

EMMO CAOFEN-F80



SAFE AND DURABLE BATTERY

INTEGRATED FRAME

SOPHISTICATED ENGINEERING

MODEL DESIGN

CYCLING - LIFE

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⚠ WARNING

- Please read this manual carefully.
- This manual contains important safety information.
- Minors under the age of 16 are not allowed to drive this electric motorcycle.

Introduction

Congratulations on your choice to acquire the EMMO CAOFEN-F80 series electric motorcycle, which incorporates years of technological advancements in alloy material research, core component manufacturing, and integrated electric drive. As the proud owner of this cutting-edge electric motorcycle, you can expect long-lasting enjoyment with proper maintenance. This manual aims to provide you with a comprehensive understanding of the model's fundamental features and operational skills. Should you encounter any operation or maintenance concerns not addressed in this manual, please feel free to reach out to EMMO Manufacturing Company or your local distributor for assistance.



Important safety information:

- This instruction manual contains important information, precautions, warnings and hazard notes for the use of the vehicle. The illustrations in the manual may differ slightly from the vehicle in detail, but the principles described are the same.
- EMMO CAOFEN-F80 electric motorcycle has always maintained high-quality standards, due to the unremitting pursuit of product quality and the continuous indepth research and improvement of product design. The information provided may not be the same as your vehicle information without further notice.
- For more detailed information about EMMO CAOFEN-F80 and the use and maintenance manual, please enter the EMMO official website: WWW.EMMO.CA ; or scan the EMMO official QR code on the last page.

Open steps and Assemble

Important Information

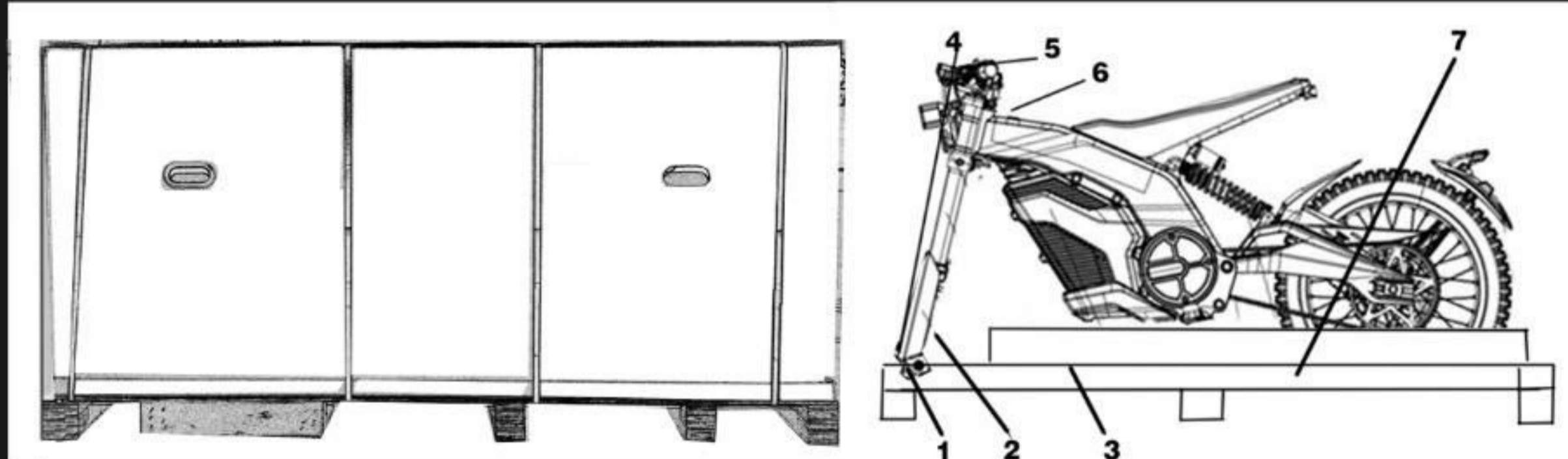


Failure to observe the contents of the manual may lead to serious injury or death!
This manual and its important information are marked as follows:

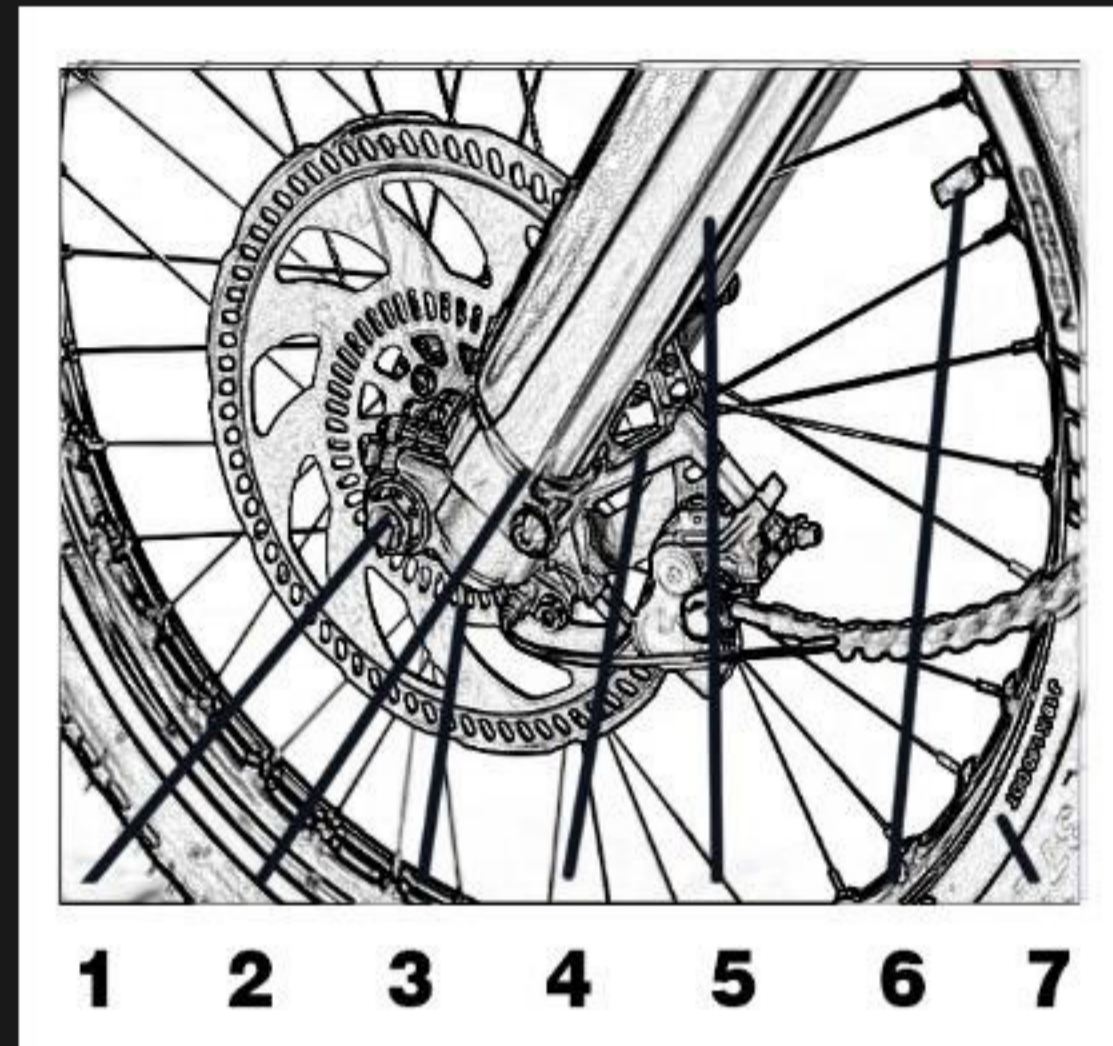
	<p>Safety warning signs mean attention, careful, vitally important</p> <ul style="list-style-type: none"> ● Failure to comply with warning signs may cause fatal injury or death to F80 electric motorcycle drivers, bystanders, maintenance or maintenance personnel. ● Warning means that precautions should be taken to avoid damage to the vehicle.
<p>Careful</p>	<p>Tips provide you with important information for easier operation.</p>

Open the Carton:

1. Please check whether the outer packaging (as shown in the upper right picture) is complete; then shear the packing belt and remove the packing carton, as shown in the lower right picture.
2. Relax straps 6
3. Loosen front axle 1, locking nut, and then pull out the front axle
4. Remove the packaging bottom tray and lower the side stand



- | | |
|----------------------------|----------------------------|
| 1、 Front axle and lock nut | 5、 Front turning signal |
| 2、 Front fender bracket | 6、 Front tightening straps |
| 3、 Accessory kit | 7、 Front rim and tire |
| 4、 Handle bar | |



Assemble front wheel:

Parts Ready: Front axle, front axle lock nut, 2 pieces front wheel bush 1. First install a bush on the left (From the drivers' view) of the front wheel, place the big head on the front wheel and small head toward the shock absorber, and then take the front axle little head from shock on the left to right across the suspension, front wheel bushing, the front wheel, wheel bushing, shock absorber, and then put the former wheel lock, nut lock and then in turn lock before cutting on the front wheel lock screw tied.

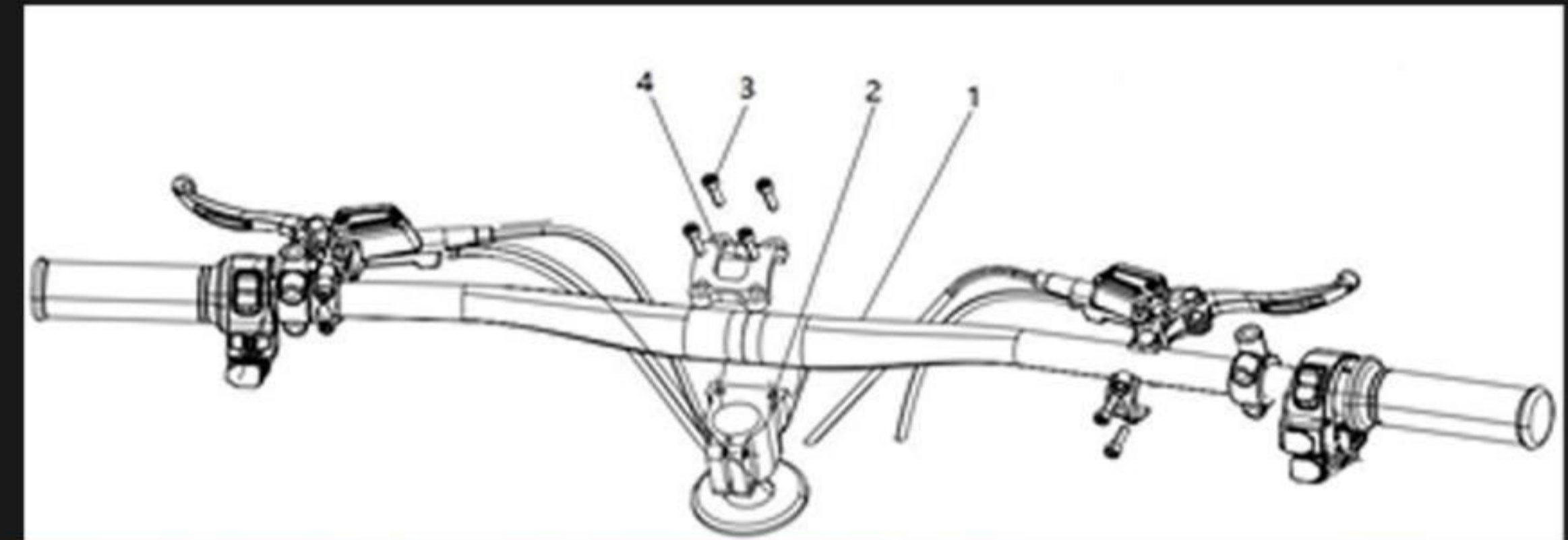
2. Front brake installation: remove the yellow fixed stop plate hydraulic brake pump, clamp the brake disc on the front hub into the brake clamp of the lower brake pump, pinch the right brake handle, tighten the installation bolt of the lower pump, and then release the handle.

