be part of your fleet within the next 10-years?

(i) Start presenting to display the poll results on this slide.





Neil Barlow

Head of Vehicle Policy & Engineering





What will be covered

- Service modernisation, including our digital journey.
- Technical Change
- Some areas to think about



Service modernisation – a digital approach

Vehicle Testing Application

Commercial Vehicle Digital Service (CVS)



atil EE WiFiCall 🗢 🖽 13:27 Start test Vehicle Testing Management Site visit 6 JANUARY 2022 Vehicle testing manage **ETTTA** 08:16 Do Not Use CVS Training Bristol (P00004) Select activity Started site visit Search for a technical Create a new technical Create a batch of trailer record technical records 08:00-08:59 Process TES1 & TES2 appl SN06 DKY unical records Annual test · PASS 08:59-09:47 AY65 RPX Annual test · PASS 09:47-10:05 W342 MDT Retest · PASS A202483 Annual test · FAIL End visit

MOT History Service



Taking a paperless approach

- Digital by default, for clear Pass (April 24).
- Certificate only printed by exception.
- For now, paper for Fails and other documentation.



MOT test certi	2013									
 Wehicle identification XLRAEL1500L474959 	Driver & Vehicle Standards Agency									
(2a) Registration number DK18HJY										
Make and model DAF, LF 180 FA										
⁽⁵⁾ Vehicle category N2	(4) Odometer 305,601 kilometres	Odometer history 214,561 kilometres 134,871 kilometres	23.05.2022 30.06.2021							
Pass										
(3b) Date of the test 22.05.2023	(3b) Date of the test (8) Expiry date 22.05.2023 30.06.2024									
To preserve the anniver 01.05.2024.	sary of the expiry date, the earl	liest you can present yo	ur vehicle for test is							
(30) Location of the test P50311, Keltruck - Wes	t Bromwich									
(9) Testing organisation (DRIVER AND VEHICLE Mark Dennis	and inspector STANDARDS AGENCY									
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Check that this docume	ent is genuine by visiting www.	gov.uk/check-mot-hist	tory							
If any of the details are test.errors@dvsa.gov	not correct, please contact DV . uk or by telephone on 0300 12	SA by email at 239000.								
Receive a free annual M at www.gov.uk/mot-re	Receive a free annual MOT reminder by subscribing at www.gov.uk/mot-reminder or by telephone on 0300 1239000.									

Potential future....

VTG 6/7 (Ministry Plates)

- Access to details via MOTH.
- Aim to make available by end Autumn 24.
- Progressing options for non-display of "Ministry Plate", including Legislation.
- Consultation just ended.



Driver & Vehicle Standards Agency		Department For Transport Million Transport and ECCIDENT 41-00 AT A MICLIONARCIAN OF INCOME VERSULE This is instead as proof of somplaces with the senging and dimensional distribute BUSICE Plating Certificate VIO/A VIO/A		Serial No	Devid No		総 Driver & Vehic	la la	Department I relies: there's a a.se pressure	For Transpor	f Hill at all AV EVECUS	Decid No.			
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Different ways of getting data.....

Title	Brief data description	How to access
MOT History	All vehicle and trailer MOTs	Online service, available at: https://www.gov.uk/check-mot-history
MOT History API	All vehicle and trailer MOTs	Key can be requested at: https://dvsa.github.io/mot-history-api-documentation/
MOT reminders	All Vehicles	https://www.gov.uk/mot-reminder
OCRS reports	Vehicle testing, encounter, fleet assessment and prosecution data	View your vehicle operator safety and risk reports - GOV.UK (www.gov.uk)
Vehicle test History	Vehicle Testing results	View your vehicle operator safety and risk reports - GOV.UK (www.gov.uk)
Encounter History	Encounter data	View your vehicle operator safety and risk reports - GOV.UK (www.gov.uk)
Effective- ness Report	Vehicle testing, encounter, fleet assessment, MOT and prosecution data	https://www.gov.uk/government/collections/vehicle-testing-enforcement-approval-and-safety-defect-data
Parc reports	Vehicle Testing	Request via MIDS@dvsa.gov.uk
Stanmore Power Bl report	Vehicle testing, encounter, fleet compliance check	Request via Stanmore to MIDS@dvsa.gov.uk https://app.powerbi.com/groups/72152f1d-55e8-44f6- b367-5f6e4df1e16d/reports/698cabb2-ac9f-49ff-af07-
(HVTR)		a38659e7366c/ReportSectiona4bd07178056ce96aa91?experience=power-bi
Operator Stats	Encounter and offence data	<u>Vehicle operators who committed road safety offences in 2022 - GOV.UK (www.gov.uk)</u> Operators who have committed drivers' hours offences in Great Britain - GOV.UK (www.gov.uk)
Recalls	Recall by vehicle type	What make is the vehicle? - Check vehicle recalls - GOV.UK (check-vehicle-recalls.service.gov.uk)
ATF Capacity	Find my nearest ATF and indicator of capacity	Find an MOT test centre for a heavy goods vehicle (HGV), bus or trailer - GOV.UK (www.gov.uk)
Brake DTP Numbers	Brake DTP Numbers database (used in vehicle testing)	https://assets.dft.gov.uk/dvsa/datasets/DTP-number-database.csv

