

User Manual
Nerva CARGO

NERVA



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Thank you for choosing the NERVA CARGO vehicle

We thank you for choosing the NERVA CARGO delivery vehicle. In the development of this vehicle, NERVA has used the latest technology with respect to electric motors, batteries and electronics so that you can enjoy a high-quality vehicle that is comfortable, robust, and equipped with a high-performance powertrain.

In terms of the batteries used, the NERVA CARGO vehicle uses the latest LFP lithium battery technology, which does away with the need for various toxic materials such as manganese, nickel and cobalt that are used in conventional NMC lithium batteries. This new technology, used by the manufacturer BYD, has been selected to power the NERVA CARGO, and thanks to its thermal stability it cannot burn or explode, guaranteeing extra safety for the vehicle user. That thermal stability also translates into greater longevity — NERVA in fact offers an exceptional 5-year warranty covering BYD's LFP batteries, one not currently available from any other electric vehicle brand.

The NERVA CARGO vehicle, classified as L3e, has a rated power of less than 11 kW, which means that it can be driven with a B-type car driving licence that has been held for at least 3 years without any additional formalities or costs, as well as with an A1-type driving licence from the age of 16.



About this manual

CAUTION

- Text with this symbol indicates extremely dangerous situations that, if ignored, could result in serious damage or injury.

WARNING

- Text with this symbol indicates dangerous situations that, if ignored, could result in minor damage or injury.

NOTE

- Text with this symbol indicates dangerous situations that, if ignored, could result in damage to the vehicle.

Safety instructions

Security pre-checks

WARNING

- This section must be followed meticulously, otherwise you may suffer a serious accident or even be killed.
- Before starting a journey, first carry out safety checks on your vehicle. A vehicle without technical faults is a basic requirement for its integrity and safety, as well as for other road users.
- For your safety, use only original spare parts or accessories authorised and certified by NERVA ECO, S.L. If you need access to an approved product or accessory, please contact your authorised dealer or go to the website (www.NERVA.eco).

Always check the following points:

- › **Handlebars:** These must rotate smoothly, without any vertical looseness or play.
- › **Brakes:** The front and rear brake levers must be free of oil and grease, have the recommended play, and illuminate the brake light on the rear light when operated. Check the brake fluid level in both brake pumps.
- › **Accelerator:** The accelerator grip should have the recommended play, with smooth operation and immediate recovery when released.
- › **Tyres:** The tyres must be at the recommended pressure, and the tread surface must not show any cracks or be worn down to the limit. Check the condition of the tyres.
- › **Suspension:** When pressure is applied to the fork or shock absorbers, the vehicle must yield and recover when the pressure is released.
- › **Lighting and horn:** Check the operation of the direction indicators, front headlight beams, rear light and brake light. Sound the horn. Clean the lenses of the various lighting components.
- › **Load sharing:** Distribute the load evenly to keep the vehicle balanced, making sure that it does not interfere with handlebar movement or suspension travel, does not exceed the maximum load limit, and does not block any of the lights.

If you identify any problems with the vehicle, contact the NERVA Technical Assistance Service.

If the scooter is not used for a long period of time, a layer of rust may build up on the brakes and thus reduce the braking power. Such a layer of rust can cause the brakes to lock up. It is recommended that after a prolonged period of non-use, you brake carefully until they are working properly again.

Equipment

Safety starts with the equipment required to ride this scooter:

- › Wear an approved safety helmet and fasten it correctly.
- › Wear comfortable and appropriate protective clothing in bright or reflective colours to warn other traffic of your presence.
- › Use gloves that keep your hands warm and offer an good sense of touch and abrasion resistance.
- › Wear close-fitting clothing (neither too tight nor too loose) to avoid snagging on vehicle controls.
- › Wear sturdy shoes with low heels and ankle protection.



Recommendations for safe driving

CAUTION

- **Braking distances can increase significantly with wet tyres or wet brake discs.**
- **Avoid abrupt use of the accelerator. Rough use can lead to loss of control of the vehicle.**
- **Beware of side wind, it can destabilise the scooter.**

WARNING

- **Always obey the traffic rules.**
- **Always adapt your driving mode to the road and traffic conditions.**
- **On wet or loose gravel, vehicle stability and braking may be limited by the condition of the tyres.**
- **The condition of your brakes and wheels depends directly on the way you drive.**

Safety is, to a large extent, determined by the user's driving style. Therefore, follow the recommendations below:

- › Put your feet on the platforms and only put them out of the way to rest on the ground at stops.
- › Hold the handlebars with both hands.
- › Drive within your limits. Do not try to surpass your personal skills and abilities. Adapt to road and weather conditions, leaving room for unforeseen events.

- › Exercise extreme caution and slow down in bad weather (icy, rainy, or windy).
- › Do not take any kind of narcotic drug before driving. Your driving ability and reaction time may be impaired under the influence of alcohol, drugs and medication. Do not drive under the influence of any of them.
- › It is recommended not to accelerate or brake sharply. Heavy use of the accelerator and brake can lead to high battery consumption. Please note that as an electric vehicle, power delivery is almost immediate. Use the accelerator with care in low grip conditions (wet, cold, etc.).
- › Particular care should be taken in side winds and when overtaking large vehicles.



Cargo transported

WARNING

- For your safety, do not exceed the weight limit under any circumstances.
- Take particular care when transporting liquids that may spill on the vehicle or harm other road users.
- This vehicle is a single-seater; it is not permitted to carry a passenger.

The behaviour of the vehicle can be influenced by the load carried and its arrangement. Overloading affects the stability, handling and safety of the vehicle.

The maximum load supported by this vehicle is **150 kg**, taking into account the weight of the driver and potential passengers and luggage. Under no circumstances is it permitted to exceed this value.

Do not place any material outside the spaces designed for transport.

Do not exceed 10 kg of weight inside the main cargo compartment under the seat.

Distribute the load evenly and place it as close to the centre of the vehicle as possible.

Check that the load is securely fastened.

Vehicle identification

Chassis number and motor number

NOTE

- The right side is taken from the driver's perspective.

The vehicle can be identified in three different ways:

- › The nameplate [1].
- › The chassis number [2].
- › Motor number [3].

Make a note of the VIN/chassis and motor numbers when ordering spare parts.

This section shows where to find these numbers.

1. Nameplate

This plate is riveted to the upper left rear frame tube at the height of the cargo box.



2. Chassis number

Inside the cargo compartment under the seat, under the plastic cover with the VIN number.



3. Motor number

On top of the electric motor housing, visible from the right-hand side.