- | | |
|-------------------------|----------------------|
| 1. front wheel lock nut | 5. front fork |
| 2. front wheel bushing | 6. Front wheel shaft |
| 3. front wheel locking | 7. front axle Assy. |
| 4. front wheel bushing | |

Warning

Grease on the brake disc will reduce the braking effect, please always keep the brake disc grease free, please use detergent to clean the brake disc when necessary.

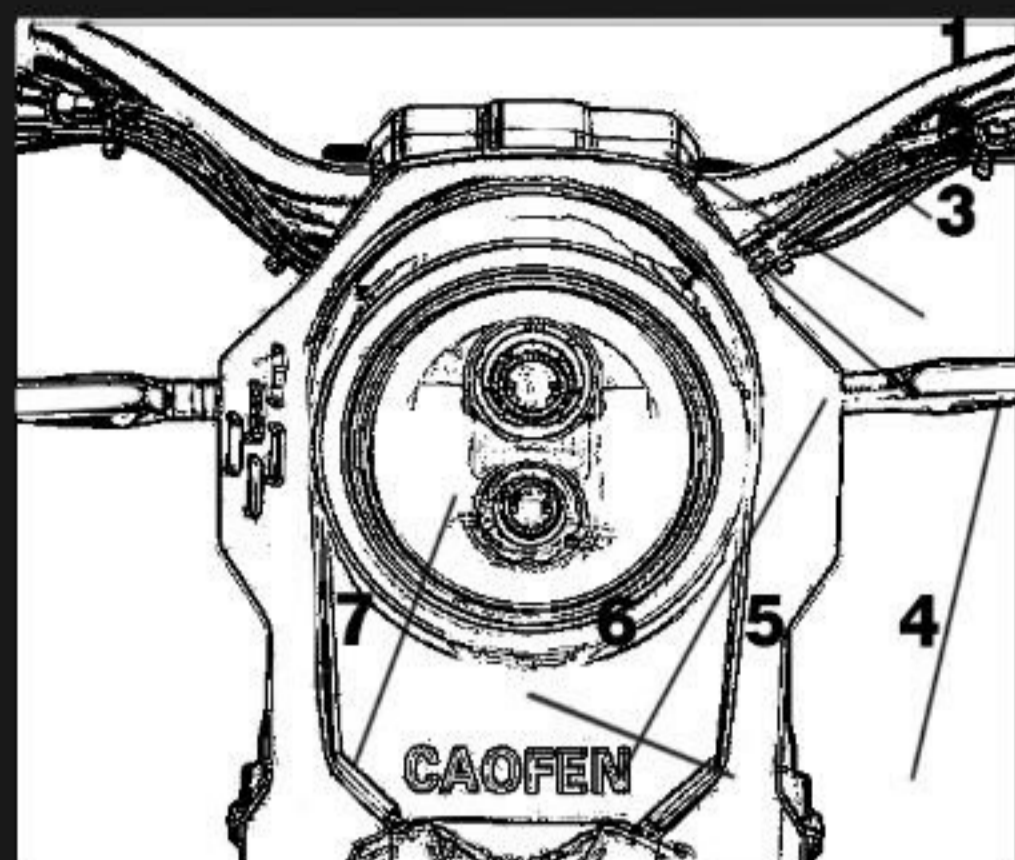
Assemble of Handlebar



- 1、 Handle bar
- 2、 Handlebar seat
- 3、 handle bar locking bolts 4-M6*20
- 4、 Handle bar locking cover

Handlebar fixing:

- 1、 Put the handle bar 1 into the handle seat 2 slot and make sure that the scale on the handlebar is evenly distributed
- 2、 Cover the handlebar locking cover 4, and evenly lock the 4 bolts without loosening



Assemble Speedometer and front Turn signal

1. Handlebar
2. Speedometer
3. Speedometer rubber pad
4. Front turn signal
5. Turn signal lock nut and sleeve
6. Headlight bracket
7. Speedometer wire harness and rubber sleeve

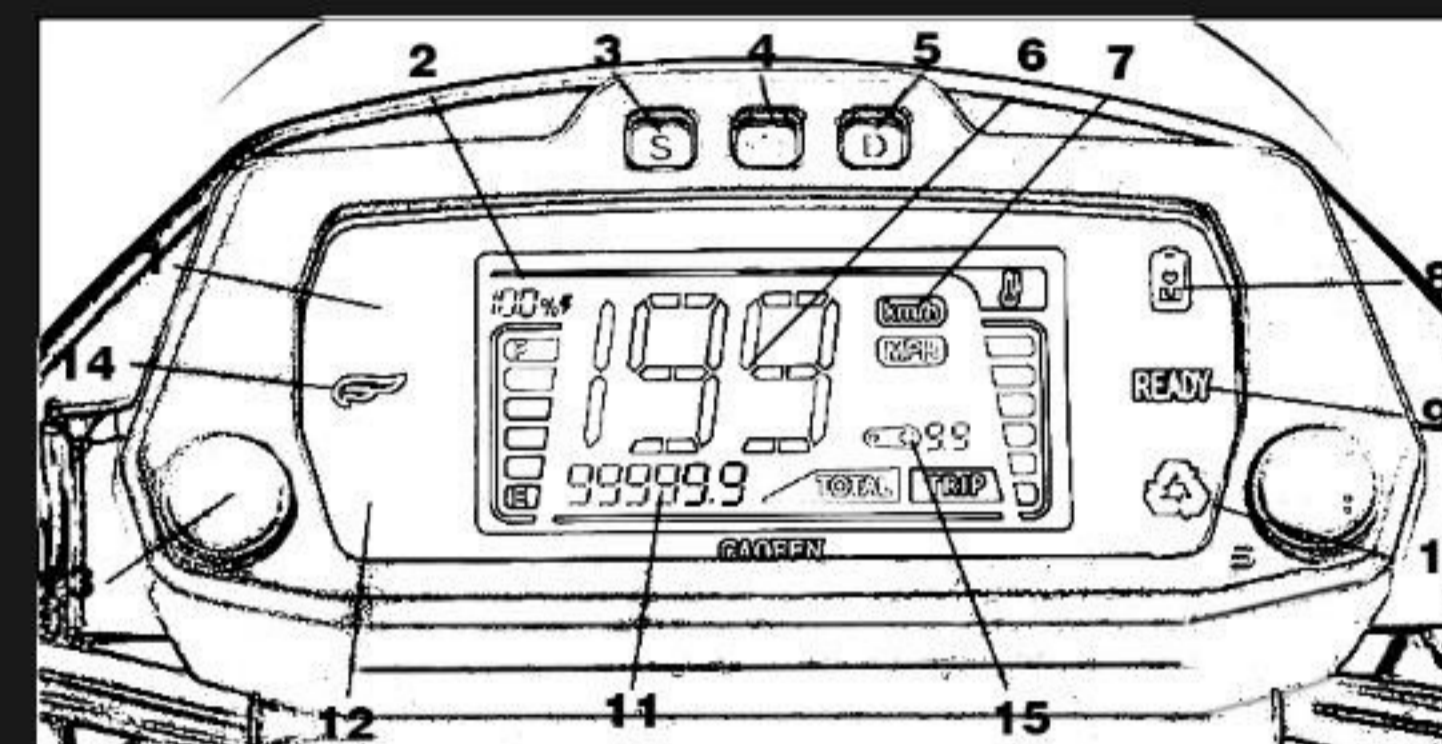
Speedometer and front turn signal

Place the meter correctly according to the picture. After installing the anti-vibration rubber pad, lock the ball nut, plug in the meter wiring harness, and cover the waterproof rubber cover.

2. Install the turn signal according to the picture, lock the nut, and cover the decorative rubber cover.



3. Speedometer and indicator light



1. Turn indicator
2. Battery level indicator
3. Power gear display
4. Fault warn light
5. Current gear position indicator
6. Running speed
7. Speed unit
8. Battery warning light
9. Running lights
10. Energy recovery
11. Total mileage display
12. Entertainment mode
13. Switch button
14. Mileage
15. Gear position

Tip: The F80 electric motorcycle you buy may be different from the description in this manual

Speedometer indicator

Press the remote control button, the LCD screen lights up, and the speedometer displays the last shutdown information mode.

1. Far light, the initial setting of the speedometer is set as the daytime running light, press the upper light button on the left brake handle, and turn on the far light.

2. The front, rear, left and right turn indicators indicate that when the steering switch on the left brake handle is pushed to the left, the front and rear turn signals on the left will flash; when the steering switch is pushed to the right, the front and rear turn signals on the right will flash.

3. Entertainment mode display: Press and hold the switch on the right brake for 3 seconds. When it is off, there is no traction control, and a constant value indicates that there is traction control.

4. S power gear display: the S light does not blink, corresponding to D gear and 1 gear, slow flash 2 gear, fast flash 3 gear.



5. D Current motion mode: Press the N/D button on the right brake handle to control the entering sports D gear. The light is either always on or off. If it is always on, it means that it has entered the current gear and the vehicle can be driven. If it is off, it means the vehicle is in the neutral position.

6. Energy recovery indicator light:

Steady on: The energy recovery is in the auxiliary braking mode. After the braking signal is detected, energy recovery is added after a delay of 20 milliseconds or when the vehicle speed drops by 10%.

Flashing: Energy recovery occurs during the throttle release phase. Off: Energy recovery is turned off.

7. Driving READY light: The one-key start button controls the light to turn on or off. The vehicle can be driven when it is always on, and the vehicle cannot be driven when it is turned off.

