



User Manual



EM – USER MANUAL

CONGRATULATIONS!

You have just purchased and electric motorcycle EM. We welcome you in our customers!

The motorcycle EM trial results from trial passion, the nature and the green technologies. It has been designed and developed with the experience and the knowhow of our team.

Riding and using this motorcycle need warning and recommendations to benefit fully of the advantages offered by this green alternative.

It is essential to read carefully this manual because, firstly, it contains the information needed to handle, drive and start this motorcycle. Secondly, it contains the information relatives to the maintenance and the control of the bike.

This manual will allow you to keep your good in a perfect working state in the safer way possible.

If you have any question or any doubt, please contact us by phone or email

0033 467 411 090

emotion.sav@gmail.com

Electric Motion's team wishes you to enjoy riding this motorcycle.



INFORMATION RECALL NOTE

1. CHARGE OF THE BATTERY

(USER MANUAL// . P12)

2. CHARGING OF THE BATTERY PACK

(USER MANUAL// p12)

3. BATTERIES INTERCHANGEABILITY TRIAL ELECTRIC MOTION

(USER MANUAL// p22)

4. CHARGERS INTERCHANGEABILITY TRIAL ELECTRIC MOTION

(USER MANUAL// p22)

5. USE OF THE BATTERY

⚠ After use your battery, **be sure that it is switched off.**

- **Indicator of the battery on the battery pack = switched off,**
- **Indicator of the general commuter on the handlebar = switched off**

The extinction of this indicator will occur after several minutes.

(USER MANUAL// p12)

6. STORAGE OF THE BATTERY PACK

(USER MANUAL// p31)

7. BIKE'S PARAMETER

⚠ We remind you that it is **ABSOLUTELY FORBIDDEN** to change your ELECTRIC MOTION bike's settings on your own.

Concerning the information that you could find on Internet, please **do not change/adapt the parameters or the software** of your electric bike by parameters and/or program not provided by ELECTRIC MOTION.

The software and the parameters adjustment are specifics to our electric bikes, all others software's/parameters are not compatible with our electric bike made by ELECTRIC MOTION. By using a different software or changing parameters, please note that you will damage your bike.

Moreover, all those actions will automatically **cancel your bike warranty.**



SUMMARY

1.	GENERAL INFORMATIONS.....	5
1.1.	RECEPTION.....	5
1.2.	BATTERY PACK.....	6
1.3.	CHARGER.....	7
1.4.	MOTORCYCLE.....	9
1.5.	STEERING ELEMENTS AND INFORMATION LIGHT.....	10
1.5.1	STEERING ELEMENTS.....	10
1.5.2	COMMUTERS.....	10
2.	BATTERY PACK.....	12
2.1.	CHARGING OF THE BATTERY PACK.....	12
2.1.1.	10A CHARGER.....	13
2.1.2.	15A CHARGER.....	18
2.2	MOUNTING AND REMOVING OF THE BATTERY PACK.....	22
2.2.1	MOUNTING OF THE BATTERY PACK.....	23
2.2.2	DEMONTAGE DU PACK BATTERIE.....	26
2.3	STORAGE OF THE BATTERY PACK.....	31
3.	USING OF THE MOTORCYCLE.....	32
3.1.	STARTING OF THE MOTORCYCLE.....	32
3.2.	RIDING OF THE MOTORCYCLE.....	34
3.2.1	SECURITY.....	34
3.2.2	SETTINGS.....	35
3.2.3	RIDING.....	35
3.2.4.	ELS – ELECTRONIC CLUNCH (Sport model or option).....	36
3.2.5.	RIDING IN THE WATER.....	38
3.2.6.	TEMPERATURES OF USING.....	38
3.2.7.	CHARGE.....	38
3.2.8.	DISCHARGE (USING).....	38
3.2.9.	STOPPING OF THE MOTORCYCLE.....	39
4.	MAINTENANCE.....	40
4.1.	CLEANING.....	40
4.2.	TRANSMISSIONS.....	41
4.2.1.	PRIMARY TRANSMISSION.....	41
4.2.2.	SECONDARY TRANSMISSION.....	43



1. GENERAL INFORMATIONS

1.1. RECEPTION

If you receive the motorcycles and the battery pack separately, please follow the procedures : **REMOVING THE COVER** and **MOUNTING THE BATTERY PACK**.

If you receive the motorcycle on a palette, the footrests and the handlebar are not assembled on the motorcycle.

HANDLEBAR

The handlebar is given in a separated box. It needs to be assembled following the next pictures.

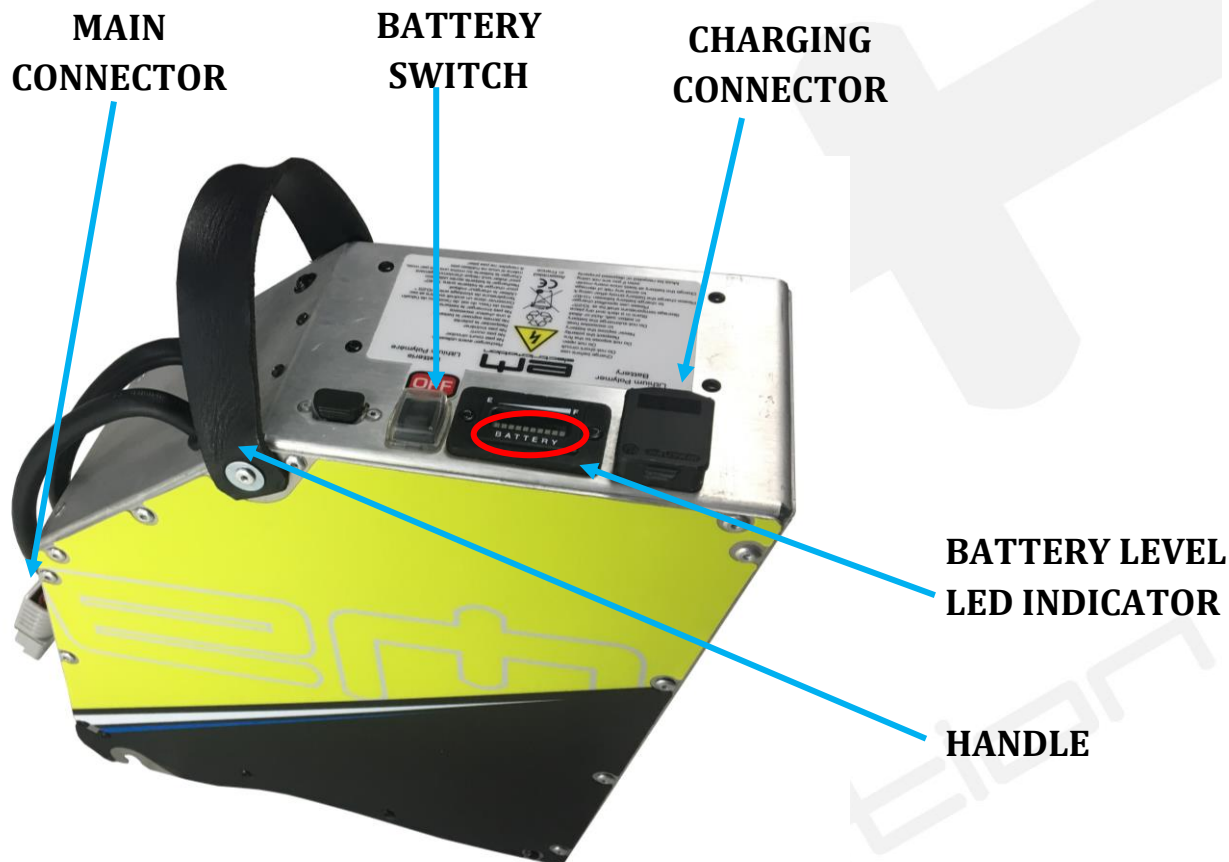
HANDLEBAR RUBBER PROTECTION

The handlebar protection is fixed on the handlebar by a velcro.





