TECHNICAL MANUALS

KM

INTRODUCTION

You must read these technical manuals carefully before riding the motorcycle and make your children understand the precautions and safety measures that must be taken.

DOWNLOADS

QR codes for downloading the manuals corresponding to each action. 1.-

ASSEMBLY

2.- CHARGER

3.- BATTERY

4.- USER MANUAL

5.- PARTS-BOOK

Before using the KM motorcycle, you must make sure that you have understood everything written in this manual, paying particular attention to the warnings and safety section.

This manual must always be carried with the motorcycle and must be transferred in any change of ownership.

Before using the motorcycle, you must read this manual carefully and keep it for future reference.

If you have any questions, you can go to your NEUTRA point of sale or you can contact the official distributor on our website.
You can also write to us at our email and our staff will respond as soon as possible.

This manual contains important safety, operation, assembly and preparation information for the correct use of the kit.

The kit is not ready for immediate use, it arrives partially assembled.

You must follow the assembly and preparation procedures indicated in this manual for good motorcycle safety.

You must also consider the safety information explicit in this manual, to avoid personal injury when assembling and maintaining it.

Where to find safety information:
- Safety labels on the kit.
- Warning symbols together with a word and instructions or information that you should consider, which you can find in this manual.

DANGER:

A hazardous situation that may result in death or serious injury.

WARNING:

A hazardous situation that may result in death or serious injury.

CAUTION:

Information on practices that do not involve risk of injury. It is used to prevent damage to the kit or the environment.

NOTICE:

Information to assist you in the operation or maintenance of your motorcycle.

This manual also includes the following information:

This publication contains the latest motorcycle information available prior to publication.
NEUTRA reserves the right to make changes at any time without notice and without incurring any obligation.

USER MANUAL

KM

Ver.1.0 JUN-26

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1 INTRODUCTION

The future of two-wheeled mobility is here.

This kit has been designed following strict environmental criteria, as it is a clean, quiet motorcycle that requires much less maintenance than combustion motorcycles. Likewise, safety measures have been considered of great importance.

The kit has been carefully designed to be easy to disassemble, to facilitate the assembly of spare parts and its recyclability.

This product offers the rider a unique experience, thanks to its acceleration and speed.

Read this user manual carefully before riding the motorcycle and make sure you understand the precautions and safety measures.

This manual contains very important information on safety, to avoid accidents, serious injuries or fatalities in the worst cases. A complete knowledge of the kit, pre-use checks, maintenance and its correct use, among other things, are explained in detail.

Remember that the use of this kit by minors must always be done under the supervision of an adult and trained person.

Many accidents are due to the lack of experience of the rider, so it is advisable to instruct the rider with a training course.

It is forbidden to perform maintenance operations by minors under 16 years of age.

Its use is not recommended for people who do not know how to ride a bicycle.

The motorcycle is only allowed to be used in areas with the relevant permits granted by the country's authorities.

Likewise, it should only be used by riders with a valid license issued by the country’s motorcycle federation or similar entity.

Before using the motorcycle, be sure that you have understood everything that is written in this manual, paying particular attention to the warnings and safety section.

This manual must always be carried with the motorcycle and must be transferred in any change of ownership.

If you still have any questions after reading this manual, go to your NEUTRA point of sale or contact the official distributor on our website.

You can also write to us at our email and our staff will respond as soon as possible.

DANGER

The use of this motorcycle without having carefully read this manual is prohibited.

2 SAFETY WARNINGS

This motorcycle has been designed for use off public roads only.
It may be used by children over 12 years of age and with a weight between 35 and 100 kg, and when under the supervision of a responsible, trained adult who makes the rider understand the correct use and the explicit warnings in this manual.

WARNING

Always ride the motorcycle with both hands on the handlebars.
To prevent injuries, riders must always wear a helmet and the appropriate protections for the use of the motorcycle.
The appropriate protections are as follows:

- Homologated helmet.
- Gloves, knee and elbow pads.
- Overalls or protective clothing.
- Closed footwear suitable for all weather conditions.

The motorcycle has been designed for exclusive use by one person. This motorcycle does not have any lighting device, therefore, it should only be used in conditions of good visibility.
This motorcycle is not designed for use in extreme weather conditions such as heavy rain, hail, strong wind or snow.
Use by intoxicated or intoxicated persons is prohibited.

DANGER

Improper use of the motorcycle can cause serious personal injury and property damage.

Never operate the motorcycle if it shows any defects or signs of possible damage.

WARNING

In some countries, specific regulations apply according to age, speed limits or areas designated for the use of this type of motorcycle. Please inform yourself and comply with the regulations of the relevant country.

Before each use, carry out the operations described in the subsection “OPERATIONS BEFORE STARTINGTHE MOTORCYCLE” corresponding to section 6 “STARTINGAND STOPPING THE MOTORCYCLE”.

2.1 WARNING AND SAFETY STICKERS

There are two warning and safety stickers on the kit with some pictograms pointed to the indicated areas (Fig. 1).

They are intended to ensure correct use and to alert drivers of safety precautions.

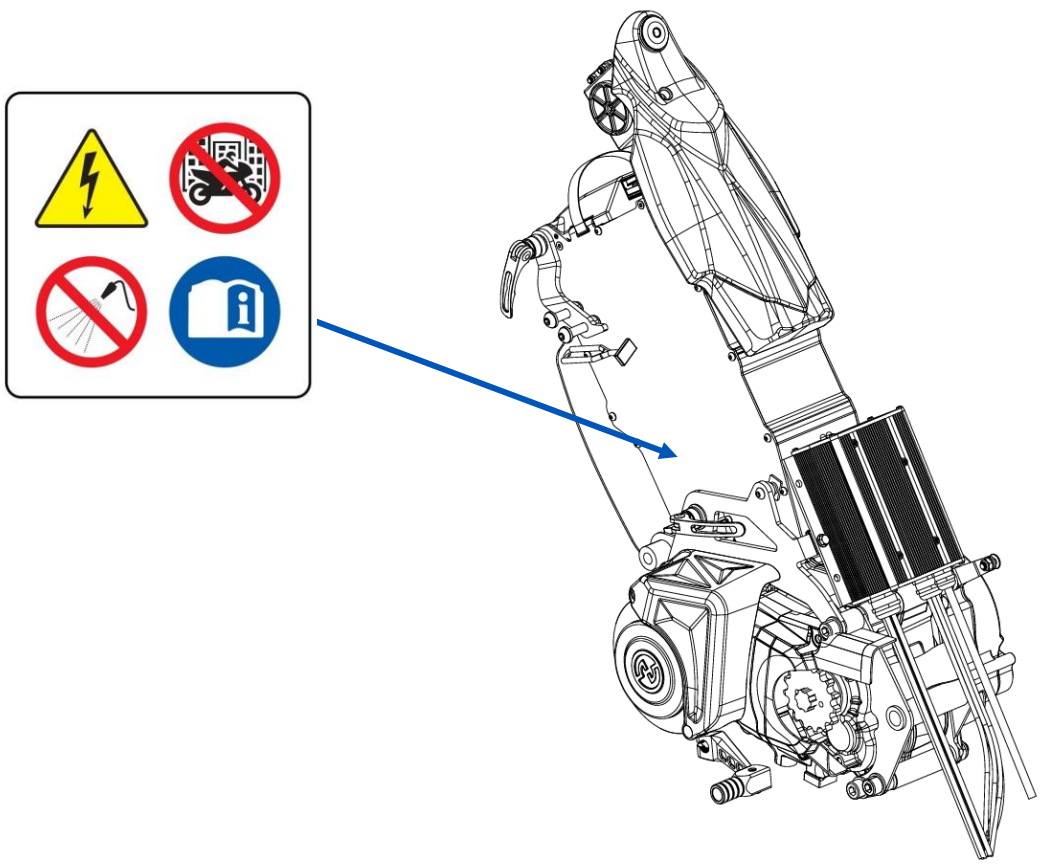


Fig. 1

Below is the meaning of each pictogram:

	Do not touch the electrical contacts. Otherwise, injury may occur. Make sure the battery is disconnected and removed before performing any maintenance.
	It is not legal to use it on public roads, highways, motorways, etc.
	Do not clean the motorcycle with pressurized water. Do not plunge the battery in water.
	Read the instruction manual before using the motorcycle.

NOTICE

The warning and safety stickers must not be removed under any circumstances and if they are damaged, they must be replaced with new ones.

To obtain replacement warning and safety stickers if they are damaged, please contact your NEUTRA point of sale, or you can contact the official distributor on our website. You can also write to us at our email address and our staff will respond as soon as possible.

⚠ WARNING

Always wear protective gloves, boots and eye protection (Fig. 2) when unpacking, assembling or servicing the kit to avoid damage.



Fig. 2

3 DANGERS AND WARNINGS

3.1 BURN HAZARD

Some components of the motorcycle can become very hot.
Below is an image (Fig. 3) where the components that can become hotter during use are highlighted in red:

- Engine.
- Controller.
- Charger (when charging the battery).

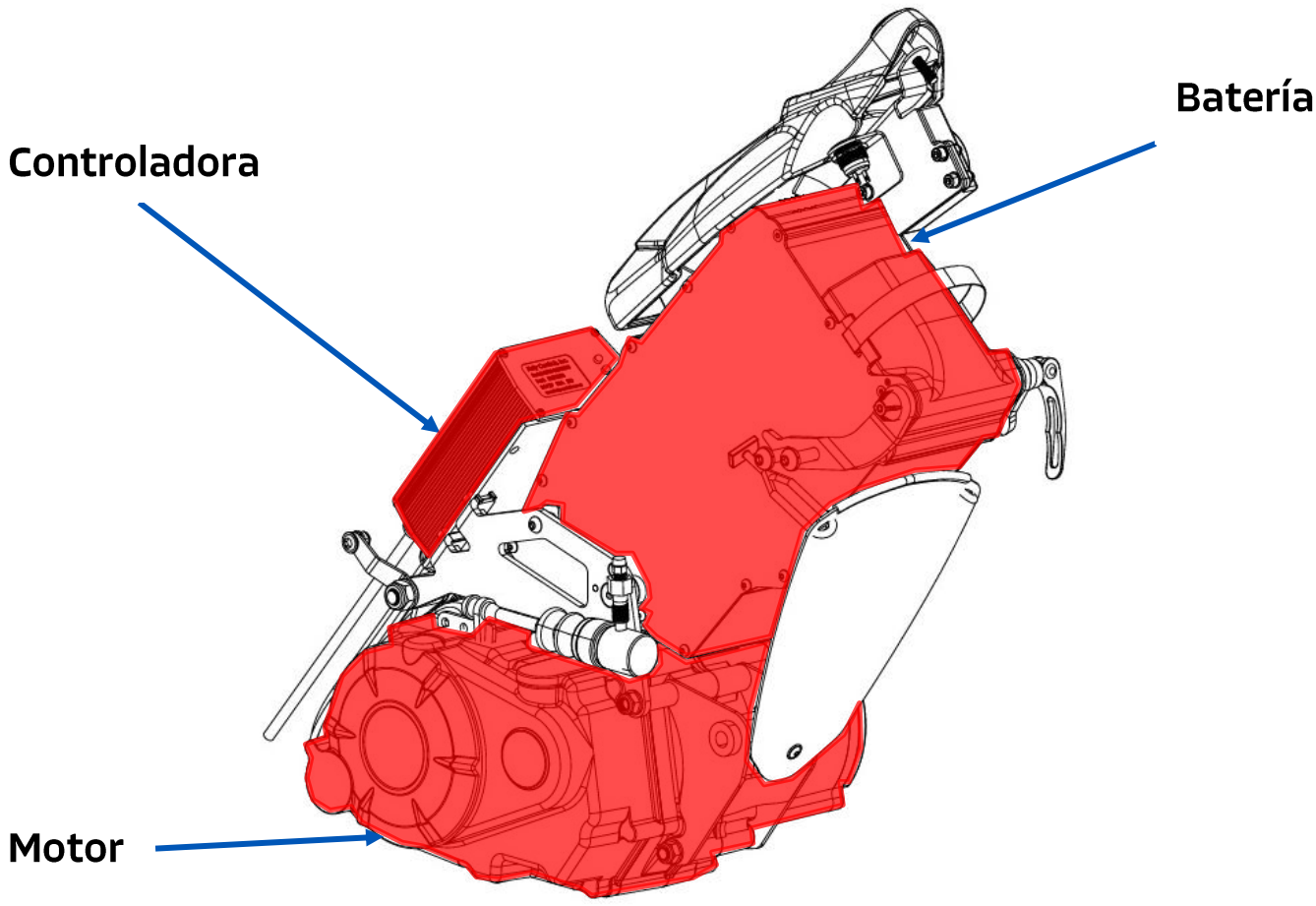


Fig. 3

⚠ WARNING

Do not touch any of the components mentioned above until they have cooled down.

3.2 FIRE HAZARD

If the battery is in perfect condition, there is no risk of fire.

DANGER

The battery contained in the electric kit poses a fire hazard.
If your motorcycle catches fire, inform the fire service that a fire has occurred in a kit with lithium-ion batteries.
Never open the battery unit.
The battery is a large energy storage system capable of causing serious damage to people or facilities due to improper use or manipulation of the battery.

The battery can only be repaired by qualified personnel authorized by NEUTRA in writing.

NEUTRA is exempt from and will not be held responsible for any damage caused by the battery to people, equipment or facilities due to improper handling of the battery by unauthorized personnel, or due to impacts or overloads.

Below, are several safety rules regarding the battery.

DANGER

The interior of the equipment cannot be accessed; never open the battery system. Any attempt to open it will void the warranty. There is a high risk of accident if the opening is carried out by unauthorized personnel.

The installation, handling and maintenance of the battery must be carried out by qualified personnel.

It is PROHIBITED to charge the battery with the ignition switch in the ON position.

Do not expose to fire.

Avoid exposing the battery to temperatures above 40°C.

Never open the battery system or any of its components.

Prevent the entry of any liquid and never immerse the battery in any liquid.

Do not hit or drop the battery.

In any case of emergency, call the emergency services and inform them that it is a Lithium battery.