Location of components and controls

Right side view

- [1] Turn signal/rear light
- [2] Cargo box
- [3] Vehicle Identification Number (VIN)
- [4] Vehicle identification plate
- [5] Under-seat compartment
- [6] Rear-view mirror
- [7] Charging socket access cover
- [8] Contact lock
- [9] Windscreen
- [10] Headlight
- [11] Retro-reflector



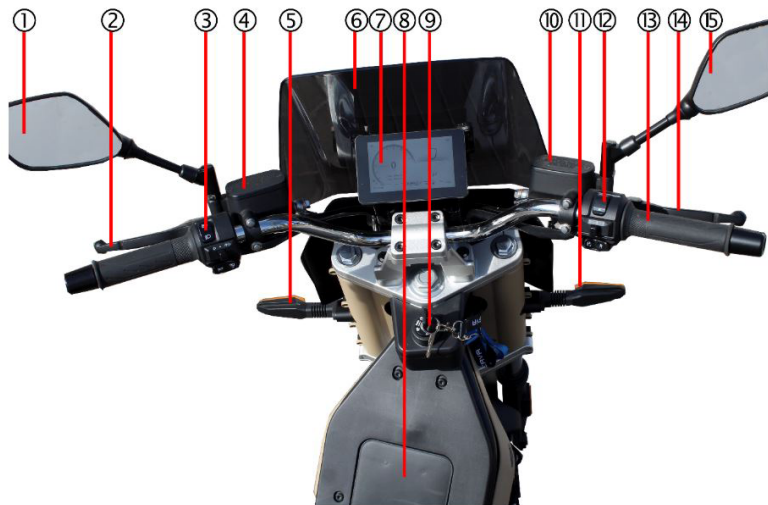
Left side view

- [1] Front disc brake
- [2] Front turn signal
- [3] Footrest-platform
- [4] Side kickstand
- [5] Central kickstand
- [6] Seat opening lock
- [7] Central kickstand
- [8] Shock absorber
- [9] Rear brake
- [10] Number plate light



View from the driving seat

- [1] Left rear-view mirror
- [2] Combined front + rear brake lever
- [3] Left-hand control switches knob
- [4] Combined front + rear brake pump
- [5] Front left turn signal
- [6] Windscreen
- [7] Instrument panel
- [8] Connector cap Type 2 (refills)
- [9] Contact lock
- [10] Front brake pump
- [11] Front right turn signal
- [12] Right-hand control switches knob
- [13] Accelerator grip
- [14] Rear brake lever
- [15] Right rear-view mirror

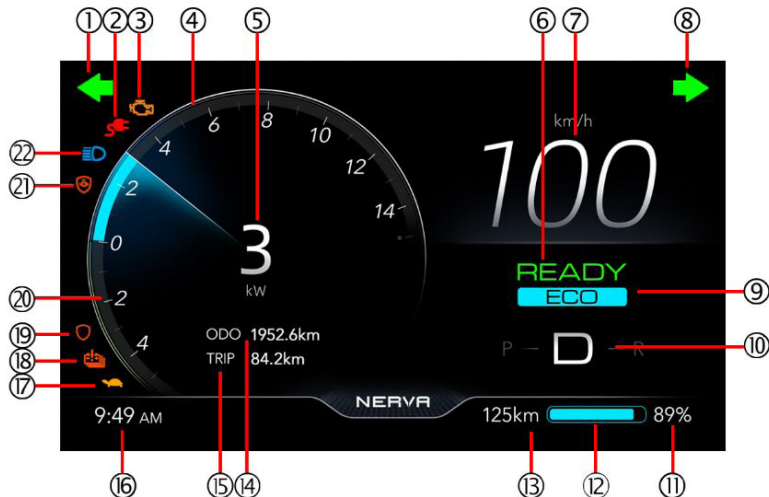


Instrument panel

The scooter's instrument panel is based on a high-resolution TFT colour display. The display itself is grouped with a number of warning lights at the top of the display.

The components of the instrument panel are listed below.

- [1] Left turn indicator light
- [2] Recharge indicator
- [3] Motor malfunction warning light
- [4] Power consumed
- [5] Digital display of consumed or regenerated power
- [6] READY
- [7] Digital speedometer
- [8] Right turn indicator light
- [9] Driving mode
- [10] Mode P (PARKING)/D (DIRECT)/R (REVERSE)
- [11] Percentage battery charge
- [12] Battery charging indicator
- [13] Autonomy
- [14] Odometer (ODO)
- [15] Trip odometer (TRIP)
- [16] Time clock
- [17] Turtle light
- [18] Battery protection warning light
- [19] Battery indicator light
- [20] Analogue power consumed/regenerated
- [21] Motor overheating warning light
- [22] High beam (main beam) warning light (highway)



[1] Left warning light: This green warning light flashes together with the left-hand side indicators when the indicator switch on the left-hand stalk switch is moved to the left. To turn off the turn signals, press the switch to its centre position.

[2] Recharge warning light: This red warning light illuminates when the scooter's battery is being recharged.

[3] Motor malfunction warning light: This orange warning light illuminates when there is an anomaly in the motor. If this happens, reduce speed and take the vehicle to a NERVA Technical Assistance Service.

[4] Power consumption: This clock analogically displays the power consumed by the motor in kW (kilowatts) in real time. From the needle's rest position (0), the needle increases clockwise with full scale at 14 kW.

[5] Digital display of consumed or regenerated power: Numerically displays the value of the power consumed or regenerated (in negative) by the motor in kW.

[6] READY: This message appears when P-mode is deactivated indicating that the vehicle is ready for use.

[7] Digital speedometer: Displays the cruising speed in km/h numerically.

[8] Right turn indicator light: This green indicator light flashes together with the right-hand side indicators when the indicator switch on the left-hand control is moved to the right. To turn off the turn signals, press the switch to its centre position.

[9] Driving mode: The driving mode is displayed when the "P" mode is exited and the "D" mode

is activated (see 10).

(a) ECO mode: This mode is selected by repeatedly pressing the "M" button on the right-hand control knob (cyclic) until ECO is displayed. In this mode, the maximum speed is limited to 50 km/h and is suitable to consume less energy from the battery preferably in urban use. Maximum available power is 60% and maximum torque is 70%.

(b) NORMAL mode: This mode is selected by repeatedly pressing the "M" button on the right-hand control knob (cyclic) until NORMAL is displayed. In this mode, the maximum speed is limited to 80 km/h and is suitable for moderate consumption on secondary roads or urban bypasses. Maximum available power is 70% and maximum torque is 80%.

(c) SPORT mode: This mode is selected by repeatedly pressing the "M" button on the right-hand control knob (cyclic) until SPORT is displayed. In this mode there is no maximum speed limit and it is suitable for driving on motorways and dual carriageways. The vehicle's autonomous range is considerably reduced.

[10] P (PARKING)/D (DIRECT)/R (REVERSE) mode: In this mode, the scooter is active but is prevented from operating, either because the P button has not been switched off from the right-hand control knob, or because the side kickstand is folded out. In P mode, the selected Driving Mode (see 9) is not displayed and all lighting elements, including those in the instrument cluster, are active. In D-mode, the vehicle is ready for use by displaying the selected driving mode: by turning the throttle twistgrip the vehicle starts

driving. Finally, the R mode will be activated once the P mode has been switched off and the R button on the right-hand switches knob has been pressed.