Testing & Enforcement - Content

Short-term

- Emissions testing (PN).
- ADAS, alternative fuels and using vehicle data.
- Test needs to be repeatable and practicable.
- Recalls data

Longer -term

- Automated vehicles
- Engaged in a series of changes and trials, from pilot vehicles to how we do collision investigations.

But – we can't lose focus on today and getting the basics right.



Regional Targeting packs

Working with Criminal Analyst Unit using ANPR data to accurately predict windows of opportunity to intercept target Operators or vehicles.

203

Driver & Vehicle

Standards

Agency

We direct teams to the targets with windows of interception as accurate as 15 mins waiting time. Supporting frontline examiners to deliver improved productivity.

Interception opportunities – NP18



Remote Targeted Enforcement

HGV No MOT pilot confirmed remote interventions improve road safety compliance in an efficient way.

Automatic Number Plate Recognition (ANPR) allows further remote enforcement activity to be undertaken such as :

Speeding commercial vehicles – potential limiter manipulation and fraud cases to follow in enhanced SLT scheme.

Remote driving time identification of potential offences for follow up action.

New processes to link to remote activities which can generate civil penalty fines to cover the cost of enforcing this work.





Remote Speed limiter analysis



Using ANPR data to remotely check average sustained speeds between fixed points can identify occasions of speed limiter manipulation.

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Remote Speed limiter analysis



Remote speed limiter analysis work and bulk mapping will potentially help us identify tacho centres of interest – We will be able to introduce mystery shopper checks at these locations – Directing front line teams to visits

Roller Brake Tester specification update – Dec 25

Drivers

Legislation

- Post 2012 efficiency changes for Drawbar trailers.
- Secondary Imbalance for vehicles.

Industry

- More information on the printout/data advisories & deficiencies added.
- \circ Tyre protection added.

Useability

- Ability to amend park brake locations (where incorrect) before starting the test.
- Secondary alternative calculated by the RBT.
- Automatic overrule when only one lock detected for transmission brake.
- Real-time warnings where Bind and Ovality thresholds are breached.
- RBT out of calibration warnings on printout/data.
- Rear axle fall-off test added for PSVs with hydraulic brakes.

Outcomes

- Fewer errors at test.
- Better in-use brakes (sometimes maintenance providers just looked at the result).
- Fewer brake failures at test.
- Speed up the test when DTP numbers are incorrect.
- Increase in operator's confidence of the brake test.

Service	Pass 50%	ULW			40%	Passiral				
Secondary Parking	ULW			17% 6%	Pas					
Deficiencies	Axle/brake	B	Bind		/Fall-Off	Imbalance	Little or no effort		П	
		N/S	OIS	N/S	O/S	10000000000	N/S	O/S	1	
	2/service		278kgf						1	
	2/parking							Little effort	1	
Advisories	Axle/brake Bind			Ovality	Fall-Off	Imbalance	Low effort			
		10.0		10.5			18.2	0.5		
	2/parking	1					304		1	
Overall Result	**** OVERALL RESULT: FAILED *****									
Notes	Measured Vehicle Weight: 8660kg Transmission brake result amended									
Tested by					Signe	d			_	

Enforcement and meet the challenges of autonomy



Q&A

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