JiangSu Ator New Power Co.,Ltd

AT-GF50 service manual

Preface

This maintenance manual will introduce you to the vehicle specifications, maintenance procedures, adjustments and diagnosis of the AT-GF50.

Employees of authorized service providers of JiangSu Ator New Power Co., Ltd. understand this manual and publish maintenance technical newsletters in the future, which can provide better service for users with AT-GF50.

For the branded products or special tools provided in this manual, it

is recommended to obtain these products, parts or tools through JiangSu Ator New Power Co., Ltd.

The information closing date is July 10th, 2025.

Warning

Warning: To reduce the possibility of personal and/or property damage, the following instructions must be followed:

The maintenance manual provided by JiangSu Ator New Power Co., Ltd. is compiled for qualified professional technicians. If, any attempt to repair or maintain the vehicle without proper training and appropriate tools and equipment may lead to vehicle damage or abnormal operation of the vehicle.

The maintenance procedures recommended and introduced in the manual are effective methods for maintenance and repair. Of which, some procedures need to use tools specially designed for them.

Hence, if any1 wants to use replacement, maintenance or tools which are not recommended or recognized by JiangSu Ator New Power Co., Ltd., he/she must make sure that they are not harmful for the personal safety and safe operation of the vehicle.

Contents

Chapter 1 The vehicle information

Main Size			
Length	1850mm	Width	540mm
Height	1250mm	Wheelbase	1400mm
Main Performance			
Curb Weight	100kg(including a battery)	Max Speed	75km/h
Rated Voltage	72V	Max Loading	180kg
Personnel Quote	2		

Frame	
Front Shock Absorber	Straight Tube Type
Rear Shock Absorber	Spring, Oil Damping Type
Front Tire Size	120/70-12
Rear Tire Size	120/70-12
Front Tire Pressure	225±10(Kpa)
Rear Tire Pressure	225±10(Kpa)
Front Wheel Rim (Aluminum)	MT2.75X12 or MT2.50X12
Rear Motor	3.50×12
Front Brake Type	Disc
Rear Brake Type	Disc
Seat Cushion Height	800mm
Battery System	
Battery Type	18650 Ternary Lithium Battery
Voltage	72V
Capacity	29Ah*2
Charger Input Voltage	AC 220V-240V
Charger Output Voltage	83V
Standard Charge Current	5/10A
Standard Charge Time	6/3H
Range	80km
Battery Weight	11.5KG*2
Battery Charging and Discharging Cycles Time	600 Cycles
Battery Usage Temperature	0℃ to 45℃
Battery Storage Environment Temperature	1 Month: -20~60°C 3 Months: -20~45°C 1 Year: -20~20°C
Battery Charging Working Temperature	0℃ to 45℃
Battery Protection System	Over discharge protection, short-circuit protection,temperature protection,overcharge protection,over current protection,balance protection of battery

Dynamic System	
Motor Rated Power	3000W
Motor Max Power	5000W
Others	
Display	TFT instrument
Speedometer Type	Electronic
Headlamp Type and Specs	12V LED
Front Position Light Type and Specs	12V LED
Front Turn Light Type and Specs	12V LED
Rear Turn Light Type and Specs	12V LED
Rear Light and Specs	12V LED
Rear License Plate Light Type and Specs	12V LED

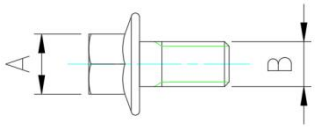
Chapter 2 Standard comp1nt specification and general torque

This chapter is used to inform the customers the specification of the standard comp1nts the vehicle uses and their corresponding repair tools.

Specify the locking torque force for standard fixtures according to ISO standard screw thread depth. **The manual has already explained the locking torque force of the special comp1nts or assembly in relevant chapters.** In order to prevent curling, please lock the multi-fixture assembly to designated torque force in cross mode and progressive manner. Unless otherwise prescribed, the locking torque should be based on clear and dry screw thread; the comp1nts should maintain the room temperature standards.