1.2. BATTERY PACK



Once you receive the motorcycle and the battery pack, you must charge it.

Please follow the procedure **CHARGING BATTERY PACK**.

The first charge will be quite quick (30 min to 1 h).

*The entire range will be reached **after around 10 cycles of charge**.*

*The standar charging time will be **around 2 h** (if the battery pack is fully discharged).*

WARNING

If you happen by mistake, forgetting to turn off the battery after use or not to use the bike on for 20 minutes, it will turn into "sleep" mode. This safety cut the relay **AND THE LED INDICATOR, BUT THE BATTERY IS ONLY IN "SLEEP MODE"**. **TAKE CARE TO SWITCH OFF THE BATTERY WITH THE MAIN SWITCH ON THE OFF POSITION.**

You must in this case cut the battery before restarting or before recharging.



1.3. CHARGER

CHARGERS INTERCHANGEABILITY TRIAL ELECTRIC MOTION

- ✓ **The grey chargers** are dedicated to batteries :
Trial batteries (before 2016) and Escape batteries (since 2016).



- ✓ **The black chargers** are dedicated to batteries :
Trial batteries (since 2016).



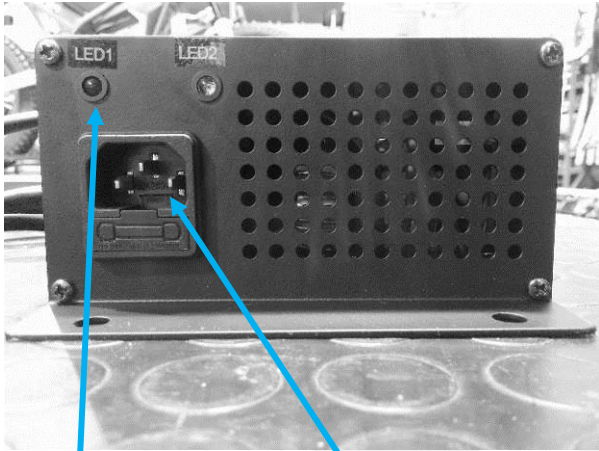
The two different charger versions are not interchangeable.

In case of wrong use, there is no influence on the security

Only an inoperative of the charger

The charger provided with the motorcycle will permit you to recharge your battery pack.





INLET CONNECTOR

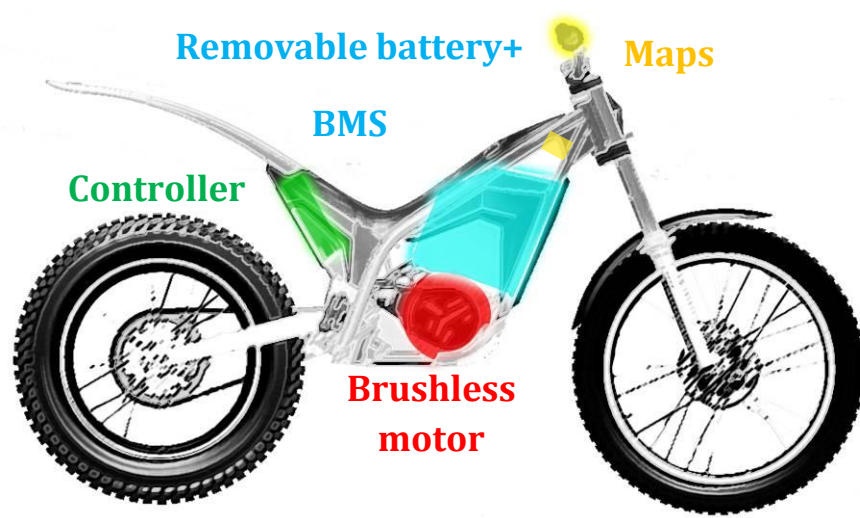
**110V/230V
CONNCECTOR**



WORKING LEDS



1.4. MOTORCYCLE



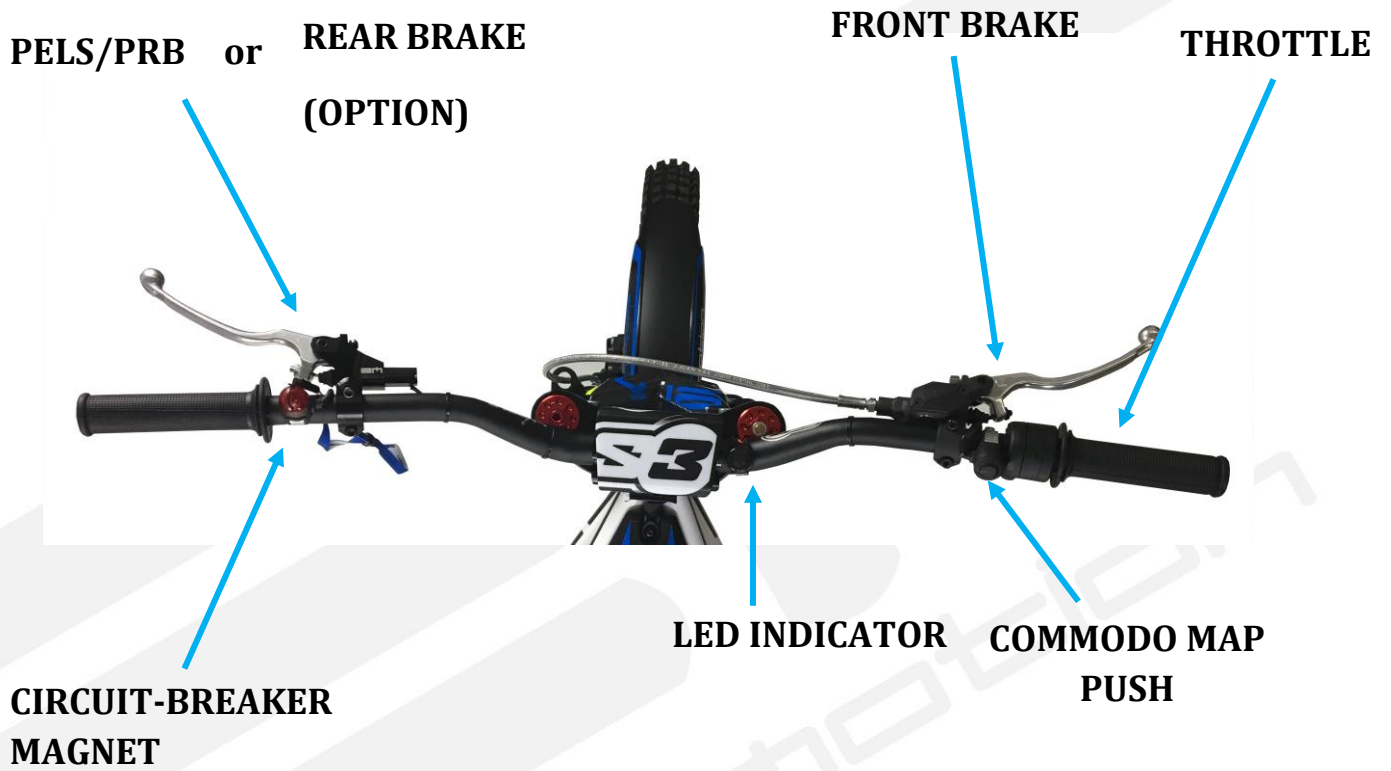
The serial number of the motorcycle is noticed on the steering pipe, on the front part of the frame.





