



Talaria-Owners-Manual-TL4000 MX

TALARIA POWER TECH (CHONGQING) CO, LTD.

TL4000 MX Operating Manual





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I. Preface

(I) Preface

Dear Customer,

Thank you for choosing TALARIA products. We will be truly grateful if you can give us any opinions or suggestions about the products. Your satisfaction is our ultimate goal.

As a professional designer and manufacturer of electric vehicles, we develop and produce electric vehicles featuring innovative appearance, comfortable riding experience, easy operation, strong power, long endurance mileage, and high safety and reliability, making them a new generation of ideal environmentally friendly transportation and entertainment tool. In order to ensure favorable services of the electrical vehicle, please read the Operating Manual carefully beforehand, so you can fully understand the performance, operation and maintenance of the vehicle and make sure that the vehicle is operating with maximum performance, less failure and longer service life.

Do not lend the vehicle to persons that are unable to ride. Always wear a helmet when using this vehicle. Follow the traffic regulations strictly and ride in the slow lane.

Slowdown in rainy and snowy days and on slippery roads, and keep a safe following distance to ensure safety.

We are constantly improving our products, so the products delivered to the customers may be different from those described herein. We reserve the right of final interpretation.

For 24-hour updates and additional information about your motorcycle, visit the Owner Resources section at the TALARIA official website:

<http://www.talaria.cn>

(II) About This Manual

This manual is only used for TL4000 Electric Moped produced by TALARIA. It covers the information on vehicle introduction, usage, troubleshooting, after-sales and maintenance for the electric moped.

A good place to locate information about the motorcycle is in the index of the manual.

The terms "right" or "left" refer to the rider's right or left when sitting on the motorcycle.

II. Useful Information for Safe Riding

(I) Useful Information for Safe Riding

This manual contains the word **WARNING** to indicate something that could hurt you or others. It also contains the word **CAUTION** to indicate things that could damage your moped.

CAUTION! Please read this manual carefully and completely before operating this moped. Do not attempt to operate this moped until you have attained adequate knowledge of its controls and operating features and have been trained in safe and proper riding techniques. Regular inspections and proper maintenance, along with good riding skills, help you safely enjoy the capabilities and the reliability of this moped.

Disregarding the aforementioned, however, may render the warranty invalid.



This symbol is located in various locations on the

moped to inform you that exposure to high voltage can cause shock, burns and even death.

The high voltage components on the moped should be serviced only by technicians receiving special training.

High voltage cable or wiring has an orange covering. Do not probe, tamper with, cut, or modify high voltage cable or wiring.

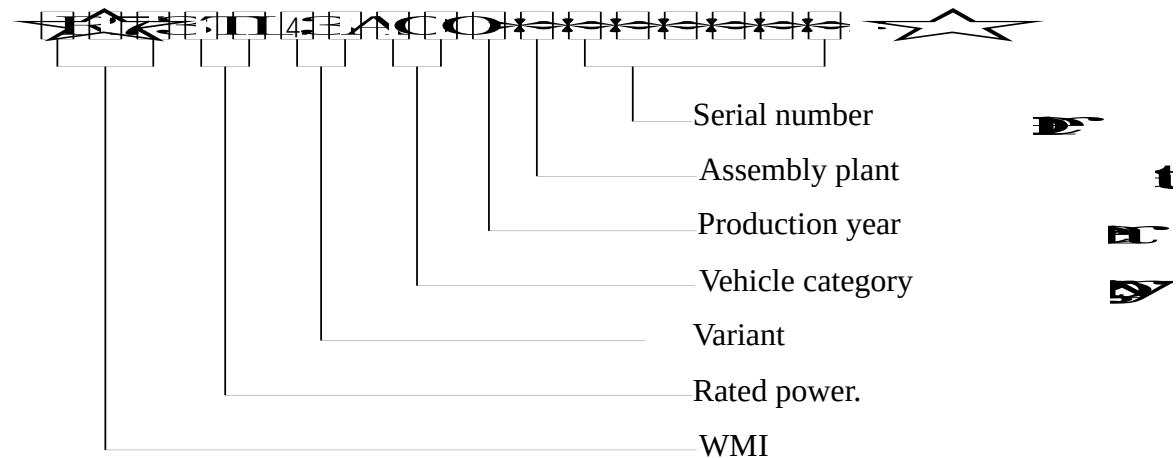
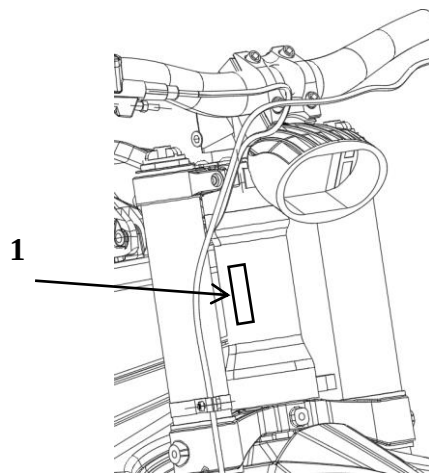
III. Identification Numbers

(I) Vehicle Identification Number

Caution: For convenient maintenance, repair and service, each of our vehicle has a unique Vehicle Identification Number and motor number, so the dealer can provide you with better services.

The Vehicle Identification Number (VIN) is a 17-digit number located on the right side (1) of the vertical tube of the frame. Do not alter or remove this number as it is the legal identifier for your moped.

VIN Breakdown will help you understand the significance of each digit or character.



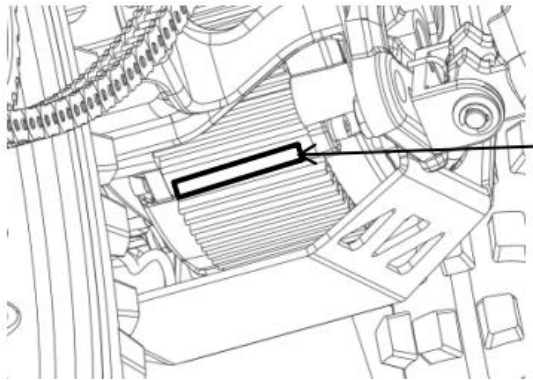
III. Identification Numbers

(II) Motor Identification Number

The Motor Identification Number is stamped on the motor shell (2).

☆159ZW6030413NA☆; internal management code in another line: vehicle model (6 digits) + manufacturing year, month and day (2 digits respectively) + manufacturer identification number (1 digit) + serial number (4 digits):

For example, ☆TL4000-22122030001☆



IV. General Information

(I) Major Technical Parameters

The Technical Parameter List will help you get to know your moped in depth.

PARAMETER ITEM	PARAMETER VALUE
The vehicle size	1880×770×1088(mm)
The wheelbase	1250mm
The vehicle weight/including battery weight	52kg/66kg
Rated load	75kg
Minimum ground clearance	300mm
High	840mm
Front dip	26°
Maximum climb slope	≥45°
The maximum speed	85km/h
Motor rated power	4000W
Maximum output power of motor	8000W
Maximum torque of drive wheel	375N.m
The battery type specification	60V45A.h
The battery life of a single charge	≥120Km (ECO mode、 speed 25km/h)
Charging time	2-4h (depending on the charger)
Charger input voltage	AC110/220V-50/60Hz
Dynamic mode	Economy/sports mode
The battery over-current protection value	135A
Rim Specification	(Top)1.4×19; (bottom)1.6×19



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IV. General Information

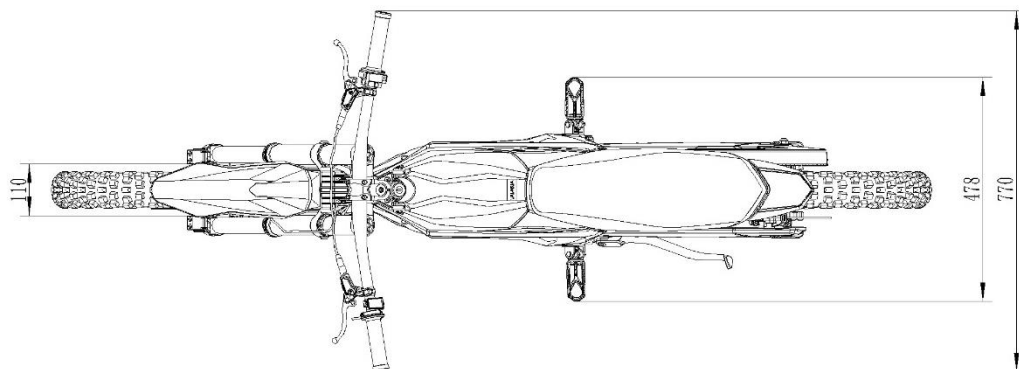
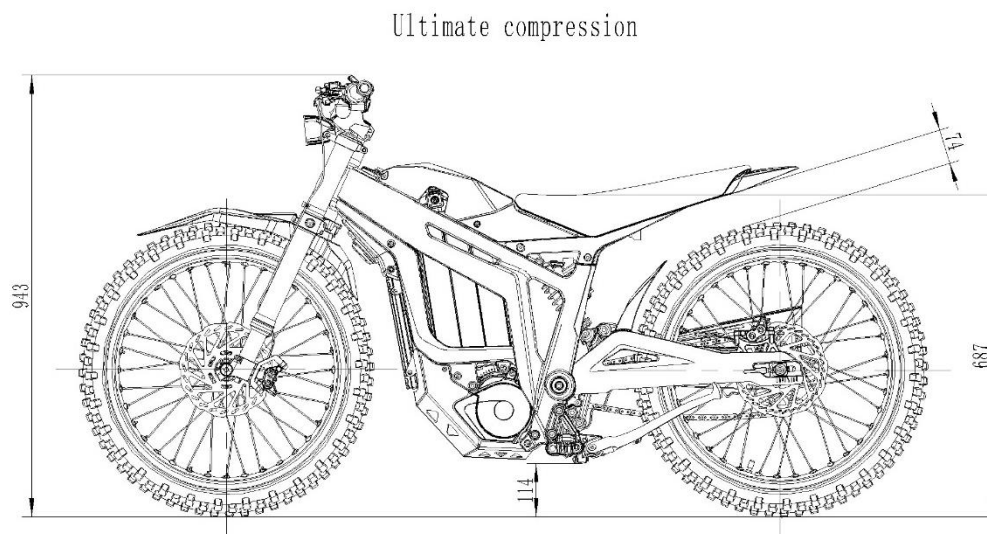
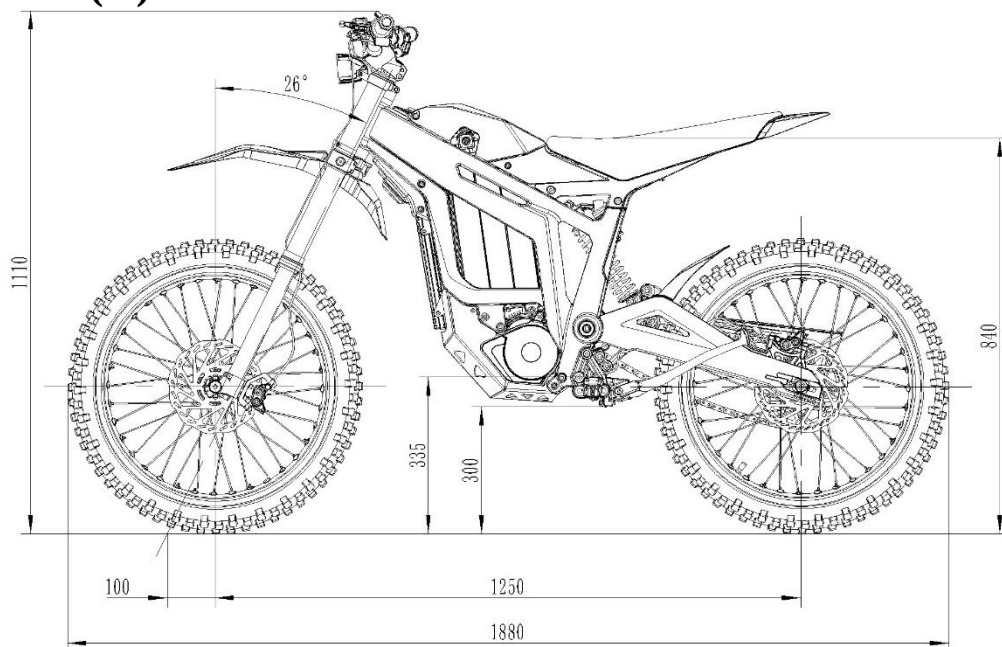
Tire specification	(Top)70/100-19; (bottom)80/100-19
Front suspension system	Stroke 200mm, adjustable
Rear suspension system	Stroke 85mm, adjustable
Braking mode	Hydraulic Front and rear disc
The primary transmission system	Gear variable box drive
The secondary transmission system	420-106
System of lamp	LED
The instrument type	OLED