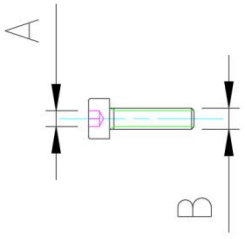
1. The e-scooteruses hexagon flange bolt, whose national standard number is GB/T 5789-2000. For the standard comp1nt specification, repair tools specification and general torque please refer to the following table:

A	B（specs）	Open Spanner/Socket ratchet wrench	General Torque N.m
8mm	M6	8#	10-15
10mm	M8	10#	25-35
12mm	M8	12#	25-35
14mm	M10	14#	35-45
14mm	M12	14#	40-50
19mm	M12	19#	40-50



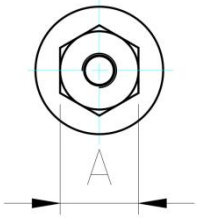
2. The whole vehicle uses hexagonal cylindrical head bolts with the national standard number GB/T70.1-2000. The standard part specifications, maintenance tool specifications, and general torque are shown in the table below:

A	B（specs）	Allen Key	General torque N.m
4mm	M5	4#	5-10
5mm	M6	5#	10-15
6mm	M8	6#	25-35
8mm	M10	8#	35-45
12mm	M14	12#	50-60



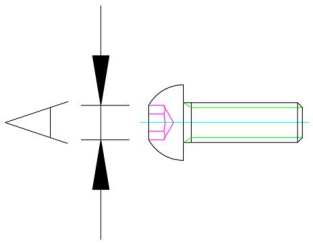
3. The whole vehicle shall use hexagonal flange nuts with the national standard number GB/T 6177.1-2000; GB/T6187.1 hexagonal flange self-locking nuts, standard part specifications, maintenance tool specifications, and general torque are shown in the table below:

A	specs	Open spanner/Socket ratchet wrench	General torque N.m
8mm	M5	8#	5-10
10mm	M6	10#	10-15
12mm	M8	12#	25-35
14mm	M10	14#	35-45
17mm	M12	17#	40-50



4. The whole vehicle uses hexagonal flat round head bolts with the national standard number GB/T70.2-2000. The standard part specifications, maintenance tool specifications, and general torque are shown in the table below:

A	B（specs）	Allen Key	General torque N.m
3mm	M5	4#	5-10
4mm	M6	5#	10-15



5. The whole vehicle uses cross recessed pan head self tapping screws with the national standard number GB/T 845-1985, cross recessed round head screws with the GB/T818-2000 standard, and the maintenance tool is uniformly a cross screwdriver. There is no requirement for torque, just tighten it.

Chapter 3 Dismantle and replacement of parts of the vehicle

Preparation for dismantling and replacement

①Before the dismantling or removal, clean the dust, dirt and foreign matter on the car.

②While dismantling, the paired parts must be put together. The paired parts must be used repeatedly or switched in pairs

③While dismantling, clean all the parts, and put them on the tray in the order of dismantling sequence. Doing so will save the time of assembling and ensure the correct installation of the parts.

④Put all parts in places away from fire and water.

3.1 Removing and Replacing Covers

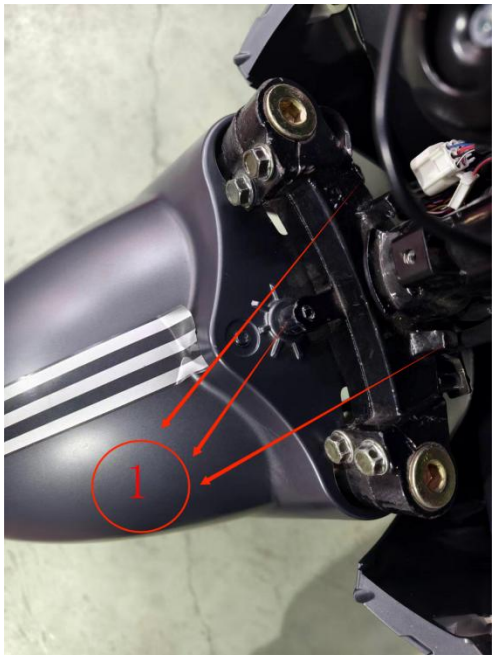
3.1.1 (1) Disassembly and replacement sequence of front upper cover of frame