1.5. STEERING ELEMENTS AND INFORMATION LIGHT

1.5.1 STEERING ELEMENTS



1.5.2 COMMUTERS



- PUSH BUTTON

On the right of the handlebar, the map push allows to select the riding mode you want. The LED indicator situated next to the comodo map push comprises 4 colored LEDs to know which riding mode you're using.

On the left of the handlebar, the red LED indicates if the motorcycle is working.



- HOMOLOGATED COMMODO



Ignition indicator

Dimmed headlights, full head light

Beam flasher

Horn

Turn signal



- BATTERY LED INDICATOR

The battery pack has a LED indicator, which shows the remaining energy capacity.



There are 10 LEDs :

- 7 greens,
- 2 oranges,
- 1 last red.

⚠ The decreasing of energy can be very quick in the 3 last red ones.

⚠ Indicator extinction may take some times (several minutes).

2. BATTERY PACK

2.1. CHARGING OF THE BATTERY PACK

⚠ If you use a 15a charger you have to follow the suitable procedure.

- The phenomenon of Sparking is normal when it connects to battery because of high current.
- This charger is designed for charging LITHIUM POLYMER type batteries only.
- Avoid charging the wrong type of battery
- The battery may be damaged if LED2 cannot be changed to green after a long time of charging
- Always place the charger in well-ventilated and dry environments
- The charger is designed with aluminum case as its heat sink. Do not cover it to avoid the case from being over heated while charging
- Please attention to DC terminal:
 - o BROWN (+) Positive terminal, Blue (-) Negative terminal
- DO NOT disassemble charger. Take it to a qualified service person when service or repair is required.



2.1.1. 10A CHARGER

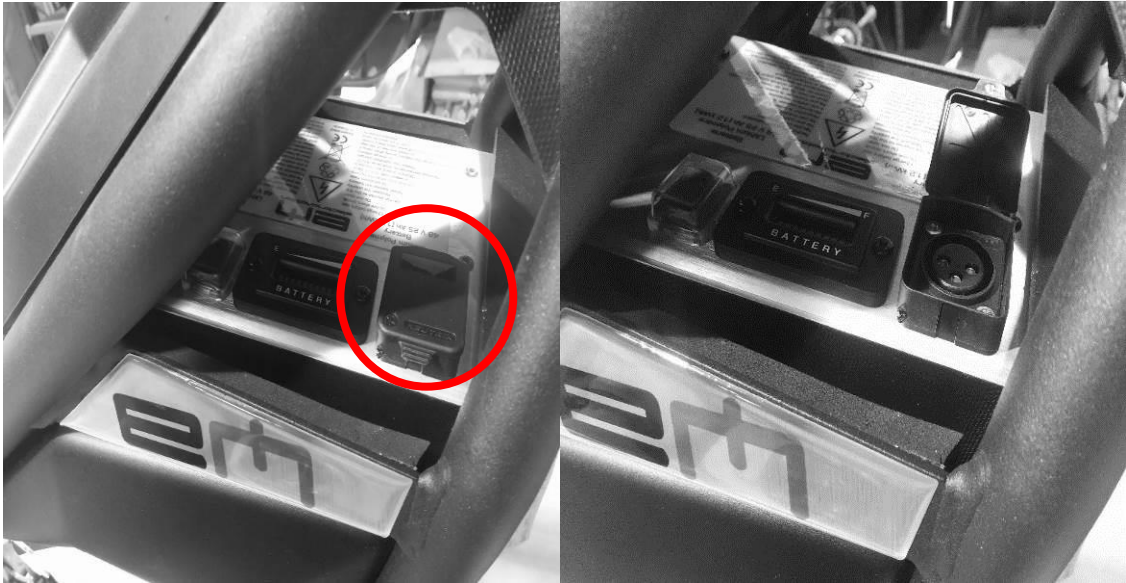
⚠ If you use this charger (10a), you must follow the next procedure to charge your battery pack.



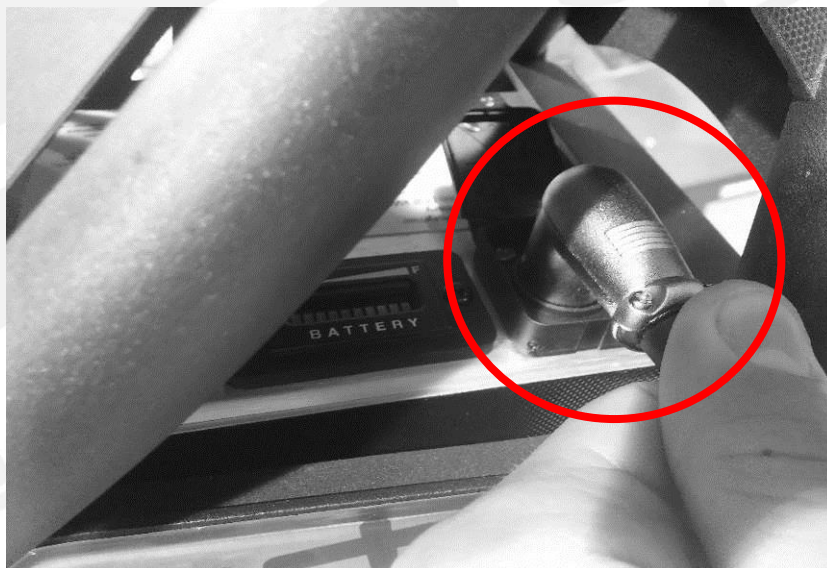
The charging of the battery pack needs to be followed very precisely.



1- OPEN THE CHARGING CONNECTOR TAP



2- CONNECT THE CHARGER CONNECTOR TO THE BATTERY PACK CONNECTOR





3- CONNECT THE CHARGER TO THE OUTLET

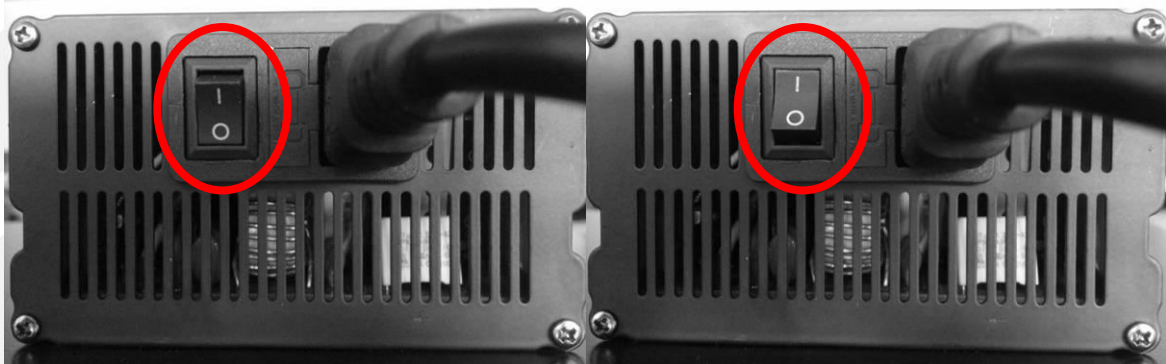


- LED1 : RED
- LED2 : NOT LIGHTING

The charger is correctly plugged.