8. Off: Sufficient power. Steady on: Insufficient power. Flashing: Low power, the battery needs to be charged as soon as possible.



Warning

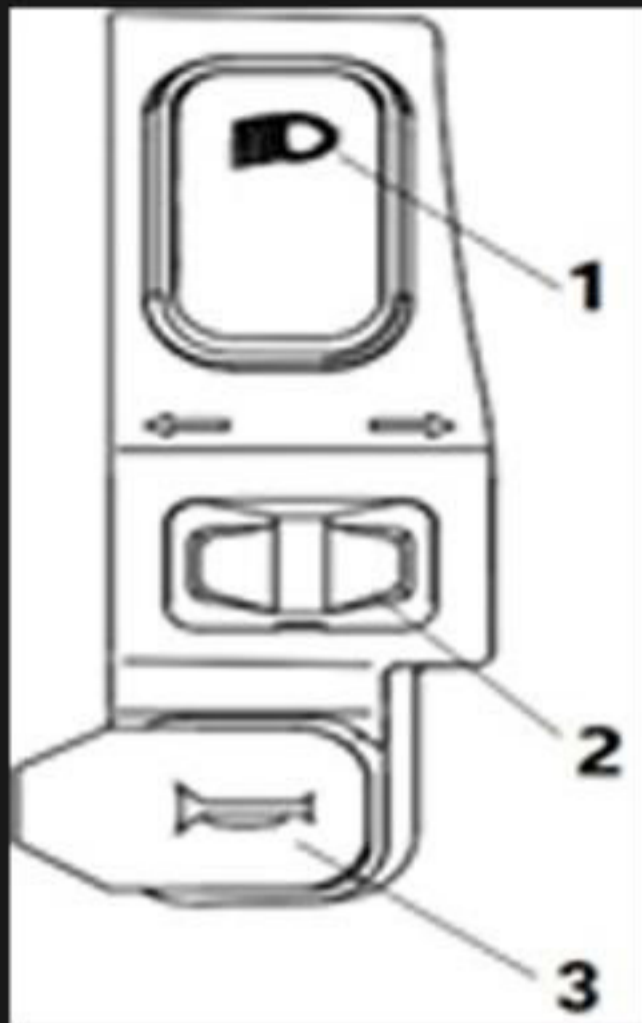
If you find that the indicator light is on or flashing after the vehicle is powered on, you may not be able to drive normally if you continue to use the motorcycle; if you find that the indicator light is on or flashing while driving, please stop using the motorcycle immediately; lighting or flashing indicates that your motorcycle has broken down, please check the fault code displayed on the instrument according to the description in this manual, and consult the local EMMO authorized dealer as soon as possible.



Warning

Please do not flush the speedometer directly with high pressure water. Please do not wipe the speedometer with organic solvents such as gasoline and alcohol, otherwise it will cause partial cracks or discoloration of the meter.

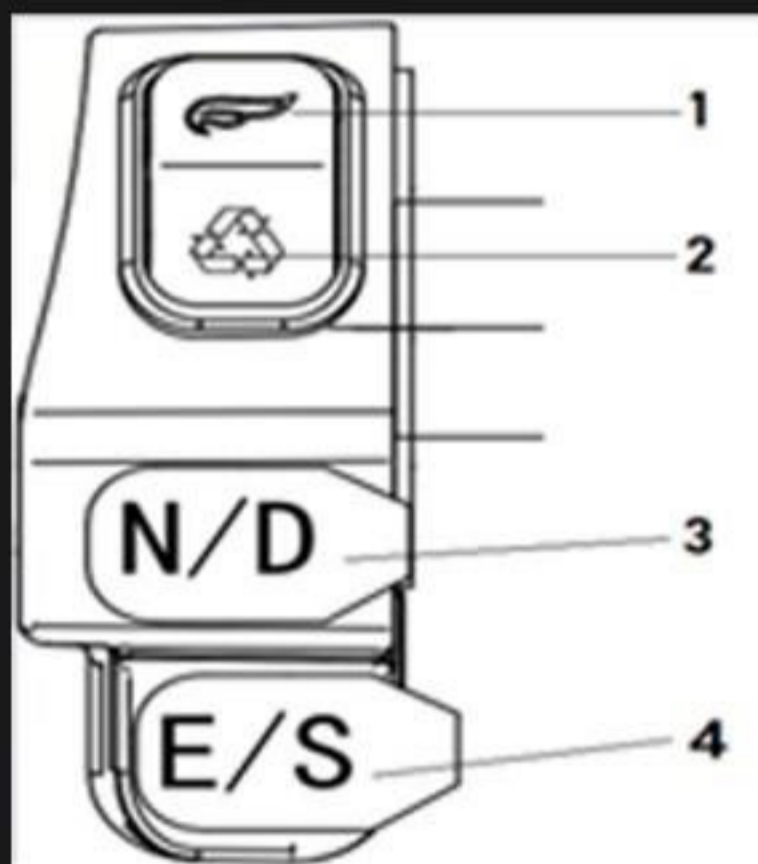
Directional combination switch



Left handlebar switch combination

1. Headlight switch button
2. Left and right turn signal switch
3. Horn button

Right handlebar switch combination



1. Entertainment mode switch
2. Energy recovery switch
3. Switch between gear and neutral
4. Gear switch button



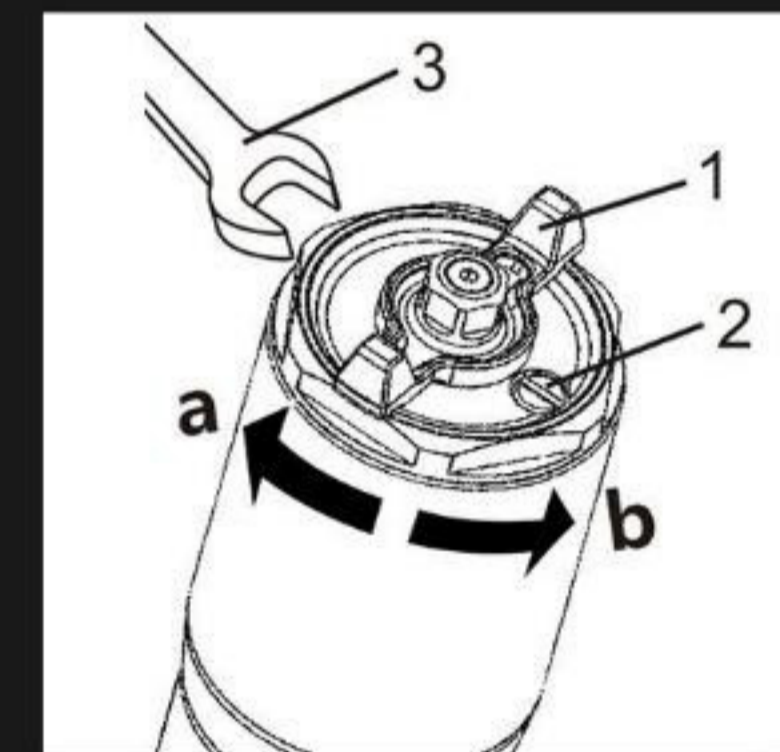
**Info: entertainment mode activation:
please press and hold the button for 3
seconds**

Front and rear shock adjustment (Right and left shock)

Adjusting the preload of front and rear shock absorber is to adapt to different drivers, loads, driving mode and road environment, in order to achieve the best driving performance of the motorcycle, and avoid damage to the front fork, rear shock absorber and body.

Front left shock absorption (spring preload) :

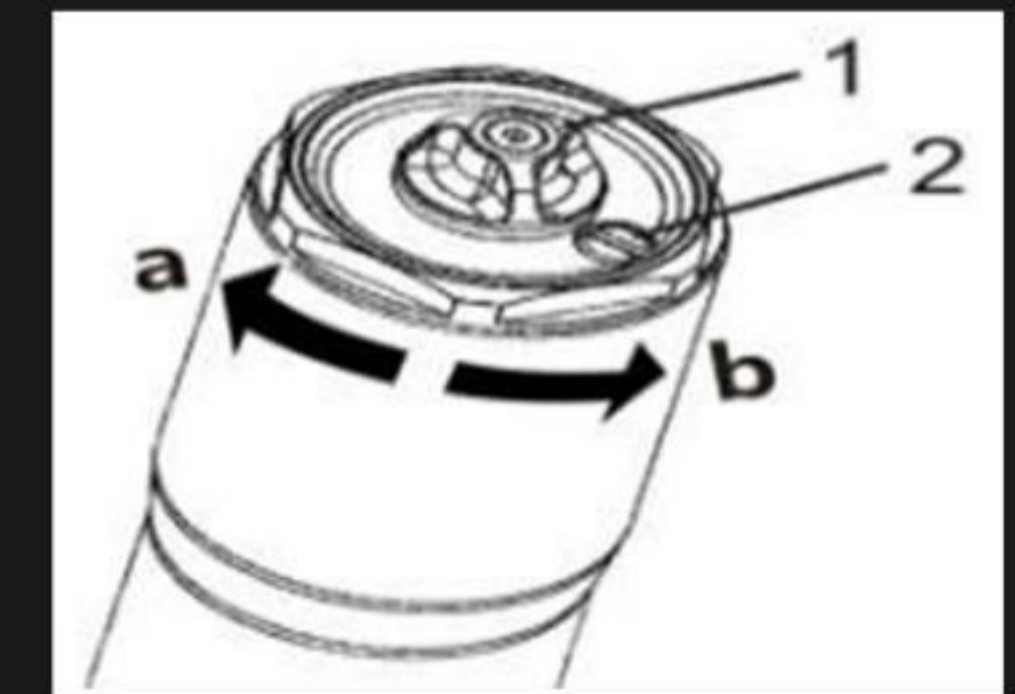
1. Spring preload adjusting knob
2. Vent screw
3. 10mm wrench or sleeve



1. Rotate the adjusting knob in the direction of a to increase the spring preload value
2. Rotate the adjusting knob in the direction of b to reduce the spring preload value
3. The rotation of spring preload adjusting knob can be adjusted manually or by 10mm wrench or a socket
4. The adjustable height of spring preload is 12.5mm. The height of the spring preload adjustment knob can be raised and lowered by one turn of 1.25mm