Estimated time
10min

Removal Tool	
Socket ratchet wrench	10mm
Torx ratchet wrench	5mm
Torx ratchet wrench	4.2mm
Hexagon ratchet wrench	5mm

No.	Part name	Description	picture
1	headlight	（1）Unscrew all 3 screws with (M5) Torx ratchet wrench. （2）Unscrew all 2 screws with a (M4.2) Torx ratchet wrench.	
	headlight	(1) pry off the headlights with a screwdriver.	

2	Front cover	(1) Unscrew this screw with a 5mm Hexagon ratchet wrench.	
3	front wall	（1）Unscrew this screw with a 5mm Hexagon ratchet wrench. Unscrew all 4 screws with a 4.2mm Torx ratchet wrench.	 

4	Front fender	(1) With a 10mm open-ended wrench/socket, unscrew all 3 screws (from the bottom up).	

3.1.2 (1) Disassembly and replacement sequence of front cover of frame

Estimated time
5min

Removal Tool	
Torx ratchet wrench	4.2mm
Torx ratchet wrench	5mm

No.	Part name	Description	picture
1	Front inner clay plate	（1）Use (M4.2) Torx ratchet wrench to remove all 2 screws.	

2	Lock cover	(1) Use (M5) Torx Ratchet Wrench to remove all 1 screw.	

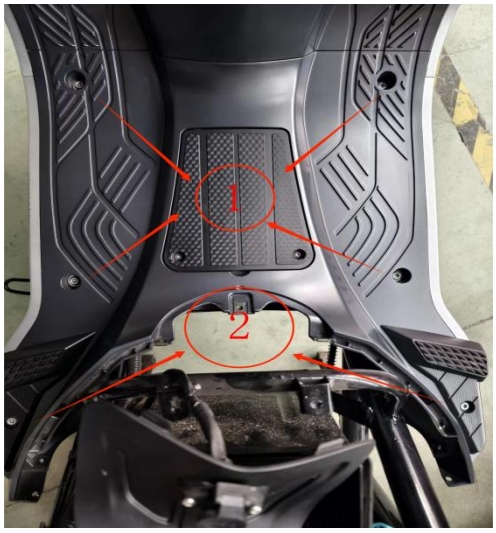
3.1.3 (1) Disassembly and replacement sequence of the middle cover of the frame

Estimated time
20min

Removal Tool	
Torx ratchet wrench	4.2mm
Torx ratchet wrench	5mm
Cross spear head	

No.	Part name	Description	picture
1	charging port	(1) Unscrew this screw with a Cross spear head.	
2	Pedal	(1) Unscrew all 2 screws with a (M4.2) Torx ratchet wrench.	

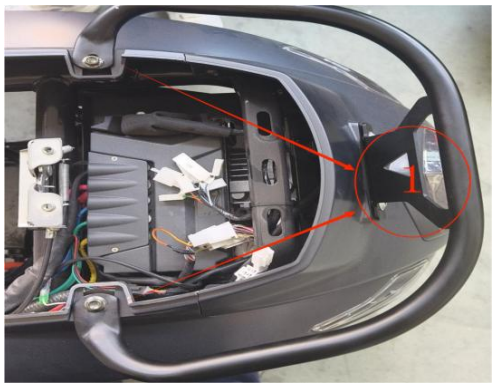
3	Pedal side plate (left and right)	（1）Use a (M4.2) Torx ratchet wrench to unscrew two screws on the left and right.	 
4	Pedal base plate	Remove all 4 screws (left and right) with a Cross spear head, as shown in the second picture.	

5	Pedal	（1）Remove all 4 screws with (M5) Torx ratchet wrench. （2）Remove all 2 screws with (M5) Torx internal ratchet wrench.	