4- SWITCH ON THE CHARGER



THE LED OF THE CHARGER ARE :

- LED1 : RED
- LED2 : GREEN

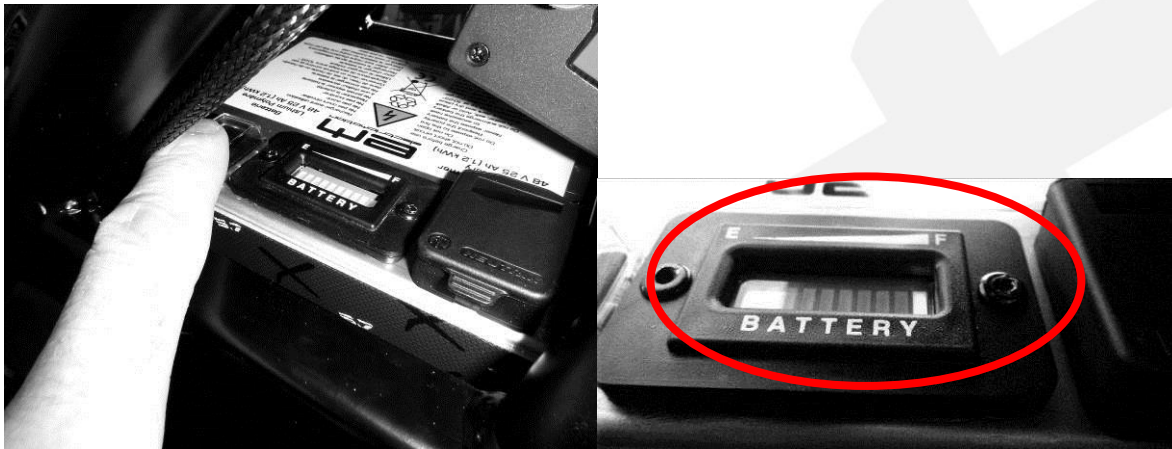
The charger is correctly plugged, and switched on.





5- SWITCH ON THE BATTERY PACK

The LED indicator on the battery pack light



The LED of the charger are :

- LED 1 : RED
- LED2 : RED

The battery pack is charging..



6- AT THE END OF THE CHARGE

The led of the charger are :

- LED 1 : RED
- LED 2 : GREEN

The battery pack is charged.





7- SWITCH OFF THE BATTERY PACK (THE LED INDICATOR MUST STOP TO LIGHT).

8- SWITCH OFF THE CHARGER

9- UNPLUG THE CHARGER FROM THE BATTERY

10- UNPLUG THE CHARGER FROM THE OUTLET

THE BATTERY PACK CAN BE CHARGED OUT OF THE MOTORCYCLE

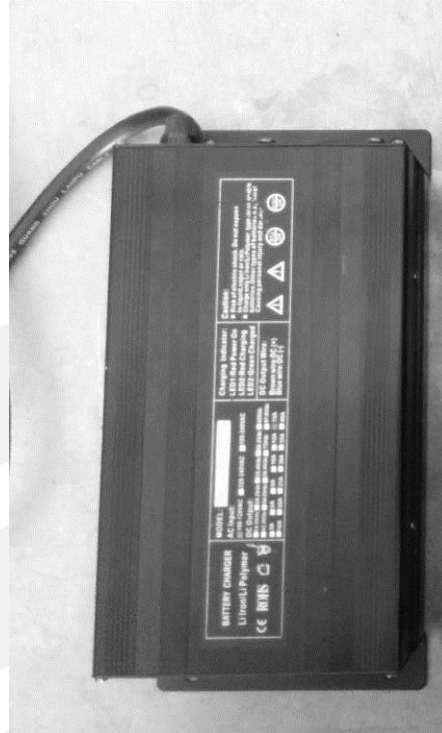
FOLLOWING EXACTLY THE SAME PROCEDURE.

THE CHARGER MUST BE UNPLEGGED FROM THE OUTLET BETWEEN 2 CHARGING PROCEDURES.



2.1.2. 15A CHARGER

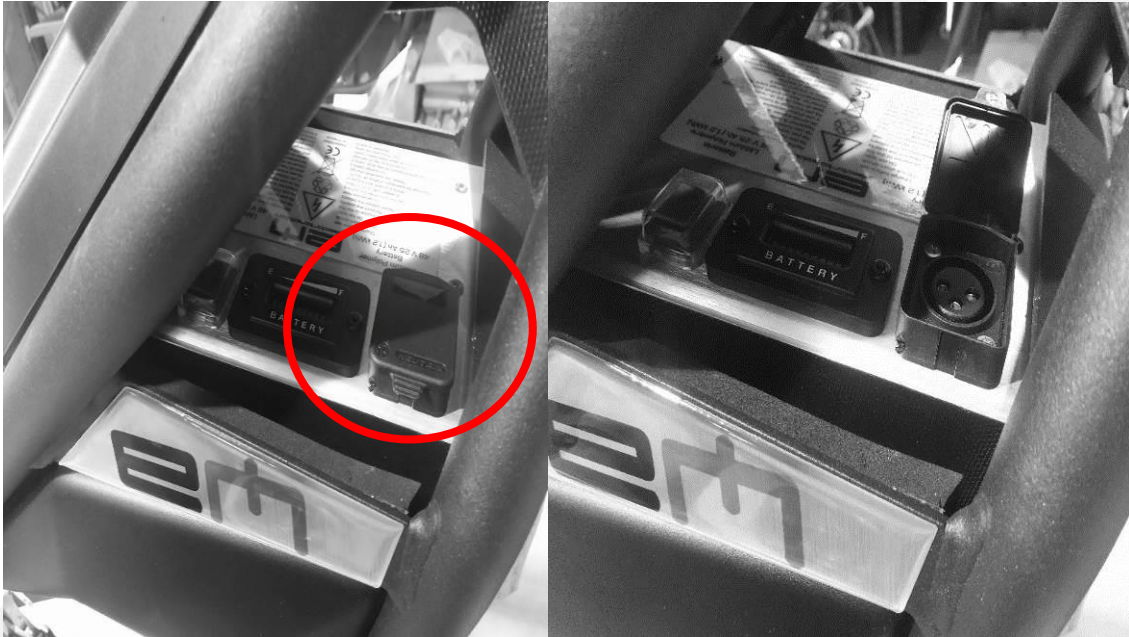
⚠ If you use this charger (54.6v 15a), you must follow the next procedure to charge your battery pack.