Keep the battery away from children during the charging process.

To avoid electrical accidents, do not leave the battery connected.

WARNING

Battery charging: must be carried out in conditions of humidity less than 75% and a temperature between 0°C and 40°C.

CAUTION

It is forbidden to use any charger that is NOT supplied by the manufacturer.

You should inform yourself more thoroughly about the correct use and precautions of the battery.
For this, refer to the manual “BATTERY MANUAL KM - 2026” found on our website.

3.3 MAINTENANCE AND HANDLING WARNINGS

At all times, follow the instructions in this manual to properly maintain the kit.

CAUTION

Use the oils and other products indicated in this manual.

WARNING

Use the indicated tightening torques.

For the safety of the rider, use only original KM spare parts and accessories. NEUTRA is not responsible for damage resulting from the use of other products.

Unauthorized changes, modifications or manipulations may not be made to the kit. If this is done, its safety cannot be guaranteed, and the warranty will be voided.

The motorcycle must be switched off before handling it.

Maintenance must not be carried out on the motorcycle until it has cooled down, due to the risk of burns.

DANGER

Specific training and tools are required to work with electrical systems, as when working under electrical voltage, there is a risk of electric shock. For any maintenance or handling, remove the battery and wait 5 minutes. This is an important precaution to take due to the risk of electric shock. Under no circumstances should any electrical or electronic components of the motorcycle be opened.

3.4 CLEANING THE KIT

CAUTION

Clean the motorcycle when the engine is cold.

Not wash the kit with high-pressure water.

The surface or paint of the parts may be damaged by using chemicals not suitable for cleaning the kit.

After washing, lubricate the transmission system.

To clean the battery, do not use water or any other conductive product. Carefully remove any dirt from it.

WARNING

The motorcycle is not designed for immersion in any type of fluid. Remove the battery and wait 5 minutes before starting to wash it.
Do not wash the motorcycle with the battery in place!

3.5 WATER RESISTANCE

The electrical components of the kit are resistant to water and rain. However, the water level on the road should not exceed the height of the footrest.

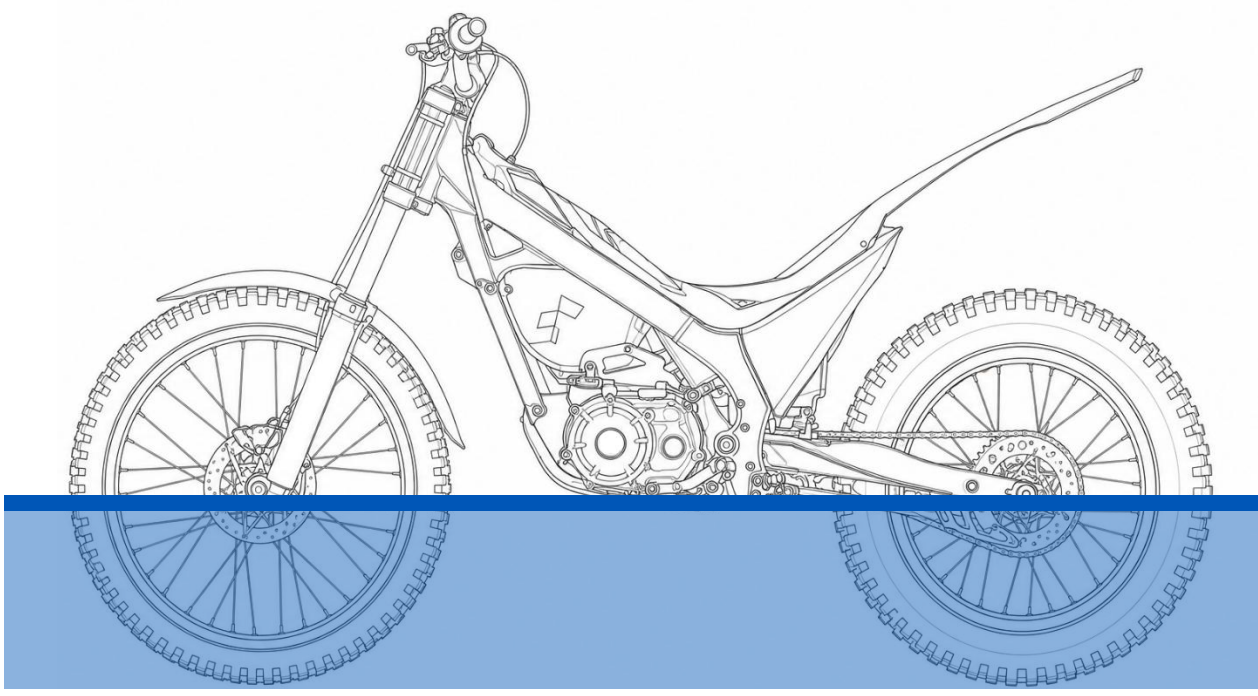


Fig. 4

4 TRANSPORT OF THE MOTORCYCLE

To transport the electric motorcycle (Fig. 5) correctly and safely to the place where it will be used, consider the following aspects:

- The motorcycle must be secured in an upright position, with straps or other suitable fastening means to prevent it from falling during transport.
- It must be fixed as indicated in the following image (on both sides):

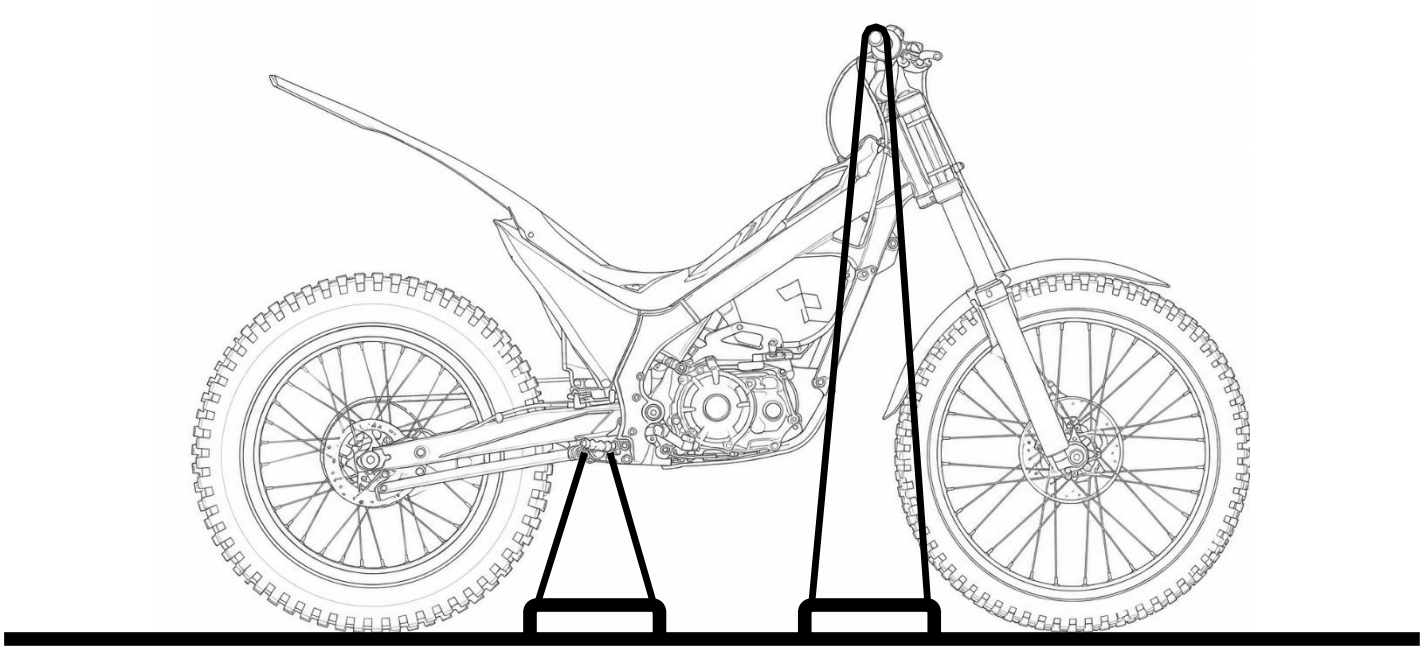


Fig. 5

NOTICE

Ensure that the straps you use to secure the motorcycle during transport do not pinch any of the front and rear brake cables.

It is advisable that the battery in a state of charge of less than 30% of its capacity.

5 STARTING AND STOPPING THE VEHICLE

5.1 OPERATIONS BEFORE STARTING THE MOTORCYCLE

The operations in the following sections of STARTING and maintenance must be carried out by persons over 16 years of age under the supervision of a trained adult.

These operations can be carried out once you have read the entire user manual.

Before starting to break in the motorcycle, carry out the following operations:

- Check that the motorcycle has the ignition switch closed.
- Check that the rims and tyres are in good condition, then check that the tyre pressure is correct as indicated in this manual, 0.8 kgf/cm^2 on both wheels.
- Check that the transmission system is working correctly, so that the chain has a play as indicated in this manual, 20 mm with respect to the swing arm.
- Operate the throttle and check that it moves back automatically. And without using the throttle, turn the handlebars left and right and check that the turn does not accelerate.

- Check that there is nothing that prevents the handlebars from turning to its maximum angle.
- Check that the battery is in good condition and does not present any damage.
- Check that the cables connecting the battery to the motorcycle are well connected and there is no visible damage or stagnant water.
- Check that the battery is well fixed to the motorcycle.
- Next, close the top cover and check that it is properly anchored.
- This motorcycle has a selector located on the upper right front of the frame that allows you to limit the power of the motorcycle. Select the mode chosen before starting. See page 17 of this manual for information on its operation and use.

WARNING

The kit contains a safety device called the MAN OVERBOARD, which stops the motorcycle engine in the event of a fall and thus prevents more serious injuries to the rider.

Before each use, ensure that the MAN OVERBOARD is correctly connected to the motorcycle and above all check that the device is properly fixed on the rider's left wrist.

- Make sure that the MAN OVERBOARD is correctly connected to the motorcycle and well-fixed to the rider's left wrist.

In the following image (Fig. 6) we can see the location of this device.

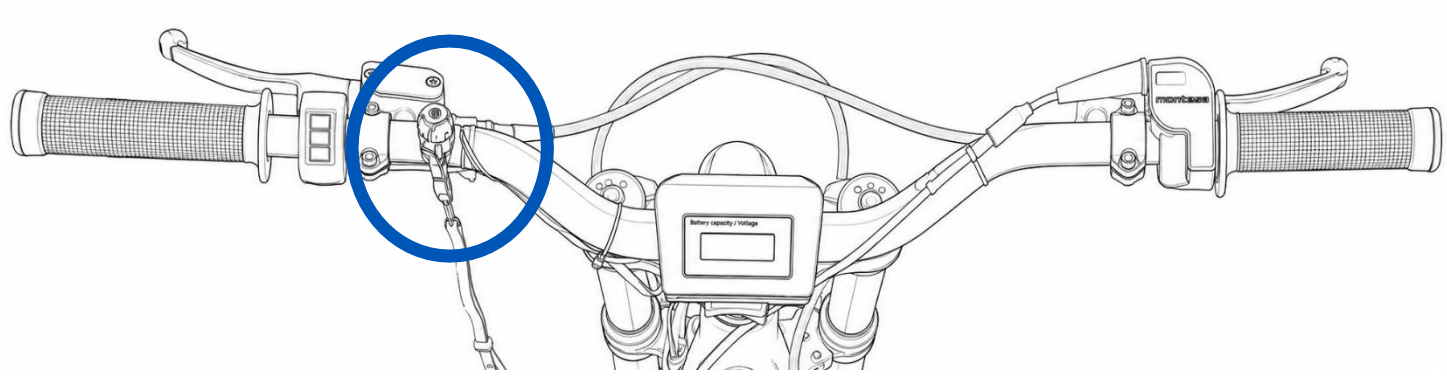


Fig. 6

5.2 STARTING THE MOTORCYCLE

To start the motorcycle, follow the steps below. It is important to always perform this procedure in this order to ensure a correct and safe start.

WARNING

Before switching on the motorcycle, ensure that the transmission is in neutral (N). To do so, operate the gear shift lever until the neutral position is engaged, confirming that no gear is selected. This check must always be carried out before start-up to prevent unintended vehicle movement.

1- First, remove the cover as described on page 23 and verify that the battery-to-motorcycle connection is properly secured and correctly connected (Fig. 7). Next, install the central cover as shown on page 28.

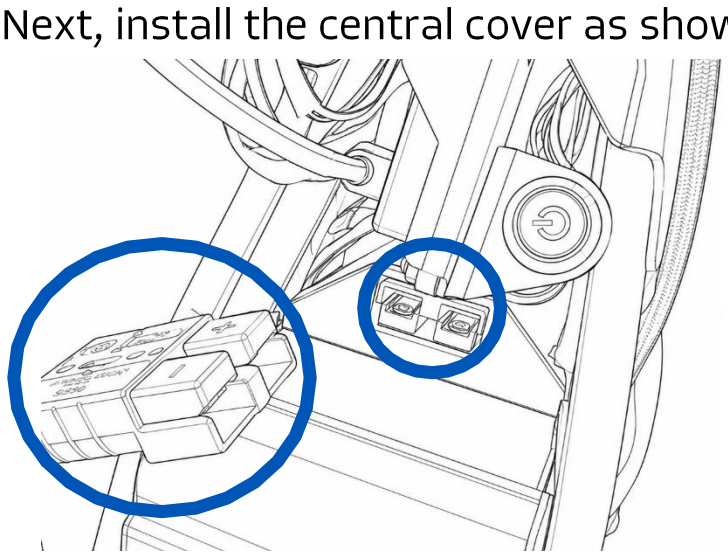


Fig. 7

2- Switch on the motorcycle by pressing the button located on the upper right side of the chassis (Fig. 8).

