

Overview

This standard is for people who work on, near or with electrically propelled vehicles but **do not work** on the vehicle's high voltage system. Examples of these job roles include body shop technicians, auto glazing technicians, vehicle fast-fit technicians, MOT testers, sales staff, cleaners/valeters or vehicle fitters. The standard covers safe working practices and essential knowledge of the hazards associated with electrically propelled vehicles and the precautions to follow to avoid these.

This standard does not deem someone competent to maintain, service or repair an electrically propelled vehicle's high voltage systems and their components.

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**Performance
criteria**

- You must be able to:
- P1 Identify that the **vehicle** is electrically propelled and collect relevant information about the **vehicle** and any specific hazards
 - P2 Wear personal protective equipment (PPE) and use vehicle protection equipment (VPE) appropriate to the work activities you are carrying out
 - P3 Follow the correct procedures to ensure the **vehicle** has been made safe prior to starting any work
 - P4 Work in a way that:
 - 4.1 - minimises contact with, or damage to, **high voltage** electrical systems and their components
 - 4.2 - avoids damage to your working environment and injury to yourself and others
 - P5 Refer any problems with the **vehicle** to the relevant person in your workplace
 - P6 Follow workplace procedures to report the work activities you have carried out on, near or with the **vehicle**
 - P7 Safely charge the **vehicle**, as necessary.

Knowledge and understanding

You need to know and understand:

Use of technical information

- K1 How to identify an electrically propelled vehicle.
- K2 How to find, interpret and use sources of information applicable to electrically propelled vehicles as appropriate to your job role
- K3 How to identify **high voltage** electrical components in an electrically propelled vehicle

Legislative and organisational requirements and procedures

- K4 The health and safety legislation and workplace procedures relevant to working on, near or with electrically propelled vehicles, including the appropriate personal protective equipment and its use and the safety of the working environment
- K5 The **hazards associated with high voltage electrical vehicle components** and how to work safely in their proximity
- K6 Your workplace procedures for:
 - 6.1 confirming that the vehicle has been made safe as appropriate to the work you are carrying out
 - 6.2 referring/reporting problems when working with electrically propelled vehicles
 - 6.3 recording and reporting work carried out on electrically propelled vehicles
- K7 The implications of electrical conductivity through the human body and other potential medical conditions that can occur regardless of current type present in the electrically propelled vehicle
- K8 The precautions necessary when using plug-in charging equipment
- K9 The hazards associated with electrically propelled vehicle high voltage batteries
- K10 The hazards associated with electrically propelled vehicles when exposed to extreme temperatures, impact and other adverse conditions
- K11 What to do in an emergency, including fires and flood

Vehicle system operation

- K12 The main differences between an electrically propelled and non-electric vehicle

You need to know
and understand:

- K13 How to safely operate and switch off an electrically propelled vehicle
- K14 The charging systems associated with electrically propelled vehicles and how to use them safely

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Scope/range

1. **Vehicle** - any vehicle that is in part or wholly electrically propelled. This would include
 - 1.1. Hybrid (HEV) - to include mild/micro hybrid vehicles where the voltage is considered dangerous.
 - 1.2. Plug-in Hybrid (PHEV)
 - 1.3. Extended Range Electric Vehicle (ER-EV) or Range Extended Electric Vehicle (RE-EV)
 - 1.4. Battery Electric Vehicle (BEV) or Pure Electric Vehicle (PEV)
 - 1.5. Fuel Cell Electric Vehicle (FCEV)
2. **High voltage** – voltages >60 V and ≤ 1500 V DC and >30 v and ≤ 1000 V AC
3. **Hazards associated with high voltage electrical vehicle components** - exist during work on high voltage systems when the voltage between the live components is greater than 25 V AC or 60 V DC and the short-circuit current where work is being performed exceeds the value of 3 mA AC or 12 mA DC or the energy exceeds 350 mJ.

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**Additional
Information**

Glossary

This section contains examples and explanations of some of the terms used but does not form part of the standard.

Work on, near or with an electrically propelled vehicle:

Any work which does not include working on the high voltage systems.

Sources of information applicable to electrically propelled vehicles

Examples include hard copy manuals, data on computer and data obtained from on- board diagnostic displays.

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Relevant occupations (needs update)	<p>Sales Executive (Automotive); Sales Controller (Automotive); Vehicle Fitting Operations (Automotive); Vehicle Valet (Automotive); Specialist Tyre Fitting Operations (Automotive); Hire and Rental Delivery and Collection Operations; Hire and Rental Operations; Hire and Rental Counter Operations; Rental and Leasing Customer Service Advisor (Automotive); Rental and Leasing Maintenance Advisors (Automotive); Rental and Leasing Technical Service Advisor (Automotive); Body Repair Technician (Automotive); Body Repair and Alignment Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); PDR Senior Technician (Automotive); PDR Technician (Automotive); Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Vehicle Damage Assessment Operators; Vehicle Damage</p>

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Carry out non high voltage work on, near or with an electrically propelled vehicle



Assessor (Automotive); Vehicle Fitters; Insurance Engineer
(Automotive)

Suite

Electric Vehicle

Key words

Electric Vehicle; maintenance.

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