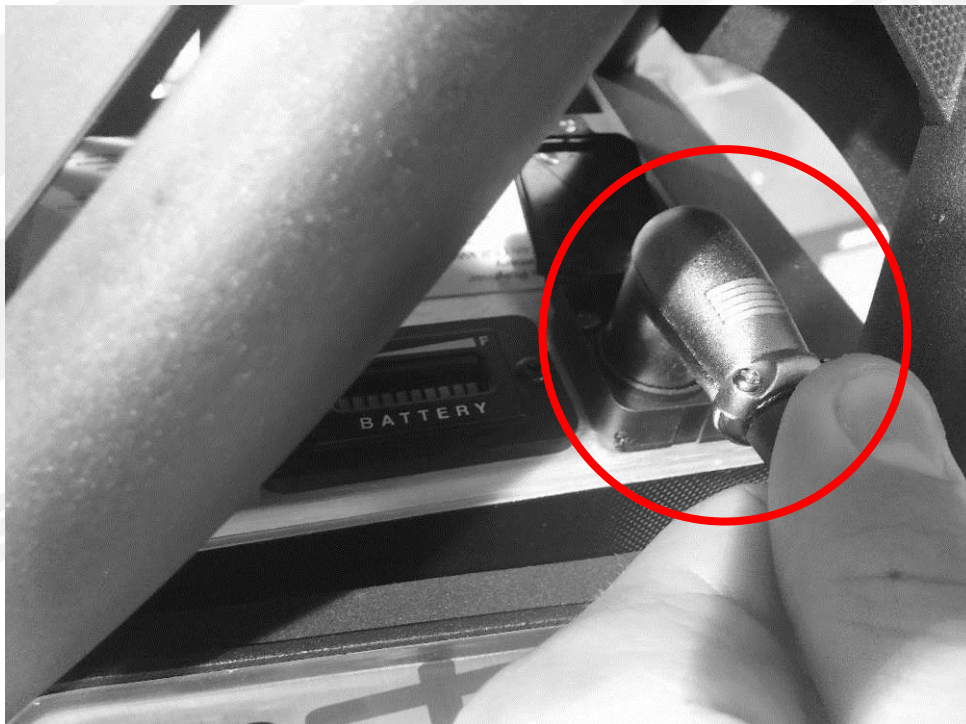
The charging of the battery pack needs to be followed very precisely



1- OPEN THE CHARGING CONNECTOR TAP



2- CONNECT THE CHARGER CONNECTOR TO THE BATTERY PACK CONNECTOR



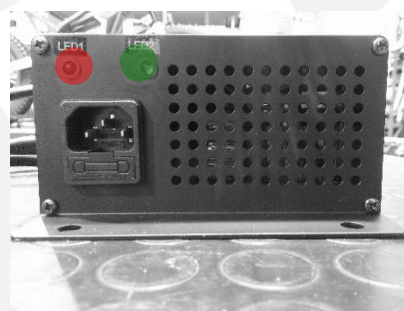


3- PLUG THE CHARGER TO THE OUTLET



The LED of the charger are :

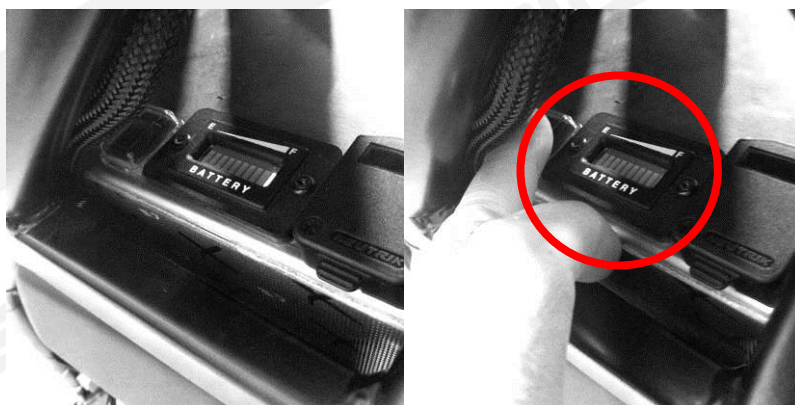
- LED1 : RED
- LED2 : GREEN



The charger is correctly plugged, it's working.

4- SWITCH ON THE BATTERY PACK

The LED indicator light (red circle).



The LED are :

- LED1: RED
- LED2: RED

The battery pack is charging..



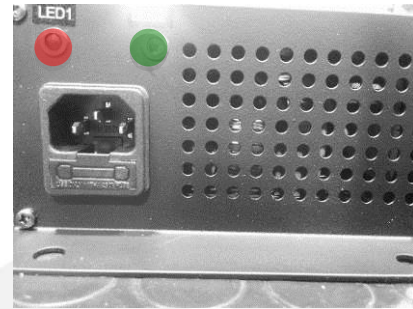


5- AT THE END OF THE CHARGE

THE LEDS OF THE CHARGER ARE :

- LED1 : RED
- LED2 : GREEN

The battery pack is charged.



6- SWITCH OFF THE BATTERY PACK (THE LED INDICATOR MUST STOP TO LIGHT)

7- UNPLUG THE CHARGER FROM THE OUTLET

8- UNPLUG THE CHARGER FROM THE BATTERY PACK

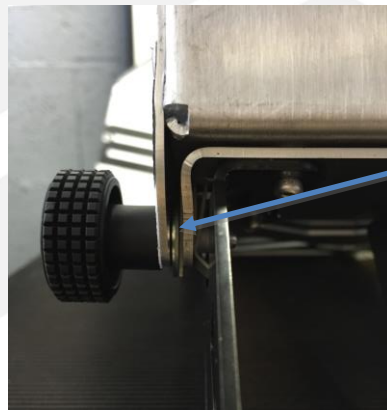
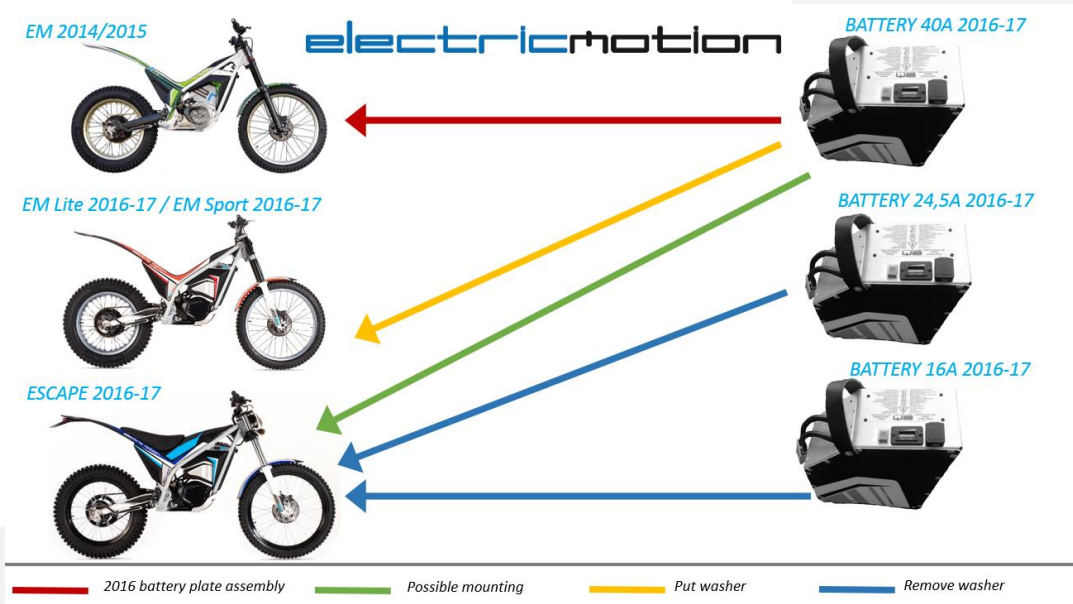
THE BATTERY PACK CAN BE CHARGED OUT OF THE MOTORCYCLE