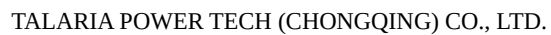


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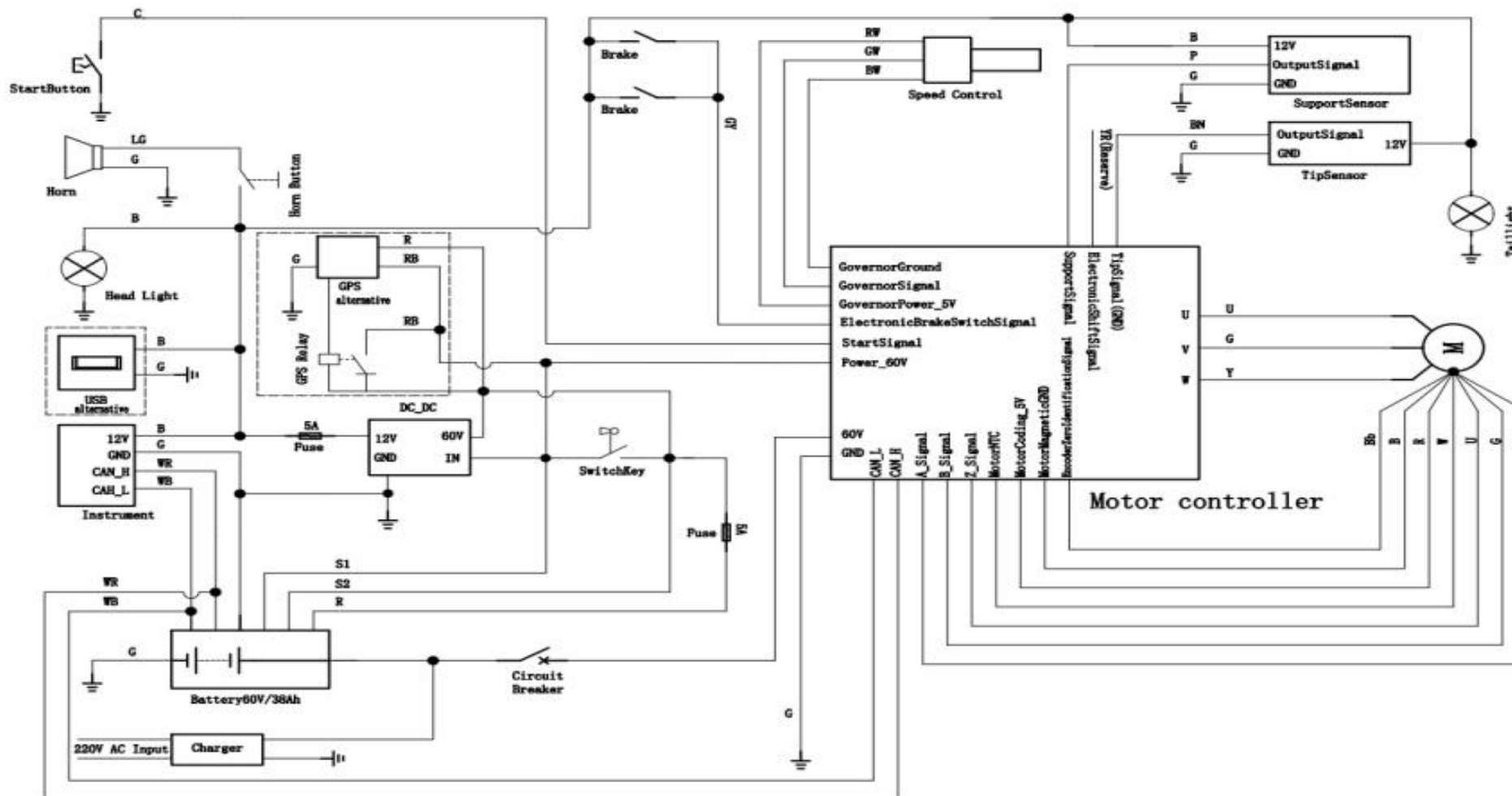
IV. General Information

(II) Vehicle Outline Parameter



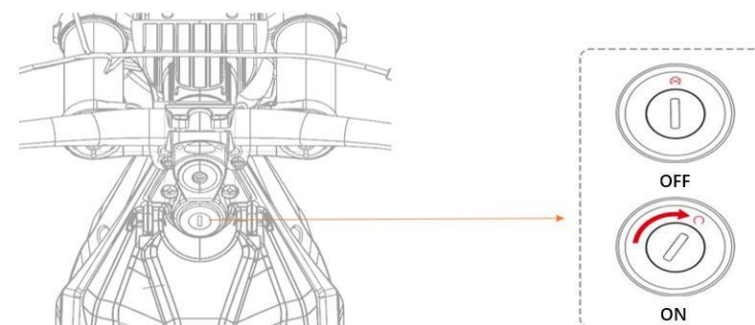
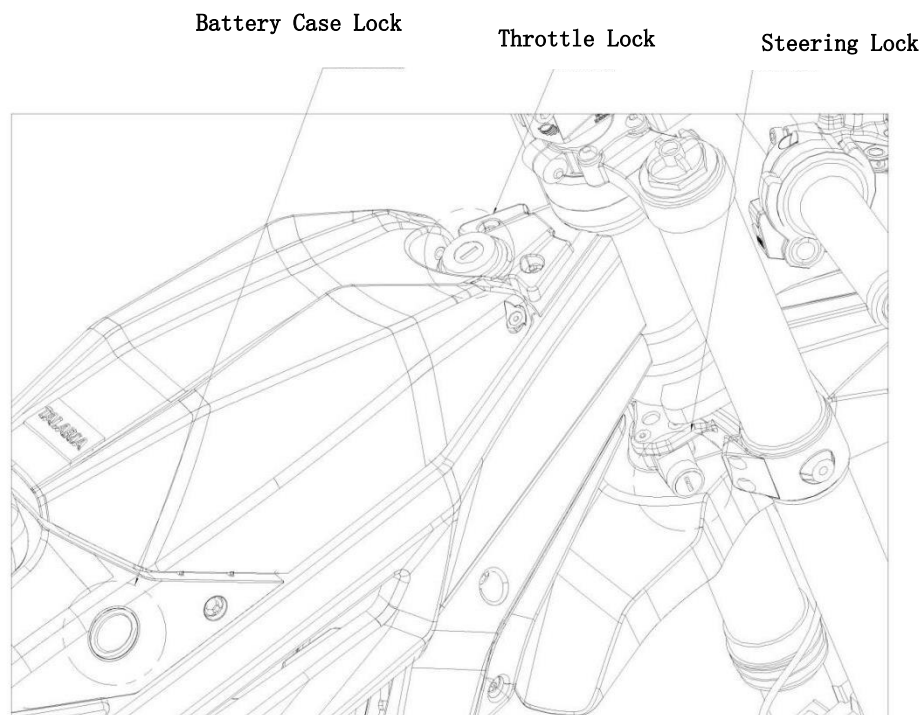


(III) Electrical Diagram



V. Safety Information

(I) Position Diagram of Anti-Theft Alarm



- 1. Throttle Lock:** Turn the key clockwise, and the whole vehicle is powered on; turn it anticlockwise, and the whole vehicle is powered off, and then remove the key.
- 2. Steering Lock:** Turn the handlebar to the leftmost position, insert the key and turn it anticlockwise to lock the steering, and then remove the key; insert the key and turn it clockwise to unlock the steering, and then remove the key.
- 3. Battery Case Lock:** Insert the key and turn it anticlockwise, and then open the Battery Case Lock.



V. Safety Information

(II) General Safety Precautions

Please follow the traffic rules and maintain a safe running speed. (The maximum speed is 45km/h)

Before operating the vehicle, please read this manual and practice in an open and safe place, so you can master the riding skills and the structure of this vehicle. This is the basis of safe riding.

CAUTION!

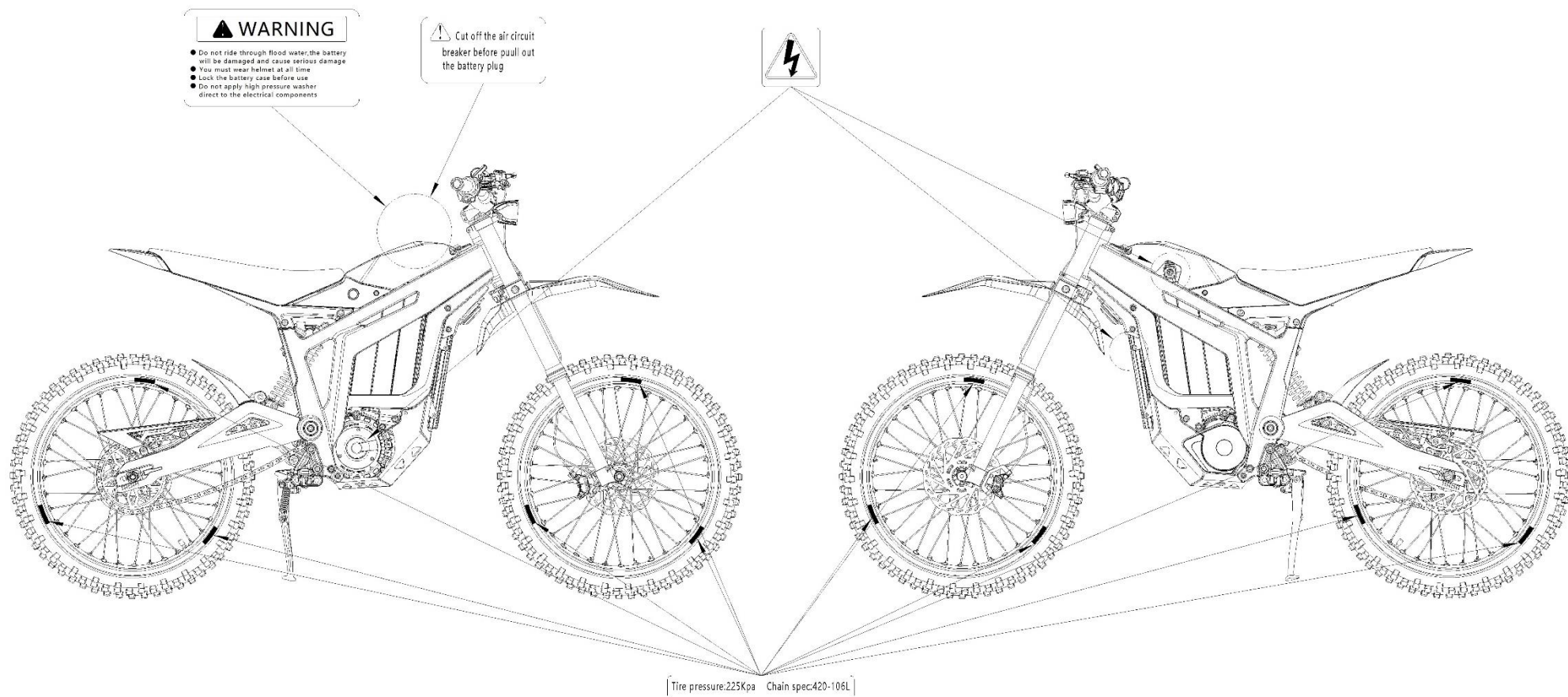
Persons not skilled in or unable to ride should not use this motorcycle. It is extremely dangerous to ride with a single hand or no hand on the handlebar, or after drinking alcohol. Wet roads in rainy or snowy days are also very dangerous. Do not ride at high speed. Be careful when turning. Use the brake in advance at any abnormal circumstances to prevent any accidents. Wear qualified helmet and buckle the fasteners.