[11] Battery charge percentage: Displays the remaining charge in the battery in a numerical percentage format.

[12] Battery charging indicator: Displays the remaining battery charge on a horizontal graphic scale.

[13] Autonomy: Estimation of the remaining range until the next recharge based on the pace maintained. Increasing the pace will decrease the range estimation and decreasing the pace will increase the range estimation.

[14] Odometer (ODO): Shows the total distance travelled by the vehicle since its manufacture.

[15] Trip odometer (TRIP): Displays the distance travelled on a trip since this counter was reset. To reset, press and hold the TRIP button on the left-hand switch knob.

[16] Time clock: Displays the hours and minutes. Adjusted via connection to the mobile app.

[17] "Turtle" warning light: This orange warning light illuminates when the battery charge (SOC%) is less than 15%. When this happens, the vehicle goes into battery saving mode. The maximum speed is limited.

[18] Battery protection warning light: This orange warning light illuminates when a battery protection mode is activated. This occurs when driving for a while at full power. With this protection mode, the functionality and durability of the components is ensured.

[19] Battery warning light: This orange warning light illuminates when the vehicle detects that the batteries are not working properly. It is advisable to stop the vehicle and contact a NERVA Technical Assistance Service for repair.

This warning light lights up when a Level 1 or 2 alarm occurs:

Level 1: Level 1 alarms are activated when the battery is operating close to its safe operating limits. In this case, the battery warning light flashes.

Level 2: Level 2 alarms are activated when the battery is operating outside its safe operating limits. In this case, the battery warning light lights up continuously.

If the warning light remains on after a complete charging cycle, please contact the NERVA Technical Assistance Service for repair.

[20] Analogue power consumption/regeneration: This clock analogically displays the power regenerated by the motor in kW (kilowatts) in real time. For the power consumed, the needle leaves a blue trace increasing clockwise with a full scale at 15 kW. For the regenerated power, the needle leaves a green trail increasing anticlockwise with a full scale at 5 kW. This power regenerated by the engine to the batteries is produced when acceleration is stopped or, to a greater extent, when the brakes are applied. In regenerative mode, the motor partially brakes the vehicle.

[21] Motor overheating warning light: Illuminates when the motor temperature exceeds 100°C.

[22] High beam (main beam) indicator light: This blue indicator light illuminates when the high

beam or main beam is selected on the left-hand control switch knob. Switch to low beam or dipped beam when approaching another vehicle from the front or rear.

USB connector

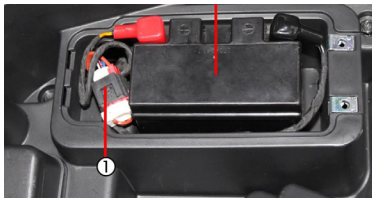


On the left side of the instrument cluster's TFT display base, you will find a black rubber cover that covers and protects the standard USB and "C" connectors. It will be very useful for charging a mobile phone on the move or for use as a GPS navigator.

Its internal circuit has short-circuit and overvoltage protection. After using this connector, do not forget to cover it again with the rubber cap to protect it from moisture and dust.

Its internal circuit has short-circuit and overvoltage protection. After using this connector, do not forget to cover it again with the rubber cap to protect it from moisture and dust.

Access to secondary battery, fuses and OBD connector



Remove the cover from inside the cargo compartment under the seat on the right-hand side by loosening the two Phillips screws securing it. You will find the connector for the OBD diagnostic tool (1) and the secondary battery.

Access to fuses



The fuse box is located in the load compartment under the seat inside a cover located next to the seat hinge. To open the cover, slide it to the right and remove it.



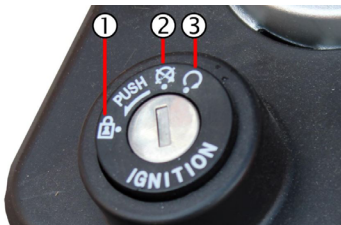
Remove the fuse box from its holder by lifting it by hand and open its top cover. The fuse box includes two fuses of 15 A and 25 A, together with two spare fuses marked "Spare".

Contact key



The vehicle is delivered with two sets of mechanical keys. Keep the spare access fob in a safe place.

Contact lock



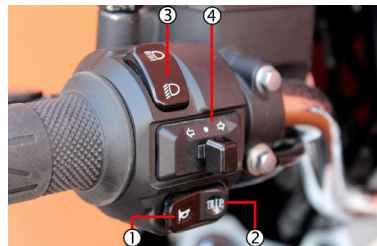
Insert the ignition key into the ignition lock slot and select one of the three functions:

[1] LOCK position "🔒": First turn the handlebars all the way to the left, then press the ignition key and turn it anticlockwise to the "🔒" position. The handlebar will be locked to prevent theft of the vehicle and the key can be removed from the ignition lock.

[1] OFF position "🔌": When in the "🔌" position the vehicle will be disabled, leaving all electrical circuits switched off and the key can be removed from the ignition switch.

[1] ON position "🔌": By turning the ignition key clockwise to the "🔌" position, the vehicle will be activated and all its circuits will be ready for operation. In this position, the key cannot be removed from the ignition switch.

Left-hand control switches knob



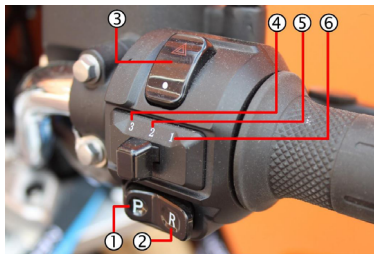
[1] Horn button: Moving this control to the left will sound the horn. When released, it will stop beeping.

[2] TRIP button: By moving this knob to the right and holding it down, the tripmeter (TRIP) will be reset.

[3] Main beam switch "🔌"/short beams switch "🔌": Switch the switch to the "🔌" position and the main beam (high beam) will illuminate together with the blue main beam indicator light in the instrument cluster. Switch the switch to the "🔌" position and the low beam (dipped beam) will illuminate.

[4] Indicator switch ⇐/⇒: Moving this switch to the left "⇐" will cause the left-hand turn indicators and the left-hand indicator light on the instrument panel to flash. Moving this switch to the right "⇒", will cause the right-hand turn indicators and the right-hand turn indicator light on the instrument panel to flash. Pressing in the centre of the indicator switch will deactivate the turn signals.

Right-hand control switches knob



[1] **PARKING "P" button:** A long press on this button on the left-hand side will deactivate the PARKING mode if the vehicle has just been activated or the side stand is retracted. Pressing this button again will re-engage the PARKING mode. PARKING mode is also activated by extending the side kickstand. The "P" indicator shall illuminate on the display.