FOLLOWING EXACTLY THE SAME PROCEDURE

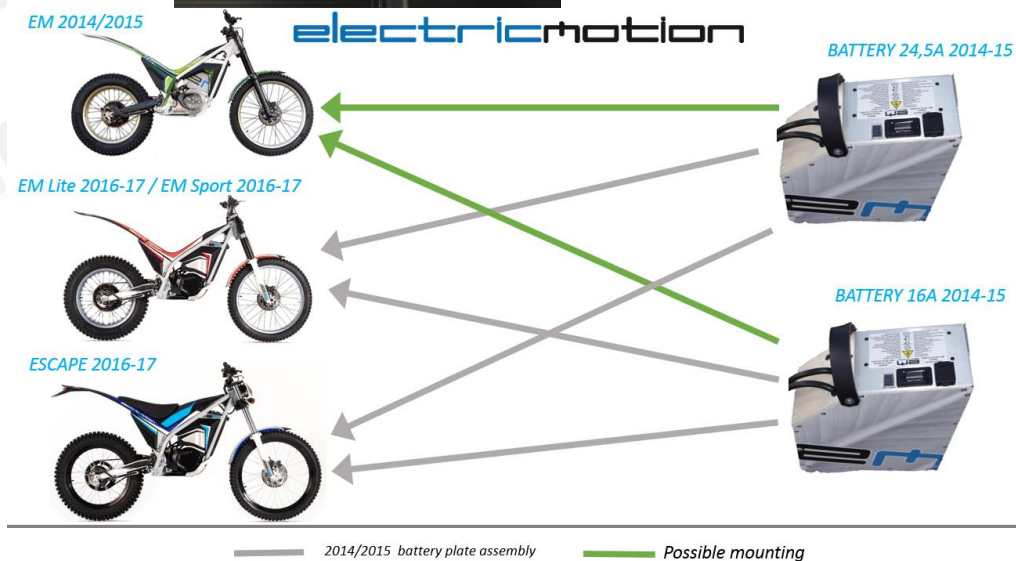


2.2 MOUNTING AND REMOVING OF THE BATTERY PACK

⚠ INTERCHANGEABILITY OF TRIAL BATTERIES ELECTRIC MOTION



Washer 0R001-06018-01-00
between the lateral plate and the
battery (on each side)





2.2.1 MOUNTING OF THE BATTERY PACK

1- TAKE THE BATTERY PACK BY THE STRAP WITH ONE HAND



2- HELP THE MOVING WITH THE OTHER HAND, PUT THE BATTERY PACK IN PLACE



⚠ DO NOT HOLD THE BATTERY PACK BY THE POWER CABLES!



3- SCREW THE FRONT SCREW



4- SCREW THE LATERAL SCREWS AND VERIFY THE TIGHTENING OF THE 3 FIXING SCREWS





5- PLUG THE BATTERY PACK TO THE MOTORCYCLE



6- IMPLEMENTATION OF THE COVER

- Put the cover in place on the motorcycle (put firstly the front part of the cover).





- The cover is fixed by a strut and 2 screws (red circles).
- Screw the 2 fixing screws.

2.2.2 DEMONTAGE DU PACK BATTERIE

1- REMOVE THE COVER

- Unscrew the 2 screws





- Remove the cover :



2- VERIFY THE BATTERY PACK IS SWITCHED OFF (BATTERY SWITCH IN OFF POSITION)



⚠ BE SURE THAT THE LIGHT ON THE HANDLEBAR IS OFF



If it is not :

- Wait minutes

If it remains lighting after minutes :



- Repeat the procedure SWITCH ON/SWITCH OFF of the battery pack until it switches off.

**INDICATOR EXTINCTION AND THE BATTERY LED INDICATOR
MAY TAKE SOME TIME (MINUTES).**

3- UNPLUG THE MAIN CONNECTOR



⚠ DO NOT PULL THE POWER CABLES OF THE BATTERY PACK



4- REMOVE THE FRONT FIXATION SCREW



5- UNSCREW THE LATERAL FIXATION SCREWS (around 5 mm)





6- TAKE THE BATTERY WITH THE STRAP WITH ONE HAND, HELP THE MOVING WITH THE OTHER HAND



⚠ DO NOT HOLD THE BATTERY PACK BY THE POWER CABLES!



2.3 STORAGE OF THE BATTERY PACK

⚠ IF YOU WANT TO STORE THE BATTERY PACK, YOU HAVE TO TAKE SOME PRECAUTIONS:

- Before storing the battery, the pack must be fully charged and you must insure the battery is switched OFF,
- Inspect and charge the battery every 8 weeks, even if it is not used,
- Discharge the battery to the orange zone on the meter and a fully recharge every 2 months. (please switch battery off after recharge),
- For a battery storage superior to 3 months, charge your battery until 80% by respecting the following voltage:
 - o 43-44V for 13S batteries,
 - o 46-47V for 14S batteries,
- Make sure that the charger and the battery are switched OFF once the charge is finished,
- Do not store the battery pack under 10°C, ideal is between 15°C and 20°C,
- Do not store the battery pack in wet atmosphere, do not store the battery pack exposed to the sun,
- Remove the battery pack is if is necessary from the bike.

⚠ FAILURE TO TURN OFF BATTERY SWITCH:

- Failure to turn off switch may result in low voltage on the battery,
- Low voltage is under 3V per cell:
 - o 39V for 13S batteries,
 - o 42V for 14S batteries.

Please contact ELECTRIC MOTION technical service
+33 (0) 4 67 41 10 90 // emotion.sav@gmail.com

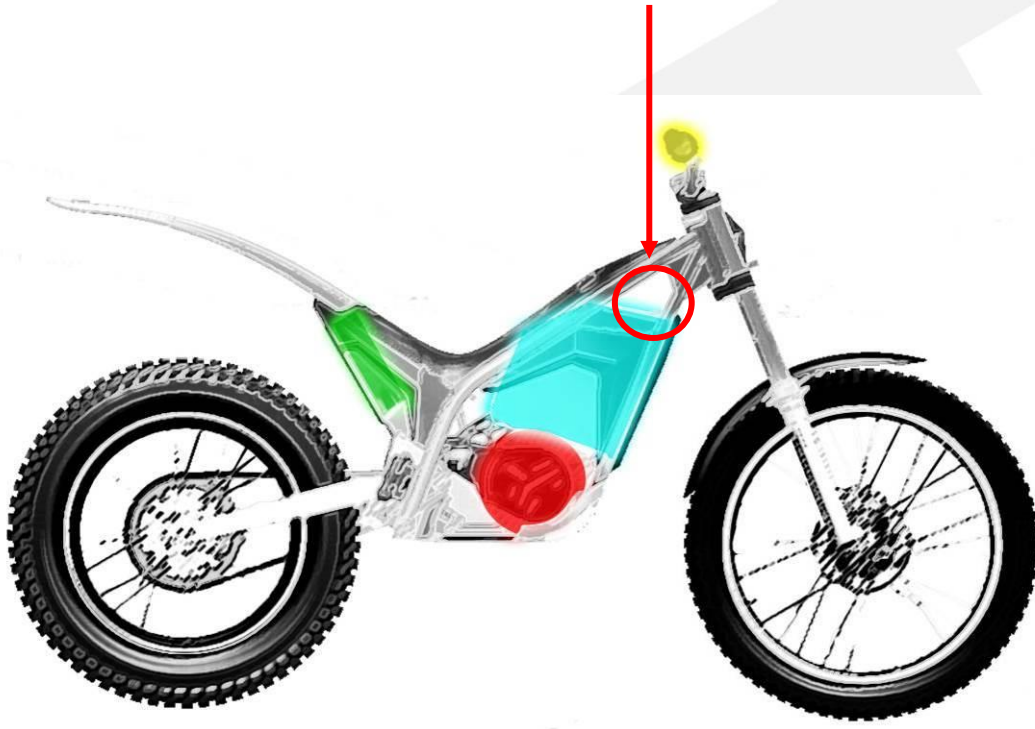
ANY OPERATION RESULTING IN A LOW VOLTAGE CONDITION THAT REQUIRES A REFRESHING AND BALANCING THE CELLS WILL VOID THE BATTERY WARRANTY