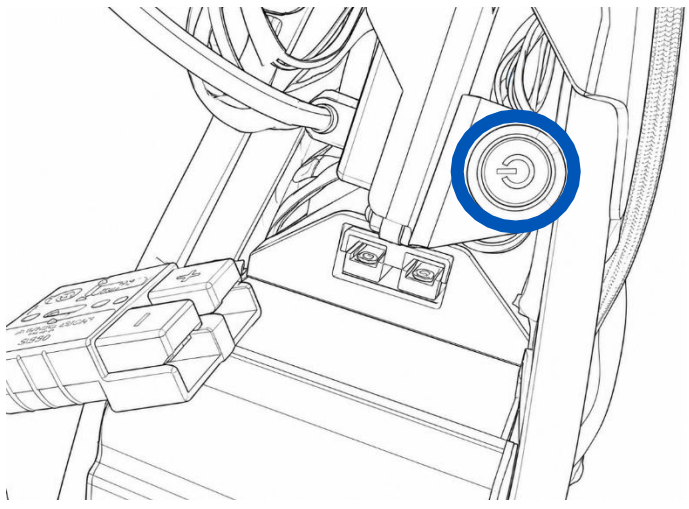


Fig. 8

With the motorcycle placed on a stand and the rear wheel off the ground, gently rotate the throttle grip to verify that the electric motorcycle is functioning correctly. From this point, you may remove the stand and your KM will be ready to ride.

5.3 COMPLETELY STOPPING THE MOTORCYCLE

To turn off the motorcycle, follow the process in reverse order of turning it on. Make sure to always follow this order to avoid possible failures or unnecessary discharges.

1- Press the power button located on the right side of the upper frame (Fig. 9).

2- Disconnect the battery as indicated on the previous page (Fig. 7) and replace the battery connector cover.

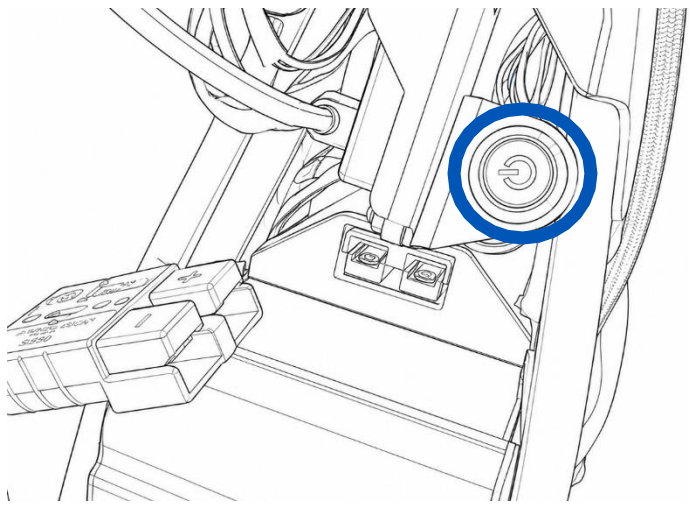


Fig. 9

⚠ CAUTION

Make sure that the motorcycle is on a flat surface.

6 MOTORCYCLE STORAGE

The following points must be considered in order to store the motorcycle correctly for a long period of time.

1- Remove the battery from the motorcycle as explained on page 23, 24 and 25.

2- Clean the motorcycle thoroughly and wait for it to dry completely before storing it, and apply a protection product for corrosion and humidity. Follow the instructions detailed in section 4.4 Cleaning the motorcycle.

3- Lubricate the transmission system and all moving parts.

4- Store the motorcycle in an upright position, mounted on the central stand (Accessory).

5- Cover it to avoid dust.

CAUTION

- Store the motorcycle in a clean, dry and well-ventilated place.
- Avoid direct sunlight.
- Keep away from heat sources.
- The ambient temperature must remain between 10°C and 35°C.
- Humidity must be between 30% and 75%.
- Periodically check that all motorcycle components are working properly.
- The battery charge level must be between 40% and 60%. Periodically check this level. If the charge is lower, connect the charger until the indicated level is reached. Otherwise, when the charge is higher, use the motorcycle until the indicated battery level is reached.
- One to three complete battery cycles must be carried out every 3 months to maintain proper performance. Once the previous cycles have been carried out, if you intend to continue storing the motorcycle for a long period of time, it must be returned to the storage conditions mentioned above.

The following aspects must be considered when putting the motorcycle into operation after long-term storage:

- Check the tire pressure.
- Perform general lubrication.
- Charge the battery to 100% of its charge and finally, insert and connect the battery to the motorcycle, if it has been removed.

7 FEATURES AND MAINTENANCE

Unlike combustion motorcycles, electric motorcycles require much less maintenance.

Maintenance operations can be easily carried out with the help of this user manual.

7.1 GENERAL MEASUREMENTS OF THE MOTORCYCLE

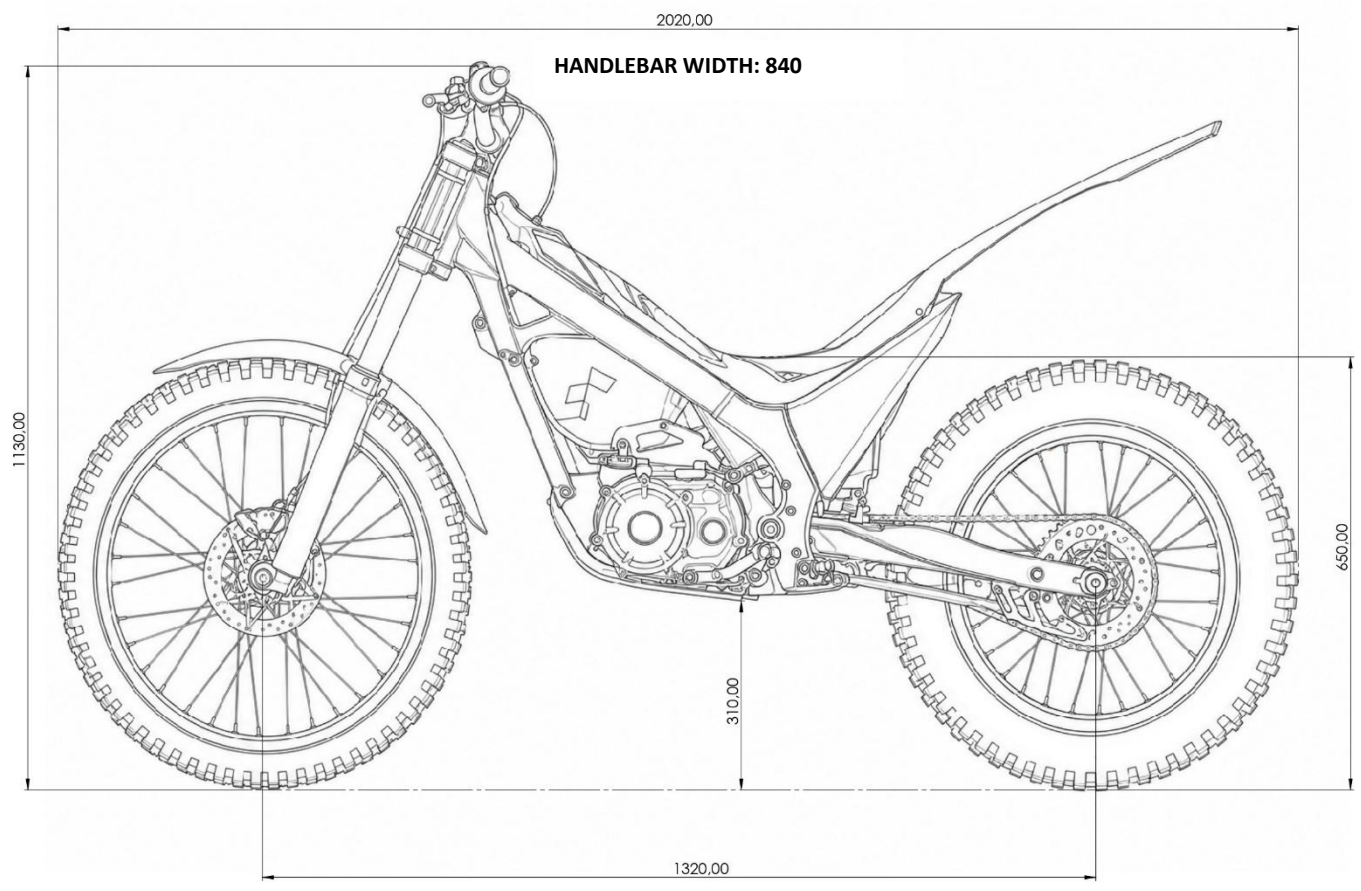


Fig. 10

The measurements shown in the photograph (Fig. 10) above are approximate.

7.2 CLUTCH

The motor supplied with this electrification kit incorporates a clutch system similar to that used in internal combustion motorcycles. Its main function is to temporarily disengage the motor from the transmission, allowing the rider to achieve more precise control of the power delivery to the rear wheel.

Usage recommendations:

1- Avoid keeping the clutch partially engaged for extended periods in order to minimize wear.

2- Periodically check the adjustment and proper operation of the clutch lever.

3- In the event of any abnormal noise, difficulty in operation, or loss of effectiveness, inspect the system before continuing to use the motorcycle.

NOTICE

Proper use of the clutch will help improve motorcycle control and extend the service life of the transmission components.

7.3 SPEED GEARBOX

The electric motor in this kit is coupled to a 4-speed gearbox. Although electric motors provide a wide operating range and high torque at low RPM, the use of different gear ratios allows the motorcycle's performance to be optimized according to riding conditions.

The different gears modify the relationship between motor rotational speed and rear wheel speed:

- 1st gear: provides maximum traction force and the highest level of control at low speed. Recommended for very technical sections, steps, tight turns, and high-difficulty obstacles.
- 2nd gear: offers a balance between traction and speed, suitable for most standard trial situations.
- 3rd gear: allows higher travelling speed while maintaining good acceleration capability.
- 4th gear: intended for transitions, fast tracks, or areas where higher forward speed is required.

The neutral position (N) is located at the bottom of the shift range. From this position, all gears (1st, 2nd, 3rd, and 4th) are selected progressively upwards using the gear shift lever.

NOTICE

Gear changes must be performed using the clutch to ensure smooth operation and reduce wear on the transmission components.

7.4 THROTTLE SYSTEM AND VOLTMETER

Before each use, operate the throttle and check that it automatically and quickly returns to the original position (with the ignition switch in the “OFF” position).

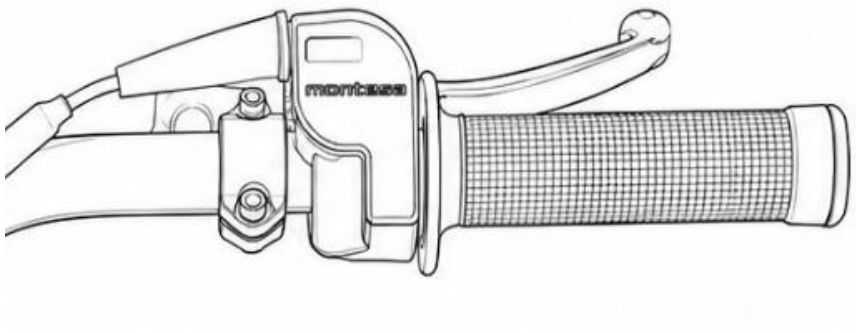


Fig. 11

The kit is equipped with an element located on the central part of the handlebar; this contains a screen where the battery charge level is indicated (Fig. 12). This indicator shows the battery voltage.

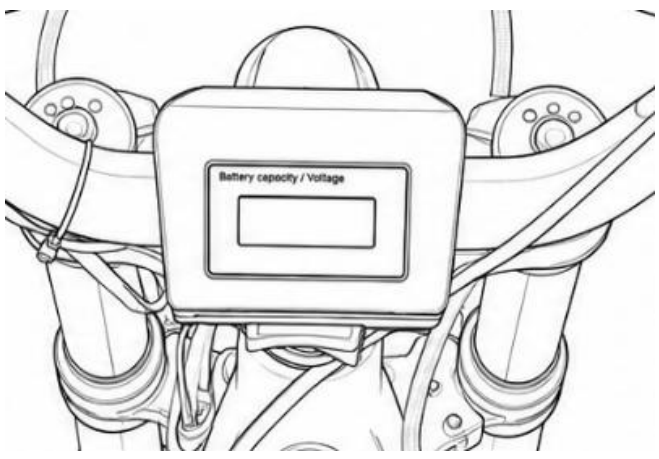


Fig. 12

⚠ WARNING

If you notice signs of deterioration or any kind of imperfection on the accelerator or voltmeter, it must be replaced.

To do so, go to your NEUTRA point of sale or you can contact the official distributor on our website.

You can also write to us at our email address and our staff will respond as soon as possible.

7.5 MAP SWITCH

The NEUTRA KM has a selector located on the upper left side of the handlebar with three engine maps, each designed specifically for trial practice and combining power, torque and speed.

These modes adapt to different skill levels, making the KM suitable for all levels of trial riding (Fig. 13).

Map 1 (ECO) – Provides smooth and controlled performance, ideal for beginners. This power map can be used in all gears.
Map 2 (MED) – Provides a progressive increase in performance, allowing riders to improve their skills step by step. This power map is only available when one of the first three gears is engaged.
Map 3 (MAX) – Provides maximum power and immediate throttle response for expert riders. This power map is only available in 1st and 2nd gear.