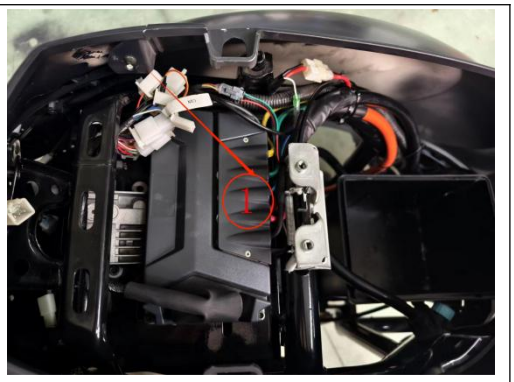
3.1.4 (1) Disassembly and replacement sequence of rear cover of frame

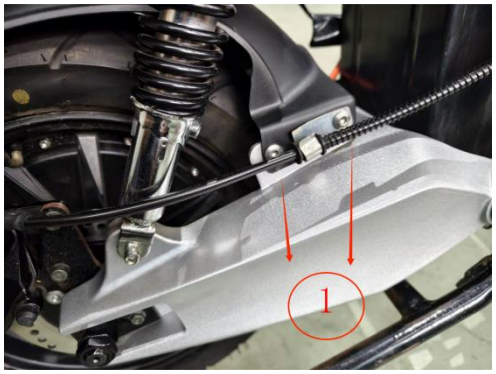
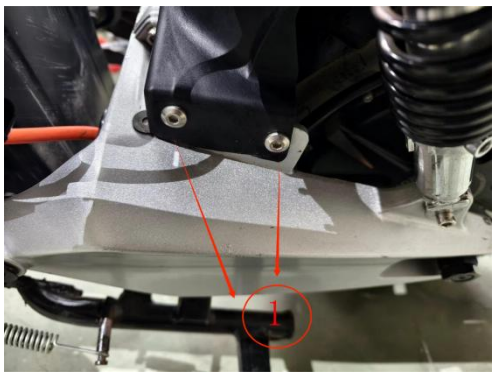
Estimated time
10min

Removal Tool	
Socket ratchet wrench	10mm
Cross spear head	
Hexagon ratchet wrench	6mm

No.	Part name	Description	picture
1	Rear shelf	（1）Unscrew the two screws marked No.1 with a 10mm Socket ratchet wrench. （2）Unscrew the 2 screws marked No.2 with a 5mm Hexagon ratchet wrench.	

			
2	Rear left and right side circumference	（1）Remove all seven screws with the Cross spear head. (2) The third and fourth pictures are divided into left and right sections	 

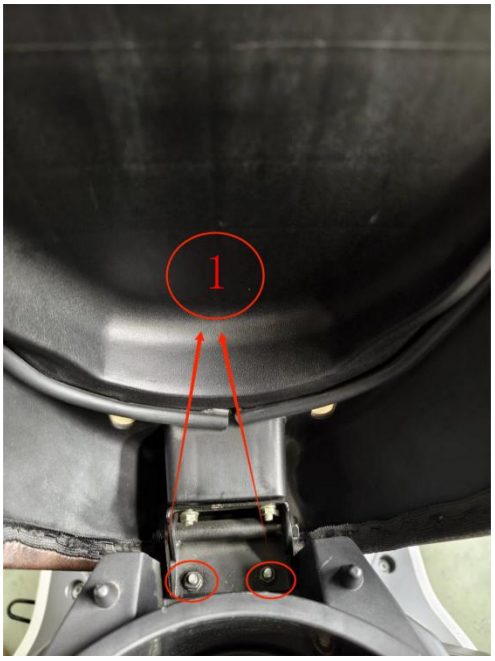
			 
3	Rear taillight	(1) Remove all 2 screws with a Cross spear head.	
4	Rear license plate light	(1) Remove all 2 screws with a 10mm Socket ratchet wrench.	