3. USING OF THE MOTORCYCLE

3.1. STARTING OF THE MOTORCYCLE

- 1- START THE BATTERY PACK (THE LED INDICATOR SHOWS THE LEVEL OF THE BATTERY PACK)





2- STARTING THE SECURITY SWITCH (put the magnet on the base)



LED is situated on the right side of the handlebar will light, and a beep will inform you that the motorcycle is ON.

You just have to push the MAP button to allow riding.

⚠ WARNING ⚠

If you happen by mistake, forgetting to turn off the battery after use or not use the bike on for 20 minutes, it will turn into « sleep » mode. This safety cut the relay and the led indicator battery. It induce the LED indicator is off but the battery is in sleep mode, be sure to turn off the battery.

You must in this case cut the battery before restarting or before recharging.

⚠ : ATTENTION: WHEN THE MOTORCYCLE IS RUNNING, THERE IS NO NOISE!

⚠ NEVER RIDE WITHOUT SWITCHING ON THE BATTERY AND MAGNET CAP INSTALLED (Downhill,etc..) !



3.2. RIDING OF THE MOTORCYCLE

3.2.1 SECURITY

BEFORE RIDING, CHECK YOU HAVE ALL THE SECURITY EQUIPMENT:

- HELMET
- GLOVES
- ADAPTED CLOTHES
- SECURITY SWITCH (fixed to your wrist to secure the motorcycle if you fall)



**⚠ : WHEN THE MOTORCYCLE IS RUNNING,
THERE IS NO NOISE !**



3.2.2 SETTINGS

FAISCEAU MAPS

The motorcycle has a commodo map push that allows to switch from a riding mode to another.

Changing the riding mode allows to adapt the acceleration and the maximum speed to type of practice wished.

The riding modes are :

0- MAP 0 (WHITE LED)

MAP 0 is a security map, push the MAP button to be on the MAP 1

1- RANDO (GREEN LIGHT)

RANDO riding mode is adapted to hiking.

The maximum speed is higher but the acceleration is lower.

2- TRIAL 1 (BLUE LIGHT)

TRIAL 1 mode has a progressive acceleration.

It is adapted to the hard conditions of adherence such as when the ground is wet.

3- TRIAL 2 (RED LIGHT)

TRIAL 2 mode has a direct acceleration and 100% of the maximum acceleration.

It is adapted to practice trial due to its nervosity.



3.2.3 RIDING

During the first ridings, be careful, electric motorcycle is quite different than Internal Combustion Engine motorcycles (2 or 4 strokes).

Begin with the first riding modes to discover this motorcycle.

Go to other MAPS if the riding of the motorcycle is OK.

For trial application, replace the front 11 teeth sprocket by the 9 teeth furnished sprocket.



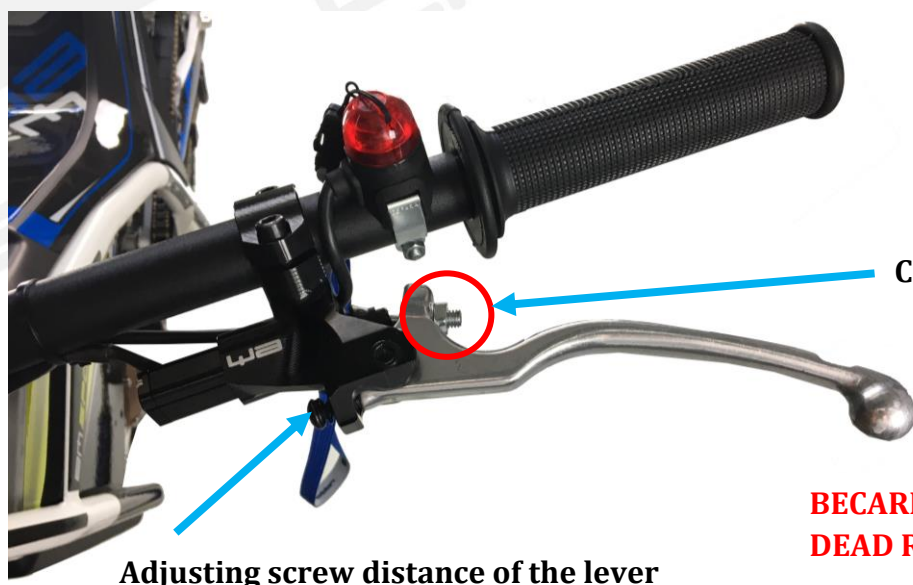
3.2.4. PELS/PRB (Sport model or option)

a) PELS

To be perfectly adapted to trial driving, the EM trial has a PELS (Progressive Electronic Lever Switch).



The PELS system (Electric Lever Switch) allows you to cut or liberate, in a progressive manner, the motor's power, such as a heat motorcycle can. It is very useful to cross obstacles for exemple.



BE CAREFULL: ALWAYS LEAVE DEAD RANGE OF THE LEVER



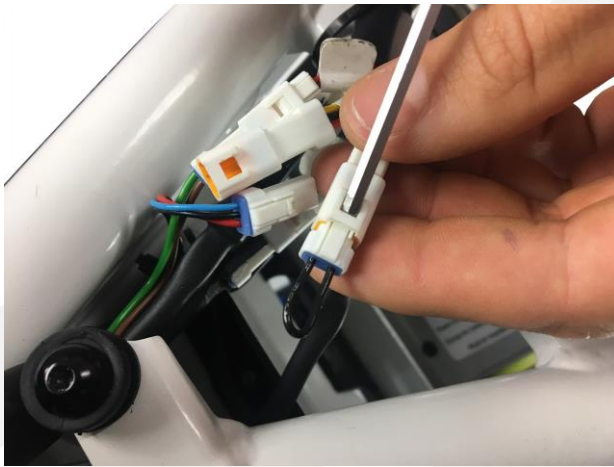
b) PRB

But this lever can also be used as PRB (Progressive Regeneratort Brake). When the pilot is not accelerating, the motor is not powered. If it is in freewheel, it is possible to regenerate the motor ;it allows to recharge the battery while acting as a motor brake. Therefore, this lever allows to manage the regeneration percentage.

c) Shift PELS/PRB

To use the lever in PELS or PRB mode depending on what you want, you need :

- Remove the cover



- Remove the "shunt" connector corresponding to the mode you want to use (sticker « PELS » or « PRB »), with a thin tool
- Unplug the plug which is connected, and plug the one you want.
- Don't forget to reconnect the "shunt connector" on the plug which is not used



3.2.5. RIDING IN THE WATER



IF DICULTIES OR STOP IN THE WATER, SWITCH OFF THE MOTORCYCLE (MAIN CONTACTOR AND BATTERY PACK) TO AVOID THE MOTORCYCLE FALLS RUNNING IN THE WATER

3.2.6. TEMPERATURES OF USING

⚠ To enjoy completely your motorcycle, please respect the charge and discharge condition.