Wear loose clothes in bright color with no puff sleeves to make sure you can move freely. Do not wear slippers or high heels.

Avoid heavy load. The control feeling is different to ride with and without load. Too heavy load will severely influence the operating and may put you in danger. Only 1 passenger is allowed on this motorcycle. Additional ones may cause safety risks and component damage.

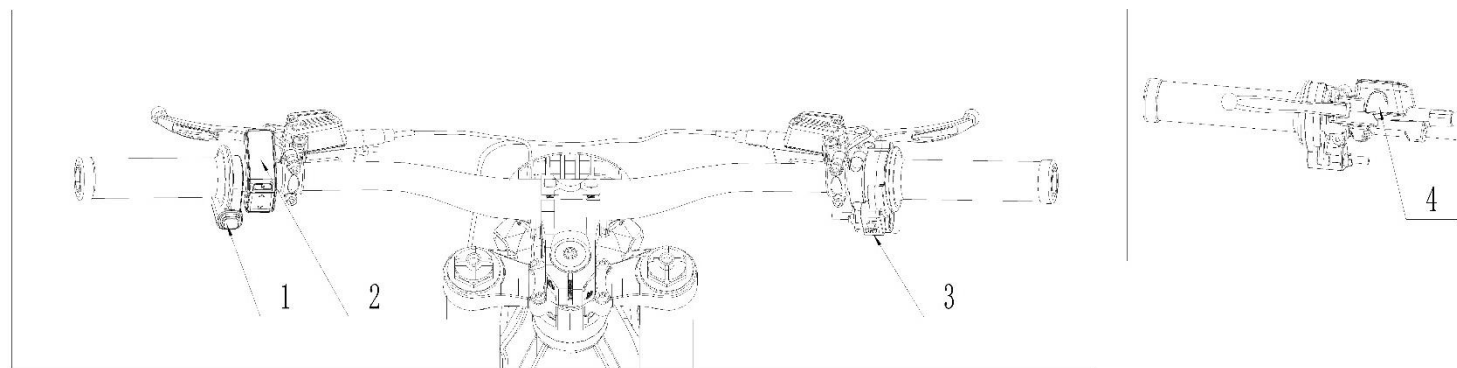
V. Safety Information

(III) Position of Warning Signs



VI. Controls and Components

(I) Handlebar Controls



1-1 Horn button

1-2 Instruments (see the next page for instructions)

1-3 Starting button, the assembly of speed adjusting handlebar. Trigger the button before normal starting of the vehicle, and it is allowed to run when the instrument shows READY.

1-4 Oil level sight glass

Special note:

- a. At the "ECO" mode, the vehicle is set at the running mode of limited power and maximum speed, which is suitable for beginners and the need of longer battery life.
- b. At the "SPORT" mode, the vehicle is set to full-power output, which is suitable for entertainment and off-road riding.
- c. To avoid overcharge and protect the battery, energy recovery intervenes only when battery SOC is below 90%.

VI. Controls and Components

(II) Diagram of Dash



2-1 Setting button (disabled in running)

VI. Controls and Components

2-2 Vehicle state indicator (including WAIT/READY/ECO/SPORT/ERROR). WAIT indicates that the vehicle is not in the runnable state. In such case, check whether the kickstand is retracted, the brake is pressed and the START button is triggered.

2-3 Current speed

2-4 Battery indicator

2-5 Mileage subtotal

2-6 Grade of energy recovery (grade 1, 2, 3, or 4)

2-7 M button (when the vehicle is powered on and not in motion, long press the 2-1 setting button to enter the instrument setting interface; at this time the M button acts as an OK button; while not in the setting interface, the button acts as an ECO-SPORT switch button)

2-8 and 2-9 Up and down/Plus and minus buttons (when the vehicle is powered on and not in motion, long press the 2-1 setting button to enter the instrument setting interface; at this time, these buttons are used for up and down selection; while not in the setting interface, they are used for grade plus or minus of energy recovery)

2-10 EXIT, to exit the setting interface.

2-11 DATA, indicating the riding data (including average energy, maximum speed, average speed, boot time, accumulated mileage)

2-12 Unit, supporting switching between metric and imperial units (by pressing the up/down arrows on the instrument)

2-13 Wheel, supporting the wheel parameter setting (17in, 19in)

VI. Controls and Components

2-14 GR, supporting gear ratio setting (1:4.7 refers to 25T rear sprocket; 1:6.857 refers to 36T rear sprocket; 1:7.5 refers to 40T rear sprocket; 1:8.4 refers to 44T rear sprocket, 1:9.1 refers to 48T rear sprocket, 1:9.5 refers to 50T rear sprocket; 1:11 refers to 58T rear sprocket)

2-15 Battery, indicating the battery information (voltage, capacity and cycles)

2-16: Match Motor magnetic encoder angle self-learning After the vehicle is powered on (Turn key right to the Key-ON position), long press the 2-1 setting button to enter the instrument setting interface, through the up and down keys of 2-8, 2-9 and the M key, Confirm to enter the Match item of 2-16 (magnetic encoder angle self-learning), Select [exit] to exit the magnetic encoder angle self-learning; if you choose to execute [execute], the instrument will send the magnetic encoder angle to the controller through the CAN harness Self-learning request command (data frame), duration 3S, the instrument displays Matching [learning] state, after the controller responds to the request, execute the magnetic angle self-learning (sampling and calculation of the initial angle of the motor rotor), pass the CAN harness after completion Send a data frame to the instrument; if the magnetic angle is failed learning, the instrument will display [Fail]; if the learning succeeded, the instrument will display [Success], the bike needs to be POWER ON once again to drive according to the new condition of the e-motor.

Note: The self-learning of the e-motor magnetic encoder angle must be completed within 1 minute after the vehicle is powered on.

VI. Controls and Components

(III) Top View

3-1 Front Brake Lever

3-2 Right Handlebar Rubber (accelerating handlebar)