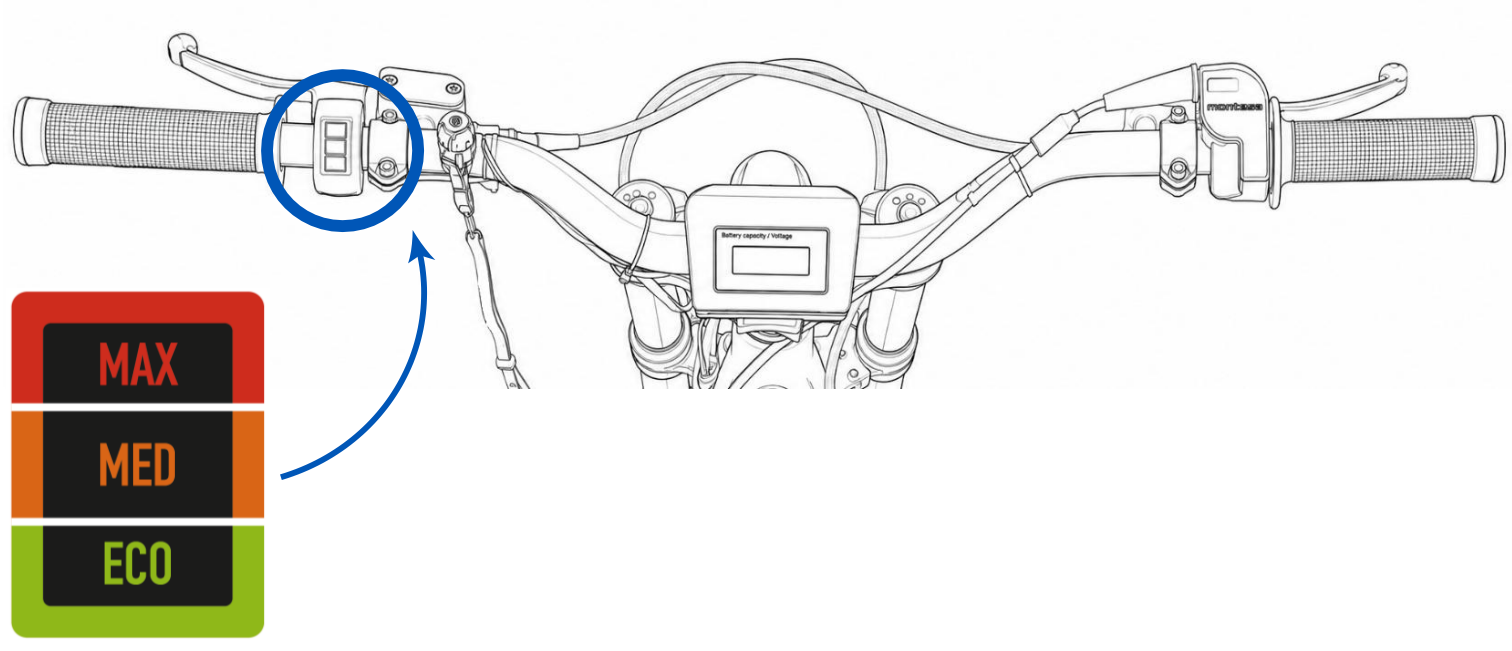


Fig. 13

CAUTION

For safety reasons, the kit is equipped with a control board that manages the electronic system and prevents the use of the “MAX” map when 4th gear is selected. This measure prevents the motor from operating continuously under extreme load and power conditions, which could cause excessive temperature rise and reduce the service life of the components.

WARNING

If signs of deterioration or any type of imperfection is observed in this element, it must be replaced.

To do so, go to your NEUTRA point of sale or you can contact the official distributor on our website. You can also write to us at our email and our staff will respond as soon as possible.

7.6 MAN OVERBOARD

The motorcycle is equipped with a “kill-switch” safety system, designed to immediately stop the motor in the event of a fall or unintended separation of the rider from the motorcycle.

The system consists of a safety switch connected to the vehicle and an elastic cord that must be attached to the rider’s wrist, protective equipment, or a secure part of the clothing. If the rider becomes separated from the motorcycle, the cord removes the magnetic safety key, instantly cutting off power to the control system and stopping power delivery to the motor.

7.7 ENGINE

Check the condition of the engine bearing. Raise the rear wheel so that it does not interfere with the ground and turn it by the tire. No strange noise should be heard coming from the engine.

WARNING

Do not put your hand near the transmission system while the engine is turning.

Do not perform maintenance on the engine or touch it shortly after using the motorcycle, as it may be hot.

Replacing the engine bearing is a delicate operation. To have it replaced, please go to your NEUTRA point of sale or you can contact the official distributor on our website. You can also write to us at our email and our staff will reply as soon as possible.

7.8 BATTERY

The Battery System controls and manages the operation of all its cells during the vehicle's charging and discharging processes.

7.8.1- Thermal Protection During Charging:
Blocks charging when the external temperature is below 0°C.
Blocks charging when the external temperature exceeds 45°C.
7.8.2- Thermal Protection During Discharging:
Blocks discharging if the external temperature is below 0°C.
Blocks discharging if the external temperature exceeds 45°C.
7.8.3- Cell Balancing:
Ensures that all battery cells charge uniformly to optimize performance.
7.8.4- Process Optimization:
Enhances efficiency during charging and discharging phases.

This is achieved through the BMS (Battery Management System), an integrated component inside the battery. The BMS is essential for ensuring the proper functioning of the vehicle. Any attempt to modify or tamper with it is strictly prohibited, as it could compromise the system's safety, performance, and durability.

NOTICE

IMPORTANT NOTE FOR EXTREME LOW-TEMPERATURE CONDITIONS

In cases of low ambient temperatures (between -10°C and 0°C), the battery must reach a temperature above 0°C to activate the vehicle. Once activated, the system will increase the battery temperature, allowing safe and proper operation even when external temperatures range be-tween 0°C and -10°C.
The removable battery design makes it easy to store or transport in an environment with a temperature above 0°C, preventing risks associated with extreme cold. Therefore, it is not necessary to keep the rest of the vehicle at this temperature, although doing so is recommended to maintain optimal performance.
Finally, driving in external temperatures of -10°C or lower is not recommended, as it could significantly affect the battery's lifespan.
Additionally, the vehicle is equipped with a safety electrical relay that protects the battery, ensuring optimal performance and prolonging its lifespan.

7.9 RELAY

This relay is located inside the seat compartment and is accompanied by a fuse designed to protect the vehicle's entire electrical system.

If an electrical issue is detected, it is recommended to check whether the fuse is in good condition.

To access the fuse, follow these steps:

1- Remove the seat plastic by loosening the four corresponding Allen screws: two located in the central area and two positioned on each side of the motorcycle.

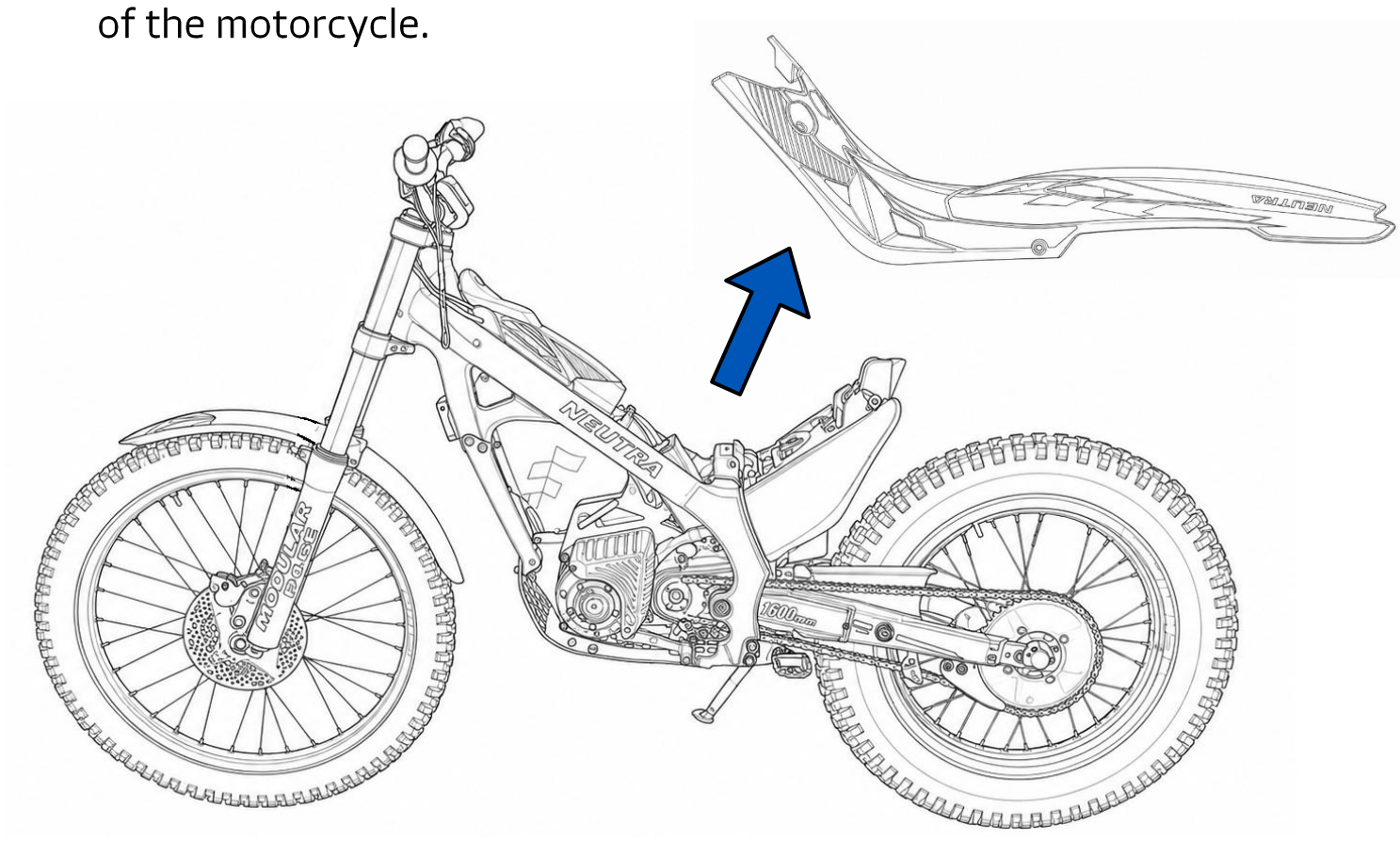


Fig. 14

2- Use a 10 mm socket wrench to remove the four hex-head screws and take off the cover. Once the cover has been removed, the fuse will be located inside.

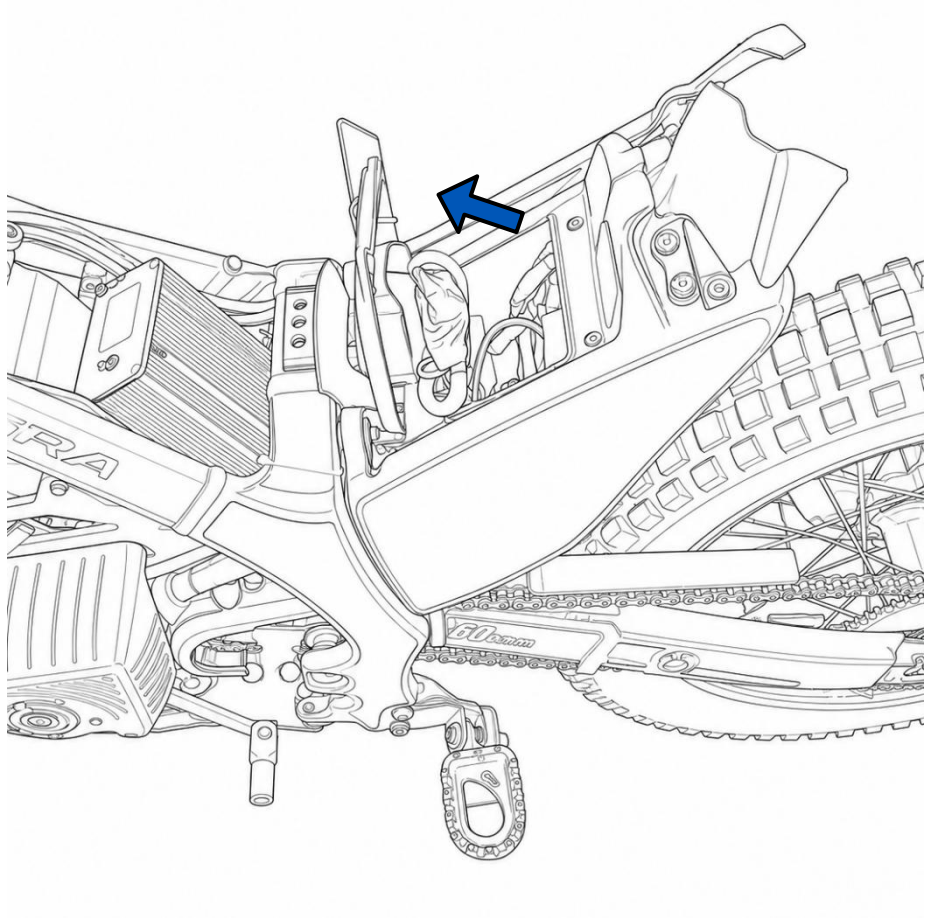


Fig. 15

To refit the cover, correctly align the screws with their mounting holes. Finally, reinstall the seat plastic.

7.10 CHARGING THE BATTERY

The following components are required to charge the KM battery:

Battery (Fig. 16). Charger (Fig. 17).