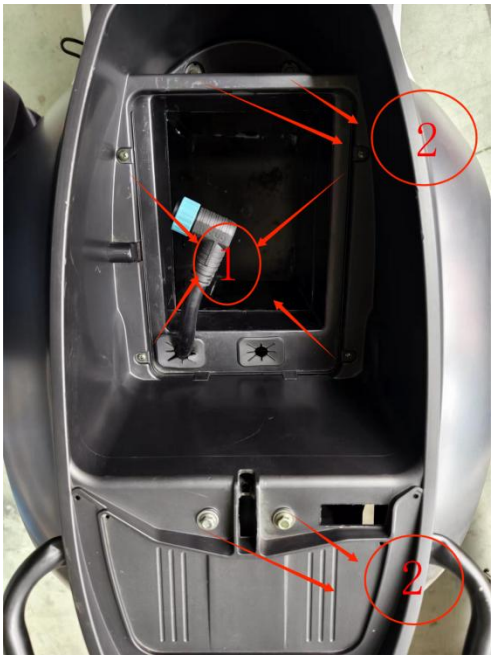
			
5	Rear fender	（1）Remove all 4 screws with a 6mm Hexagon ratchet wrench.	 

3.1.5 (1) Disassembly and replacement sequence of seat cushion assembly

Estimated time
10min

Removal Tool	
Socket ratchet wrench	10mm
Cross spear head	

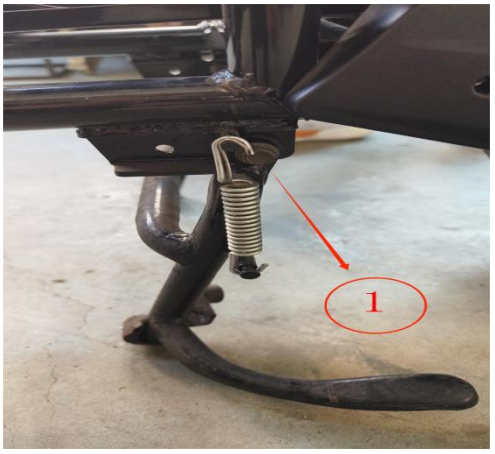
No.	Part name	Description	picture
1	seat	（1）Unscrew all 2 nuts with a 10mm open-ended wrench. Unscrew 2 self-locking nuts with a 10mm Hexagon ratchet wrench.	 

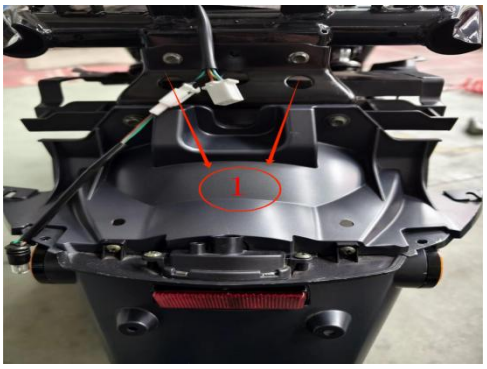
2	Seat bucket	(1) Remove the 4 screws marked No.1 with a 10mm Socket ratchet wrench, and remove the 4 screws marked No.2 with a Cross spear head.	