[2] **REVERSE "R" button:** Once the PARKING mode has been deactivated, and with the vehicle at a standstill, you can reverse at low speed while holding down this button with the thumb of your right hand and operating the accelerator. "R" mode shall be activated on the display.

[3] **Hazard warning lights:** Moving this switch upwards (position "▲") will flash all four of the vehicle's turn indicators at the same time, as well as the two indicator lamps on the instrument panel, alerting other traffic to a dangerous or emergency

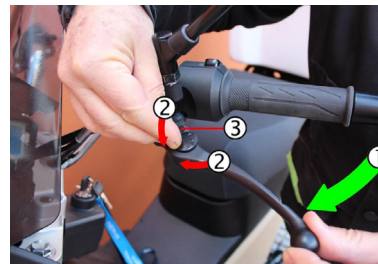
situation. By moving this switch downwards (position "●"), the hazard warning flashers will be deactivated.

[4] **SPORT driving mode:** Move this switch all the way to the left to position "3" in mode "D" (DIRECT) and the SPORT driving mode will be selected and shown on the instrument panel display.

[5] **NORMAL driving mode:** Move this switch to the centre to position "2" in mode "D" (DIRECT) and the NORMAL driving mode will be selected and shown on the instrument panel display.

[6] **ECO driving mode:** Move this switch all the way to the right to position "1" in mode "D" (DIRECT) and the ECO driving mode will be selected and shown on the instrument panel display.

Ergonomic lever adjustment



The front and rear brake levers are adjustable in the handlebar opening to suit the rider's ergonomics. No tools are needed to adjust them — this may be done by hand, even with gloves on:

1. Use one hand to pull the handle outwards ①.
2. With the other hand, turn the wheel ② to the appropriate position, matching the position number with the small reference arrow ③.
3. The wheel has five positions: position 1 is the furthest from the handlebars, while position 5 is the closest.

Lighting

All of the vehicle's lighting is based on LED technology. LED lighting offers high visibility, helps you to be seen and stand out from other traffic, causes minimal power consumption and has a long service life compared to traditional incandescent bulbs. In the unlikely event that a component stops working, it must be replaced with a new one.

Headlight



It is a triple LED spotlight assembly. Selecting the low beam will illuminate only the centre spotlight, while selecting the high beam will illuminate all three spotlights at the same time.

In addition to the three LED headlamps, the headlamp includes three LED segments that are always illuminated and surround the three headlamps and act as a position light.

Indicators



The LED front indicators are positioned on both sides of the front suspension and are attached to the front suspension by means of an elastic rubber mount. The rear indicators are integrated with the tail lamp at their lateral ends.

Rear light/Brake light



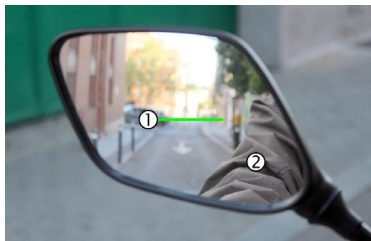
The rear light position light is formed by a row of LEDs which increases in brightness when any of the brakes (brake light) are applied. The indicators are formed by a pair of LEDs on each side of the tail light.

Adjustment of rear-view mirrors

For your safety, it is essential that both rear-view mirrors be correctly adjusted and that the reflective surface of the mirror be perfectly clean and unbroken. If the mirror is broken, replace it with a new one.



Release the locknut at the base of the rear-view mirror mast with a 17 mm open-end spanner, and orient the mast with the handlebars straight so that it is perpendicular to the longitudinal axis of the vehicle (not parallel to the handlebars) to achieve the furthest point away from the mirrors. Once the rear-view mirror mast is aligned, retighten the lock nut with the 17 mm open-end spanner to prevent it from moving. Make the same adjustment for the other rear-view mirror.



Orient the mirror so that the horizon line (1) is at the centre of the surface and part of the user's arm (2) appears in the inner corner of the mirror, serving as a reference for locating objects or vehicles behind the user's back. Do the same with the other rear-view mirror.

Cargo compartment

WARNING

- Do not store valuables in the cargo compartment.
- Make sure that the seat is securely closed after pressing it down.
- The cargo compartment is not airtight. Water may leak from rain or washing. Avoid leaving objects that can be damaged.
- Never leave the Keyless access fob in the cargo area. If the compartment is locked with the key inside, you will need the spare key to open it again.
- Maximum loading capacity: 10 kg.



A cargo compartment is provided under the seat for carrying small items and the charger.

Opening the cargo compartment under the seat



- › Insert the ignition key into the side lock under the rear left-hand side of the seat.
- › Turn the key anti-clockwise ①.
- › Open the seat by pulling the back of the seat upwards ②.

Closing the cargo compartment:

- › Lower the seat and press down on the back of the seat until the latch locks.
- › Check that the seat is correctly locked.

Charging the battery



The vehicle's battery is charged via the Type 2 connector located in the front centre area of the vehicle. To access the Type 2 connector it is necessary to open the access cover and remove the protective cap.

There are 2 ways to charge the vehicle: using the charger supplied with it, or a public charging point.

For charging, follow the steps below:

Opening the recharge socket cover



To access the Type 2 connector, pull the handle at the bottom of the connector access cover.



To open the plug, turn it a quarter in an anticlockwise direction and remove it, exposing the Type 2 connector. To close the plug over the Type 2 connection, place the plug over the connection, rotate it to find the snap-in point and rotate it clockwise.

You can also use a public charging point to charge your vehicle by plugging the Type 2 connection directly into the vehicle's charging socket.

Charger connection



Connect the power input of the charger supplied with the vehicle to a grounded household mains socket.



Before connecting the charger to the Type 2 connector, you must select the charging current. By default, the charger operates in ultra-fast charging mode and will deliver a charging current of 16A equivalent to a power consumption of 3.6 kW. Check if the automatic system accepts that current or power, or if the maximum contracted power is higher than 3.6 kW.



If this is not the case, you must select another maximum current value by pressing the button shown in the picture. The display of the charger will cycle through the following power values:

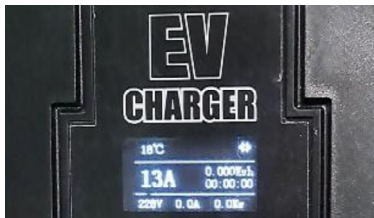


Slow charge: corresponds to a maximum current of 8 amps and a power consumption of 1.8 kW.



Medium charge: corresponds to a maximum current of 10 amps and a consumption of 2.25 kW.

OPERATIONS



Fast charge: corresponds to a maximum current of 13 amps and a power consumption of 2.925 kW



Ultra-fast charge: corresponds to a maximum current of 16 amperes and a consumption of 3.6 kW

Once the maximum charging current has been selected, connect the charger's Type 2 connector to the vehicle's Type 2 connection.