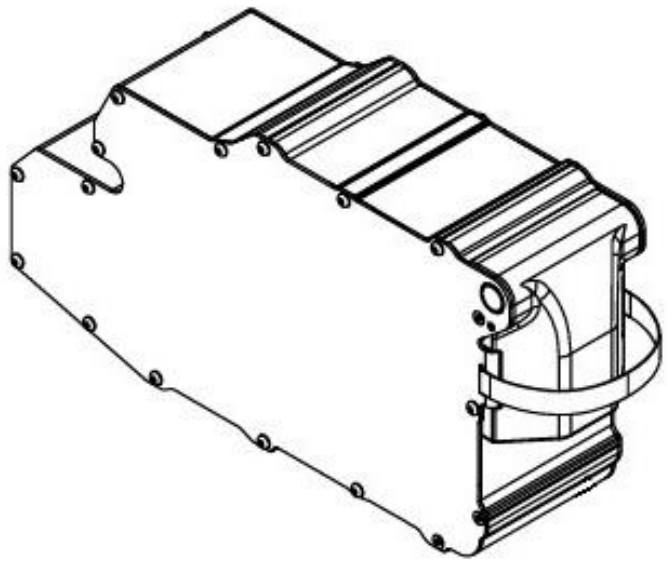


Fig. 16

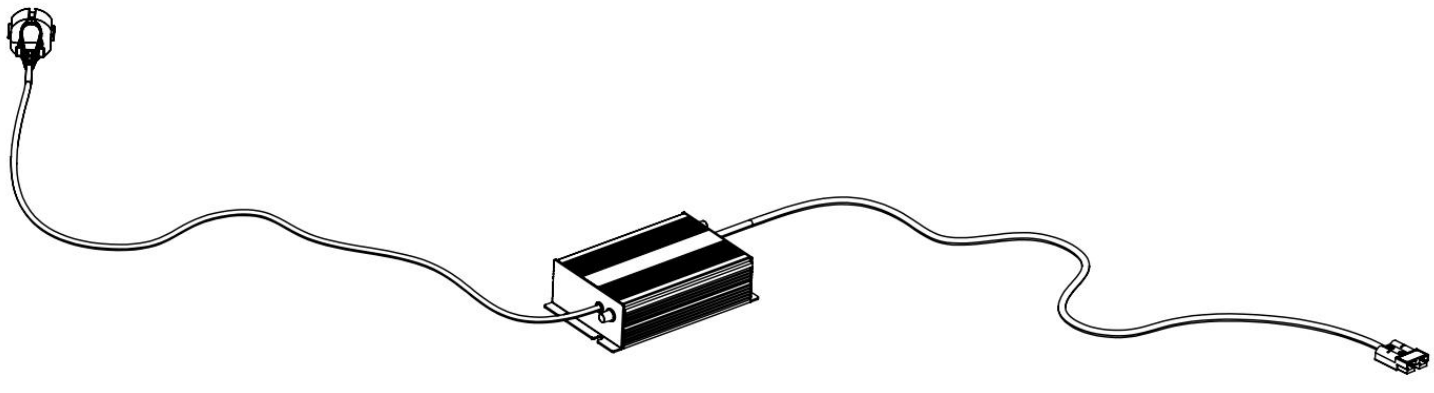


Fig. 17

NOTICE

FULLY CHARGE THE BATTERY BEFORE USING THE MOTORCYCLE.

1. The charger cable must be plugged into the household mains (Fig. 18a). At this point, LED 1 on the charger will be red and LED 2 will be green (Fig. 19).
2. Next, connect the charger cable with its two-pin connector to the battery. Correctly position the two-pin plug (Figure 18b) by aligning it with the slot and insert it.

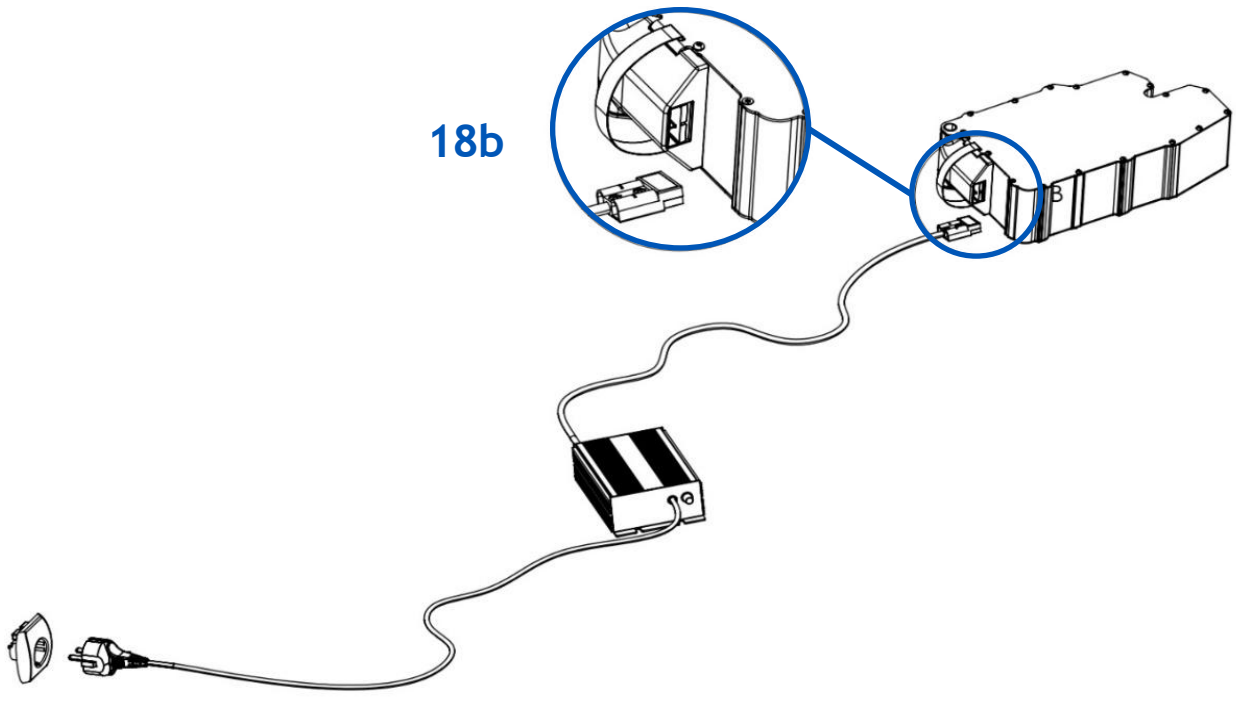


Fig. 18a y 18b

You will notice that both LEDs on the battery charger will be red, which means that the battery is charging correctly.

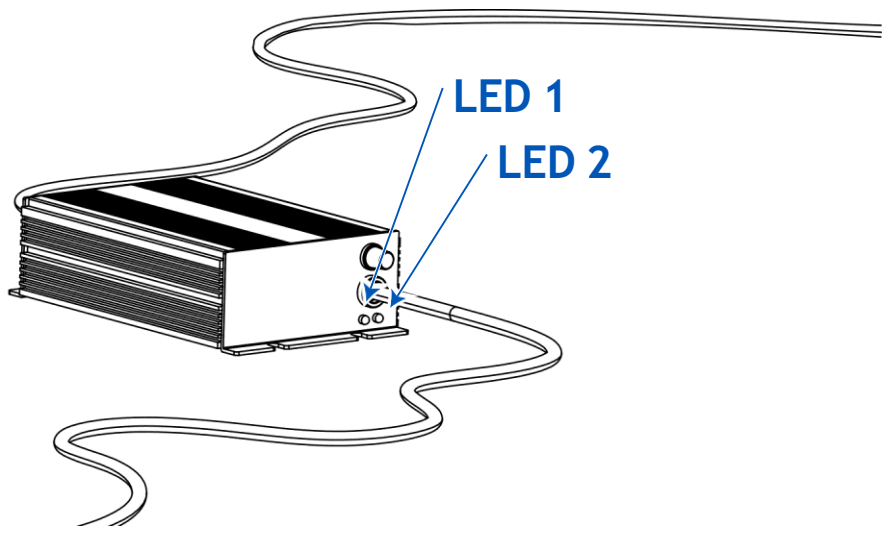


Fig. 19

The battery will be fully charged in approximately 2 hours. You will know that the battery is fully charged when LED 1 on the charger is red and LED 2 is green.

Below is a table indicating the colours of the two LEDs on the battery charger according to the different states:

	LED 1	LED 2
CHARGER ON	🔴	🟢
BATTERY CHARGING	🔴	🔴
BATTERY CHARGED	🔴	🟢

To extend the life of the battery, you should avoid half-charging.

Once the battery is fully charged, you should follow these steps to be able to use the vehicle:

You should disconnect the battery charger, then unplug the charger from the household power outlet and store the battery charger in its corresponding box.

⚠ CAUTION

You should always disconnect the cables by the rigid part of the connectors, you should never disconnect them from the charger by pulling on the cables, or should you connect them with excessive force.
It is forbidden to use any charger that is NOT supplied by the manufacturer.

⚠ WARNING

If signs of deterioration or any type of imperfection is observed in the battery or the charging elements, they must be replaced.

To do this, go to your NEUTRA point of sale or you can contact the official distributor on our website.
You can also write to us at our email and our staff will respond as soon as possible.

One of the most notable advantages of this electric motorcycle is that its battery is very easy to remove and easy to transport. On the other hand, this allows us to have more than one battery to exchange when it runs out. Without the need to wait for the battery to charge, without being able to use the motorcycle.
Follow the instructions below to remove and charge the battery outside the motorcycle:

1- Make sure that the motorcycle is turned off with the button in the “OFF” position.
NEVER REMOVE THE BATTERY WITH THE MOTORCYCLE ON.

2- Next, remove the tie rods and the central axle mounting.

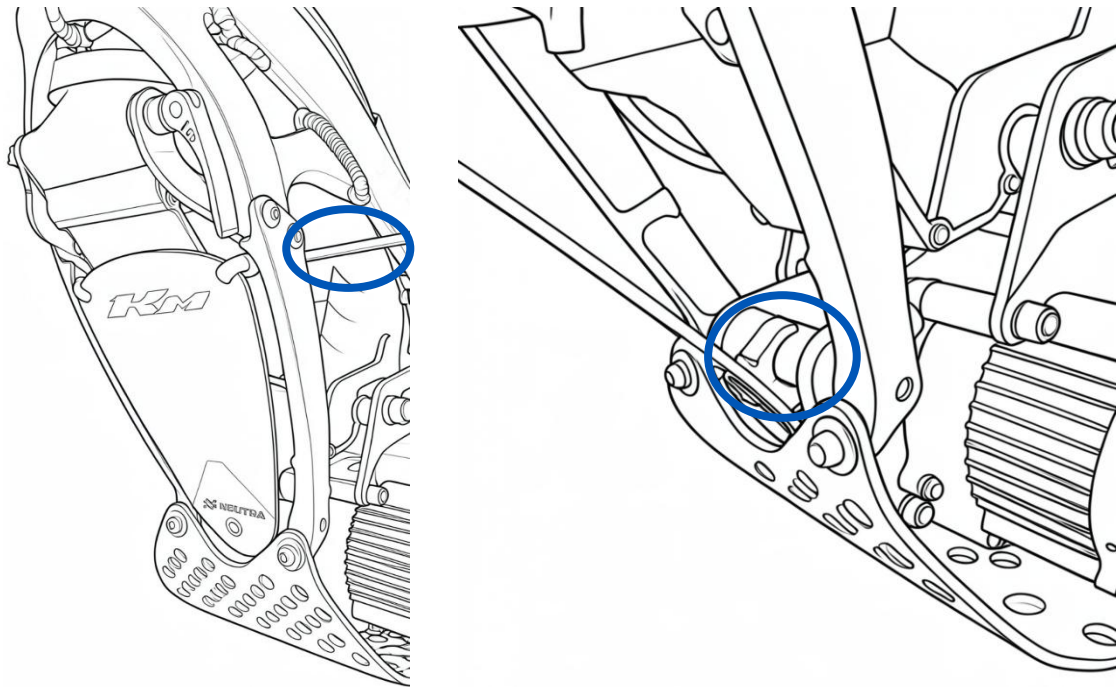


Fig. 20a y 20b

3- Then, remove the front cover.

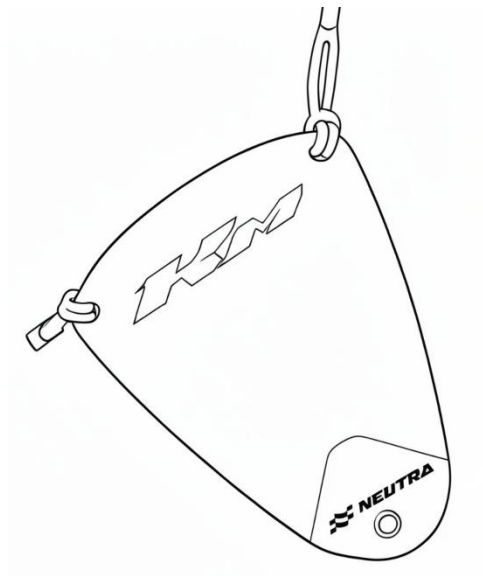


Fig. 21

4- Press the button on the upper cover to release it.

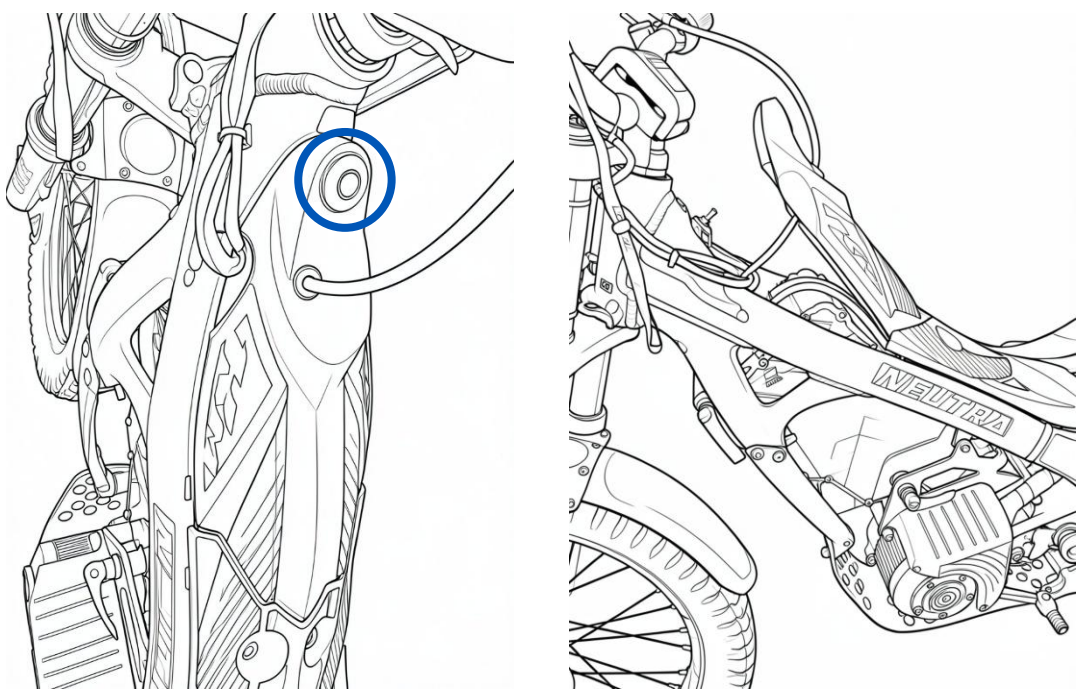


Fig. 22a y 22b

5- Remove the upper cover and place it resting against the voltmeter.