3-3 Handlebar Tube

3-3 Rear Brake Lever

3-4 Throttle Lock

3-5 Battery Case Cover

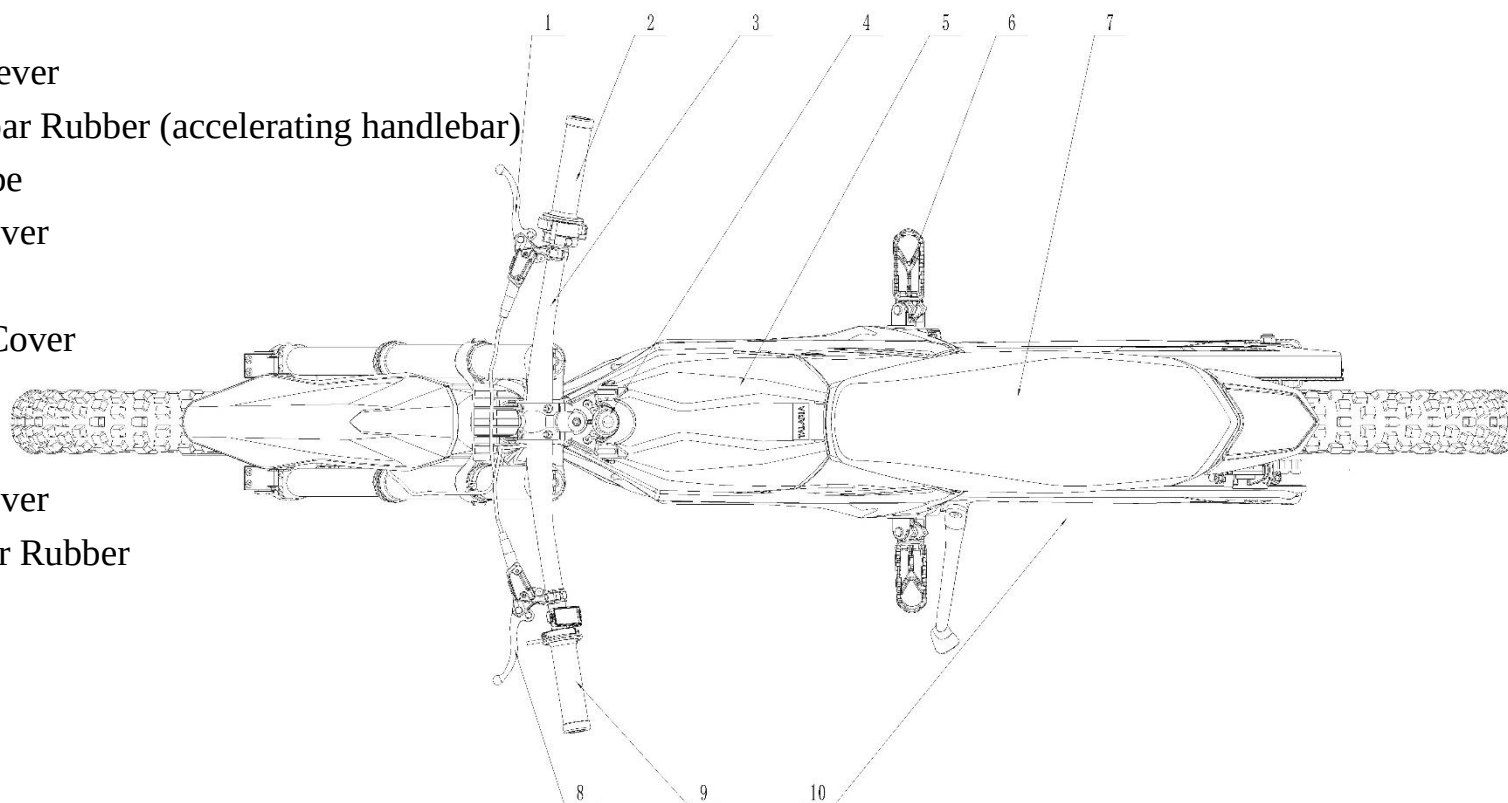
3-6 Peg

3-7 Seat Cushion

3-8 Rear Brake Lever

3-9 Left Handlebar Rubber

3-10 Kickstand





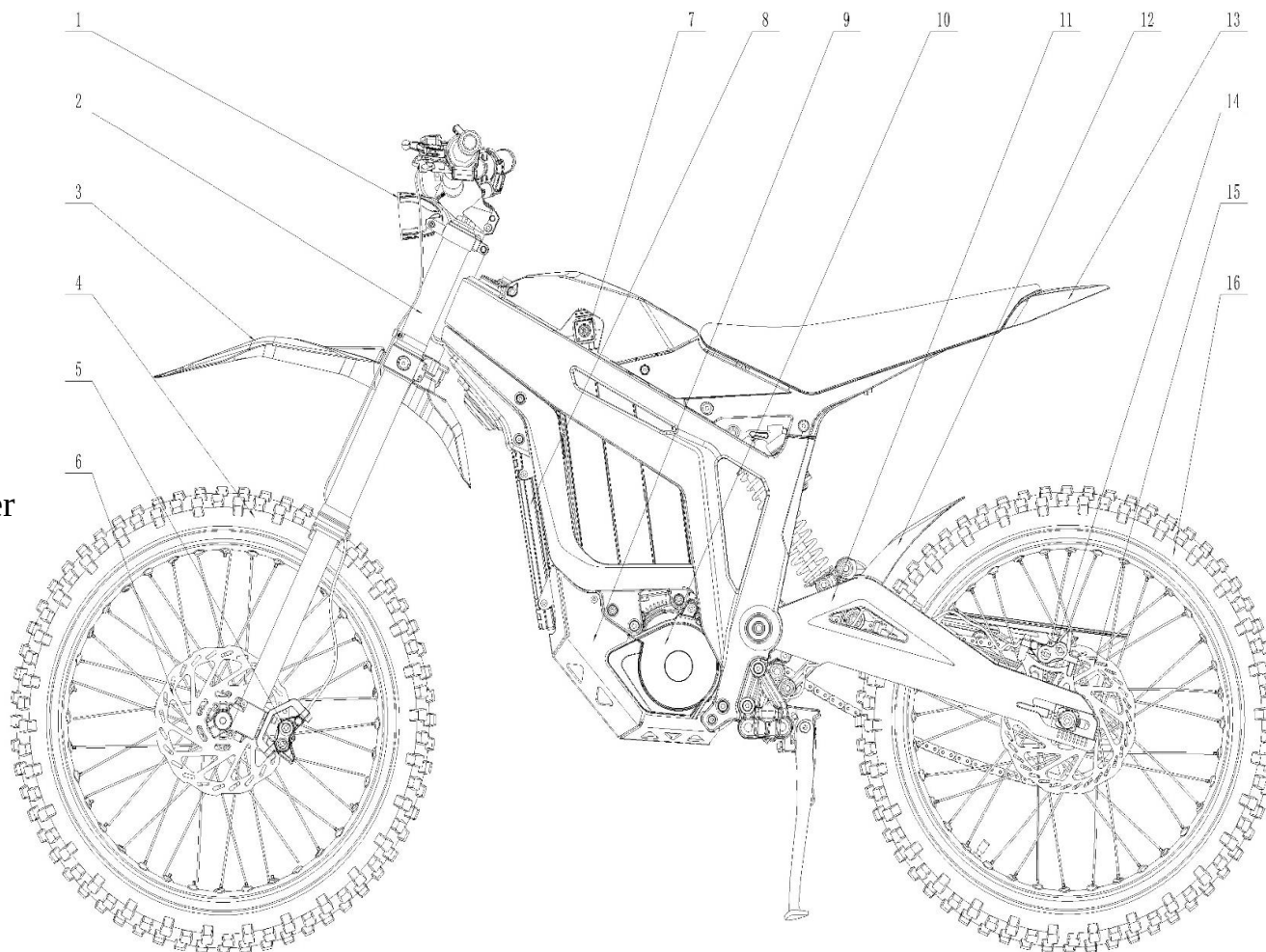
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VI. Controls and Components

VI. Controls and Components

(IV) Left Side View

- 4-1 Headlight
- 4-2 Front Shock Absorber
- 4-3 Front Fender
- 4-4 Front Wheel
- 4-5 Front Disc Brake Disk
- 4-6 Front Disc Brake Pump
- 4-7 Battery Charging Port
- 4-8 Controller
- 4-9 Lower Fender of Motor
- 4-10 Gearbox Decorating Cover
- 4-11 Chain Stay
- 4-12 Rear Fender
- 4-13 Tail Cover
- 4-14 Rear Disc Brake Pump
- 4-15 Rear Disc Brake Disk
- 4-16 Chain Stay



VI. Controls and Components

(V) Right Side View

5-1 Rear Chain Disk

5-2 Chain Case

5-3 Chain

5-4 Rear Shock Absorber

5-5 Taillight

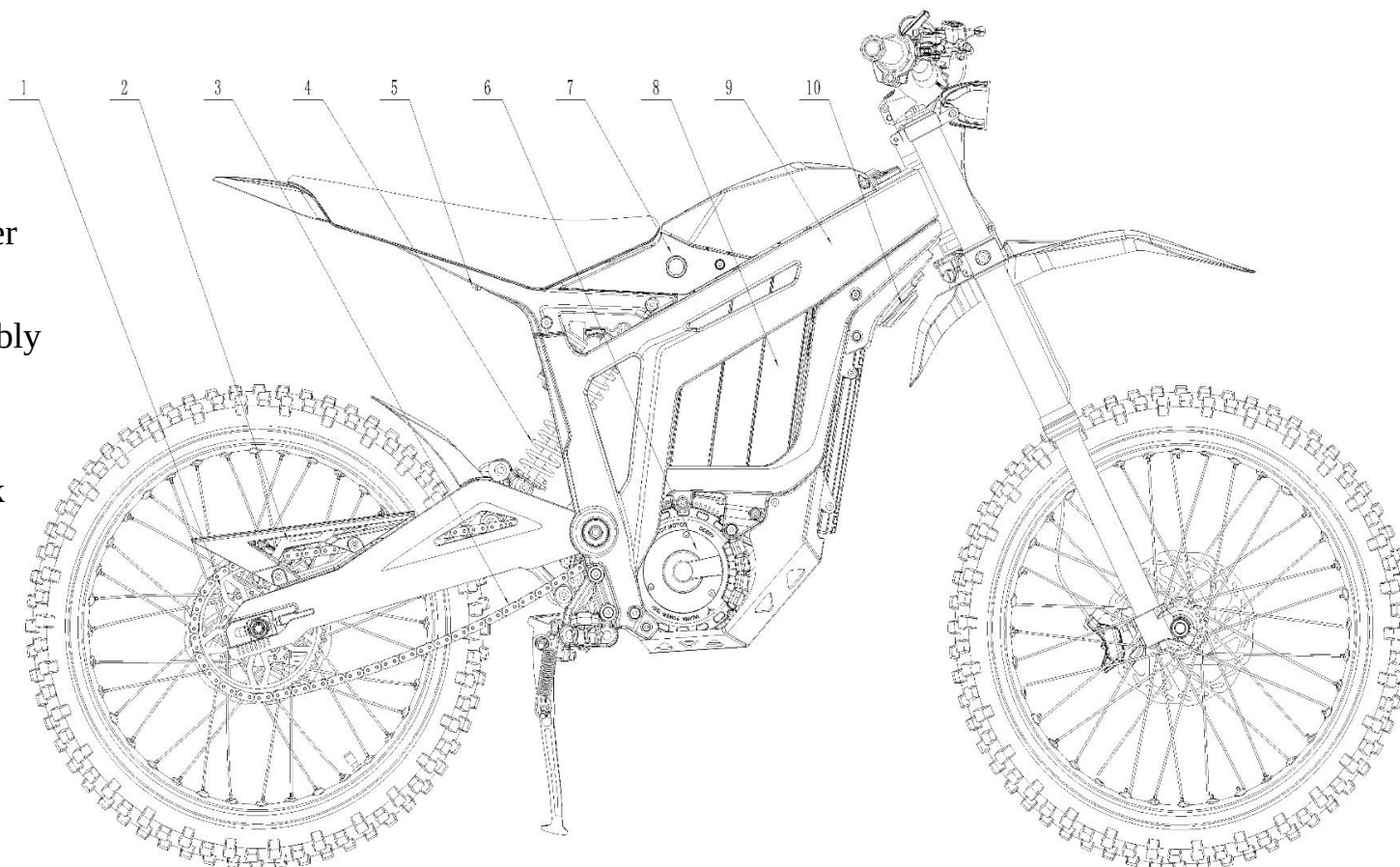
5-6 Drive Motor Assembly
(Including gear box)

5-7 Battery Case Lock

5-8 Lithium Power Pack

5-9 Frame

5-10 WARNING Horn



VII. Starting and Operating

(I) Pre-ride Inspection

Before operating your TL4000 Electric Moped, check the following to make sure the motorcycle is secure and intact:

- **Power pack:** Make sure that the remaining power indicated on the Dash is enough for you to ride to the destination and come back for charging.
- **Brake:** Squeeze the brake lever and press the brake pedal individually while pushing the motorcycle to see if it rolls. You should be able to lock-up the wheels completely by applying the brakes.
- **Accelerating handlebar:** With the key switch in the OFF position, apply the accelerating handlebar and release to verify that the handlebar is smooth and returns correctly.
- **Tire**

1. Normal air pressure.

Abnormal air pressure, damage and abnormal wear of tires will cause safety risks.

Insufficient air pressure may cause abnormal wear, malfunctioning steering, low running speed and short endurance mileage.

Excessive air pressure may cause abnormal wear, compromised comfort and even tire burst, leading to potential safety hazards. The tire depression of the surface in contact with the ground is used to determine whether the air pressure is proper. Generally, normal air pressure of front tires is 225KPa and that of rear tires is 225KPa. (Insufficient air pressure will influence the running speed and endurance mileage)

2. Any fracturing or abnormal wear on the tires.

3. Any nails, stones or glasses pricking into the tires.

4. Depth of tire threads. The tire should be replaced if 2/3 of the bumps on it are worn off.

VII. Starting and Operating

5. Any loosened spokes.

- **Electric system:** Inspect the headlight, steering light and brake/taillight for any dysfunction.

(II) Riding Operation

- **Starting**

1. Check whether the air switch in the front of the battery case is changed to the right to the ON position, and then close the battery case, insert the key to throttle lock into the throttle lock, rotate to the right to the ON position (operation), and then check the switches, instruments and horns for normal function, pinch the front and rear brake lever, and check whether the braking function is normal.

2. Motor start: After finishing the above step, retract the kickstand (the instrument indicates WAIT state at this time), sit on the motorcycle steadily, and press the START button on the speed adjusting handlebar. The instrument indicates READY state, meaning that the vehicle is in the runnable state (READY and the current driving gear ECO or SPORT are displayed alternatively). Twist the speed adjusting handlebar slowly and stably to start the motorcycle. The vehicle is provided with the function of power loss protection at the kickstand. When the kickstand is supporting the vehicle, the motor cannot be started.

- **Speed adjusting**

The speed adjusting handlebar is usually disabled. Twist it inward to accelerate and outward to decelerate; release it to automatically reset, and then the motor stops operation. Operate the speed adjusting handlebar slowly and gently. Do not handle with force, because it may cause danger or damage components.