With the ignition switch OFF, the TFT display on the instrument panel will illuminate showing the battery charge percentage as well as the graphic charge level, the estimated time remaining to fully recharge and the recharge indicator "⚡" in red at the top left of the TFT display.



You can also use a public charging point with a Type 2 connection to charge the vehicle battery.

Recharge completed

1. When charging is complete, disconnect the mains power cord and then the Type 2 connection.
2. Cover the end of the charging cable to the charging socket with the rubber plug.
3. Close the plug of the recharging socket by fitting it with the Type 2 recharging socket and turning it clockwise.
4. Close the lid by pressing it gently.
5. The vehicle is now ready for use.

WARNING

- If the battery is not 100% charged after 24 hours of recharging, contact the NERVA Technical Assistance Service.
- Avoid extreme ambient temperatures for the battery: above 35°C or below -15°C.
- Avoid exposing the battery to corrosive liquids.

OPERATIONS

Charger states

STATUS	MESSAGE VIA LED			
	POWER ●	CHARGE ●	FAULT 1 ●	FAULT 2 ●
Initial mode	Blink 1s	Blink 1s	Blink 1s	Blink 1s
When connecting	Fixed activation	Switched off	Switched off	Switched off
Charging mode	Fixed activation	Blinking	Switched off	Switched off
Full load	Fixed activation	Fixed activation	Switched off	Switched off
Power failure in self-diagnosis	Fixed activation	Switched off	Fixed activation	Fixed activation
Communication exception	Fixed activation	Switched off	Switched off	Fixed activation
Overvoltage or undervoltage	Fixed activation	Switched off	Fixed activation	Switched off
Ungrounded	Fixed activation	Switched off	Switched off	Flashing (1s ON and 1s OFF)
Over current	Fixed activation	Switched off	Flashing (1s ON and 1s OFF)	Switched off
Current leakage	Fixed activation	Switched off	Flashing (1s ON and 1s OFF)	Flashing (1s ON and 1s OFF)
Overheating protection	Fixed activation	Fixed activation	Fixed activation	Fixed activation

Side kickstand

WARNING

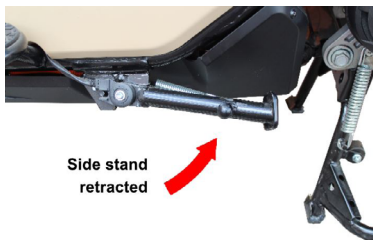
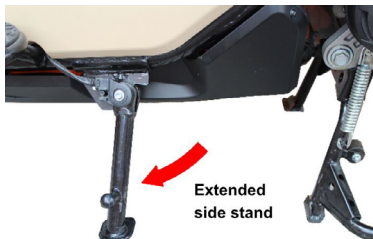
- Ensure that the scooter is always on firm, level ground. The side kickstand must not be used on sloping terrain, as it could collapse and cause the scooter to fall to the ground.
- For the scooter to exit **PARKING mode**, the side kickstand must be folded down, as it contains a safety system that prevents the scooter from being driven with the side kickstand folded out.

The scooter has a side kickstand accessible from the left side of the vehicle. The side kickstand is equipped with a safety switch which switches off the power supply to the electric motor when the side kickstand is extended.

If the stand is extended, the scooter goes into **PARKING mode** (the motor does not run in this mode).

1. Ensure that the scooter is securely fastened before folding the side kickstand.
2. Once the side kickstand has been folded out, slowly tilt the scooter to the left until it is fully resting on the side kickstand.

If the support surface is sloping, soft or uneven, if it is windy, or if parking for a long period of time, only the central kickstand should be used.



Central kickstand

The scooter is equipped with a central kickstand. When resting on it, the scooter lifts up at the rear until the rear wheel is in the air:

To raise the vehicle onto the centre stand, follow the steps below:

1. Disable the vehicle by turning the ignition switch to the OFF position.
2. Step off the scooter from the left side, holding the handlebars firmly.
3. Hold the left handlebar grip with your left hand and the rear frame tube with your right hand. Push down on the centre stand lever with the right foot until the two support points of the stand touch the ground.
4. Put your body weight on the central kickstand lever and pull up and back on the left handgrip.
5. Check that the vehicle is firmly supported.



Driving instructions

Start-up

CAUTION

- Do not switch off the scooter during activation. This could damage the vehicle's electrical circuits.
- Do not start the scooter immediately after it has been switched off. This could damage its electronic circuits. Allow at least 2 to 5 seconds to elapse before re-activating it.

WARNING

- Hold down the rear brake lever to prevent the vehicle from moving. Avoid accelerating when the scooter is stationary if you do not intend to drive. You could lose control and cause an accident.

NOTE

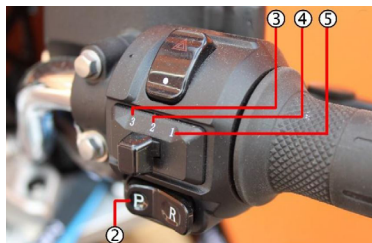
- The scooter has a safety switch on the side kickstand. If the stand is folded out, the scooter will not exit PARKING mode. Once the side kickstand is retracted, press the PARKING button [2] on the right-hand control knob to start off.

1. Lower the vehicle from its central kickstand or retract the side kickstand.
2. Activate the scooter and turn the ignition knob [1] to the ON position.



5. Choose the driving mode you want to use (③ Sport, ④ Normal and ⑤ Eco).
6. Turn the accelerator gently to start the vehicle moving.

3. Wait until the display turns on completely.
4. Press the PARKING "P" button [2] on the right-hand switchgear on the right-hand switch gear.



Driving modes

WARNING

- If the scooter is driven at high speed and is switched to a lower mode, the scooter progressively slows down to the maximum speed of the new driving mode and the accelerator no longer responds to increases in speed
- Do not drive in the ECO driving mode on motorways or dual carriageways. Not only is the maximum speed in this mode lower than the mandatory minimum speed on these roads, but it can also lead to and/or cause a serious accident.
- Use of the SPORT driving mode is disabled if the battery is at 25% charge or lower. If you are riding in SPORT mode when this charge state is reached, the vehicle will automatically switch from SPORT mode to NORMAL mode

NOTE

- Please note that frequent use of the SPORT mode decreases the range of the vehicle, due to increased power consumption. Prolonged use of the SPORT mode may increase the temperature of the vehicle's electrical components, resulting in reduced motor performance.

The vehicle has three driving modes, which are selectable from the "M" button on the right-hand switch, to provide the user with different driving experiences. To select the Driving Mode, the side kickstand must be retracted and the "PARKING" mode deactivated. Mode selection may be done by brief presses of the "M" button, with the selected mode appearing on the display. The three modes are presented cyclically.