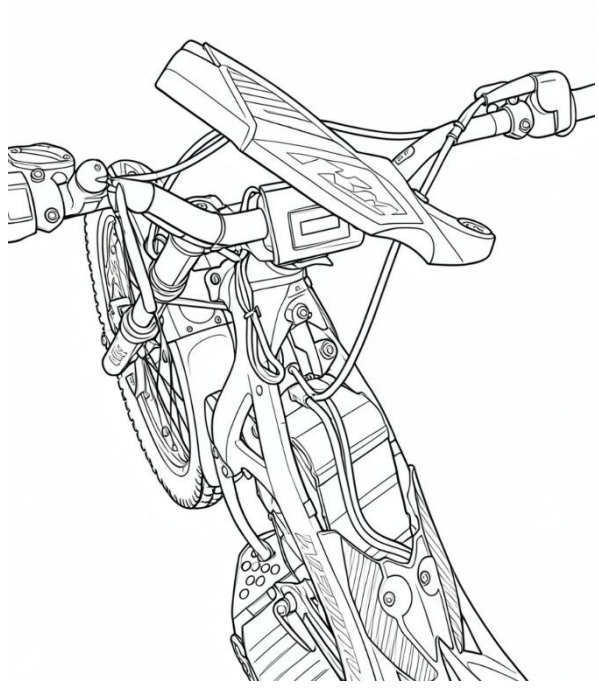


Fig. 23

6- Disconnect the cable connecting the electric motorcycle to the battery.

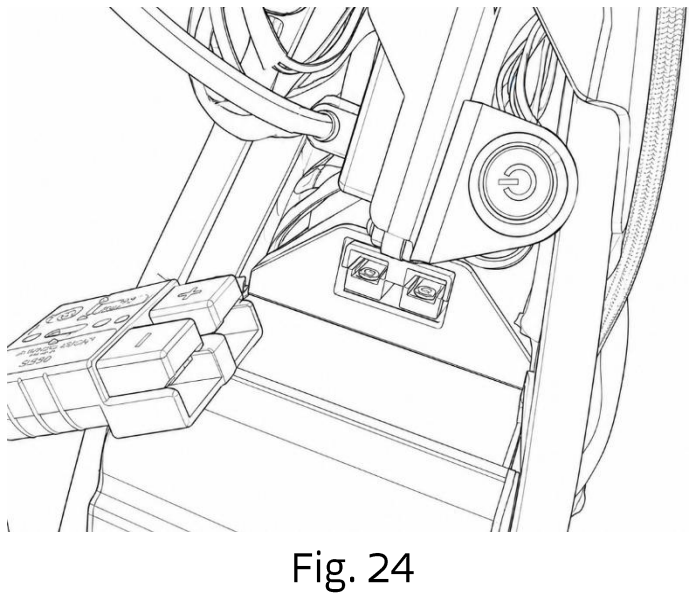


Fig. 24

7- Remove the lower battery axle.

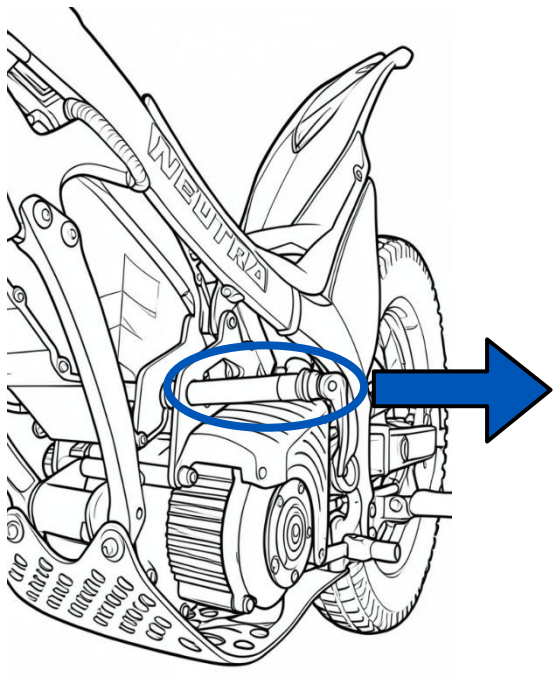


Fig. 25

8- Then, turn the handlebars to facilitate the removal of the battery.



Fig. 26

9- Remove the upper battery axle, first unscrewing the bushing shown in Fig. 27a.

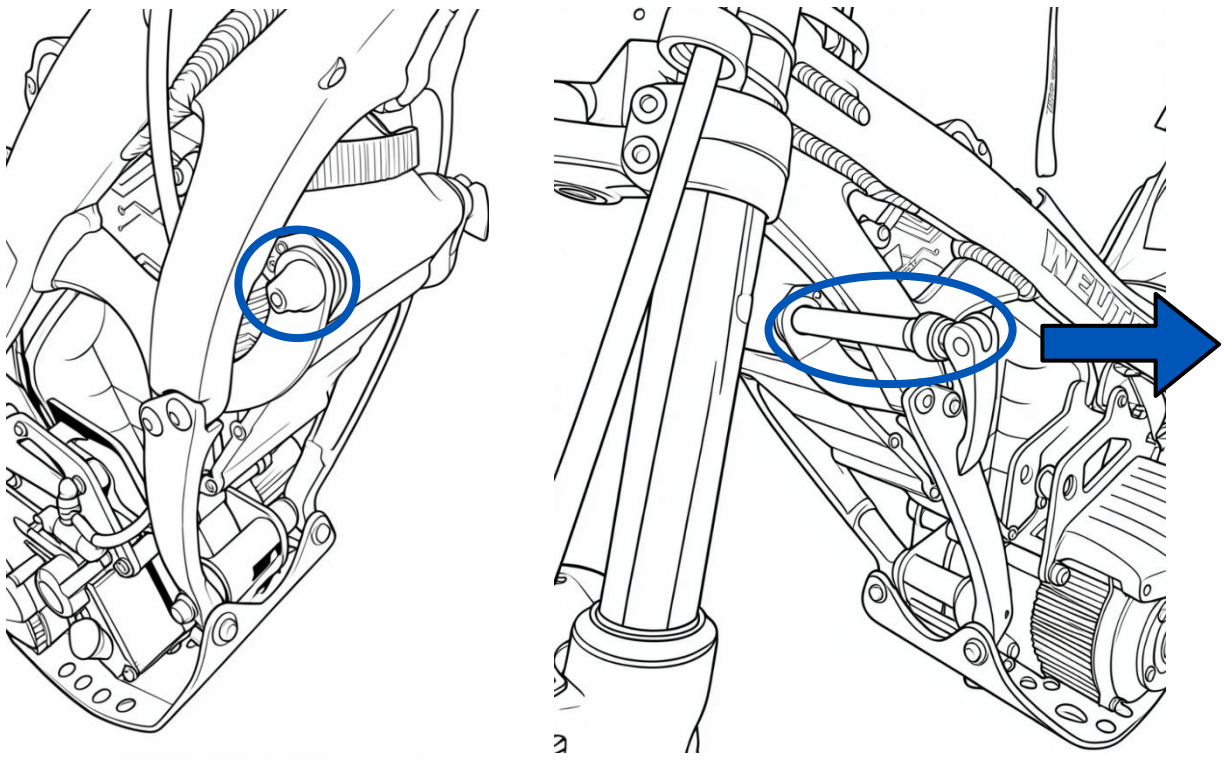


Fig. 27a y 27b

10- Rotate the battery by 90°.

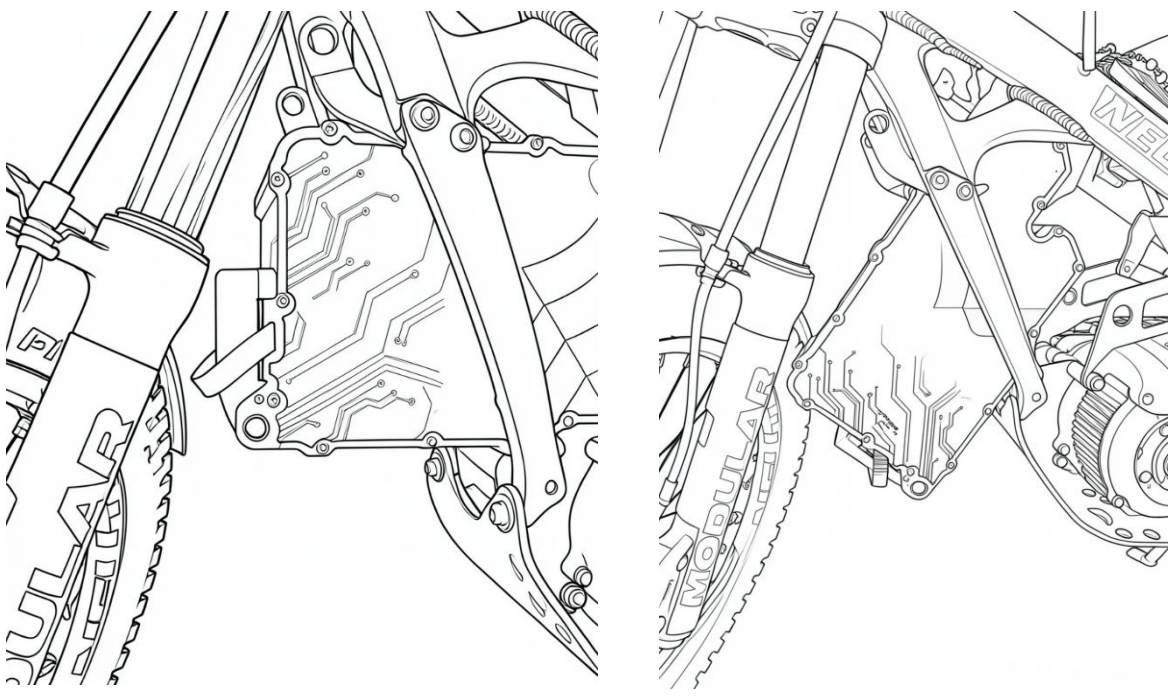


Fig. 28a y 28b

11- Finally, the battery will be removed from the motorcycle.

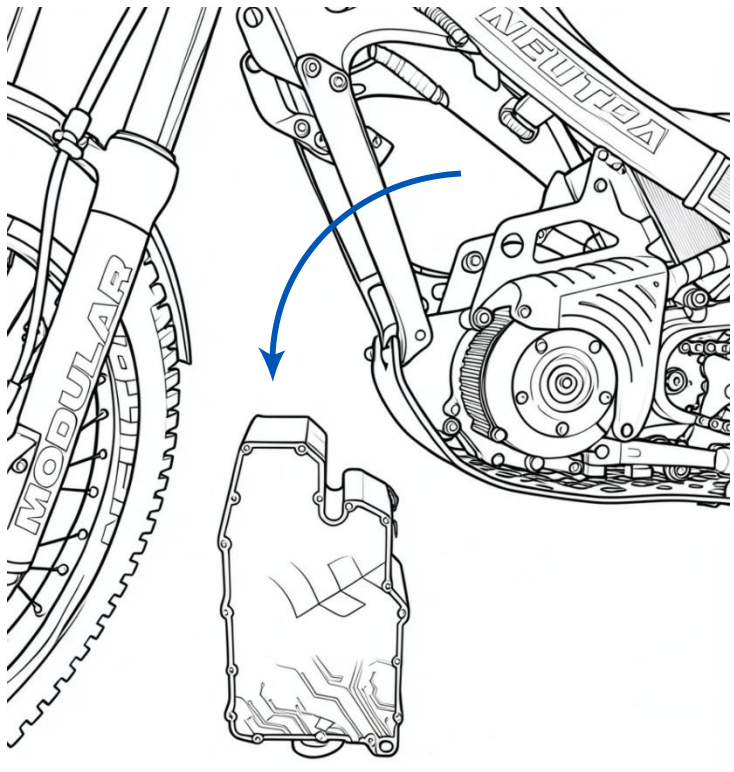


Fig. 29

12- Then plug the charger cable into the domestic mains (Figure 30a). At this point, LED 1 on the charger will be red and LED 2 will be green.

13- Finally, Connect the charger cable with its two-pin connection to the battery. Correctly position the two-pin plug (Figure 30b) by aligning it with the slot and insert it.

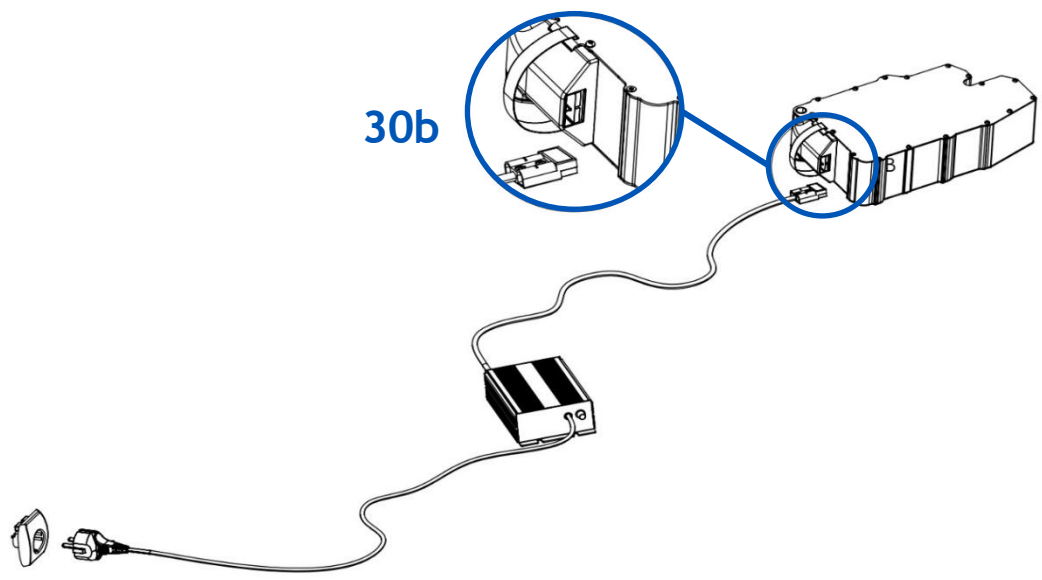


Fig. 30a y 30b

The two LEDs on the battery charger (Figure 40) will be red, this means that the battery is charging correctly.