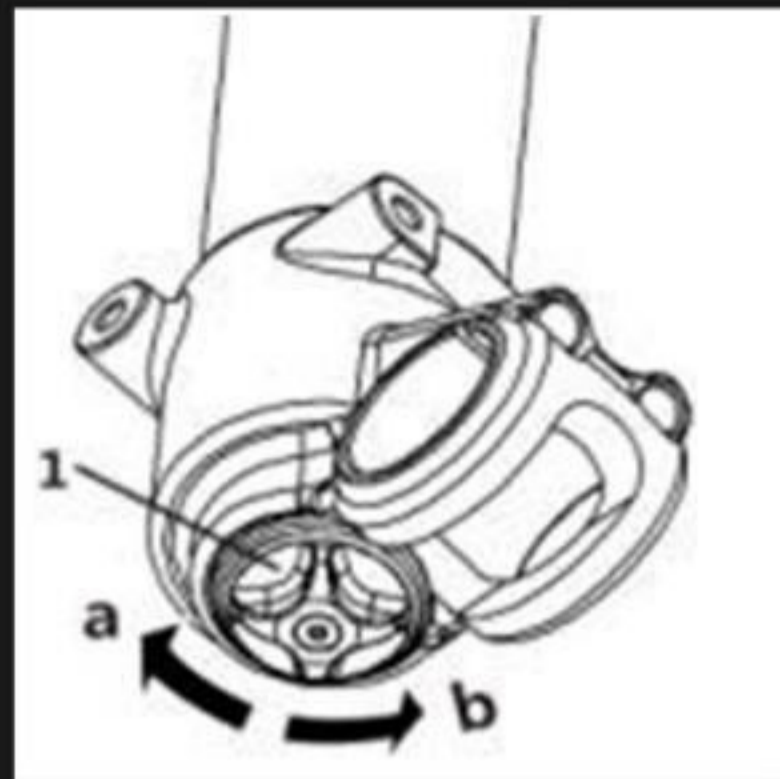
Front right shock (return damping)

1. Return adjusting button
2. Bleed screw



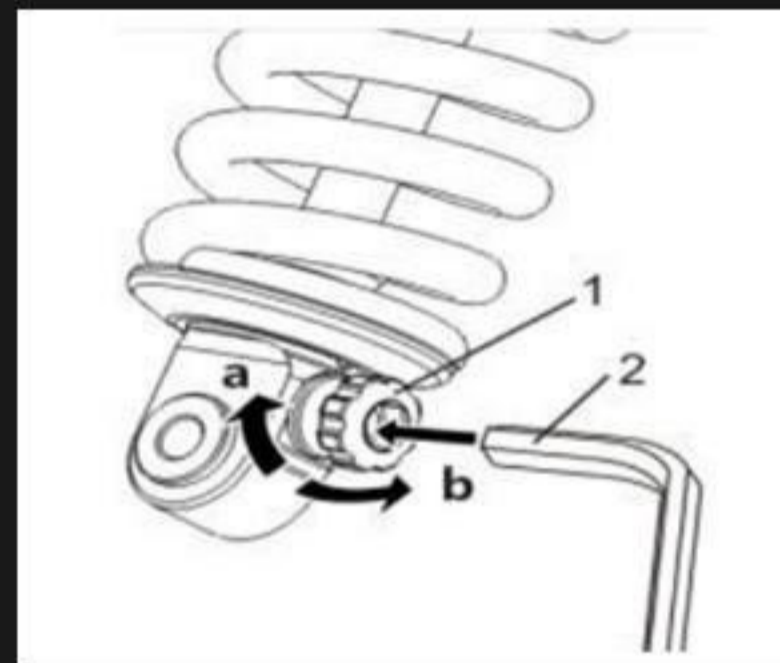
1. Rotate the recovery adjustment button in the direction of A to increase the recovery damping
2. Rotate the recovery knob in the direction OF B to reduce the recovery damping

Front and rear shock adjustment.



Compression adjustment button

1. Rotate the compression adjusting knob in the direction of a to increase the compression damping
2. Rotate the compression adjusting knob in the direction b to reduce the compression damping



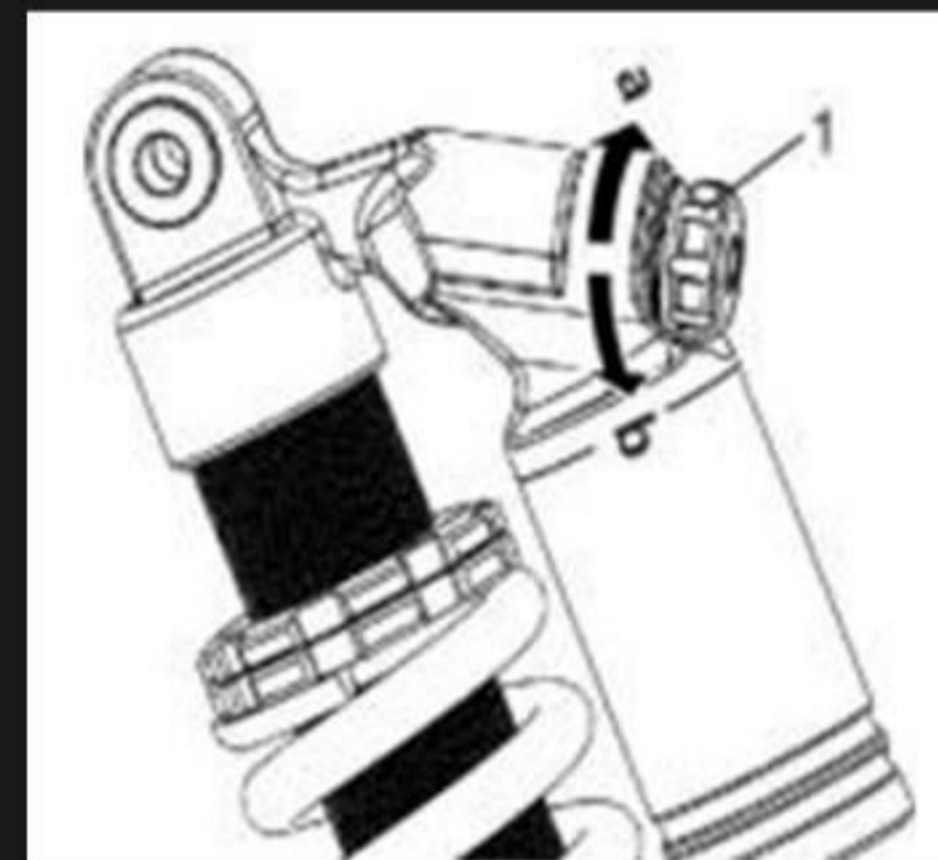
Return damping regulation

1. Return adjusting button
2. 8mm inner hexagon wrench

1. Rotate the recovery adjustment button in the direction of a to increase the recovery damping

2. Rotate the recovery knob in the direction of b to reduce the recovery damping

3. the rotation of the adjustment button can be manually adjusted and 8mm inner hexagonal wrench two ways of adjustment.



Compression damping regulation

1, compression adjustment button

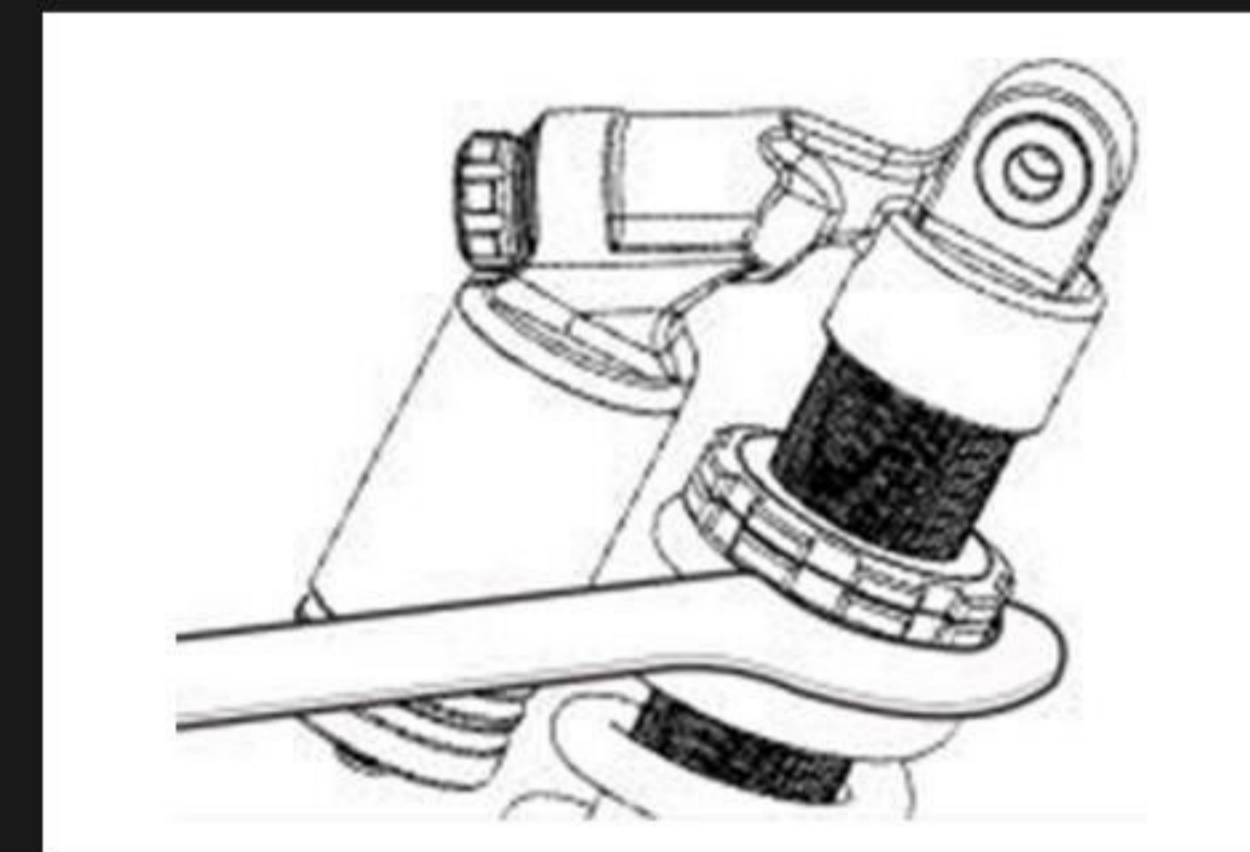
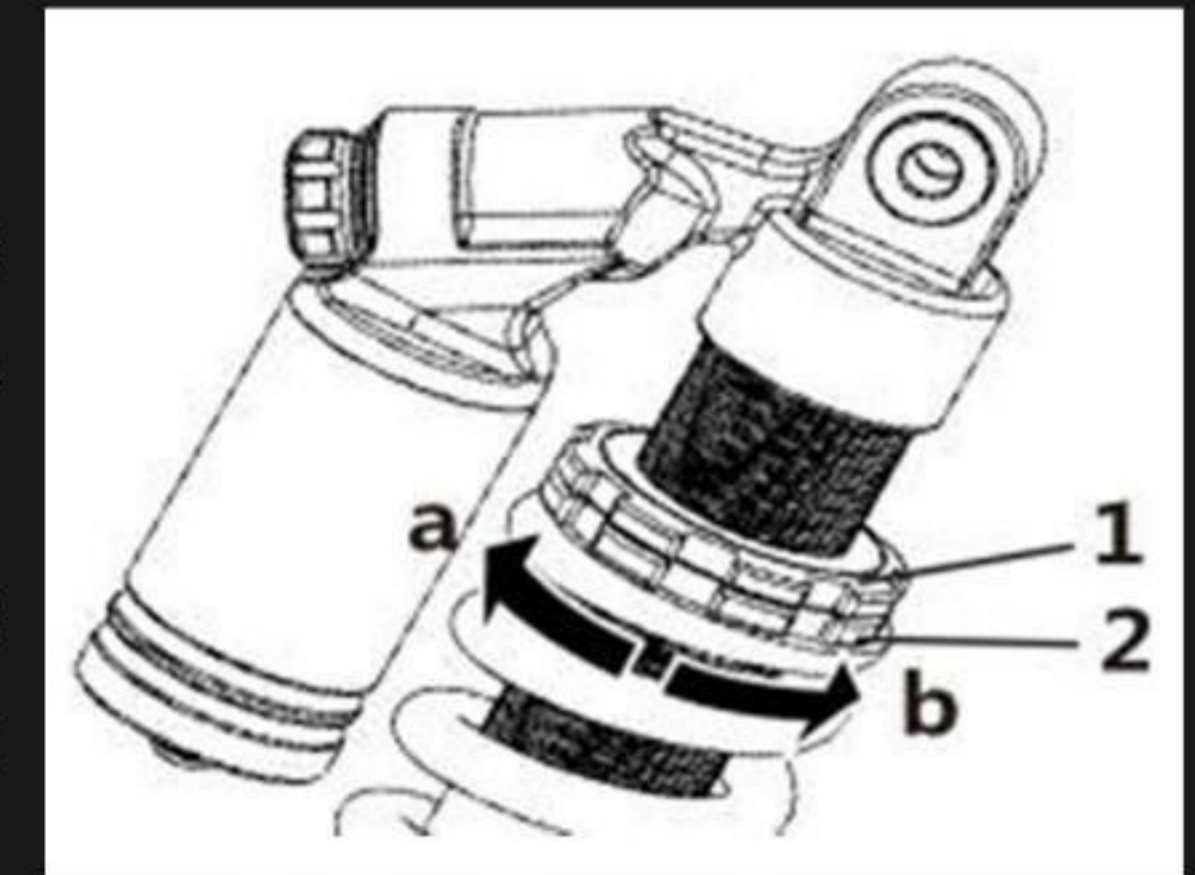
1. Rotate the compression adjusting knob in the direction of A to increase the compression damping
2. Rotate the compression adjusting knob in the direction B to reduce the compression damping