- › **ECO:** This allows for more relaxed driving, ideal for inner-city driving. Speed and acceleration are limited, allowing for greater vehicle range.
- › **NORMAL:** This driving mode resembles the behaviour of a 125 cc scooter. It allows a smooth ride without abrupt power delivery. At the same time, it is possible to drive at higher speeds than in ECO mode.
- › **SPORT:** This allows you additional power and speed, accessing the full power the scooter has to offer.

The maximum speeds and approximate ranges for each driving mode are detailed below:

MODE	MAXIMUM SPEED KM/H*	APPROXIMATE RANGE OF AUTO- NOMY**
ECO	50km/h	140km
NORMAL	85km/h	105km
SPORT	100km/h	70km

(*) The maximum speed values shown are standard. For fleets of delivery vehicles, other values can be fixed either when the vehicles are pre-delivered or later at a Nerva Technical Assistance Workshop.

(**) Indicative values Range varies substantially depending on driving style, weather and road conditions.

Economic driving



It is recommended to accelerate gently so that the power consumption is not excessive and you do not lose control of the scooter.

The following cases are unfavourable for battery consumption:

- › City traffic with many stops and traffic lights.
- › Journeys with constant starts and stops.
- › Driving in slow-moving, heavy traffic.

Battery consumption is also affected by poor road conditions or steep slopes.

The weight carried is also a major factor in electricity consumption. The maximum load, taking into account the weight of the driver and possible passengers and luggage, is 150 kg. Driving while overloaded is not permitted under any circumstances.

If pushing or manoeuvring the vehicle is required, first press the PARKING button to disable the accelerator. This prevents accidental operation and an accident.

CBS combined braking

WARNING

- **On light curves, sandy or dirty roads, wet asphalt and icy roads, use the front brake with care. If the front wheel locks, the vehicle could slide sideways and cause an accident.**
- **Use the brakes with care. Blocked wheels can adversely affect the vehicle's braking ability and can lead to accidents.**
- **Brake before cornering. Braking in a curve increases the risk of skidding.**

This vehicle is equipped with a combined CBS brake on the left brake lever, i.e. when the rear brake is applied, it is also accompanied by a small contribution from the front brake.

Front brake



The front brake is operated by the right-hand lever and acts on the right-hand front disc brake.

Rear brake



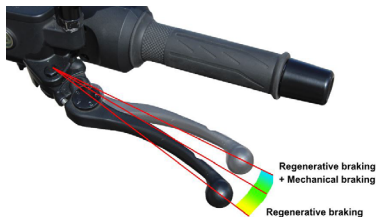
The rear brake is always accompanied by a small contribution from the front brake on the left disc brake and is operated by the left lever.

Regenerative braking

In addition to mechanical disc brakes, the vehicle has a regenerative brake. When the traction provided by the motor is no longer used, its use as an motor brake can be reversed, producing electricity in its retention which is used to partially recharge the batteries. This regenerative braking is activated electronically when the accelerator is released and, to a greater extent, when one of the brake levers is actuated and depending on the travel of the brake lever.

The regenerative brake has its own range of travel on the brake lever. Only motor brake regeneration is active during this range of travel. If the lever continues to be actuated, the mechanical brake comes into action. At that moment, both types of brakes act simultaneously.

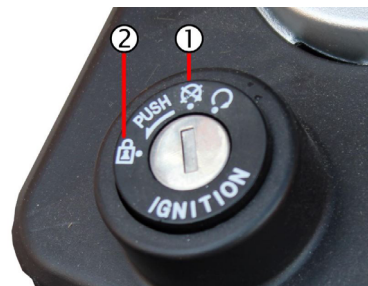
The use of regenerative braking assists the braking process by using fewer brake pads than mechanical brakes, and also helps to maintain battery charge.



Stopping the motor

To switch off the engine, turn the key in the ignition switch to the OFF position ①.

It is recommended to lock the steering when the vehicle is parked by turning the handlebars fully to the left, pressing the ignition knob and, at the same time, turning it to the LOCK position ②.



Maintenance instructions

Brake fluid level



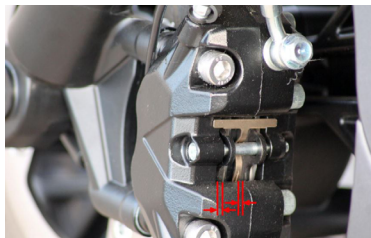
With the scooter on its central kickstand on a level surface, turn the handlebars until the brake pump of which you wish to check the level is horizontal. Through the sight glass on the pump reservoir, check that the brake fluid level is above the "LOWER" mark. If the brake fluid level is below the "LOWER" mark, check the brake pads for wear. If the brake pads are not worn, check for brake fluid leaks at the pump cover, brake lines, and brake linkages or banjo fittings.

Brake fluid needs to be changed every 15,000 km or every 2 years (whichever comes first). The change requires bleeding air from the hydraulic system. For your safety, entrust this operation and

the repair of brake fluid leaks to a NERVA Technical Assistance Service.

Recommended brake fluid: DOT-4

Brake pads



Check the brake pad wear by observing the thickness of the brake pad lining at the caliper end in contact with the disc. Verify that the thickness of the friction material of each pad is more than 2 mm. If wear is noticeable, do not press down on the thickness as this may damage the disc surface and replace both pads at the same time. For your safety, entrust this operation to a NERVA Technical Assistance Service.

Cleaning the scooter

CAUTION

- Do not use steam or high-pressure jets to wash the scooter. Such systems can damage or fog the headlamps, instrument panel, braking system and electrical system. The use of pressure washers, regardless of the intensity of the pressure, immediately voids the vehicle warranty.
- Never use paint polish on plastic parts.
- After a relatively long journey, thoroughly clean the bodywork and apply a corrosion protection agent.
- Use mild and environmentally friendly cleaning products. Never use aggressive detergents.
- Use a soft, clean cloth to dry the scooter.

WARNING

- Plastics and upholstery can be damaged if corrosive and penetrating cleaning agents are used.



To clean the scooter, use a soft sponge and clean water. Afterwards, wipe dry with a cloth.

After cleaning, always carry out a brake test before driving again.

To avoid bodywork damage or scratches, do not use dry cloths to remove dust or dirt.

As a precaution, we would recommend protecting the parts most exposed to corrosion using a commercial product dedicated to this purpose, especially in winter (on account of the salt that is added to asphalt to prevent it from freezing.)

Long-term storage of the scooter

The following steps are recommended for proper long-term storage of the scooter:

1. Clean the scooter before storing it.
2. Store the scooter in a dry room.
3. Raise the scooter on its central kickstand, chocking the fork with timbers so as to ensure that neither tyre rests on the ground, which can cause permanent deformation.
4. Cover the vehicle with a protective cover.
5. To protect the batteries, maintain an environment with a temperature below 35°C and humidity below 75%.
6. If the vehicle is to be stored for a long period of time, the battery should be kept at a charge between 30 % and 60 % SOC. 30 % to 60 % SOC.
7. It is not recommended to exceed half a year of storage. After a period of storage with no use of the battery, an inspection should be carried out to check the condition of the battery.
8. In the event that the storage period exceeds half a year, charge the battery to 50 % every 6 months.