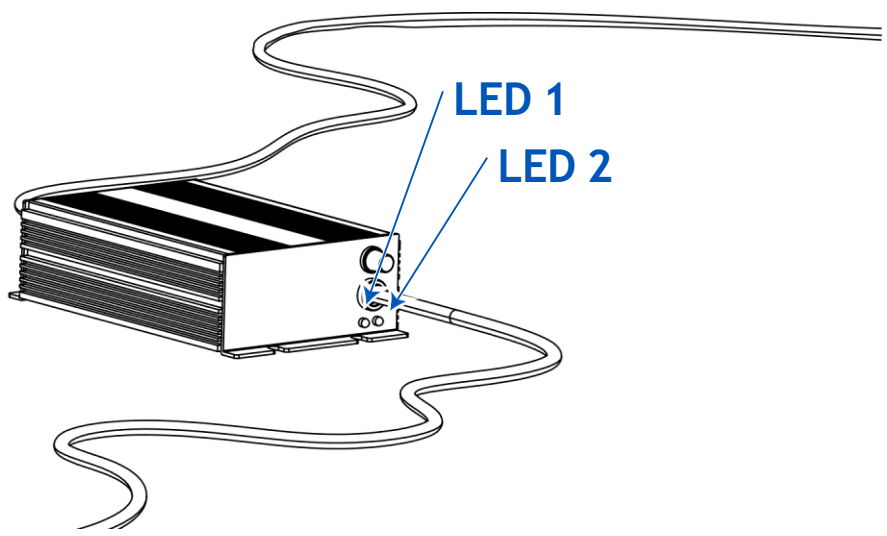


Fig. 31

The battery will be fully charged in approximately 2 hours. You will know that the battery is fully charged when the charger's LED 1 is red and LED 2 is green.

Below is a table indicating the colours of the two LEDs on the battery charger according to the different states:

	LED 1	LED 2
CHARGER ON	🔴	🟢
BATTERY CHARGING	🔴	🔴
BATTERY CHARGED	🔴	🟢

To extend the life of the battery you should avoid half-charging.

Once the battery is fully charged, you should follow these steps to be able to use the vehicle:

Disconnect the battery charger, then unplug the charger from the household power outlet and store the battery charger in its corresponding box.

CAUTION

Always disconnect the cables by the rigid part of the connectors, you should never disconnect them from the charger by pulling on the cables, nor should you connect them with excessive force.
It is forbidden to use any charger that is NOT supplied by the manufacturer.

WARNING

If signs of deterioration or any type of imperfection is observed in the battery or the charging elements, these must be replaced.

To do so, go to your NEUTRA point of sale or you can contact the official distributor on our website. You can also write to us at our email and our staff will respond as soon as possible.

Once the battery is fully charged, follow these steps to be able to use the vehicle:

1- Disconnect the charger from the battery, then unplug it from the household power outlet, and store the battery charger in its corresponding box.
2- Ensure that the motorcycle is switched off with the button in the “OFF” position.
3- Insert the battery into the motorcycle (Fig. 32).

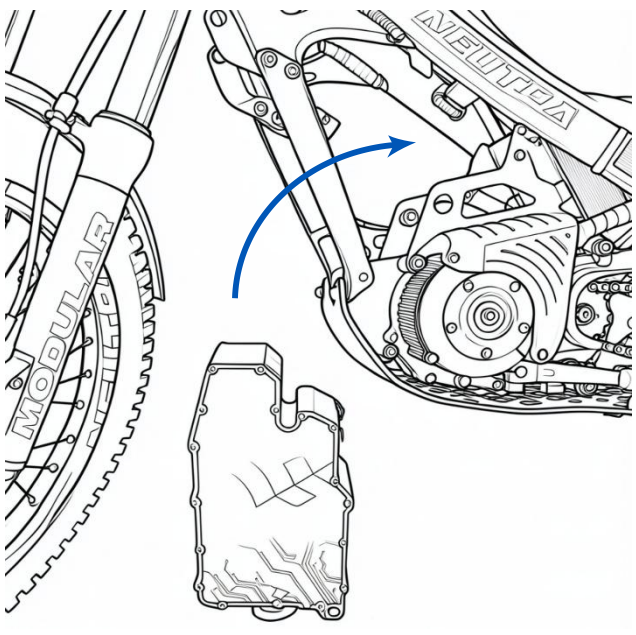


Fig. 32

4- Align the battery hole with the axle and the collar with the nut.

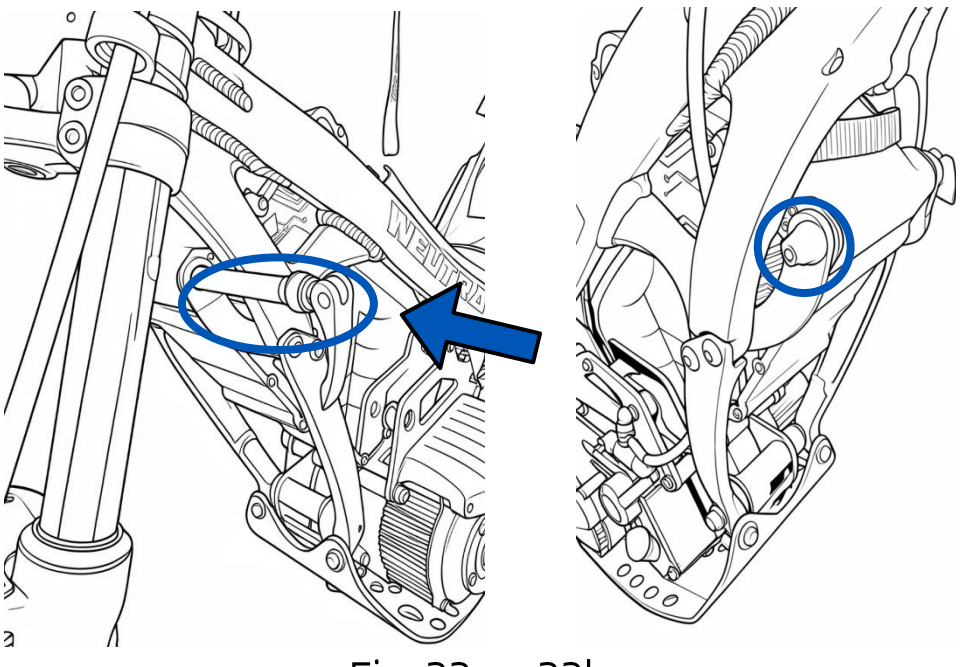


Fig. 33a y 33b

5- Insert the lower fixing axle.

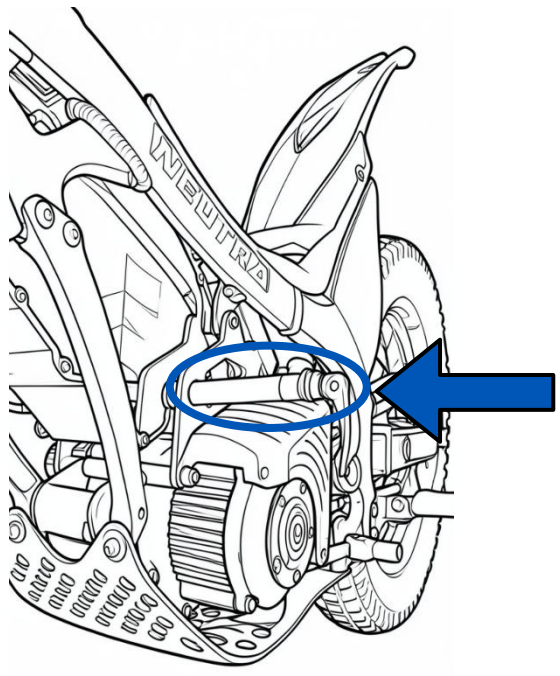


Fig. 34

6- Connect the cables linking the electric vehicle to the battery.

7- Then, correctly fit the upper housing, ensuring that the button aligns with the protrusion (Fig. 35b).

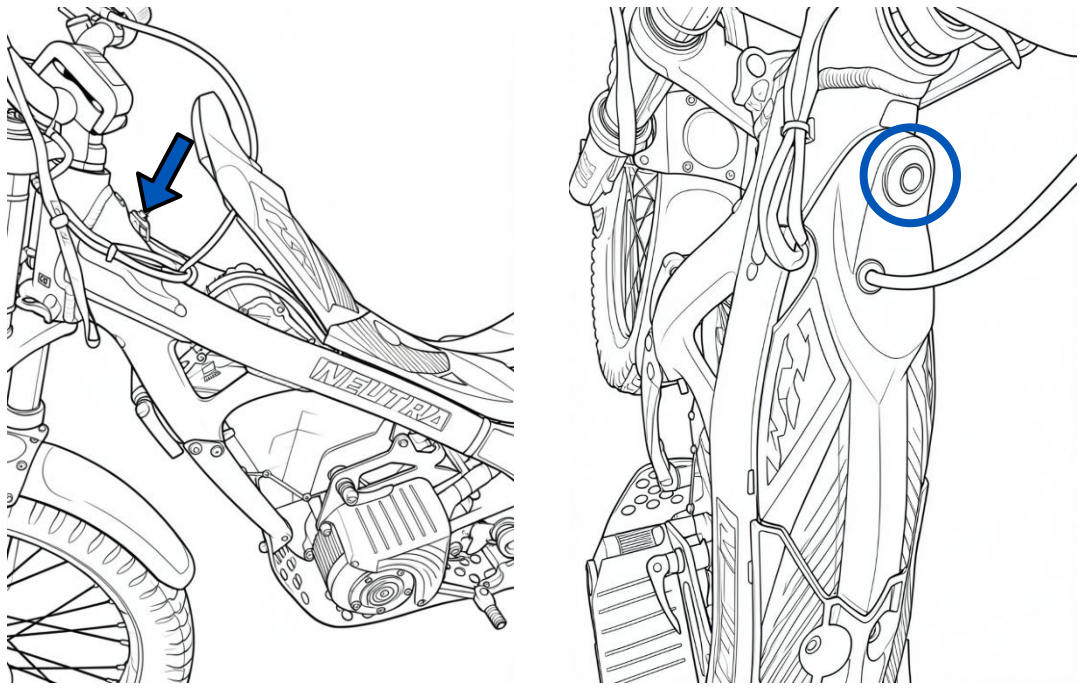


Fig. 35a y 36b

8- Finally, install the central mounting first, followed by the two side tie rods.

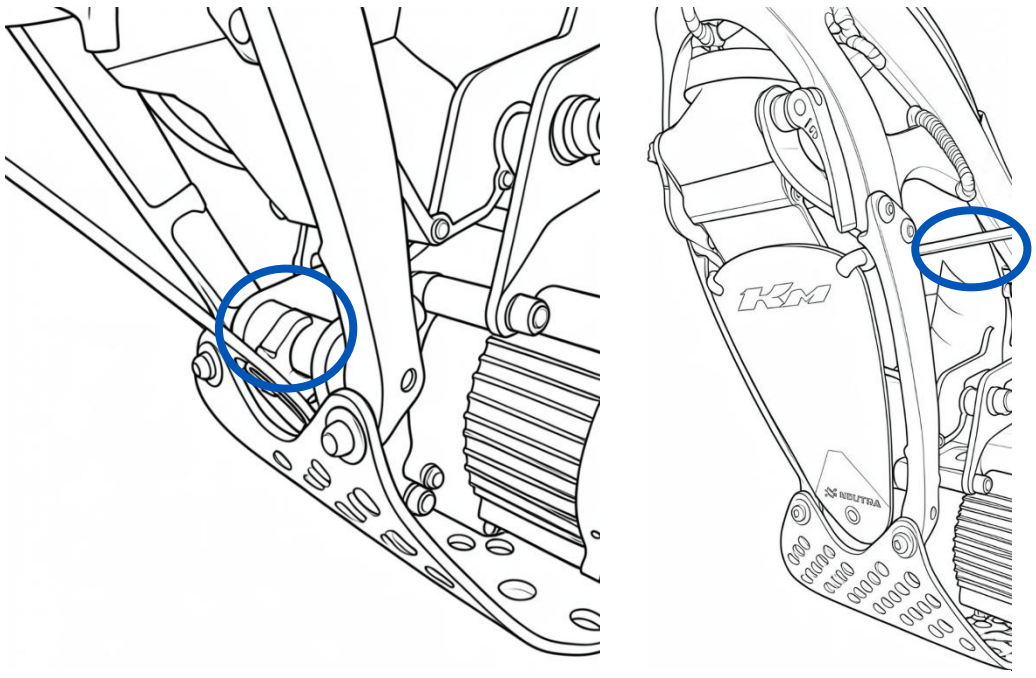


Fig. 36a y 36b

Follow the following instructions to charge the battery connected to the motorcycle:

1- Ensure that the motorcycle is switched off with the button in the “OFF” position.

2. Then, press the button on the upper housing and remove it (Fig. 22a and 22b).

3. Disconnect the cable connecting the electric vehicle to the battery.

4. Next, plug the charger cable into the household power supply (Fig. 37). At this stage, LED 1 on the charger will be red and LED 2 will be green.

5. Finally, connect the charger cable with its two-pin connector to the battery. Ensure the two-pin plug (Fig. 37) is correctly aligned with the groove before inserting it.