Front and rear shock adjustment (adjusted shock assembly)

Spring preload

1. Lock nut
2. Spring preload adjusting nut

1. Rotate the adjusting nut in the direction of a to increase the spring preload value
2. Rotate the adjusting nut in the direction b to reduce the spring preload value



Spring preload

1. Special wrench

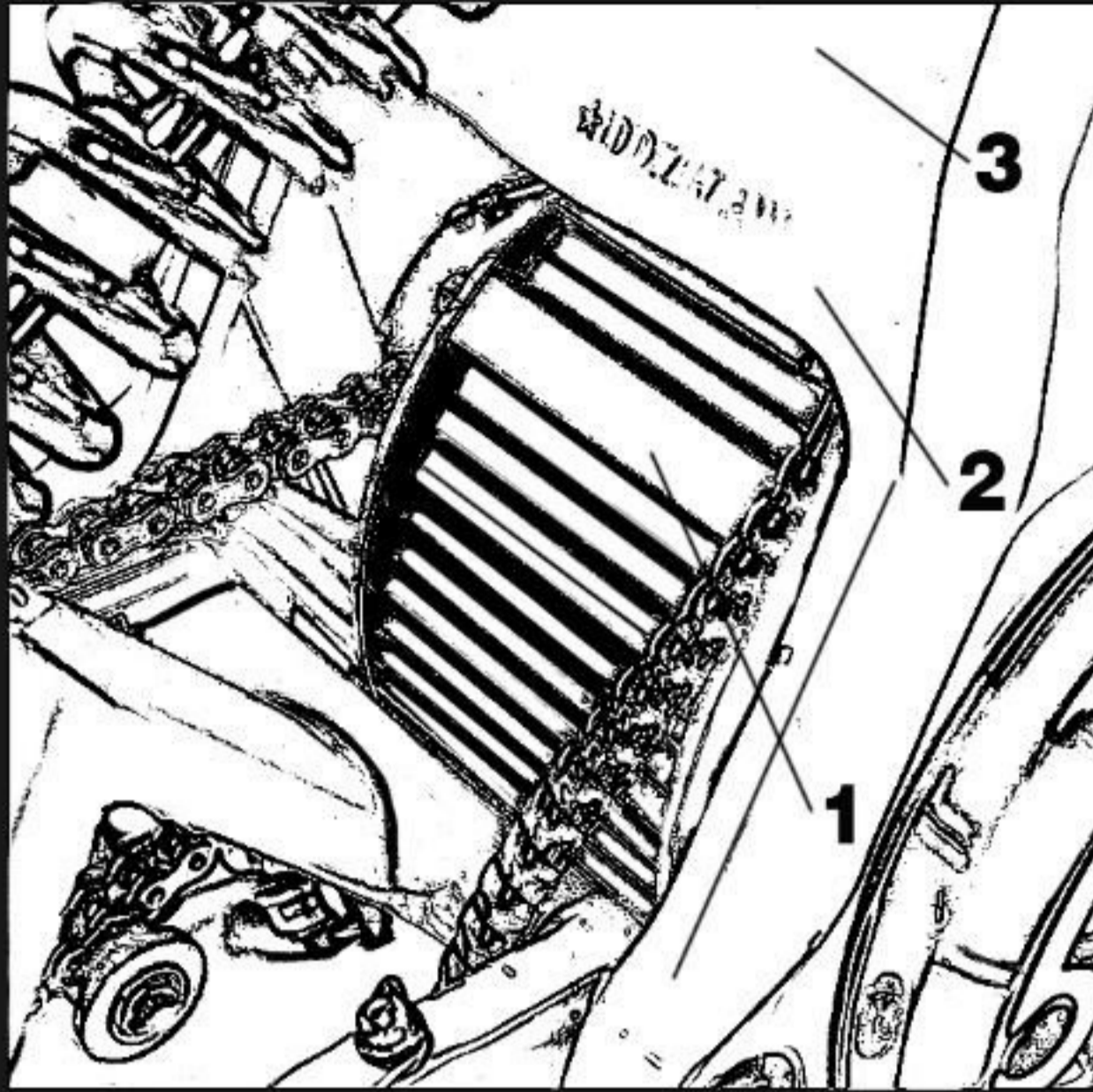
Locking torque of locking nut:
35 Nm

⚠ Warning

Please adjust preload, recovery damping and compression damping appropriately according to riding needs; Please do not blindly adjust the preload of shock absorption, improper adjustment results will make you feel uncomfortable or weaken your ability to control the vehicle.

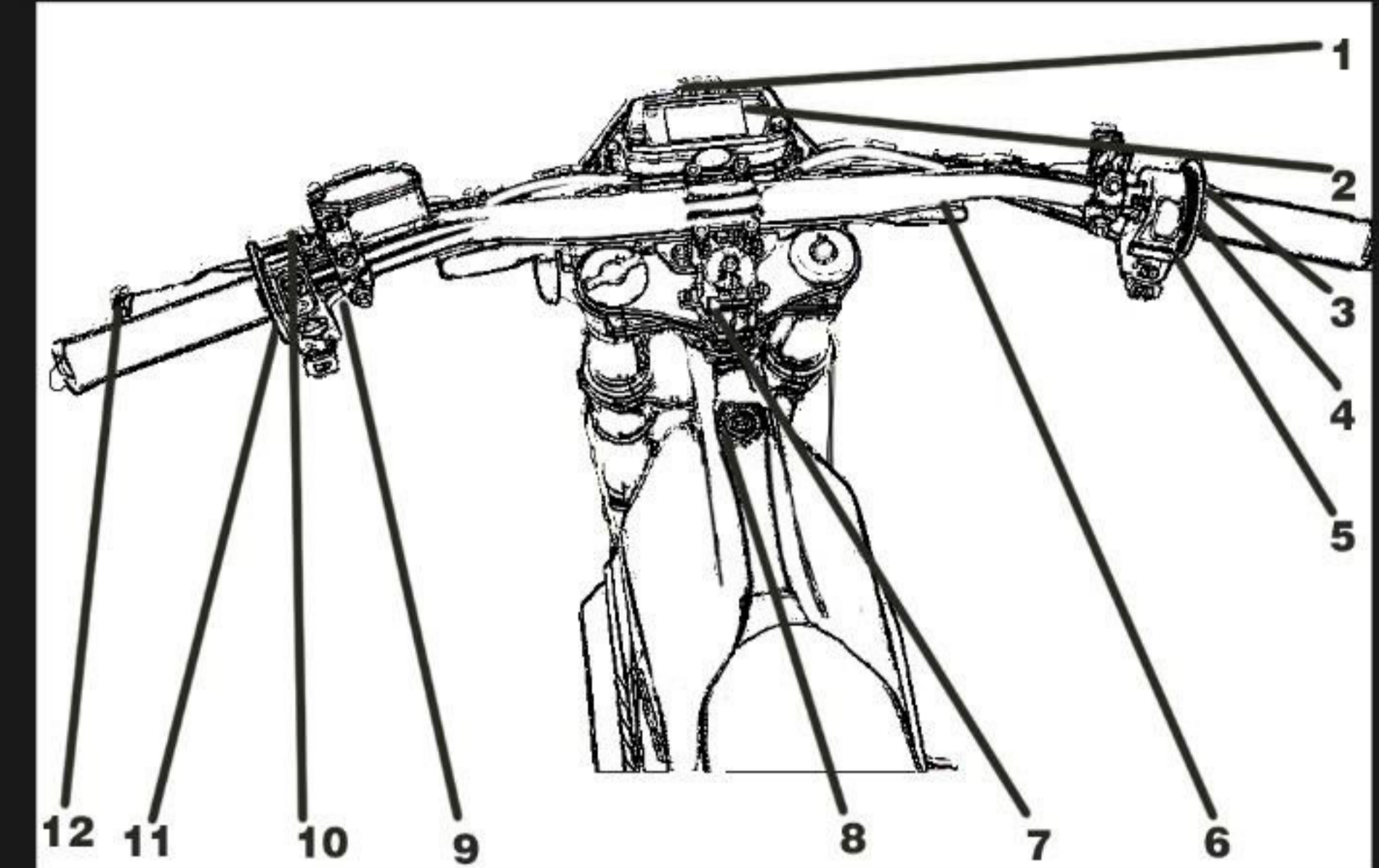
⚠ Note:

Special tools are required for preload of shock absorber springs after adjustment. If adjustment is required, please use your local EMMO authorized distributor to provide such services for you.



