

e-Day Car: Sustainable Mobility and Culture



Vocational schools from Bulgaria, France and Italy.

2014
2017



2e2f

Lockout - Removal lockout electric cars training

Denis Leclerc – Benoit Remy

BG meeting


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Lockout




Step 1 : Before starting



- Check the vehicle's identification (registration, VIN) based on the repair order.
- Remove all personal metal objects (jewellery, chain, ring, watch, etc.).
- Open the driver's window, put the handbrake and the vehicle in neutral position.
- Switch off the vehicle.

Mark out	Mark out the work area using a specified demarcation kit (Posts, red and white chain, signalling).	
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Step 2 : Separation of the power sources

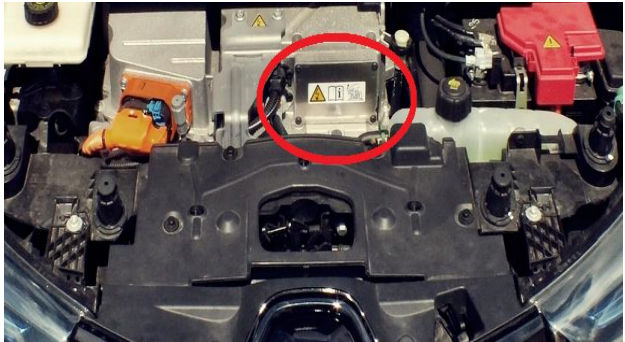
Separate	Disconnect external voltage sources (charging cable) and close the trap of loading	
condemn	Keep the front doors open and Lock the doors. Keep the key in a close box in place on is more than 5 meters of vehicle. Put a locking sign on the dashboard.	

<p>Equip</p>	<p>Wear personal protective equipment :</p> <ul style="list-style-type: none"> - Protective overalls, - Safety footwear , - Electrical insulating gloves, - Face shield. <p>Check that the gloves are not damaged.</p>	
<p>Separate</p>	<ul style="list-style-type: none"> - Unclip the traction battery safety device switch trim. - Turn the retaining pins of the traction battery safety device and remove the switch plate. <p>Remove the traction battery safety device switch</p>	
<p>Condemn</p>	<ul style="list-style-type: none"> - Fit the Safety lockout plug of the traction battery on the base of the traction battery safety device switch socket. - Fit the Safety lockout plug padlock of the traction battery. - Place the traction battery safety device switch on the dashboard with the locking sign. 	

<p>Separate</p>	<p>Disconnect the 12V battery Border - and +.</p>	
<p>condemn</p>	<p>Insulate the 12V battery earth terminal and put a locking sign</p>	

Step 3 : Check for absence of voltage.

Wait 5 min after the disconnection of the traction battery safety device.

<p>Separate</p>	<p>Remove :</p> <ul style="list-style-type: none"> - the fuse flap bolts, - the fuse flap, - the fuse flap seal. <p>- Unclip the fuses protective cover.</p>	
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Before taking any measurements, make sure that the tool Voltage detector is working correctly.

WARNING

Never use a voltage detector if its self-test is incorrect as it could provide erroneous data that could put you in danger.



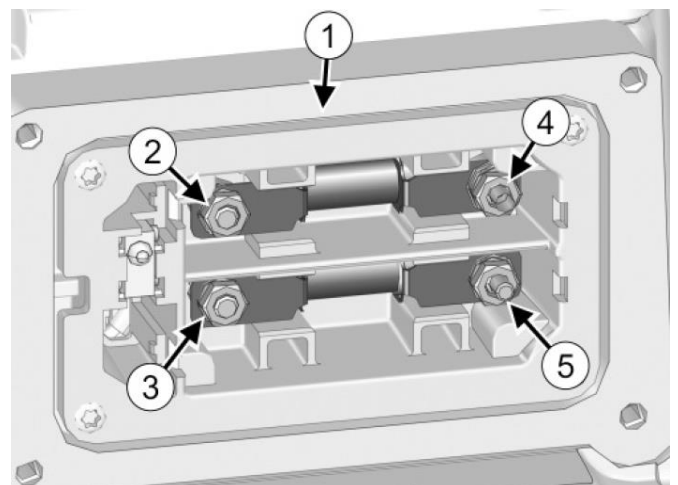
Control

Check that there is no voltage using the tool Voltage detector via the fuse flap used to check for the absence of voltage on both sides of the two fuses :

- between the phases (2 measurements)
(2) with (3) , (4) with (5).

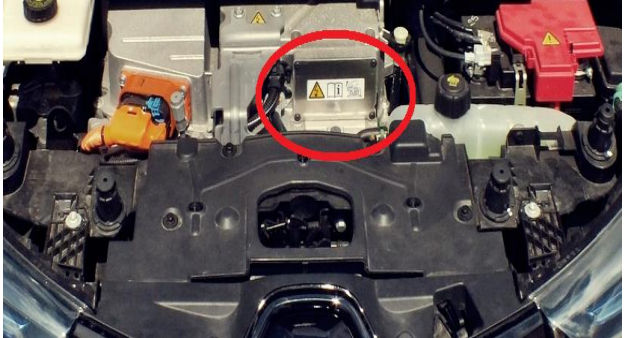
- between the phases and the earth (4 measurements) :
(1) with (2) , (3) , (4) , (5) .

Make sure that the tool Voltage detector is working correctly again.





Removal of lockout :

Step 1 : Check the vehicle and ensure its conformity




Check	<p>Check the conformity of the vehicle after reassembly, visual inspection of connectors.</p> <p>Refit the fuse flap and tighten the fuse flap bolts</p>	
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Step 2 : Unlocking and restore the power sources

Equip	<p>Wear personal protective equipment :</p> <ul style="list-style-type: none">- Protective overalls,- Safety footwear ,- Electrical insulating gloves,- Face shield. <p>Check that the gloves are not damaged.</p>	
Remove	<p>Remove the insulation of the battery earth terminal.</p> <p>Refit the 12V battery earth terminal.</p> <p>Do not operate on opening orders or consumers before the end of the refitting of the traction battery safety device switch plate.</p>	

<p>Die to condemn</p>	<p>Remove the tool Safety lockout plug padlock and Safety lockout plug of the traction battery.</p> <p>Refit:</p> <ul style="list-style-type: none"> - the traction battery safety device switch, - the traction battery safety device switch plate. <p>Turn the retaining pins of the traction battery safety device switch plate.</p> <p>Clip the traction battery safety device switch trim.</p>	
<p>Remove equip</p>	<p>Remove personal protective equipment</p>	

Step 3 : Remove the Vehicle in electrical safety mode

	<p>Insert the vehicle keys or card. Switch on the vehicle (APC).</p> <p>Check that no faults are indicated on the instrument panel.</p>	
<p>Power on reset</p>	<p>Check that it is possible to start the vehicle without fault.</p>	
	<p>Remove the lockout signs from the front and rear of the vehicle.</p>	
	<p>Remove the Demarcation kit (posts, red and white chains, A4 mounting) equipment.</p>	