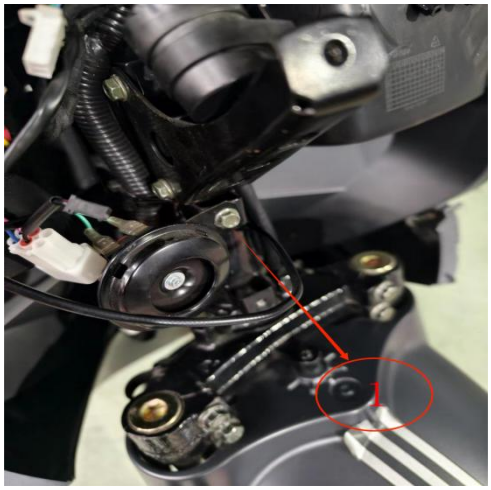
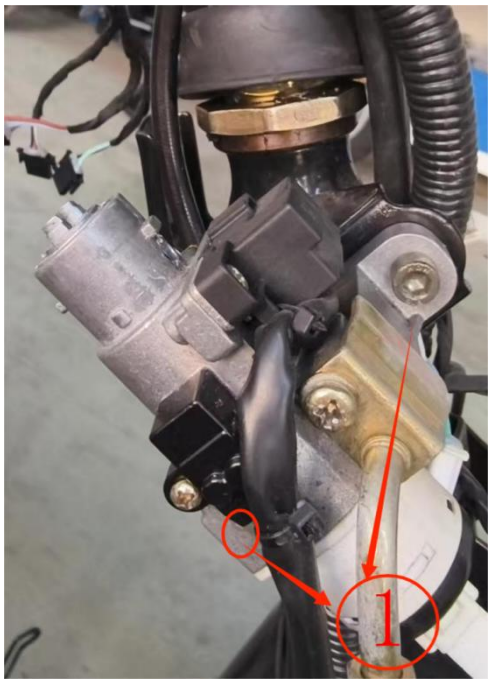
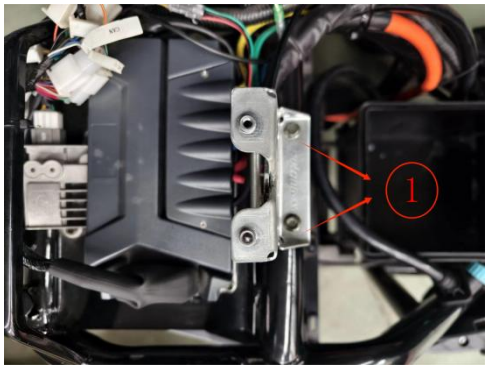
3.1.6 (1) Disassembly and replacement sequence of mechanical parts at the front of frame

Estimated time
20min

Removal Tool	
Socket ratchet wrench	10mm
Cross spear head	
Hexagon ratchet wrench	5mm
Socket ratchet wrench	14mm

No.	Part name	Description	picture
1	Double-brace bracket welding assembly	(1) Remove all 1 screws with a 14mm Socket ratchet wrench. The right is the same as the left.	

2	Welding assembly of single-support mounting bracket	（1）Remove all the bolts with a Cross spear head.	
3	Frame rear bracket	(1) Remove all 2 screws with a 10mm Socket ratchet wrench.	
4	Front panel bracket	(1) Remove all 2 screws with a 10mm socket and wrench.	

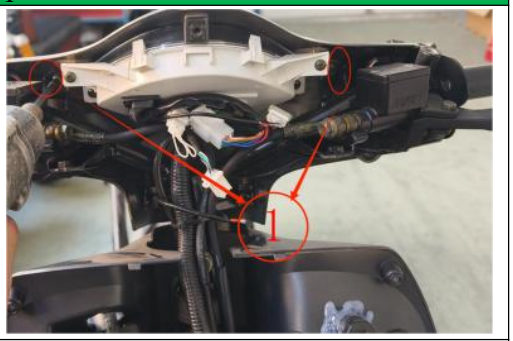
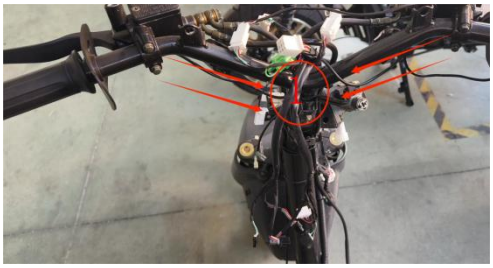
5	Horn	(1) Remove all 1 screws with a 10mm socket and wrench.	
6	electronic lock	(1) Remove all 2 screws with a 5mm Hexagon ratchet wrench.	
7	lock plate	(1) Remove all 2 screws with a 10mm Socket ratchet wrench.	