Vehicle identification

- 1、 Vehicle Plate
- 2、 VIN NO.
- 3、 Motor model and factory No.



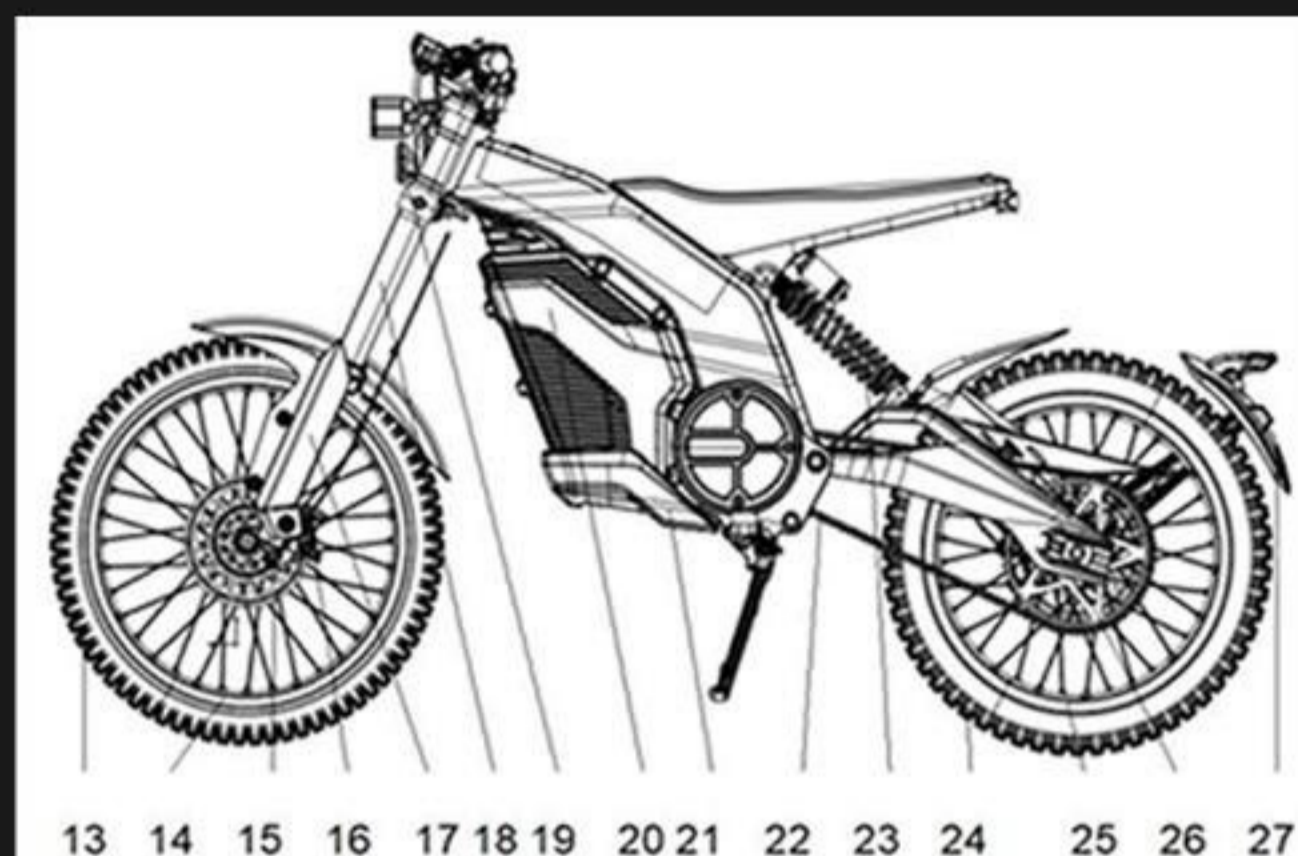
Front Part

- 1、 Headlight
- 2、 Speedometer
- 3、 Right brake lever
- 4、 Right hand grip
- 5、 Right speed control switch
- 6、 Handlebar
- 7、 steering dust cover
- 8、 One-button starter
- 9、 Rear view Mirror base
- 10、 Rear view Mirror
- 11、 Left switch assemble
- 12、 Left brake lever

- 13. Front tire
- 14. Front Rim Assy.
- 15. Front brake disc
- 16. Front brake caliper
- 17. Front mud guard
- 18. Front shock absorber
- 19. Horn
- 20. Battery pack
- 21. Battery bottom protective cover
- 22. Chain
- 23. Rear damping
- 24. Rear wheel
- 25. Rear Rim
- 26. Rear sprocket
- 27. Rear fender rear section

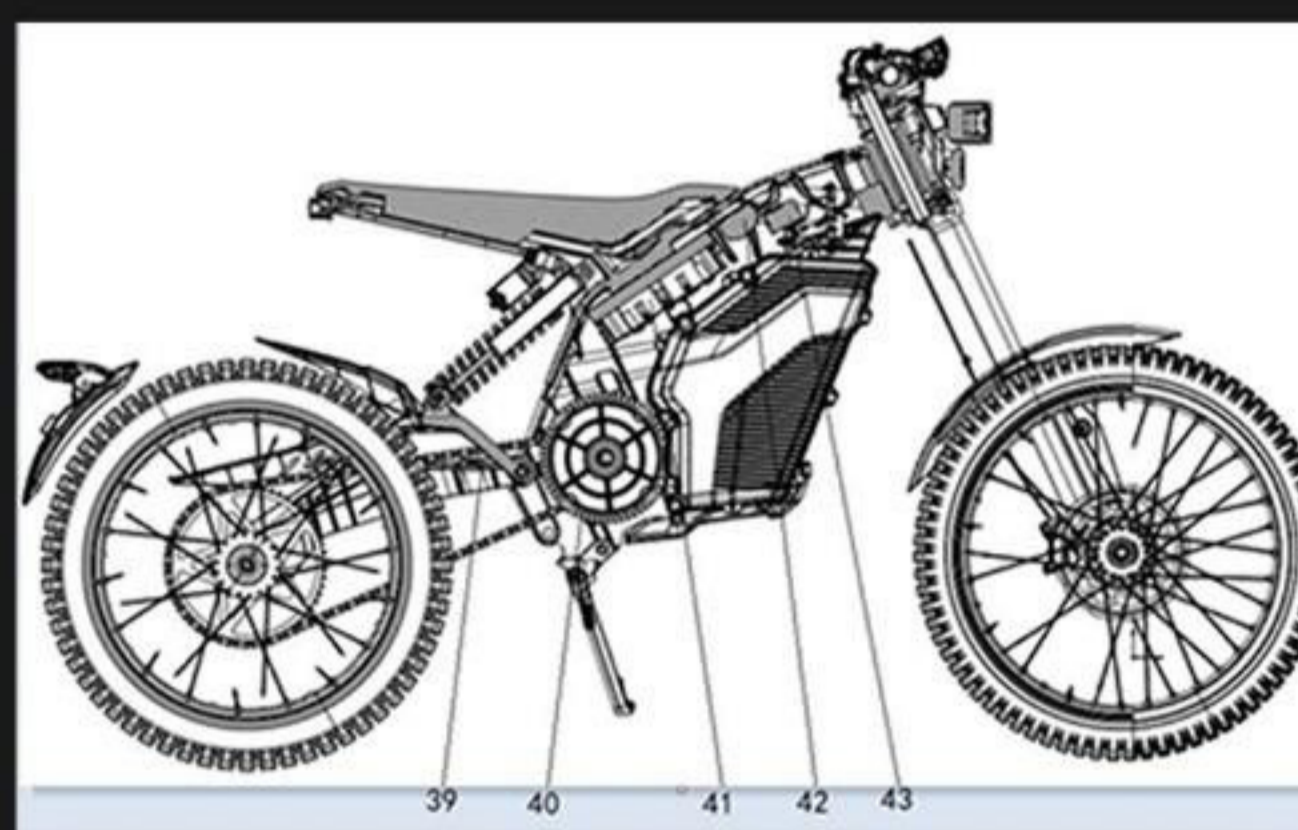
Operation and driving of EMMO CAO FEN-F80 electric motorcycle
Step to start the vehicle:

1. Turn on the battery switch, and the power switch indicator light is on.
- 2, press the alarm switch. The speedometer lights up and the vehicle enters the self-test state.
3. Fold up the side support and press start button, the speedometer will display the READY light steady on and start normally.
4. Press the N/D button on the right brake handle to enter motion D gear, and the speedometer D gear light will light up.
5. Turn the right speed control handle to drive normally.



Left Side

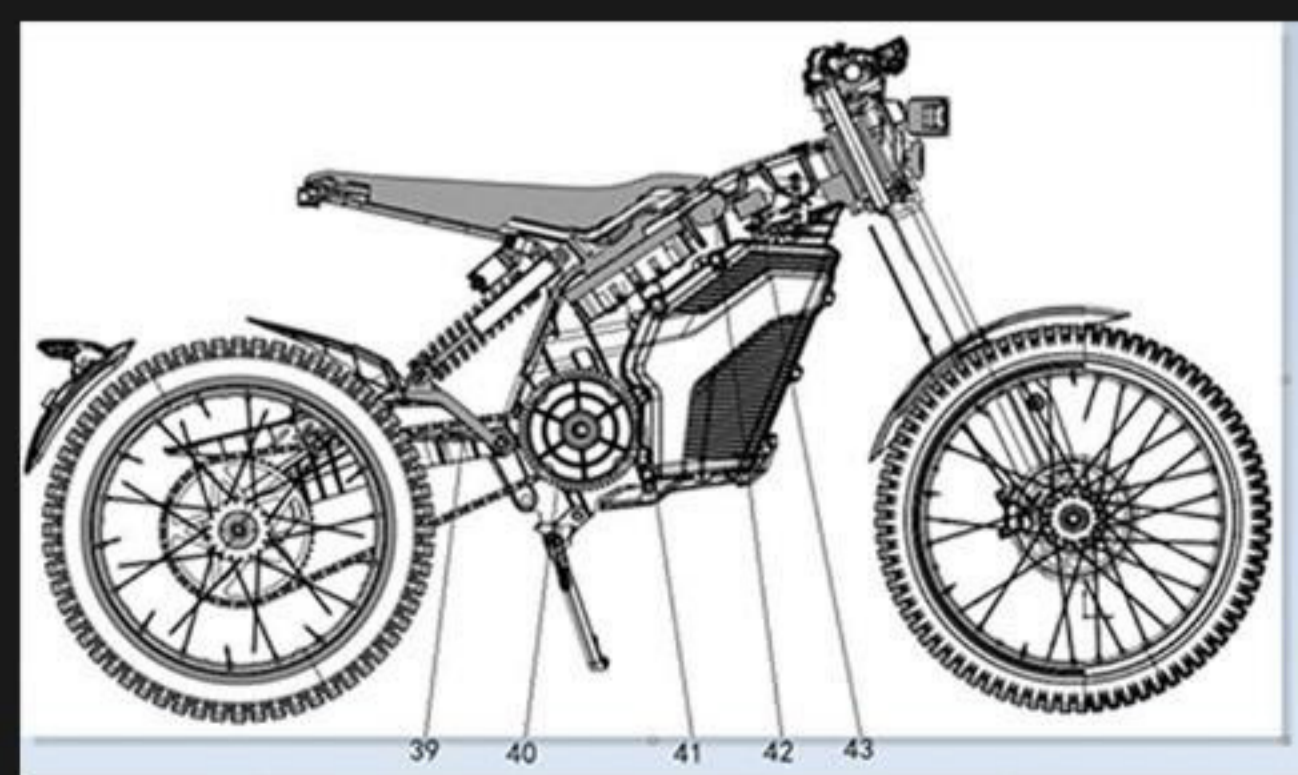
- 28. Rear guard bracket
- 29. Rear brake disc
- 30. Chain Adjuster
- 31. Rear brake caliper
- 32. Rear fork
- 33. Rear guard front part
- 34. Taillight
- 35. Seat bracket
- 36. Seat
- 37. Frame
- 38. Steering