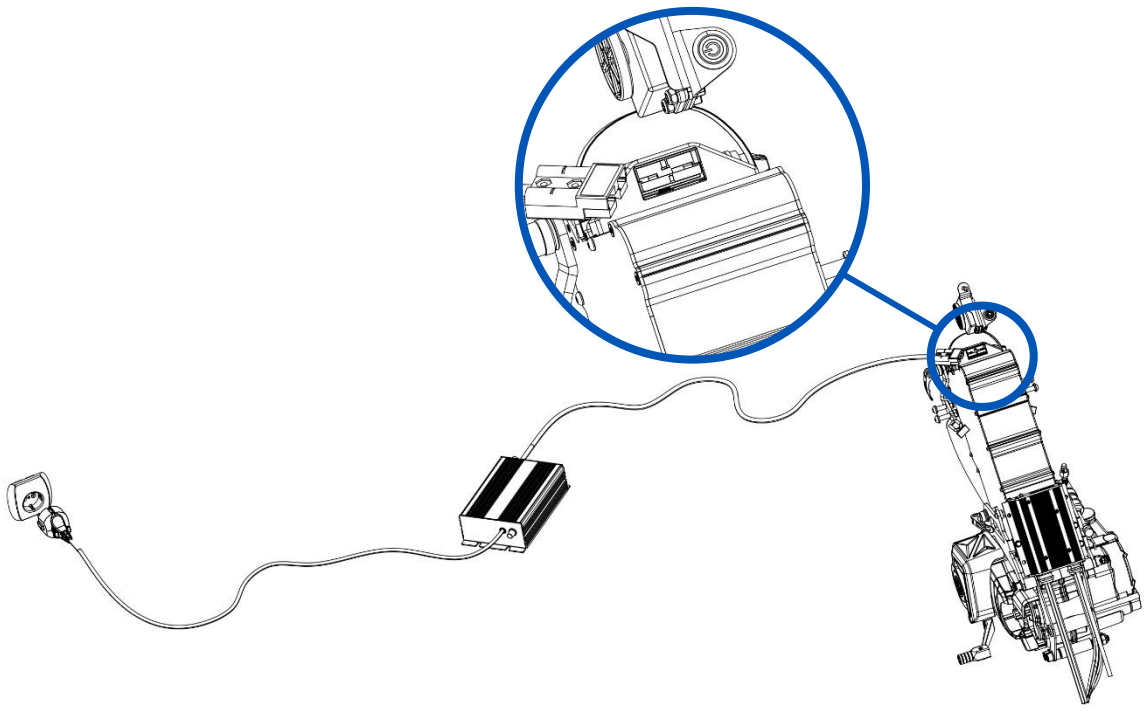


Fig. 37

The two LEDs on the battery charger will be red, this means that the battery is charging correctly.

Full charging of the battery takes approximately two hours. The battery is fully charged when LED 1 on the charger is red and LED 2 is green.
See the colours of the two LEDs on the battery charger according to the different states in the table above on page 26.

CAUTION

Always disconnect the cables by the rigid part of the connectors, never disconnect them from the charger by pulling on the cables,
nor must you connect them with excessive force.
It is forbidden to use any charger that is NOT supplied by the manufacturer.

WARNING

If signs of deterioration or any type of imperfection is observed in the battery or the charging elements, they must be replaced.

For more detailed information on the correct use of the battery and its specifications, refer to the “BATTERY MANUAL KM - 2026” found on our website.

To do so, go to your NEUTRA point of sale or you can contact the official distributor on our website. You can also write to us at our email address and our staff will respond as soon as possible.

7.11 SCREW TIGHTENING TORQUES

⚠ WARNING

Periodically check the correct fastening and tightening torques of the most important screws on the motorcycle, indicated in the following table.

The tightening torques for these screws are specified below:

ÍTEM	TYPE	REF	ASSEMBLY ELEMENT	QUANTITY	TORQUE (Kgf.m)	SEALING TYPE
M6	DIN 912	ZB	MOTOR CABLE PROTECTIVE HOUSING	2	0,8	
M8	DIN 912	ZB	FRONT MOTOR MOUNT	1	2	
M8	DIN 912	ZB	BATTERY/CONTROLLER BRACKET L	1	2	
M10	DIN 912	ZB	REAR MOTOR MOUNT	2	4,5	
M10	DIN 912	ZB	BATTERY/CONTROLLER BRACKET L	1	4,5	
M5	DIN 6921	ZB	CONTROLLER	3	0,4	
M6	ISO 7380	INOX	BATTERY/CONTROLLER BRACKET R	1	0,8	
M6	ISO 7380	INOX	BATTERY/CONTROLLER BRACKET L	1	0,8	
M8	ISO 7380	INOX	UPPER BATTERY AXLE FIXING SUPPORT	4	2	
M5	ISO 7382	ZB	FRONT COVER / CLAMP	2	0,4	
M5	ISO 7382	ZB	RELAY	2	0,4	
M6	ISO 7382	ZB	BRAKE FLUID RESERVOIR SUPPORT	1	0,4	
M5	DIN 7991	ZB	CENTRAL BATTERY PIN NUT	1	0,4	

7.12 KM TECHNICAL SPECIFICATIONS

COMPONENT	FEATURES					
PINION	Z12					
ENGINE	ELECTRIC. BRUSHLESS. THREE-PHASE / 3 KW / 3500 RPM					
PERFORMANCE	12 KW					
CONTROLLER	58,8 V / 300 A					
CONTROLLER MAPS	3 pre-set maps combining speed, power and throttle response					
THROTTLE TYPE	Mechanical cable					
FRAME	Aluminium					
TYPE OF CHARGE	Electricity					
STANDARD BATTERY	Removable	21700 Li-ion	58,8 V	29,4 Ah	1728,7 Wh	14S 7P
CHARGER	58,8V	10 A / 15 A	1-2 hours full charge aprox.			
TOTAL WEIGHT (KIT KM)	73,7 Kg					
WHEELBASE	1320 mm					
TOTAL LENGHT	2020 mm					
MAX. HEIGHT	1130 mm					
HANDLEBAR WIDTH	840 mm					
SEAT HEIGHT	650 mm					

7.13 KIT COMPONENTS CHART

COMPONENT	INSPECT/ADJUST	SUBSTITUTE	NOTE
TRANSMISSION SYSTEM	Every Ride/Race LUBRICATE	16 hours	Perform by specialist
THROTTLE-CABLE GRIP SYSTEM	Every Ride/Race LUBRICATE	Breakageor barewire	Lubricate, tighten throttle tube
ACCELERATION SYSTEM	Every Ride/Race	Breakage	Perform by specialist
MAP SELECTOR	Every Ride/Race	Breakage/poor contact	Perform by specialist
MAN OVERBOARD	Every Ride/Race	Breakage/poor contact	Perform by specialist
ON/OFF BUTTON	Every Ride/Race	Breakage/poor contact	Perform by specialist
ENGINE	After 300 hours of use	-	Perform by specialist
BATTERY/WIRING	Every Ride/Race	-	Perform by specialist
PLASTICS	Every Ride/Race	Breakage	-
GENERIC TIGHTENING TORQUE	Every Ride/Race	-	Handlebars/ Levers Axles Wheels/ Protectors/ Footpegs
FRAME/ENGINE TIGHTENING TORQUE	Every Ride/Race	-	After each race, perform thorough maintenance

A clean motorcycle helps to identify possible anomalies.

WARNING

Because it is a racing vehicle, wear and tear is always subject to the rider's driving. This table gives guidelines for normal driving.
In the event of a fall, inspect all damaged parts.

8 SPARE PARTS

This product has been specifically designed to facilitate the assembly of spare parts and their recyclability, thus reducing the impact on the environment and improving customer service.
To see all the kit components and possible spare parts, go to the “MANUAL DE DESPIECE - PARTS BOOK - NEUTRA KM 2026” catalogue in our website.

⚠ WARNING

Always use original KM spare parts.

9 TROUBLESHOOTING

If the motorcycle does not work, these may be the most common and easy to detect faults:
1- Check that the ignition switch, located on the left side of the upper part of the chassis, is on.
2- Check that the man overboard is connected correctly.
3- Check that the battery contains a minimum charge for the motorcycle to work. If the battery is not charged, check that its charge or discharge connector is not damaged.
4- The battery is charged correctly and the connectors mentioned above are not damaged. C check that the battery is correctly connected to the rest of the motorcycle through the battery discharge connectors.
5- Check that the green LED on the controller is on. If the LED is in the state mentioned, the controller is working correctly.
6- Check if the red LED on the controller is on, this means that the controller has entered the “sleep time” state. In this case you should disconnect the con-tact switch and reconnect it.
7- Check if the red LED on the controller is on, this means:
- That the battery has entered the “sleep time” state. In this case you should disconnect the contact switch and reconnect it.
- In case the red LED is still on or flashing, you should check the ERROR CODE table.

CODE LED		ERROR	DETAILS
1,1	● ●	Auto-Identification failed	1. Check Phase line or Hall line. 2. Check Hall power line (+5V and GND). 3. The motor load maybe too high. Please unload the motor before proceeding with identification.
1,2	● ●●	Over voltage error	1. Battery voltage is too high for the controller. Check battery volts and controller configuration. 2. Regeneration over-voltage. Controller will limit regen or stop regen. please reduce the regen ratio in configuration.
1,3	● ●●●	Low voltage error	Battery voltage is too low, please check the battery and recharge. When the battery voltage continuously exceeds the low voltage cut-off value for 5 seconds, the controller will resume normal operation.
1,4	● ●●●●	The controller did not receive CAN commands	Resend CAN commands from VCU.
2,1	●● ●	Motor stall	The motor did not reach 25eRPM within 2 seconds of starting. Please check the Hall signal lines and the phase line connections.
2,2	●● ●●	Internal voltage error	1. Check the connection between PWR and B+(For 8080N series, check connection between PWR and +12V; GND and -12V). 2. The load on the 5V or 12V power supply could be too heavy, ensure that the measured voltage of the 5V power supply is not less than 4V and the voltage of the 12V power supply is not less than 8V. The lower these values are, the heavier the load on the power supply. 3. If none of the above issues are present, the internal power module of the controller may be damaged. The controller needs to be sent back to the factory.
2,3	●● ●●●	Over temperature	The controller temperature is too high, about to stop. Please wait until it restore to 80℃.
2,4	●● ●●●●	Throttle error at power on	Throttle signal is higher than the value of “TPS_dead_low”at power-on. Release the throttle and press again or adjust the TPS_dead_low value. If still can’t fix the issue, check if the throttle is functioning properly.
3,1	●●● ●	Reserved	
3,2	●●● ●●	Internal reset error	Current is too high or current fluctuations are too large. Reduce the phase current and check if the 5V and 12V power supplies are normal.
3,3	●●● ●●●	Hall throttle is open or short-circuit	May occur after TPS_Type being set to 2. 1. The throttle might have an internal short circuit or the ground wire might be disconnected. 2. Set TPS_High_Err to 95 , check the throttle and its wiring, then restart to fix the issue.
3,4	●●● ●●●●	Angle sensor error	1. Speed sensor type error,customers may set the correct sensor type through user program or App. 2. Incorrect wiring. 3. Speed sensor is damaged or defective. Or feedback signal is erratic.
4,1	●●●● ●	Switch-direction error	1. Throttle is not at 0 when switching motor direction. 2. Motor rotation speed is above 50RPM.
4,2	●●●● ●●	Reserved	
4,3	●●●● ●●●	Motor over-temperature	May occur after motor temp being set to 1 or 2. The Motor temperature has exceeded the configured maximum value. The controller will shut down until the motor temperature cools down.
4,4	●●●● ●●●●	Hall Galvanometer sensor error	Hall galvanometer inside the controller is damaged.

Correct interpretation of red LED warning lights:
For example, "1, 2" indicates that the red LED flashes once, then after a one second pause, flashes twice. The pause time between different groups of flash codes is two seconds.

In case the motorcycle still does not work, please go to your nearest NEUTRA dealer or you can contact the official distributor on our website. You can also write to us at our email and our staff will reply as soon as possible.

10 OPERATING MODE IN CASE OF ACCIDENT

11.1. INITIAL SAFETY VERIFICATION

1- Stop the vehicle immediately:
Turn off the motorcycle's ignition switch to prevent any unexpected movement.
Ensure that the child is away from the vehicle in case of potential electrical or mechanical failures.

2- Evaluate the rider's condition:
Check for visible injuries such as bruises, cuts, or fractures.
If there are signs of serious injuries (immobility, difficulty breathing, or bleeding), call emergency services immediately.

3- Check the surroundings:
Ensure that there are no other moving vehicles or people that could increase the risk.
If safe, move the rider and the motorcycle to a secure location away from the road or impact zone.

11.2. ACTION IN CASE OF MILD INJURIES

1- Cuts or scrapes:
Clean the wound with clean water and apply a bandage. Consult a doctor if necessary.

2- Mild blows:
Apply ice wrapped in a clean cloth to reduce inflammation.

3- Emotional state assessment:
Calm the rider, making sure he or she feels safe and accompanied.

11.3. VEHICLE INSPECTION

1- Check the electric motorcycle:
Check for possible structural or mechanical damage.
Make sure the electrical system is turned off to avoid risk of short circuit.

11.4. POST-ACCIDENT PREVENTION

1- Safety equipment verification:
Make sure the child's helmet and protections are in good condition before riding the motorcycle again.

2- Periodic inspection of the motorcycle:
Carry out regular maintenance, see section “7.13 KIT COMPONENTS CHART”.

11 AIRBORNE NOISE EMISSION

The airborne noise emitted by our electric children's motorcycle is the sound generated by the vehicle's movement, including the electric motor, transmission, wheels, and their interaction with the air and the environment during operation.
The airborne noise level emitted by the NEUTRA K5 electric motorcycle is below 60 decibels (dB), equivalent to a normal conversation.
To reduce the airborne noise emitted by the electric motorcycle, it is recommended to perform regular maintenance on mechanical and electrical components and ensure that all structural elements are properly adjusted to avoid vibrations.

12 INFORMATION

Complete manufacturer and technical service details:

Brand: NEUTRA

Manufacturer: FACTORY MADE S.L.
Address: C/ Salvador Seguí 22, 08750, Molins de Rei (Spain)

13 ACKNOWLEDGEMENTS

By choosing the KM product you become part of the great NEUTRA community.
We welcome you and hope it will be an amazing journey.

Thank you for your trust in NEUTRA.