Commissioning

To restore the vehicle after a long period of storage, follow the steps below:

1. Clean the vehicle.
2. Check tyre pressure.
3. Check the condition of the brakes.
4. Carry out the activities as indicated in the maintenance plan.

Tyre and wheel maintenance

If the scooter is not to be used for an extended period of time, it is recommended that the scooter be placed on the central kickstand. Thus, the weight of the vehicle does not rest on the wheels.

It is advisable to spray tyres with a silicone rubber treatment to prevent tyres from hardening. To do this, the tyres must first be thoroughly cleaned.

Do not store the vehicle or tyres in hot spaces for prolonged periods of time.

Technical changes, accessories and spare parts

CAUTION

- We recommend the use of original accessories and spare parts only.
- The safety, suitability and reliability of the original accessories and spare parts have been tested specifically for this vehicle.
- For certified accessories and original spare parts, please contact an authorised service centre. A list of NERVA sales outlets and Technical Support Services can be found at www.NERVA.eco.

Unauthorised technical modifications may lead to cancellation of EC type-approval.

NERVA ECO S.L. is not responsible for any modifications made to the vehicle, nor for any accessories that have not been tested and distributed by the company's authorised service network.

Modifications and/or installation of accessories not approved by NERVA ECO S.L. may lead to the loss of the vehicle warranty.

Condition of tyres

WARNING

- All tyres are tubeless (TUBELESS).
- The scooter is equipped as standard with the following tyres:
 - Front: 110/70-15 MC 56 S
 - Rear: 140/70-14 MC 68 S
- Use only tyres with the approved or equivalent dimensions and bearing the European type-approval mark. The use of non-approved tyres or rims increases the risk of an accident. NERVA ECO S.L. is not responsible for any damage to tyres and rims that may occur as a result of poor maintenance or after manipulation of these by any technical service **servicio técnico**.

The condition of tyres should be checked regularly. A worn tyre has inferior grip and can lead to accidents.

Do not drive without valve caps. These must be firmly tightened to prevent the wheel from losing pressure.

To check the condition of the tyres:

- › Measure the depth of the drawing (Minimum depth: 2 mm, equivalent to the outer ring of a 1-euro coin)
- › Check the wear mark



Tyre pressure

Adjust the tyre pressure according to the weight of the load.

Never exceed the maximum permissible weight for each tyre.

Incorrect pressure has a direct effect on vehicle safety and performance. This also affects the service life of the wheels.



Always measure tyre pressure when the tyre is cold (without having travelled too many kilometres to the measuring point).

TYRE	DRIVER ONLY	WITH LOAD
Front tyre	250 kPa 2,50 bar (atm.) 36 PSI	250 kPa 2,50 bar (atm.) 36 PSI
Rear tyre	250 kPa 2,50 bar (atm.) 36 PSI	250 kPa 2,50 bar (atm.) 36 PSI

Batteries

CAUTION

- **Due to the high voltage between the terminals, do not touch the electrical terminals under any circumstances.**

Do not access the batteries under any circumstances. Tampering with the batteries by personnel not authorised by NERVA ECO S.L. will lead to the suspension of the warranty. For proper operation and maintenance of the batteries, we recommend as follows:

1. Charge the batteries with a suitable charger approved by NERVA ECO S.L.
2. Do not expose the battery to fire or heat. Keep away from hot spots such as heat or fire. Do not store the vehicle in a place with high temperature.
3. Pay attention to the polarity of the terminals. Do not connect the battery in reverse polarity to a charger or device.
4. Do not strike the batteries with a hammer, nail or similar tool that may damage the mechanical integrity of the battery.
5. Do not immerse the battery in water. Do not store in a damp environment.
6. Avoid direct sunlight, high temperatures and high humidity. Store the batteries in an environment with a temperature below 35°C and above -15°C, and a humidity below 75%.
7. If the vehicle is to be stored for a long period of time, the battery should be stored with a char-

- ge of between 30 % and 60 % SOC. It is not recommended to exceed half a year of storage.
8. In the event of storage beyond half a year, charge the battery to 50% every 6 months.

After a period of storage with no use of the battery, an inspection should be carried out to check the condition of the battery. If the battery is leaking, smoking or damaged, stop using the unit immediately. The batteries may only be handled by authorised NERVA ECO S.L. technicians. Tampering by unauthorised persons will lead to the suspension of the warranty.

Maintenance plan

The first inspection of the vehicle after delivery is of utmost importance to ensure proper functioning over a long period of time

WHICHEVER COMES FIRST DISTANCE/ DISTANCE TRAVELLED	500 KM/ 2 MONTHS	2.500 KM/ 6MONTHS	5.000 KM/ 12MONTHS	7.500 KM/ 18MONTHS	10.000 KM/ 24MONTHS	12.500 KM/ 30 MONTHS	15.000 KM/ 36 MONTHS	17.500 KM/ 42 MONTHS	20.000 KM/ 48 MONTHS	FOLLOWING
Gearbox oil (80W90, 120 cc)	C				R				C	Every 15,000 (or every 2 years)
Belt tension			R		R		R		R	Every 15,000 (or every 2 years)
Nuts and bolts	R		R		R		R		R	Every 5,000 (or every 1 year)
Steering and bearings	R		R		R		R		R	Every 15,000 (or every 2 years)
Front and rear suspension	R		R		R		R		R	Every 15,000 (or every 2 years)
Brake system: brake pads and brake discs	R		R		R		R		R	Every 5,000 (or every 1 year)
Brake fluid	R		R		R		R		R	Service every 5,000 km and change every 15,000 km (or every 2 years) since the last change.

C: Change.

R: Review. Replace, clean and/or adjust if necessary.