VII. Starting and Operating

- **Usage of brake**

1. Reset the speed regulating handlebar quickly, hold the left and right brake levers, and apply appropriate force.
2. Control the grip force towards the brake levers according to the practical circumstances, and the most reasonable way is to gradually increase the force and avoid sudden full brake, so as to prevent danger arising from wheel lock and skid.
3. Always make judgement in advance. Avoid hard brake, sudden turning or other operations that may cause sideslip or tumbling. It is extremely dangerous, especially in rainy days.

- **Precautions in riding**

1. In the premise of ensuring safety, drive smoothly as far as possible, and avoid sudden acceleration or deceleration, so as to save electricity, protect components, and improve the endurance mileage and vehicle service life.
2. Sideslip may easily happen on wet roads in rainy or snowy days. Please stay focus and be responsive. Brake function may be slightly compromised after the vehicle is washed or operated in water. In this case, ride slowly and be careful. Brake gently for several times until the brake goes back to normal state.
3. Please avoid riding in heavy rain or water. If the water level is higher than the wheel center, it may adversely affect the motor and brake. The vehicle can be used in rainy and snowy days provided that long-time deep wading can be avoided. Once the water depth exceeds the height of controller and other electrical components, the component damage may be caused.
4. The kickstand is used for supporting the vehicle only. Do not sit on the vehicle with the kickstand stretched out, or it may be damaged.
5. Do not park the vehicle at a place where the ground is tilted or soft, or it may fall over.
6. The electric moped contains a lot of electrical components. Please avoid long-time exposure to rain or using high

VII. Starting and Operating

pressure jetting guns to rinse the parts with electrical components.

● Parking

1. Pay attention to your back and slow down to approach the parking site.
2. Use the brake to park the vehicle, reset the speed adjusting handlebar, turn OFF the throttle lock and remove the key after the vehicle stops operating.
3. After parking, stretch out the kickstand to support the vehicle. Make sure you have locked the throttle, steering and battery case before leave and take the key with you.

● Adjustment of shock absorber resistance

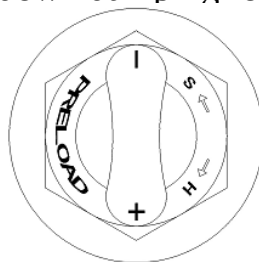
The front shock absorber resistance is adjusted as follows:

Turn to direction F to increase the rebound damping force

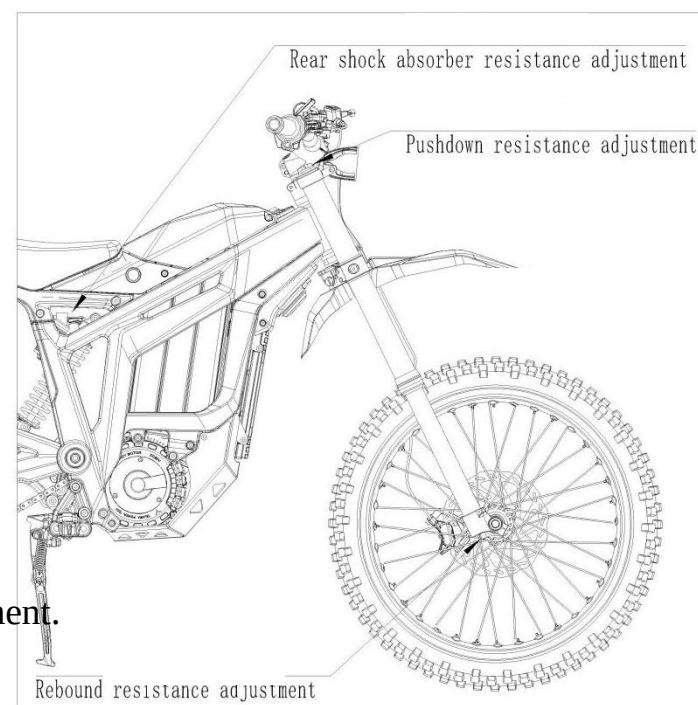
Turn to direction S to decrease the rebound damping force

Turn to direction H to increase the pushdown damping force

Turn to direction S to decrease the pushdown damping force



See the *Operating Manual* delivered together with the vehicle for the specific methods for front shock absorber repair and resistance adjustment.



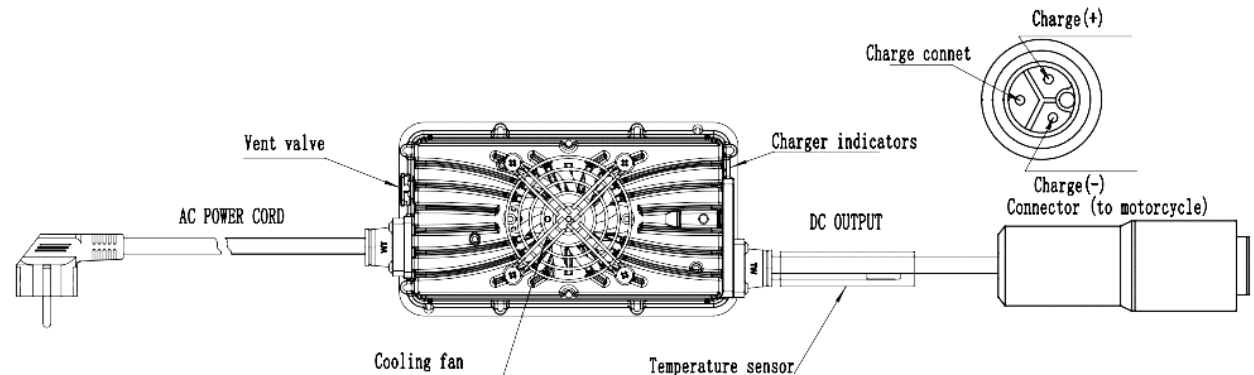
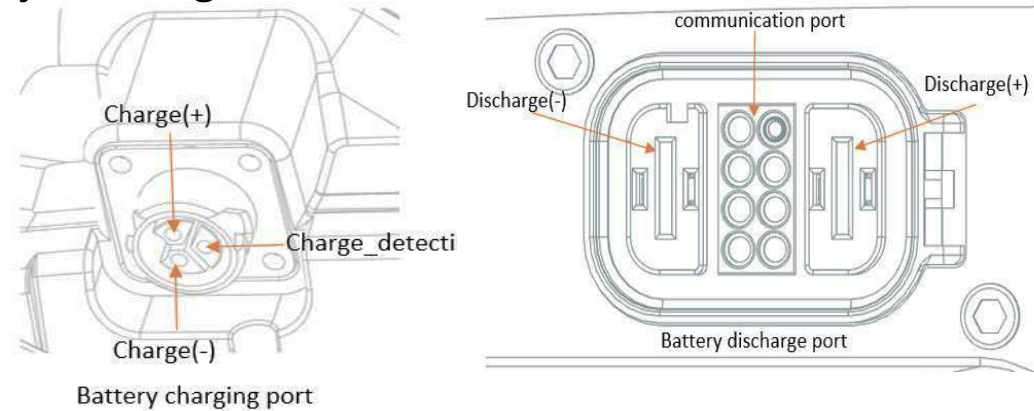
VIII. Charging and Battery Information

(I) Definition of Charging through the Battery Discharge Port

The vehicle uses high-performance high-rate lithium battery with a safe voltage of 60V. The battery can be used at the ambient temperature of -20°C to 60°C, optimally at 10°C–30°C. Too low or too high temperature will adversely affect the performance and life of the battery, so please do not use it at a temperature beyond this range.

WARNING:

1. Do not charge the battery under 0°C, or it may be damaged. Please wait until the battery temperature rises.
2. Too low temperature will affect the battery performance, leading to a slight drop of endurance mileage. It will go back to normal when the temperature rises.
3. The battery is provided with well-improved protection function, saving itself from the damage arising from overcharge. However, deep discharge during use will affect the battery performance. Please charge the battery promptly in the case of low power.



VIII. Charging and Battery Information

4. Please charge the battery frequently. The lithium battery used in this vehicle operates with no memory effect, so it can be charged at any time, which is also favorable for the battery to stay healthy.

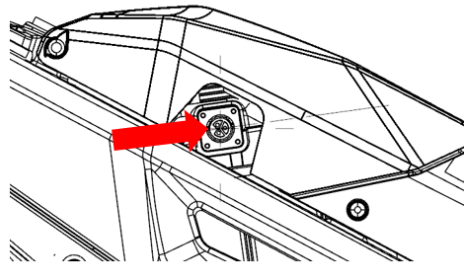
5. In case of long-term storage, charge the battery to about 50%, turn off the air switch on the vehicle body and disconnect the discharge plug. Charge the battery once every 3 months to prevent it from losing activity and avoid compromised performance.

CAUTION:

Sideslip may happen in the event that only front brake or rear brake is used. It is safer to use combined braking.

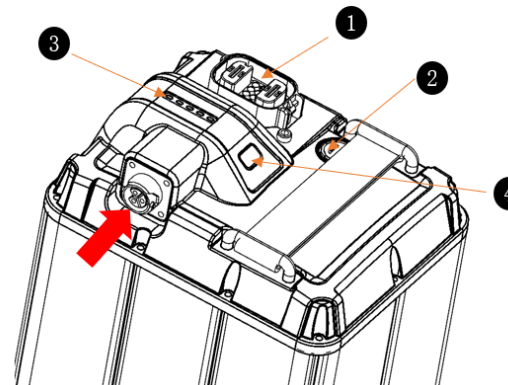
When the motor temperature and controller temperature is high, or the battery power is too low, the vehicle will automatically operate with low power to ensure the operation safety of the whole vehicle. This is not a fault.

(II) Battery Charging and Charger Usage



Whole vehicle charging mode.

2-1 Battery discharge port



Separate charging mode

2-2 Breather valve

VIII. Charging and Battery Information

2-3 Battery indicator

2-4 Enable Button

1. The car uses a special lithium battery charger. Do not use other chargers, or it may cause battery damage or danger.
2. Check whether the input voltage of the charger is consistent with the grid voltage AC110V/AC220V.
3. The charger output port can be directly inserted into the battery charging outlet on the left side of the vehicle body for charging, and the removed battery can also be charged.
4. When charging, the charger and battery charging port must be connected in place before connecting the charger and mains outlet; after charging, disconnect the charger and mains outlet first, and then disconnect the charger and battery after the indicator light goes out. If you plug in the mains power 220V and then the battery end, please be sure to complete the operation within 3S; otherwise, the charger will enter the protection state and automatically shut down because the battery cannot be detected!
5. When the red indicator light of the charger flashes, it indicates that charging is ongoing. When the green indicator light is on for a long time, it indicates that the battery is fully charged. The time needed to fully charge the battery depends on the remaining power of the battery and the user's choice of charger, which is about 2-4 hours.
6. The charger will turn off automatically after the battery is fully charged. But you should always avoid connecting the charger to the power grid for a long time, which shall not exceed 6 hours.
7. It is strictly forbidden for users to disassemble the battery by themselves, which may cause damage and danger.
8. When the battery enters deep sleep, it can be awakened with the activating button or by connecting the charger.

Charging precautions

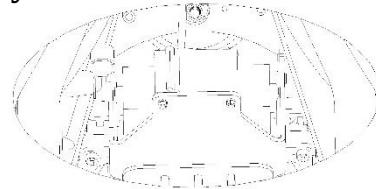
1. When charging, please put it in a safe place out of the reach of children.

