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# EQUIPMENT FOR RISK-FREE WORKING ON ELECTRIC VEHICLES



# WORKING SAFELY ON ELECTRIC VEHICLES: WHAT IS THE NORM?

Electric cars impose other requirements to painters and technicians. An electric motor has fewer moving parts than a petrol or diesel engine and therefore requires less maintenance. Furthermore the battery packs of electric cars operate at a higher voltage of 300-600 Volt. The Health and Safety Regulations requires electrical work above 24 volts to comply with the respective standard. Specifically for the automotive industry norms have been developed for safe working on electrical vehicles. You cannot just go around tinkering on hybrid and e-vehicles. The local safety standards establish who is allowed to work on an e-vehicle, which training or instruction you should have and how you work safely, because very different risks can arise when working on hybrid and e-vehicles than working on combustion engines. Among other things, the local regulations (e.g. NEN 9140 for Netherlands) prescribe which operation a technician may carry out with a certain level of knowledge, and which protection and safety measures must be taken in this regard.

In order to work safely on hybrid and e-vehicles, we hereby offer you specific protective equipment, which complies with the local standards to protect your employees against the possible risks.

## **ELECTRIC SAFETY KIT** (only available as kit)



Universal disconnection Kit to work safely on Hybrid and E-vehicles. This kit contains the minimum basic tools required to work safely. An excellent kit for those bodyshops who only occasionally getting a hybrid or electric vehicle for repair.

## Article No.: D15378487

## **KIT CONTENTS**



1 insulated socket set 12 side in 3/8" consists of 8 / 10 / 11 / 12 / 13 / 14 mm 2 insulated spanners 10 and 12 mm



1 set of 4 flat and 2 x phillips screws



1 pair of insulated composite gloves 1000 V Class 0 - size 10



1 voltage detector 12 V -1000 V



1 full face shield standard EN166-1B8



1 insulated ratchet 3/8"



extension 3/8"

# **CONTAINMENT SET**



This signal and delimitation kit allows you to mark the work area where the electric vehicle is repaired. This kit consists of a two-colour chain 4 posts with bases and a flag indicating electrocution hazard. **Article No.: D15378490** 

## **KIT CONTENTS**



## 25m Chain

Two-colour polyethylene chain, resistant to harsh weather conditions, chemicals and temperatures (-10 ° C à 75 ° C)

Diameter: 6 mm Colours: Yellow and black



Warning Triangle Made of aluminum - 200mm lateral length.



#### **Chain Posts**

Signposting and marking of the work area. Colours: black and yellow. To be used with delimitation chain. Simple model on base, 90 cm (4 pieces)

# **FIRST AID SET**



The first aid kit should be present in a bodyshop as standard. This kit consists of all necessary items to safely provide first aid in the event of an accident during the repair of an electric vehicle. **Article No.: D15378488** 

## **KIT CONTENTS**

### **Composite Insulating Gloves**

2-in-1 composite insulating gloves: dielectric and mechanical protection. Class 0. Operating voltage up to 1000 Volt. Ergonomic shape for easy and flexible movement. Supplied with a pair of cotton gloves (absorption of sweat, better hygiene) Can be used without leather gloves. Length 360mm



#### **Insulating Mat**

Insulating mat (0.6m x 1.0m) to avoid direct contact with the ground, thus isolating itself in case of contact with parts under electrical Voltage Class 0 Thickness 1.5mm

#### **Glove Box**

Storage and protective box for gloves. Can be used as wallmounting box (electrical station, technical rooms) or as a portable box (due to the retractable handle) Size: 500 x 250 x 100mm. Including a talc bottle.

#### **Isolated Drawbar**

Bar used to pull a person under electrocution to be detached from the electrocution source. Bar is made of composite material.

Ø 32 mm; complies with the EN 61235. Test voltage at 300 mm: 50 kV Length of the protected part: 600 mm

# **COMPLETE WORKCART (TOOL BOX)**



Complete workcart containing all accessories and tools for safely releasing the voltage from hybrid and electric vehicles

- Mobile Workcart
- 5 drawers on high-quality roller bearings designed to organize all materials: Isolated material, Consignment / voltage detector, temporary protection, personal protection, delimitation and signaling
- Pre-formed foam in upper slide for neat tool storage
- Lockable with key
- Side handle for easy travel
- Side support for the chain posts (the pole base is arranged in the bottom slide)

### Article No.: D15378489

## **KIT CONTENTS**

#### **Insulated tool**

23MS85P Insulated ratchet 3/8	1	23RL2-PH-6X125 SCREWDRIVER Rotoline Phillips head 6x125	1
23MS84P insulated extension 3/8 165mm	1	23MC11CE straight composite insulating pin	1
23MS86-08 12 side insulated socket 3/8 08	1	23MC13CE insulating bucket chuck composite half round	1
23MS86-10 12 side insulated socket 3/8 10	1	23MC45I insulated cable cutter	1
23MS86-12 12 side insulated socket 3/8 12	11	23MS16-08 Insulated spanner 08	1
23MS86-13 12 side insulated socket 3/8 13	1	23MS16-10 Insulated spanner 10	1
23MS86-14 12 side insulated socket 3/8 14	1	23MS16-12 Insulated spanner 12	1
23MS100N0P Insulated torque wrench 3/8	1	23MS16-13 Insulated spanner 13	1
23RL2-PL-3X100 SCREWDRIVER Rotoline flat head 3x100	1	23MS16-14 Insulated spanner 14	1
23RL2-PL-4X120 SCREWDRIVER Rotoline flat head 4x120	1	23MS87T30 3/8" Torx male socket T30	1
23RL2-PL-65x150 screwdriver Rotoline flat head 65x150	1	23MS87T20 3/8" Torx male socket T20	1
23RL2-PL-8X150 SCREWDRIVER Rotoline flat head 8x150	1	23MS7-210 Insulated English wrench L210 mm	1
23RL2-PH-5X100 SCREWDRIVER Rotoline Phillips head 5x100	1	23MS27-250 Insulated Water Pump Pliers	1



Consignment and temporary protection			Pe
	23TAG780VIFE Measurement Device 1000V	1	23
	23TL05 insulated lever	1	23 (*:
	23C31V Orange composite padlock 35x48mm, diameter: 6mm, height: 38mm	1	23
	23C31VLT Orange composite padlock 35x48mm, diameter: 6mm, height: 6mm	1	
	23SFES453L consignment nylon bag	1	Si
	23S350C11 Safety board 80 mm	2	Po
	23TC41 insulation cap D35mm x L120mm Capacity 240mm <sup>2</sup>	2	Pla
	23TP60P Plastic cutter 165mm for nap	4	23
	23TN17-6636 insulating tap 0.36m x 0.66m	1	23 1×

## Personal protection

	23E20 Face shield	1			
	2344L090-* Glove composite 1000V (*=size 9 - 10 -11)	1			
	23BGT Glove Storage Box	1			
Signalization and delimitation					
	Pole yellow/black on base for plastic chain	1			
	Plastic chain yellow/black	1			
	23S120E Electrical Voltage Flag	1			
	23S85C1 Delimination Banner Type C1 1x0.20m	1			

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