IMIEV1
Carry out non high energy electrical system work on or near electric and hybrid vehicles

Overview

This standard is for people who work on or near electric and hybrid vehicles **but do not work on the vehicle's high energy electrical system**. Examples of these job roles include: sales staff, cleaners/valeters or vehicle fitters. The standard includes essential knowledge of the hazards associated with electric and hybrid vehicles and the precautions to follow to avoid these.

Note: *This standard does not deem someone competent to maintain, service or repair high energy electrical systems.*

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Performance criteria

You must be able to:

P1 collect relevant information about the **electric/hybrid vehicle** and any potential hazards

P2 wear personal protective equipment appropriate to the **work activities** you are carrying out

P3 follow the correct procedures to ensure the **electric/hybrid vehicle** has been made safe prior to starting any work

P4 carry out **work activities** in a way that avoids contact with, or damage to, **high energy electrical** systems and their components

P5 refer any problems with the **electric/hybrid** vehicle to a relevant person in your workplace

P6 report the **work activities** you have carried out on or near the **electric/hybrid vehicle** to relevant colleagues

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Knowledge and understanding

You need to know and understand:

K1 the hazards associated with high energy electrical vehicle components

K2 the health and safety legislation and workplace procedures relevant to working on or near electric/hybrid vehicles, including the appropriate personal protective equipment and its use

K3 your workplace procedures for:

- K3.1 checking that the vehicle has been made safe as appropriate to the work you are carrying out
- K3.2 referring/reporting problems when working with **electric/hybrid vehicles**
- K3.3 making others aware of the work carried out on **electric/hybrid vehicles**

K4 the differences between an electric/hybrid and non-electric vehicle

K5 how to operate an **electric/hybrid vehicle** safely

K6 how to charge an **electric//hybrid vehicle** with plug-in capability

K7 the precautions necessary when using plug-in charging equipment

K8 how to make an **electric/hybrid vehicle** safe, including isolating **high energy electrical** systems where required within your level of training

K9 the implications of electrical conductivity through the human body and other potential medical conditions that can occur regardless of current type present in the **electric/hybrid vehicle**

K10 how to find, interpret and use sources of information applicable to **electric/hybrid vehicles** as appropriate to your job role.

K11 the hazards associated with electric/hybrid vehicle batteries when exposed to extreme temperatures, impact and other adverse conditions

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Additional Information

Scope/range

1 **Electric/hybrid vehicle** – any vehicle that is powered wholly or in part by an electrical drive train. This includes electric hybrid plug-in vehicles.

2 **High energy electrical/high voltage** – typical voltages used for a range of Electric and Hybrid Vehicles 100-650V **ECE R100** (relating to vehicle regulations) paragraph 2.14 clearly defines high voltage: “High Voltage" means the classification of an electric component or circuit, if its working voltage is > 60 V and ≤ 1500 V DC or > 30 V and ≤ 1000 V AC root mean square (rms).’

3 **Status of vehicle** – without any damage that might present a greater electrical hazard than an undamaged vehicle.

4 **Work activities** – not involving work on the high energy electrical system and its components.

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Originating organisation	The Institute of The Motor Industry (IMI)
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Relevant occupations	Sales Executive (Automotive); Sales Controller (Automotive); Vehicle Valeter (Automotive); Vehicle Fitting Operations (Automotive); Specialist Tyre Fitting Operations (Automotive); Tyre Fitting Operations (Automotive); Hire and Rental Operations (Automotive); Hire and Rental Delivery and Collection Operations (Automotive); Hire and Rental Counter Operations (Automotive); Rental and Leasing Customer Service Advisor (Automotive); Rental and Leasing Technical Service Advisor (Automotive); Rental and Leasing Maintenance Advisors (Automotive); Body Repair Technician (Automotive); Body Repair and Alignment Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); PDR Technician (Automotive); PDR Senior Technician (Automotive); Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Vehicle Damage Assessor (Automotive); Insurance Engineer (Automotive)
Suite	Electric and Hybrid Vehicles; Vehicle Sales; Vehicle Parts Operations; Motor Vehicle Valeting; Vehicle Fitting; Accident Repair – Body; Accident Repair – Joining; Accident Repair – Paint; Accident Repair - SMART – Cosmetic; Accident Repair - SMART – PDR; Rental and Leasing; Hire and Rental Operations; Body Building; Vehicle Damage Assessment Operations
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