VIII. Charging and Battery Information

2. The internal temperature of the battery that has just been discharged is high. Do not charge it immediately. Ventilation and heat dissipation for 30 minutes is recommended.
3. Avoid using the battery immediately after it is fully charged. Let it stand for 10 minutes before using.
4. It is strictly forbidden to cover the charger with any object when using it. This charger is for indoor use. Please use it in a dry and well-ventilated environment.
5. In case you find peculiar smell or high temperature during charging, or the battery is not fully charged after charging for a long time, please stop charging immediately and send it to the maintenance facility.

VIII. Charging and Battery Information

(III) Remove the Battery



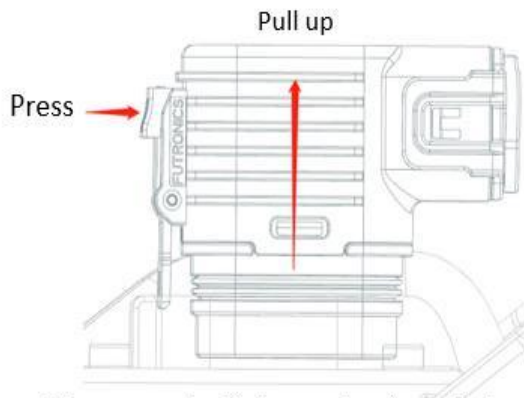
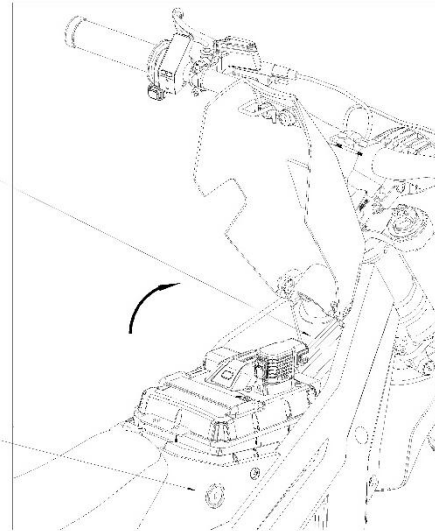
Circuit breaker position



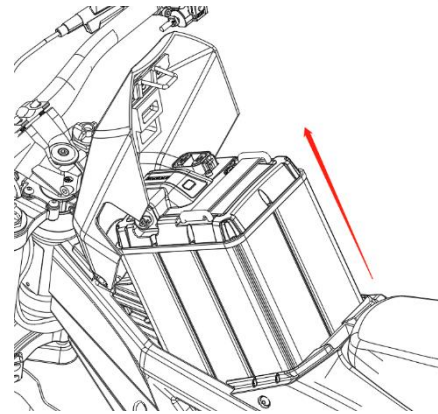
Off state



Open the battery cover



Disconnect the discharge plug from the battery



1. Turn off the throttle lock, use the vehicle key to open the battery case lock on the right side of the vehicle body, then open the battery case cover forward, and you can see the battery.

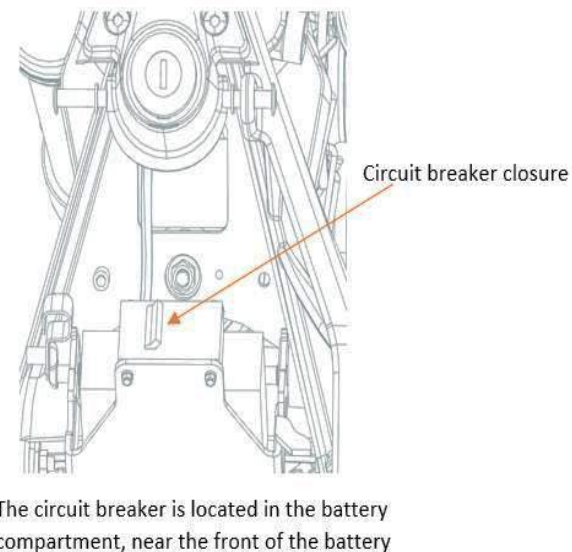
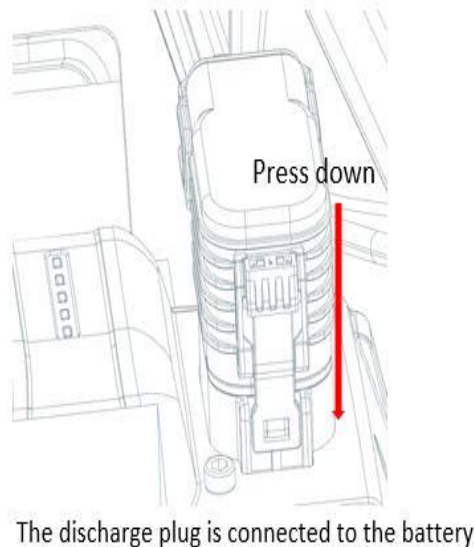
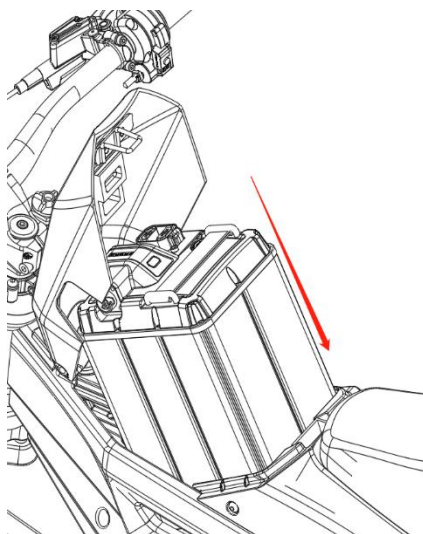
2. Turn off the air switch in front of the battery to the left, remove the discharge plug on the battery, then pull up to take out the battery and close the battery case cover.

CAUTION:

The air switch must be turned off before plugging in and out the battery plug.

VIII. Charging and Battery Information

(IV) Install the Battery



1. Use the key to open the battery case cover.
2. Put in the battery from the top, pay attention to the front and rear direction of the battery (the charging outlet faces the left of the vehicle body), and plug in the discharge plug. Then turn on the air switch to the right, close and lock the battery case cover, and remove the key.

CAUTION:

The discharge plug must be plugged in place; otherwise, the vehicle body cannot correctly identify the battery, which will result in failure to start.

IX. Troubleshooting

(I) Precautions for Electric Motorcycle

Your TL4000 Electric Moped contains electrical components. The voltage used in these components is dangerous and can cause personal injury, severe burns, electric shock or even fatal injury unless appropriate precautions are taken.

Always follow the instructions on the label of each component, which is very important for your safety.

Do not touch, attempt to remove or replace any high-voltage components, wiring (identified by orange outer protection) or connectors. In the event of an accident with the electric moped, do not touch any high-voltage wire connector or assembly connected to the wire. In case of fire of the electric moped, use a class-D power-type fire extinguisher to put out the visible flame. After the flame is extinguished, soak it with a water-soluble fire extinguisher.

CAUTION! The operating voltage of the electric moped is high. During and after start-up and when the electric moped is turned off, the system components may be too hot to touch by hand. Pay attention to high voltage and high temperature. Follow the label instructions everywhere on the electric moped.

CAUTION! The high-voltage system of the electric moped is maintenance-free. Disassembly, removal or replacement of high-voltage components, cables or connectors may cause severe burns or electric shock, which may lead to severe injury or death. High-voltage cables are made in orange for easy identification (see response information in the latter part of this manual).

Note: All electric mopeds have been carefully inspected before delivery. But there will inevitably be some technical problems even after inspection. The following information serves as a guide to help you identify the problem and repair it by yourself if possible. If you cannot solve the problem of TL4000 Electric Moped, please send it to an authorized dealer at your convenience.

IX. Troubleshooting

(II) General Troubleshooting

SYMPTOM	POTENTIAL CAUSE	POTENTIAL SOLUTION
The electric moped cannot be started.	The battery pack is dead, the protection switch is turned on, or the three-phase connection of the motor is wrong or loose, etc.	Charge the power pack. Turn on the protection switch and operate according to the startup process. Check the U, V and W three-phase lines.
The charger does not work.	No AC power supply.	Check the AC outlet for power and check the fuse/voltage of AC power supply.
Handlebars wobbly (shimmy)	Incorrect tire pressure	Inflate to correct tire pressure.
	Deformed front tire	Replace the front tire with the same tire supplied from the factory.
	Bald tire (excess wear)	Replace the tire with the same tire supplied from the factory.

IX. Troubleshooting

(III) Dash Fault Code and Description and Troubleshooting

S/N	FAULT CODE (OFF-ROAD VERSION)	FAULT CODE (ON-ROAD VERSION)	FAULT DESCRIPTION	CAUSE ANALYSIS	SOLUTION	SUGGESTION
1	E01	00001	Protection IC fault	Internal communication of the front-end chip is interrupted.	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
2	E02	00002	Cell disconnection	The cell is not firmly welded, resulting in dry joint or fracture of connecting piece and poor contact of sampling line.	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
3	E03	00003	Cell unbalanced	The cell voltage difference is greater than 500mV.	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
4	E04	00004	Metering fault	No such fault yet.	/	
5	E05	00005	Storage fault	Recording device fault	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
6	E06	00006	Clock fault	Clock device fault	Restarting	If the fault continues, it is recommended to send it for after-sales

IX. Troubleshooting

						maintenance.
7	E07	00007	Discharge MOS damage	Discharge circuit damage	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
8	E08	00008	Charge MOS damage	Charge circuit damage	Restarting	If the fault continues, it is recommended to send it for after-sales maintenance.
9	E09	00009	Overcharge fault	1. The charging voltage is higher than 4250mV, the overcharge protection threshold for single cell. 2. BMS false alarm.	Restarting	It does not affect riding at this time, but charging is not available; if the fault continues, it is recommended to send it for after-sales maintenance.
10	E10	0000A	Primary over discharge	Low voltage protection of battery discharge	Users are advised to charge in time.	
11	E11	0000B	Secondary over discharge			
12	E12	0000C	Primary overcurrent	The battery discharge current is greater than the primary overcurrent protection threshold.	The fault automatically disappears after 1min.	If the fault occurs repeatedly, it is recommended to send it for after-sales maintenance.
13	E13	0000D	Secondary overcurrent	The battery discharge current is greater than the secondary	Disconnect the battery load or control the load current at lower than	If the fault occurs repeatedly, it is

IX. Troubleshooting

				overcurrent protection threshold.	110A or troubleshoot the battery load circuit for any short circuit.	recommended to send it for after-sales maintenance.
14	E14	0000E	Charging overcurrent	The charging current is greater than the protection threshold.	1. Whether the charger is used incorrectly. 2. If the problem cannot be solved after replacing with a matching charger, please send it for after-sales maintenance.	
15	E15	0000F	Soft start failure	When the battery is connected with load, the external load capacitance is too large, resulting in failure to start directly.	Please power on and start the vehicle according to the instructions.	
16	E16	00010	Overtime pre-charge	1. BMS fault. 2. Charger is damaged or does not match.	If the problem cannot be solved after replacing with a matching charger, please send it for after-sales maintenance.	
17	E17	00020	MOS temperature sensor fault	MOS temperature sensor fault	Restarting	If the fault occurs repeatedly, it is recommended to send it for after-sales maintenance.
18	E18	00030	Cell temperature sensor fault	Cell temperature sensor fault	Restarting	If the fault occurs repeatedly, it is recommended to send it for after-sales maintenance.