Right Side

Frame Inside

- 39. Chain caliper
- 40. Motor
- 41. Controller
- 42. Alarm
- 43. DCDC converter



Warning

When the outdoor temperature is below 0°C, the low temperature protection of the battery system may be triggered. Please charge the battery before using it; otherwise, the vehicle may not run normally. When the meter displays a fault code, please check the fault code displayed on the meter according to the description in this manual, and consult the local EMMO dealer for treatment as soon as possible.

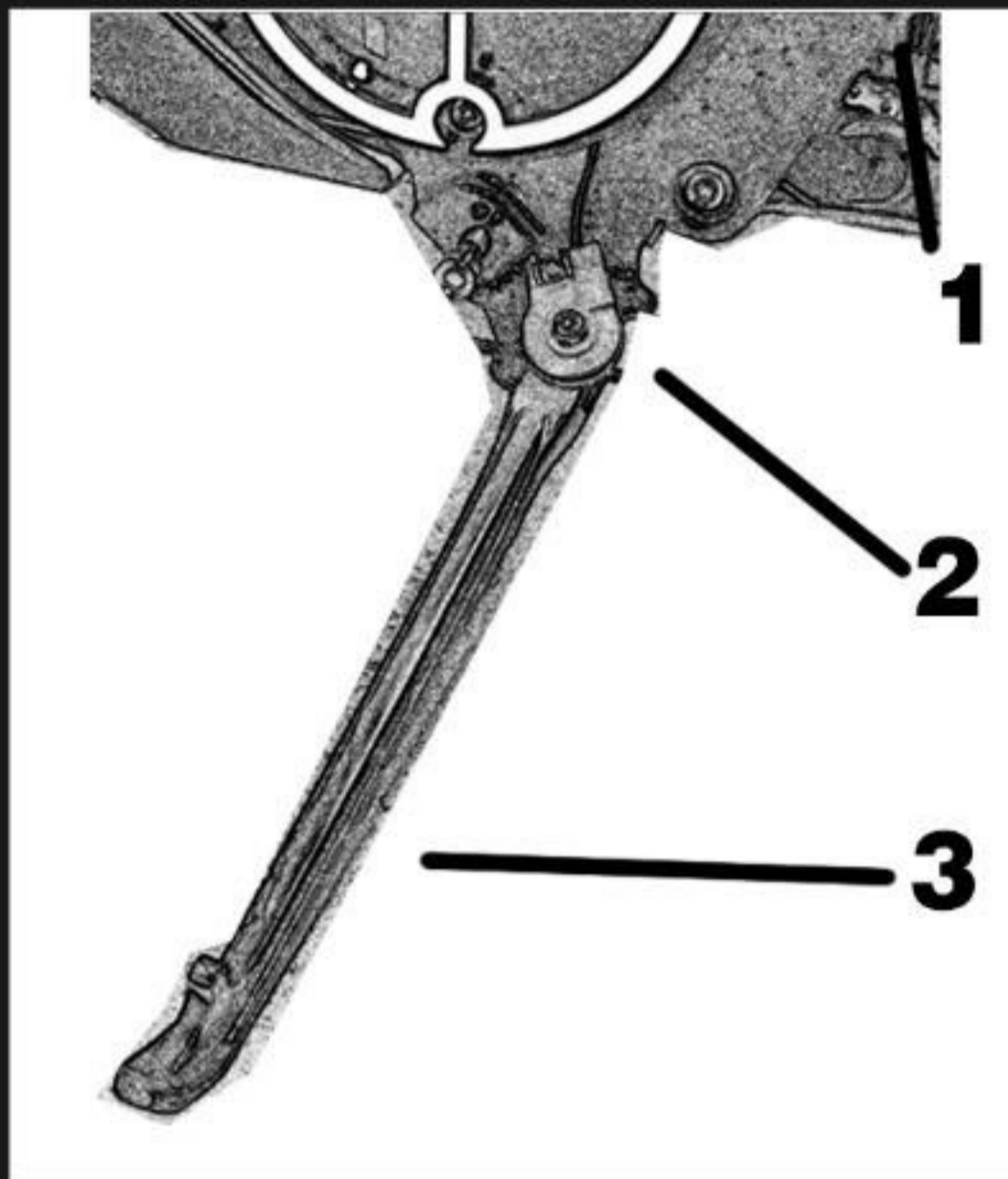
Dangerous

When the speedometer shows D, at this time the vehicle is in the forward state, turn the right speed control turn the vehicle will run, not familiar with the vehicle operation process if the rotation speed control turn is very large, the vehicle will suddenly move forward at high speed, may lead to personnel injury or vehicle damage; Therefore, when refueling for the first time, please be sure to concentrate on the smooth and light rotation of the speed control, and the left and right index finger and middle finger are placed on the brake handle to prevent the speed control rotation is too large and the vehicle can suddenly brake at high speed

Steps to turn off the vehicle:

1. After the vehicle stops, press the N/D button on the right brake handle, and the speedometer shows that the D light goes out and enters neutral, and the vehicle no longer walk.
2. The braced side bracket is in parking state, and the READY light is off.
3. Press the alarm button to power off and turn off all electrical equipment
4. Turn off the battery switch.

Side Stand



1. Chain tensioner
2. standby switch
3. side stand

This electric motorcycle is designed with a side support parking system. The side support extinguishing fire switch is a safety design, which is a part of the starting circuit. When the side support is in the parking state, the READY light will be off, and only when the side support is folded up, the READY light will be on.

Warning

When the speedometer lights up, it may be impossible to directly power off the alarm key, so we can directly turn off the battery switch. In this case, please check the fault code displayed on the instrument according to the description in this manual, and consult the local EMMO dealer for treatment as soon as possible. The temperature of the motor may be very high after the vehicle is stopped, please cool it before touching it.

Dangerous

The failure of the speed control knob will make the switch difficult to operate. If you want to speed up or slow down, but it is difficult to use, it may cause serious injury or death. Please check the switch handle operation before starting. If the operation is not smooth or stuck, check the reason before riding. If you are unable to solve the problem, please consult your local EMMO distributor.

Dangerous

Deceleration in the process of high-speed driving, such as just use the front brake or rear brake, the vehicle is easy to skid and out of control. Both front and rear brakes must be used equally.

Driving Precautions

1. Try not to carry occupants. If the user must carry it, any occupant must be very familiar with the particularity of electric motorcycle driving, because the position of the occupant is not suitable. Sudden movement during driving may affect the handling of the vehicle; therefore, we remind the occupants to keep their seats as stable as possible while driving, and not to affect the driver's handling. Animals cannot be carried on motorcycles.
2. In order to reduce the impact on the center of gravity of the motorcycle, all luggage on the motorcycle must be as low as possible; the weight of the luggage must also be evenly distributed on both sides of the motorcycle. Luggage protruding too far behind the motorcycle should be avoided.
3. The luggage must be securely fixed on the motorcycle. Please make sure that the luggage cannot be moved before driving. When the motorcycle feels unstable while driving, the firmness of the luggage should be rechecked and readjusted if necessary.
4. Do not carry heavy or bulky luggage. Overloading must affect handling and dynamic performance.
5. Do not install accessories that reduce the performance of this electric motorcycle and carry luggage that reduces the performance of the motorcycle, make sure that everything you do will not affect any lighting system, ground clearance, braking performance, roll angle, handling performance, tires Compression stroke, front reduction working stroke or other related driving performance of this electric motorcycle.
6. The increased weight on the handlebar or front fork will affect the steering performance and cause unsafe driving factors.

7. This vehicle cannot be converted into a three-wheeled motorcycle, and cannot be used for towing trailers or other vehicles. We will not be responsible for any damage or injury caused by the user's selffitting of this vehicle.

8. It is forbidden to drive after taking medicine or drinking. Please wear suitable and genuine safety equipment: helmet, eye mask, face shield, gloves, boots, long-sleeved shirt or jacket, trousers. Maximum load: no more than 100kg including driver, luggage and accessories).

Note: The speedometer shows that the 1st gear is the lowest power output, and the starting is the most stable, and the 2nd and 3rd gears increase the power step by step;