Technical characteristics

Motor	Maximum net power	10 kW
	Maximum continuous net power	6 kW
	Type	AC alternating current
	Operating voltage	54V AC
	Maximum torque value	10.4 Nm
Transmission	Type	Belt/gear drive
	Final ratio	6.409
	Transmission case oil	80W90, 120 cc
Chassis	Front suspension	Telescopic fork
	Rear suspension	Double shock absorber. Hydraulic shock absorption, preload adjustable
	Front tyres	120/70-15 MC 56 S
	Rear tyres	140/70-14 MC 68 S
	Front rim dimension	3,0 x 15
	Rear rim dimension	4,0 x 14
	Front tyre pressure	2,5 atm
	Rear tyre pressure	2,5 atm
	Front brakes	- Disk: 2 discs 260 mm diameter - Clamp: 2 parallel pistons of 25.4 mm diameter - Brake pump: to the right of the handlebars, with a 14 mm piston diameter

TECHNICAL CHARACTERISTICS

Chassis	Rear brake	- Disk: 1 disc 230 mm diameter - Clamp: 2 parallel pistons of 25.4 mm diameter - Brake pump: to the right of the handlebars, with a 14 mm piston diameter
Electric equipment	Main battery	LiFePo4 76,8V (38,4V x2) 5,2 kWh
	Secondary battery	12A 6Ah
	Fuse output DC DC 12V	25A
	12 V battery positive side fuse	15A
	Headlight	Low beam or dipped beam: 12V 3,5 W/ High beam or full beam:12V 9,6 W
	Position light	LED 12V 2,86 W
	Instrument panel	3,6 W
	Rear brake light/position	LED 12V 4,8 W / 2 W
	LED front indicators	LED 2 x 12V 1 W
	LED rear indicators	LED 2 x 12V 1,2 W
Dimensions and weights	Net weight	181 kg
	Length	2180 mm
	Width	840 mm
	Height	1330 mm
	Distance between axles	1570 mm
	Maximum permissible weight	150 kg

Vehicle warranty

The warranty terms are as follows:

En caso de que ocurra una avería, NERVA ECO SL proporcionará, mediante el servicio técnico autorizado, un servicio de garantía dentro de las obligaciones legales:

1. For the first 36 months after the registration date of the vehicle, NERVA ECO S.L. will undertake to remedy any deficiencies caused by component failures and/or manufacturing defects by repairing or replacing the affected part through an authorised dealer, in accordance with the statutory warranty regulations. NERVA ECO S.L. may refuse the requested repair or replacement if the failure has been caused by negligent or improper use of the unit. Repairs or replacements may also be refused if the maintenance schedule has not been respected.
2. The installation of replacement components within the warranty period does not extend the warranty period which began with the delivery of the vehicle.
3. The warranty does not cover wear and tear caused by normal use. Wear and tear due to improper use is also not covered by the warranty.
4. Applications from users will be rejected if any of the following circumstances should apply:
 - Tampering of any kind with the scooter.
 - Transmission modifications
 - Installation of accessories or spare parts

that have not been approved by NERVA ECO S.L.

Repairs carried out in workshops not authorised by NERVA ECO S.L. and failure to comply with the maintenance intervals will also void the warranty.

5. When submitting a warranty claim, the customer must present the correctly completed Maintenance Booklet.

Warranty exclusions

The following circumstances are outside the official guarantee offered by NERVA ECO S.L.:

1. After the guarantee period has expired.
2. Defects due to repair, adjustment, maintenance or any other operation outside the specifications of NERVA ECO S.L. and/or outside the authorised service network.
3. Failure to pass the inspections scheduled by NERVA ECO S.L. as per the Maintenance Booklet.
4. Defects arising from improper use of the vehicle, such as participation in any kind of competition, use outside traffic lanes, on roads in poor condition or in hostile areas.
5. Use outside the parameters set out in the User Manual.
6. Damage caused by use as a rental vehicle.
7. Damage due to the use of non-original spare parts or accessories not approved by NERVA ECO S.L.
8. Damage caused by the transformation or modification of the vehicle and/or its components.
9. Damage caused by ageing or prolonged storage.
10. Perceptual sensations not affected by vehicle performance and operation such as noise, vibrations, looseness, etc.
11. Consumable parts: Brake pads
 - Brake discs
 - LED lighting elements

- Fuses 15 A and 20 A
- Gaskets
- Rubber parts
- Transmission belt
- Rear cogs
- Crown gears, Transmission gears
- Tyres
- Oil
- Greases
- Pipes
- Electrical and control cables
- Cable sleeves
- Grips
- Adhesives

12. Natural wear and tear from normal use. For example: wear to the transmission kit, seat and stands.
13. Damage resulting from the use of pressurised water such as: condensation, water seepage, rust, paint damage, upholstery damage, adhesive products, logos or any type of malfunction.
14. Damage due to incorrect transport or storage.
15. Any intervention carried out by persons outside the services authorised by NERVA ECO S.L.
16. Damage caused by weather accidents, catastrophes, fire, collision, traffic accidents or theft.
17. Damage caused by smoke, chemicals, oil, animal droppings, saline water, salt or other similar materials.
18. Warranty claims that do not match the MO-

DEL, VIN / CHASSIS NUMBER, TRUCK NUMBER or MOTOR NUMBER OF THE PRODUCTS SUPPLIED

19. Parts such as controllers, batteries, chargers, etc., which have their seals or labels removed, shall be exempted from warranty.
20. Vehicles that have not been maintained and/or repaired at a NERVA Authorised Dealer.

The official NERVA ECO S.L. guarantee does not assume or cover the following points:

1. Costs resulting from periodic maintenance.
2. Costs of cleaning, inspection and/or assembly prior to delivery.
3. Expenses of carrying out estimates for repairs outside the coverage of the guarantee offered by NERVA ECO S.L.
4. Additional indirect expenses caused by a vehicle breakdown, such as: towing, transport, communications, lodging, per diems, etc.
5. Financial compensation for the maintenance and repair period. Whether or not they are covered by the guarantee, the guarantee does not cover the costs of loss of time, loss of business, loss of working hours, costs for rental vehicles, etc.

Parts that are replaced within the warranty period will be warranted for the remaining warranty period.

All replaced parts become the property of NERVA

ECO S.L. NERVA ECO S.L. reserves the right to introduce modifications or improvements to its vehicles with the aim of improving performance and/or durability.

Battery warranty

In the event of a breakdown or failure of the battery, NERVA ECO S.L. will provide a warranty service through the authorised service centre.

Such warranty shall have an extension of 5 years or 80,000 kilometres, whichever occurs first, from the date of delivery of the vehicle.

The following causes will void the warranty:

1. The cause of the damage is due to improper use of the battery or force majeure.
2. Battery voltage exceeds 91.2 V (cell > 3.8 V) at the time of charging.
3. Battery voltage is below 48 V (cell < 2.0 V). 48 V (cell < 2.0 V).
4. An attempt has been made to charge the battery by reversing its polarity.
5. There is mechanical damage to the battery, such as puncture or crushing. The warranty is immediately void if any attempt is made to open or modify the external structure of the battery.
6. An attempt has been made to charge the battery under high-temperature conditions that may bring it close to near-fire temperatures.
7. Short-circuit caused by human manipulation or other means.
8. Wetting or immersing the battery in water by human or other means.
9. Improper charging/discharging of the battery, prolonged storage of the battery or any other form of use that does not comply with the User Manual or other NERVA instructions leading to

rapid battery discharge or other failures.

The battery will remain under warranty as long as it is charged with a suitable charger approved by NERVA ECO S.L., following the operating instructions.

Summary of warranty periods

COMPONENT	WARRANTY PERIOD
Battery	5 years or 80000 km, whichever comes first
Controller	3 years
Charger	3 years
DC DC	3 years
Motor	3 years