IX. Troubleshooting

19	E19	00040	Discharge overtemperature	During use, the internal temperature of the battery pack is too high.	Ride or charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	
20	E20	00050	Charge overtemperature	Too high cell temperature	Ride or charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	Riding is available but charging inoperable at the time.
21	E21	00060	Discharge under-temperature	Too low temperature	Ride or charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	
22	E22	00070	Charge under-temperature	Too low temperature	Ride or charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	
23	E23	00080	Discharge MOS overtemperature	MOS overtemperature during battery discharge	Ride or charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	
24	E24	00090	Charge MOS overtemperature	Charge MOS overtemperature during battery charge	Charge after the temperature protection is removed. It is recommended to use the vehicle according to the instructions.	
25	E25	000A0	Overtemperature of soft start circuit	The soft start temperature is too high. At this time, the discharge MOS tube cannot be opened.	Ride after the temperature protection is removed.	
26	E26	000B0	Memory fault	Incorrect operation during	It is recommended to send it for	

IX. Troubleshooting

				production.	after-sales maintenance.	
27	E27	000C0	Discharge fuse damage	No such fault yet.	/	
28	E28	000D0	Charge fuse damage	No such fault yet.	/	
29	E29	000E0	Third overcurrent	Short circuit in the external circuit.	Troubleshoot the external circuit for any short circuit.	If the fault occurs repeatedly, it is recommended to send it for after-sales maintenance.
30	E30	000F0	Fourth overcurrent	Short circuit in the external circuit.	Troubleshoot the external circuit for any short circuit.	If the fault occurs repeatedly, it is recommended to send it for after-sales maintenance.
31	E31	00100	Configuration fault	Incorrect operation during production.	It is recommended to send it for after-sales maintenance.	
32	E33	00300	Overcurrent at the controller phase line	The current of controller phase line reaches the protection threshold.	1. Disconnect all power supplies of the whole vehicle, check whether the motor phase line terminals are loose or broken, check whether the motor outgoing phase sequence corresponds to the U/V/W on the controller, and check whether the yellow, green and blue lines of the Hall output line at the motor end corresponds to those on the main cable; 2. check whether the rear	If the fault still cannot be eliminated, it is recommended to replace the magnetic encoder assembly or send it for after-sales maintenance.

IX. Troubleshooting

					wheels are stuck because the vehicle is ridden in a narrow tunnel;	
33	E34	00400	Controller bus overcurrent	The controller bus current reaches the protection threshold.	1. Disconnect all power supplies of the whole vehicle, check whether the motor phase line terminals are loose or broken, and check whether the motor outgoing phase sequence corresponds to the U/V/W on the controller, and check whether the yellow, green and blue lines of the Hall output line at the motor end corresponds to those on the main cable; 2. Whether the rear wheels are stuck because the vehicle is ridden in a narrow tunnel;	If the fault still cannot be eliminated, it is recommended to replace the magnetic encoder assembly or send it for after-sales maintenance.
34	E35	00500	Power tube failure	Dry joint or damage to controller MOS tube	Replace the controller assembly or send it for after-sales maintenance.	
35	E36	00600	Falling fault	The vehicle falls to the ground, or the sensor is not properly connected or damaged.	Disconnect the power supply, righting the vehicle, and restart the vehicle, and the fault is eliminated;	If the fault still cannot be eliminated, it is recommended to replace the magnetic encoder assembly or send it for after-sales

IX. Troubleshooting

						maintenance.
36	E37	00700	Handlebar fault	The connection of the speed regulating handlebar is loose, or the handlebar is not fully reset before using the key or is damaged.	1. Check whether the connecting plug of the speed regulating handlebar is loose, or the harness is broken; 2. Check whether the handlebar is fully reset; 3. If the fault cannot be removed through the first two steps, it is recommended to replace the speed regulating handlebar.	
37	E38	00800	Low voltage protection	Triggered by insufficient battery power	It is recommended to charge in time.	
38	E39	00900	Overvoltage protection	The battery voltage is too high, triggering the maximum protection voltage threshold.	Make sure to use the matching original battery.	If the fault still cannot be eliminated, it is recommended to send it for after-sales maintenance.
39	E40	00A00	Hall motor fault	Poor contact of or damage to the Hall motor magnetic encoder	Check for any poor contact.	If the fault still cannot be eliminated, it is recommended to replace the motor encoder or send it for after-sales maintenance.

IX. Troubleshooting

40	E41	00B00	Motor phase line fault	Loose motor phase line or wrong wiring	Disconnect all power supplies of the whole vehicle, check whether the motor phase line terminals are loose or broken, and check whether the motor outgoing phase sequence corresponds to the U/V/W on the controller, and check whether the yellow, green and blue lines of the Hall output line at the motor end corresponds to those on the main cable.	If the fault still cannot be eliminated, it is recommended to send it for after-sales maintenance.
41	E42	00C00	Motor overtemperature	High-power operation for a long time, high motor temperature or poor contact or damage of temperature sensor	It is recommended to use it after the temperature protection is removed or check whether the motor encoder plug is loose.	
42	E43	00D00	Motor temperature sensor fault	High-power operation for a long time, high motor temperature or poor contact or damage of temperature sensor	It is recommended to use it after the temperature protection is removed or check whether the motor encoder plug is loose.	
43	E44	00E00	Controller overtemperature	High-power operation for a long time and high controller temperature	It is recommended to use it after the temperature protection is removed.	
44	E45	00F00	Controller temperature sensor fault	High-power operation for a long time, high controller temperature or poor contact or damage of temperature sensor	It is recommended to use it after the temperature protection is removed.	
45	E46	01000	Current sensor fault	Failure of current sensor	It is recommended to send it for after-sales maintenance.	

IX. Troubleshooting

46	E47	02000	Motor phase deficiency	1. Air switch is not turned off; 2. Loose motor phase line (U/V/W) or wrong wiring.	1. Turn on the air switch when the battery case cover is closed; 2. Disconnect all power supplies of the whole vehicle, check whether the motor phase line terminals are loose or broken, and check whether the motor outgoing phase sequence corresponds to the U/V/W on the controller, and check whether the yellow, green and blue lines of the Hall output line at the motor end corresponds to those on the main cable.	If the fault still cannot be eliminated, it is recommended to send it for after-sales maintenance.
47	E48	03000	Motor stalling fault	The rear wheel is stuck in a pit and cannot rotate during riding, or the motor/gearbox/brake and chain are stuck, or the load is too large, reaching the maximum current protection threshold.	The key is OFF: 1. Retract the kickstand, lift the rear wheel off the ground, and rotate the rear wheel by hand. The rear wheel should rotate smoothly. Eliminate the motor, gearbox, chain and brake stalling; 2. Ride on suitable roads;	If the fault still cannot be eliminated, it is recommended to send it for after-sales maintenance.
48	E49	04000	Communication fault	Loose CAN communication line or hardware failure	Disconnect the power supply: Check whether the CAN communication interface of the whole vehicle falls off or breaks; (CAN network harness exists in the instrument plug, controller plug and battery communication plug) repair the loose or damaged parts and restart.	If the fault still cannot be eliminated, it is recommended to send it for after-sales maintenance.

X. After-sale Service

(I) Warranty Parts

Dear user:

For the sake of your rights and interests, please keep this manual properly. Please inspect and commission the vehicle on the spot of purchasing and ask the salesperson for correct operation methods and maintenance issues, as well as valid documents, warranty card, repair addresses, contact numbers, and other information.

If you find any quality-related problems while using this vehicle, you are entitled to the "Three Guarantees" services at an authorized maintenance facility by providing the purchase invoice and warranty card.

WARRANTY PERIOD	PART DESCRIPTION	CAUSE	REMARKS
24 months	Lithium battery	Insufficient capacity, quality-related fault	Except for man-induced factors.
	Controller	Irreparable fault	Ensure original package of the product.
	Charger	Irreparable fault	
18 months	Motor assembly	Wire group damage	Except for man-induced factors.
		Normal operation is not available.	
12 months	Whole vehicle	Including frame, chain stay and other components	Except for man-induced factors. (Brake pad is not included in the brake part)
	Brake	Oil leakage, brake not working	
	Front and rear shock	Oil leakage, no resistance	

X. After-sale Service

	absorbers		
	Instrument	Irreparable fault	
	Combined switch	Irreparable fault	
	Central control for speed adjustment	Irreparable fault	

If the above parts fail during the warranty period and cannot be used normally after maintenance, they will be replaced free of charge.

Wear parts include:

Tire, brake block, direction bearing combination, fender, accelerator, handlebar rubber, cushion, lamp, rearview mirror and reflect panel. They can be replaced or repaired with fees paid, except for quality-related problems.

(II) Warranty Principle

For services beyond the scope of "Three Guarantees" and after expiration of the "Three Guarantees" period, we will be responsible for warranty, and charge for repair and replacement parts as the case may be.

(III) User's Note

1. You can have the warranty services at the sales office or an authorized service center by providing the warranty card on the manual.

2. We undertake to charge only an appropriate amount of maintenance fees for any main components such as motor, controller, charger and lithium battery in case they fail after expiration of the "Three Guarantee" period.

The following are not included in the "Three Guarantees":

1. Failure caused by the user's failure to use, maintain and adjust the product in accordance with the provisions of the

X. After-sale Service

manual.

2. Failure caused by user's dismantling, repairing and refitting by himself, as well as non-compliance with instructions.
3. Failure caused by improper storage by the user or accidents.
4. There is no warranty card or invoice, or the invoice, card and product do not correlate to each other.
5. Consumables of wear parts (brake oil tube, bearing, etc.).
6. Parts whose warranty period has expired.
7. Failure caused by collision, impact, overload and chemical corrosion.
8. Repair without consent of the authorized repair unit.
9. Parts that have been compensated by the insurance company.

XI. Maintenance Service

(I) Owner's Responsibilities

Listed below are the responsibilities afforded to the owner:

This Owner's Manual should be considered a permanent part of this motorcycle and should remain with it even if the motorcycle is subsequently sold.

Perform routine care and maintenance of your electric motorcycle as detailed in this Owner's Manual.

Use only Talaria approved parts and accessories for the moped.

The operator is responsible for learning and obeying all country and local laws governing the operations of an electric motorcycle.

Always wear a regionally approved helmet, goggles, appropriate boots, and all other appropriate safety equipment when operating an electric motorcycle.

(II) Scheduled Inspection

To prolong the life of your motorcycle and ensure safe and comfortable riding, periodical inspection and maintenance is recommended. If stored for a long term, the motorcycle should also be inspected regularly.

A new motorcycle should be subject to inspection and maintenance after running for 300KM.

Be careful when you inspect the motorcycle.

Park the motorcycle at an open and flat place.

Riding inspection should be carried out in a safe place. Pay attention to the surrounding environment and conditions.

Any abnormality found through the inspection should be eliminated before you use the motorcycle. If it is difficult to solve it by yourself, you can entrust the maintenance facility for inspection.

XI. Maintenance Service

CAUTION:

The front and rear brakes are disc brakes. If the brake friction plate is severely worn, it shall be replaced in time.

Keep the disc brake system clean in daily use to avoid sand accumulation for a long time, especially oil stain.

Inspection for operating parts

- **Check the shock absorber** for any bending, deformation, damage, looseness, oil leakage and other faults. Shake the handlebar up and down to check for any abnormal sound caused by foreshock fault.
- **Brake inspection:**
 1. Check whether the free clearance of the brake lever is within the specified range (15-30mm). If the measured result does not meet the requirements, it shall be adjusted.
 2. When driving at low speed on a dry and flat road, use the front and rear brakes respectively to check their braking function.
- **Inspection for tire and other parts:**
 1. When the tire is cool, check the air pressure with a tire barometer.
 2. Check for any cracks, damages, foreign matters and abnormal wear.
 3. Check whether the rim spokes are loose.
 4. Check the tension of the chain. It should be 10–20mm from the top and bottom of the chain.