3.2.7. CHARGE

The charging can be done only above 10°C

We recommend to charge between 10°C and 40°C

3.2.8. DISCHARGE (USING)

The battery can be discharged on a bigger temperature range from -15°C to 55°C

You must know that the time range is really affected by the temperature. See the chart below:

TEMPERATURE (°C)	-15	-10	0	25	40	55
RANGE REDUCTION	-30%	-25%	-15%	-0%	-3%	-4%



3.2.9. STOPPING OF THE MOTORCYCLE

1. DISCONNECT THE SECURITY SWITCH (remove the magnet of the base)



2. SWITCH OFF THE BATTERY PACK : THE LED INDICATOR MUST STOP TO LIGHT



During the first using sessions, it is possible the battery pack do not switch off correctly. To avoid this problem, repeat the operations SWITCH ON/SWITCH OFF of the battery pack until it switch off.

AFTER EACH USING, YOU MUST RECHARGE THE BATTERY PACK. EVEN MORE IF YOU DEEPLY DISCHARGED IT DISCHARGE THE BATTERY TO THE ORANGE ZONE ON THE METER AND A FULLY RECHARGE EVERY 2 MONTHS (PLEASE SWITCH BATTERY OFF AFTER RECHARGE)



4. MAINTENANCE

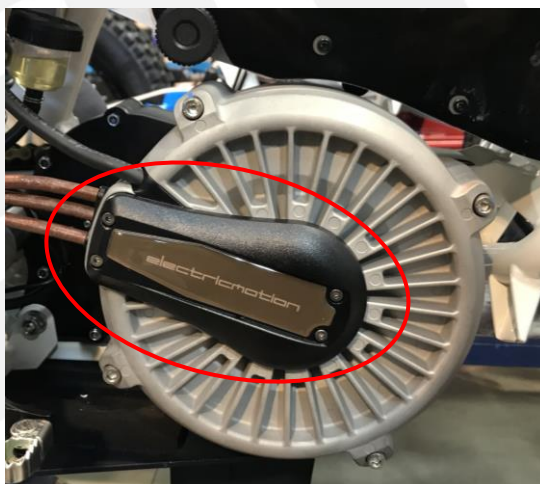
4.1. CLEANING


Concerning the water cleaning of the motorcycle:

- 1- REMOVE THE BATTERY PACK (FOLLOWING PROCEDURE REMOVING OF THE BATTERY PACK)
- 2- WASH THE MOTORCYCLE WITHOUT FOCUSING ON THE ELECTRICAL COMPONENTS AND THE EXTERNALS BEARINGS. (USE MOTUL MOTO WASH AND MOTUL WHEEL CLEANER)
- 3- DRY THE MOTORCYCLE (ELECTRICAL CONTACTS) BEFORE THE MOUNTING OF THE BATTERY PACK.

 DO NOT CLEAN THE HANDLEBAR WITH A PRESSURE WASHER

 DO NOT CLEAN MOTOR SENSOR WITH A PRESSURE WASHER!!



 AGRESSIVE CONDITIONS (SALT OR WET CONDITIONS) CAN DAMAGE THE MOTORCYCLE ; IN CASE OF EXPOSITION TO AGRESSIVE CONDITIONS, REPEAT THE MOTORCYCLE/TRANSMISSION WASHING AND TRANSMISSION LUBRIFICATION OPERATIONS.

Concerning the cleaning of the battery pack:

- 1- SWITCH OFF THE BATTERY PACK.
- 2- USE ONLY A WET CLOTH OR SPONGE.
- 3- DRY PROPERLY THE BATTERY PACK.



4.2. TRANSMISSIONS

The motorcycle has 2 direct transmissions, the PRIMARY (circle red) one and the FINAL transmission (circle blue)



4.2.1. PRIMARY TRANSMISSION

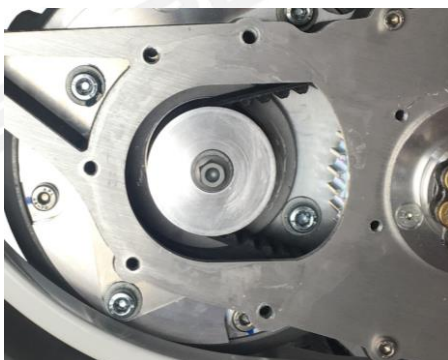
It is necessary to regularly check the state of the primary transmission. This transmission is located between the two transmission plates, under the battery pack.





Please, follow the next procedure :

- Unscrew the 5 transmission carter screws, and the 2 chainguide screws
- Remove the transmission carter



- Check the state of the transmission
- Check the belt.
- Once the checking is done, reassemble the transmission carter with its 7 screws.



4.2.2. SECONDARY TRANSMISSION

The secondary transmission needs to be cleaned and lubricated after every riding session

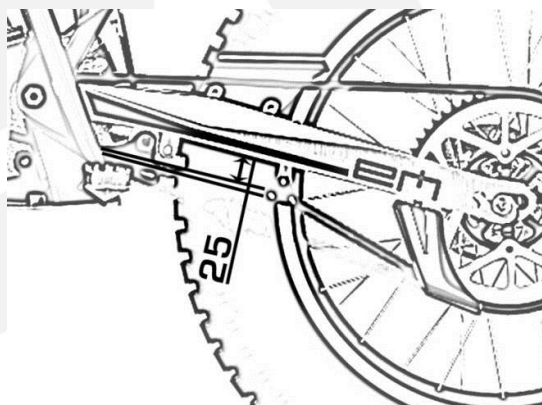
CHAIN TENSION:

Please follow the next procedure to check or adjust the secondary chain tension.

Attention: To do this operation, the motorcycle needs to be on the floor.

- 1) LOOSEN the rear wheel axle.
- 2) ADJUST the chain tension with the setting cranks on each side of the swingarm. The crank position needs to be the same on the 2 sides.
- 3) ADJUST the tension following the next picture.

- 4) When the tension of the rear wheel is OK, TIGHTEN the rear wheel axle.



CHAIN LUBRIFICATION:

Electric Motion recommend MOTUL for the maintenance of your bike



- ✓ Clean the chain with MOTUL's products and a cloth
- ✓ Afeter cleaning, use MOTUL lubrifiant

After reading this document, you can ride your EM.



Take the time to adapt your riding to the motorcycle behavior. I will allow you to ride this motorcycle in the best conditions to discover all its capacities!

If you have any question or any doubt, please contact us by phone or email

0033 467 411 090

emotion.sav@gmail.com

Electric Motion's team wishes you to enjoy riding your electric motorcycle.