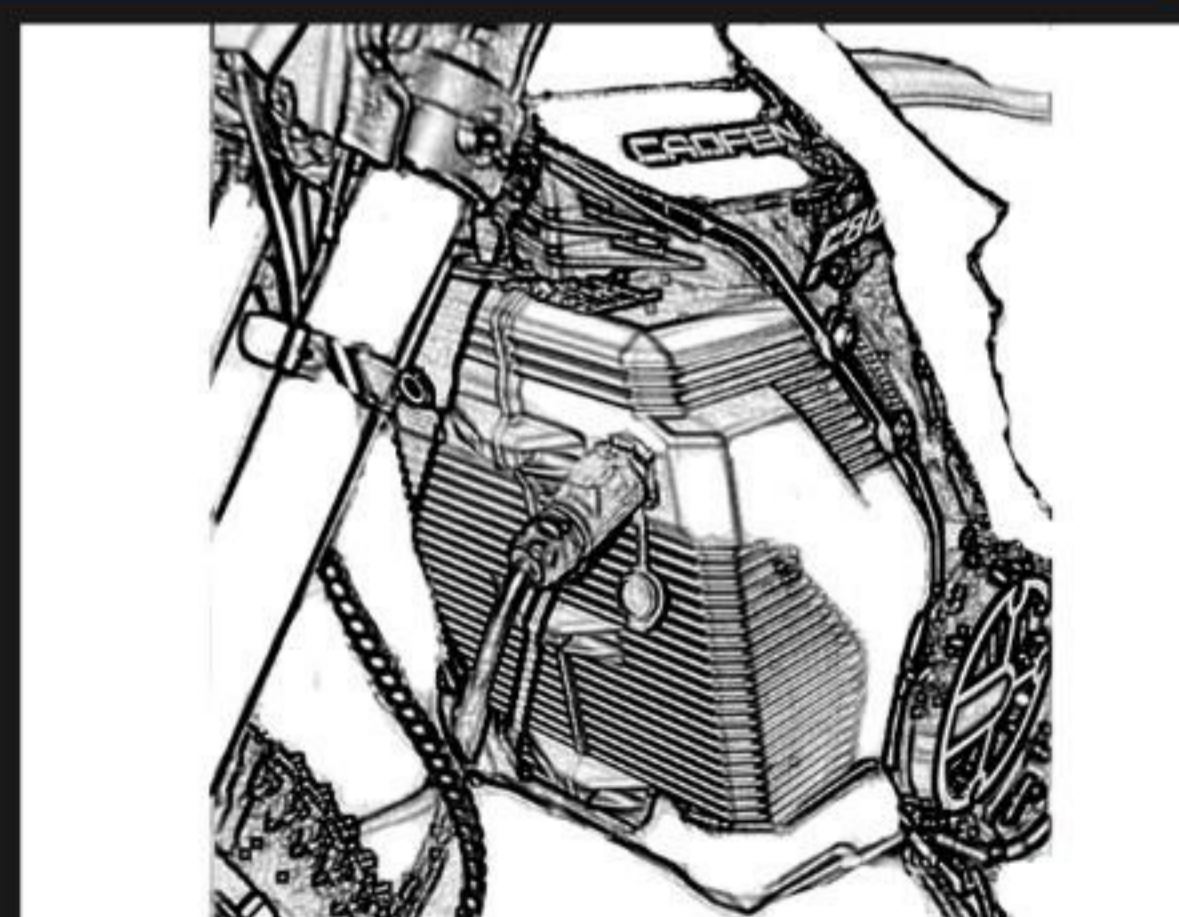
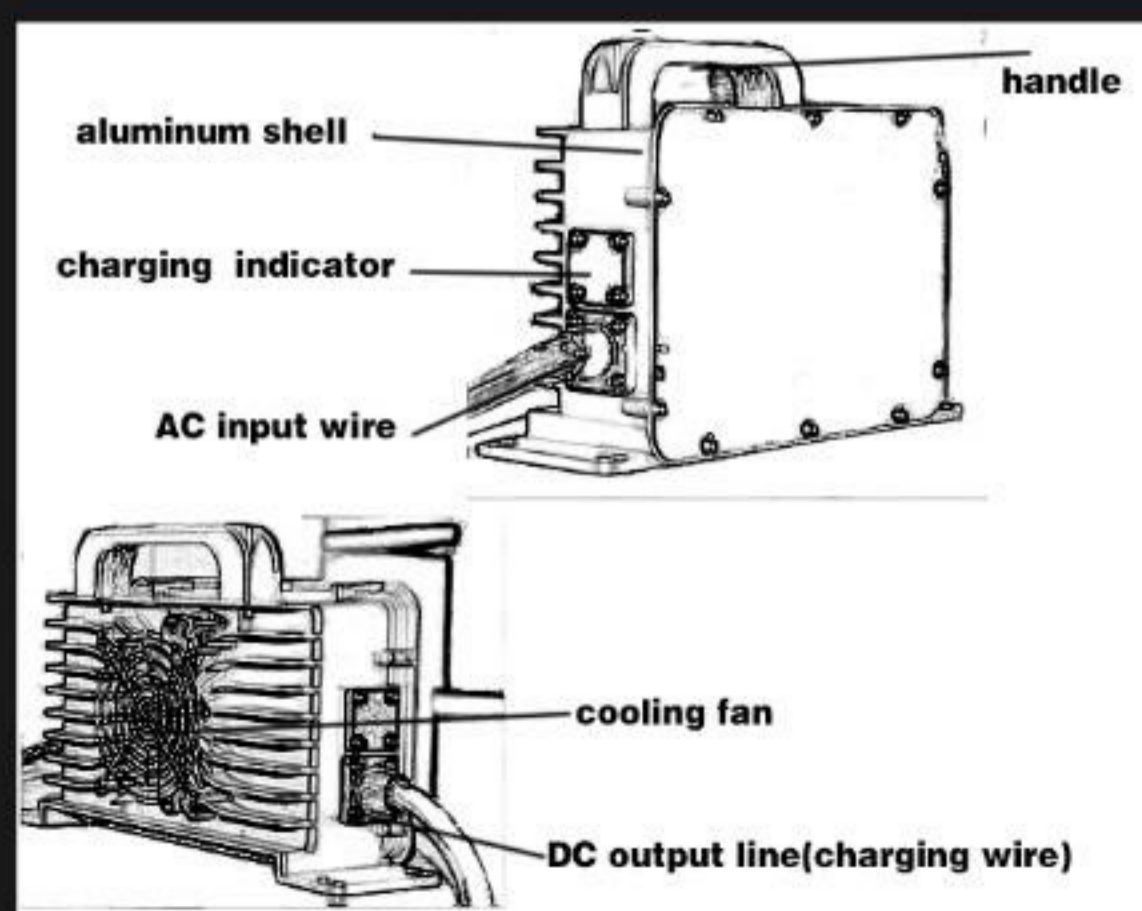
When the charging light is flashing and the power indicator is lower than 20%, please recharge it; the battery power protection strategy will limit the output power at 15%.

Charger Instructions

1. Overview

This smart charger is specially used to charge the power battery of CAOFEN vehicles. It uses a civil 10A or 16A socket power supply. The charging process is controlled by the charging program itself, and it stops automatically when it is fully charged.

2. Product appearance diagram



Product Features

small size and high power	The charging speed is fast, and it can be charged to 80% of the power in two hours at 20 °C;
automotive grade shock resistance	durable;
six items security protections	Dedicated protection, over temperature protection, output short circuit, output reverse connection, output over-voltage, output over-current protection
IP66 level protection	Higher protection, higher security, higher reliability;
CAN intelligent communication	Real-time communication with the vehicle to ensure controlled charging;
wide temperature range operating temperature	It can work normally at -40 ~ 60 °C;
lightweight and portable design	All aluminum alloy die-casting shell, light weight and good heat dissipation.

Environment and power requirements

NO.	item	technical indicators	note
1	operating temperature	-40C ~+60C	
2	Storage temperature	-40C ~+90C	
3	relative humidity	5%~95strong	
4	protection class	IP66	

5	cooling method	forced air cooling	
6	Input voltage Input frequency	AC220V+15%	Pay attention to AC power matching.
7		AC90—140V	AC 220v power supply is strictly prohibited.
		50Hz ± 2%	

AC220V or 110v AC power supply should be selected according to the AC power supply (AC) voltage requirements indicated on the label at the bottom of the charger body, and the rated current of the corresponding charging socket should meet at least 10A (AC).

It is strictly forbidden to use AC220V power supply for AC110V (100V) special charger! Otherwise, there may be serious security risks.

Charging method

5.1 It should be charged in a cool, dry and ventilated place;

5.2 When charging, the charger should be kept away from flammable materials, keep good ventilation and heat dissipation around the charger, and it is strictly forbidden to cover things on the charger;

5.3 Press the battery switch to turn on the battery (the switch light is on);

5.4 Hold the DC output plug of the charger, insert it into the battery charging base, and push the lock in to ensure that the charging head and the battery charging base are fully and tightly connected;

5.5 Insert the AC input line plug of the charger into the appropriate socket (make sure the plug and socket are fully, and reliably inserted), the charging indicator of the charger will turn green, about 3S, the indicator will change from steady green to flashing red, and then the charger fan will automatically turn on and enter the charging state;

5.6 When the battery is fully charged, the charger will automatically stop charging. At this time, the indicator light of the charger will turn solid green and the cooling fan will stop rotating. On the corresponding instrument of the vehicle, the battery level is displayed as 100%, and the flashing battery charging symbol disappears.

5.7 After charging, unplug the charger output plug from the battery and cover with a dustproof plastic cover.

Then, remove the charger input plug from the AC outlet.

Frequently Asked Questions and Instructions

NO.	Phenomenon	Problem	Solution
1	charger, green light, not charging.	The AC power voltage does not match the input AC voltage indicated on the label of the charger.	Replace with an AC outlet that matches the voltage.
2		The charger output plug is not inserted into the battery or is not fully inserted.	Fully insert the charger output (DC) plug into the battery charging socket.
3		Battery switch not turned on	Press the switch, turn on the battery, and the switch light will turn on.
4		The charger does not match the battery.	Contact the dealer or factory for replacement.
5		The charger or battery temperature is too high.	It will be released naturally after the temperature is lowered to within 45°C
6	charging is slow	Temperature below 5 °C	It Change to an environment above 15°C for charging or wait for the battery temperature to rise, the charger will speed up by itself.
7		The battery temperature is higher than 45°C	It will automatically speed up when the battery temperature drops.
8		Charger parent is running out of battery	Check the AC outlet.
9	No response from the charger, indicating that the light is not on	The charger itself is faulty	Contact the seller or manufacturer.

Indicator status description

1	charging process	the red light flashes once every 1S	battery is below 90%
2		the green light flashes once every 1S.	battery 90%~100%
3		green light, always on.	charging finished
4	trouble instruction	the red light flashes once every 3S.	battery failure
5		the green light flashes once every 3S.	charger failure
6		the red and green lights flash alternately.	Input failure

8. Safety precautions

- > Ensure that the charger vent and the space where it is located are kept unobstructed to prevent the charger from overheating.
- > When charging, keep away from heat sources and flammable materials, and charge in a cool, dry and ventilated place.
- > Ensure that the AC power supply voltage and current are consistent with the allowable input voltage and current of the charger.
- > For the sake of safety and electromagnetic compatibility, the three-pin plug of the charger needs to use a socket with a grounding wire.
- > The AC power supply line should not be too long or too thin, so as not to affect the normal charging of the charger.
- > The charger should be placed on a level surface, and the radiator should be kept vertical to ensure good heat dissipation.
- > If the charger is found to be abnormal or damaged during the charging process, please unplug the power plug and charger interface immediately, and contact the supplier.
- > It is strictly forbidden to disassemble the charger by yourself, and there is a danger of electric shock if you open the cover of the charger at will.
- > Prevent damage to the charger wiring harness. If the wiring harness is found to be worn or damaged, please replace it immediately.
- > It is recommended that users perform dust removal treatment on the charger shell at least half a year.
- > The power input end of the charger must be equipped with over-current protection devices (such as fuses, AC circuit breakers).



Notice:

For more information and maintenance manual of EMMO CAO FEN-F80 please visit EMMO's official website: www.emmo.ca or scan the below QR code to learn more!