Stones, glass, nails and other foreign matters on the ground will damage your tire as it is in long-term contact with the ground. Therefore, when riding, make sure to observe the road surface to avoid the places where the tire may be damaged. In addition, regularly check the tire for any obvious cracking and other damage, whether it has been penetrated by stones, glass and other foreign matters, and whether there is abnormal wear.

XI. Maintenance Service

- **Inspection for tire groove depth**

Check the tire wear and the groove depth. Replace the tire 2/3 of the bumps are worn off. When the tire makes abnormal noise and swings during riding, please send it to the maintenance facility for inspection and maintenance. It is recommended to set the locking torque of the middle axle as 50-60N.m and the locking torque of rear axle nut as 45-55N.m. The locking torque of the front axle screw depends on the front fork.

Caution: Hold the brake lever tightly. If it still can't achieve the ideal braking function, check whether the disc is clean. If the problem is still not solved, send it to the maintenance facility for inspection.

- **Battery inspection**

The motorcycle uses a sealed ternary lithium battery. Fully charge the battery before inspection, and then use a multi-meter to measure the cathode and anode voltage. The full voltage should be between 65.5–67.2. Otherwise, please send it to the maintenance facility for inspection.

Caution: Please turn off the throttle lock and turn off the air switch to the left before removing and installing the battery. If the battery cannot be pushed in, do not operate it by force. Pull out the battery and check whether it is stuck by foreign matters.

- **Fuse replacement**

If the instrument, horn, lamps and other parts still cannot work after turning on the air switch and throttle lock, it is probably because the fuse is blown. Turn off the air switch before replacing the fuse.

1. Open the battery case cover and pull out the battery. Open the fuse box which is located in the front of the case.
2. Remove the broken fuse, take out the spare fuse from the box cover and install it, close the fuse box, install the battery and close the battery case cover.

XI. Maintenance Service

CAUTION:

The fuse should be installed firmly. If the insertion part is loose, it may cause the fuse to heat up and results in other faults and hazards.

Replace the fuse with those of the specified model and corresponding specification. If the fuse is out of specification, it may not have the function of fuse protection.

If the new fuse burns out again in a short time, check for the causes other than the fuse.

Avoid strong impact to the fuse with water flow.

● **Inspection for brake oil level**

Inspect the front and rear brake oil level through the sight glass. Through the sight glass, the oil is white, and the brake oil is red. If the top of the sight glass indicates obvious transparent white, brake oil must be added. Open the liquid tank cap and add the special mineral oil for bicycle disc brake.

Note: Before checking the liquid level, the electric moped should remain upright.

1. Remove the two M3 screws fixing the liquid tank cover.
2. Add the special mineral oil (HF10-2) for bicycle disc brake.
3. Check the sealing cover for any wear or damage and correct position.

CAUTION:

Do not spill the brake oil on the paint surface; otherwise, it may cause cracks on the vehicle body.

Before removing the cylinder head, be sure to place a rag under the liquid tank of the master cylinder.

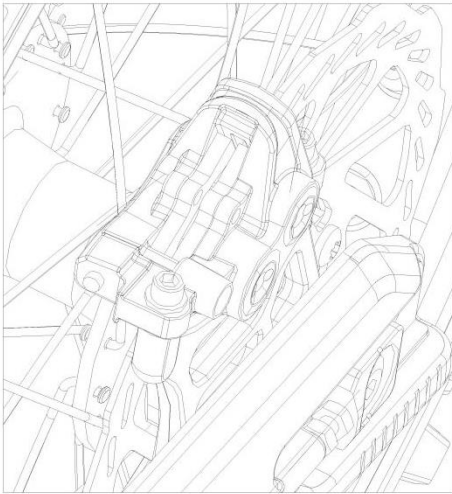
At low fluid level, there may be brake pad wear or leakage of hydraulic system. Check the brake pads for wear and/or the hydraulic system for leakage. Add the special mineral oil (HF10-2) for bicycle disc brake. Do not use other kinds of brake oil.

XI. Maintenance Service

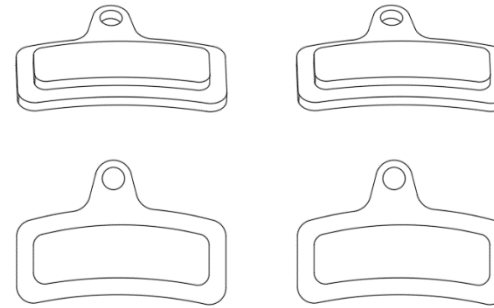
Place the cover and tighten the M3 screws. The torque is 1.5N.m.

- **Inspection for brake pads**

Check the brake pads and visually check the brakes by observing the remaining brake pad materials on both sides of the brake caliper.



Brake pads



Brake pads

Replace the brake pads when the free clearance of the brake lever exceeds the specified range (15–30mm), or the thickness of the brake pad becomes 2mm or thinner.

- **Inspection for brake disk**

Inspect the thickness of the brake disk regularly and replace the disk if the thickness is less than 2.1mm.

WARNING! Use new brake disks or new brake pads, and lightly press and hold the brake for several times in the first several brakes at low speed (less than 20km/h), so as to form appropriate braking friction.

XI. Maintenance Service

- **Tire inflation**

WARNING! Under-inflation is a common cause of tire failure and may result in severe tire cracking, tread separation, "blowout", or unexpected loss of motorcycle control, causing serious injury or death.

Tire pressure should be checked and adjusted to the proper inflation levels before each ride. Tire pressure should be checked using an accurate gauge when the tires are cold. Always replace the valve stem cap when finished adjusting tire pressures.

Front tire 225Kpa Rear tire 225Kpa

Lubricate the drive chain. Check the drive chain.

Lubricate the drive chain.

WARNING! Always wear safety glasses when cleaning the chain to prevent eye injuries.

WARNING! Never have the motor spinning the wheel. Turn the wheel only by hand. Failure to do so could result in serious injury.

WARNING! Never place your hand between the chain and sprockets. Work with the chain only in the middle between the two sprockets. Failure to do so could result in serious injury.

WARNING! Do not allow any of the cleaner to get on the brake disks or brake pads. If the brake rotors or brake pads are contaminated with cleaner, it will impair the motorcycle's ability to stop. This could result in serious injury or death.

Follow the manufacturer's instructions for the chain cleaner you are using; below are the general guidelines. Do not allow any of the cleaner to get on the brake pads.

To lubricate the drive chain:

XI. Maintenance Service

1. Turn the wheel backwards slowly and spray the inside of the chain on the inside of the links.
2. Turn the wheel backwards slowly and spray the outside of the chain on the outside of the links.
3. Let the electric moped stand for 30 minutes to allow the lubricant to penetrate the link rollers.

- **Checking the drive chain**

1. Using a ruler, grasp the chain halfway between the front and rear sprockets.
2. The chain shall have a tightness of 15mm–25mm.

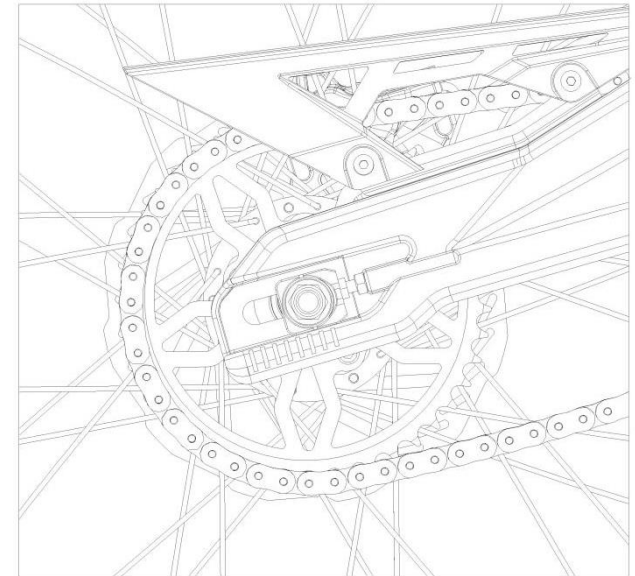
- **Adjusting the drive chain**

Note: Adjust both sides equally.

1. Remove key from the key switch.
2. Loosen the rear axle nut on right side of moped.
3. Loosen the (left and right) M6 jam nuts.
4. Turn the (left and right) M6 adjustment bolts 1/4 turn at a time

until the chain adjustment is within specification.

5. Tighten left and right jam nuts to secure the chain.
6. Tighten the axle nut on right side of moped. Torque 75 lb·ft (102 Nm).
7. Test ride the moped.
8. Recheck the chain for proper adjustment after the test ride and readjust, if necessary.



XI. Maintenance Service

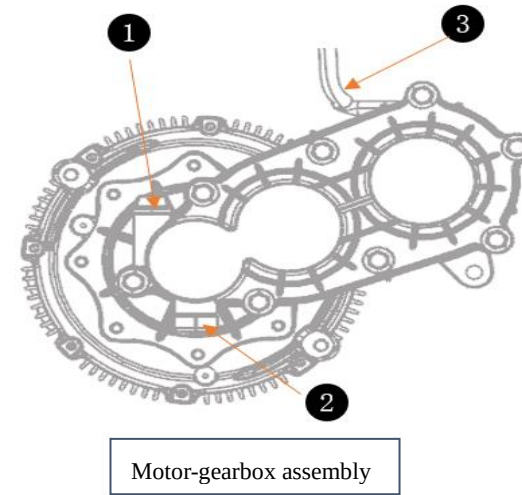
● Maintenance of motor-gearbox assembly and controller



1-Dipstick cover and oil filler

2-Oil drain bolt

3-Exhaust pipe



1. Regularly check whether the screws of the motor-gearbox assembly are loose and whether the gear oil is between the upper and lower grooves. It is strictly prohibited to ride when the gear oil is insufficient, because it will cause damage to the gearbox. After changing the gear oil during the run-in period, change the gear oil every 5000km (Type of gearbox oil: CL-5 85W/90, 70-90ml). Loosen the screw of dipstick cover 1 on the gearbox, then loosen oil drain bolt 2, and the gear oil flows out of the oil drain hole. If no gear oil flows out, clean the magnetic core of the oil drain bolt, reinstall it into the gearbox, and add new gear oil with an amount of 70-90ml.

2. Regularly check whether the wiring of motor and controller is loose or insulated.

3. Regularly check whether the fuse is loose.

4. Do not ride in too deep water; otherwise, it may affect operation of the motor.

5. It is prohibited to wash the motor and controller with high-pressure jetting guns.

XII. Service and Maintenance Record Card

Maintenance Items

MAINTENANCE	MAINTENANCE REQUIREMENTS	APPLICANT/UNIT STAMP
300KM 1 month	Check the fasteners of the whole vehicle (motor, gear train, brake, spokes, etc.) and check the tension of the chain and belt.	
After the first maintenance 1000KM 3 months	Check the fastening state of the safety components of the whole vehicle (motor, gear train, brake, spokes, etc.), check the high-current circuit, and check the tension of the chain and belt.	
2000KM 6 months	Check the high-current circuit, brake oil way, brake pads and spokes. Chain and belt	

XII. Service and Maintenance Record Card

Maintenance Record Card

Maintenance record card			
Date	Situation	Warranty staff signature	Sales unit stamp

Customer Information Card

Basic information	Vehicle Model		
Username		Date of purchase	
The frame number (VIN)			