3.2 Removing and replacing the steering handle

3.2.1 (1) Disassembly and replacement sequence of the assembly in the direction

Estimated time
20min

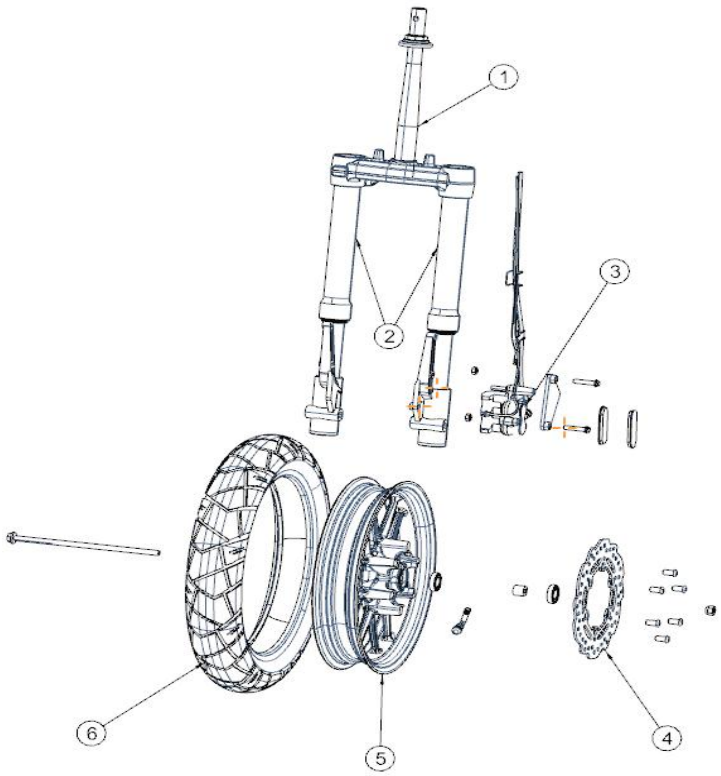
Removal Tool	
Socket ratchet wrench	8mm
Cross spear head	
Hexagon ratchet wrench	5mm
open-ended spanner	14mm
Socket ratchet wrench	14mm

No.	Part name	Description	picture
1	Speedometer	(1) Remove all 2 screws in front of the Speedometer with a Cross spear head.	
2	Left and right switch assembly	(1) it can be disassembled directly.	
3	Left and right front disc brake assemblies	(1) Unscrew all 4 left and right screws with an 8mm socket ratchet wrench.	
4	Left and right handlebar covers	(1) Dismantle the left and right handlebars directly by hand and push them out forcefully.	

5	Front left turn signal	（1）Remove all 5 screws with a Cross spear head. The front right turn signal is also removed in the same way.	
6	Handlebar	(1) Use a 14mm socket ratchet wrench to remove all the nuts and then remove the screws, and then remove Handlebar.	

3.3 Front Wheel and Front Disc Brake System

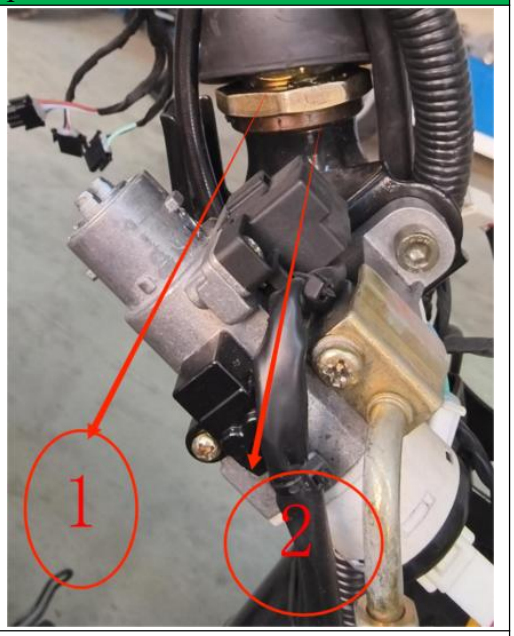
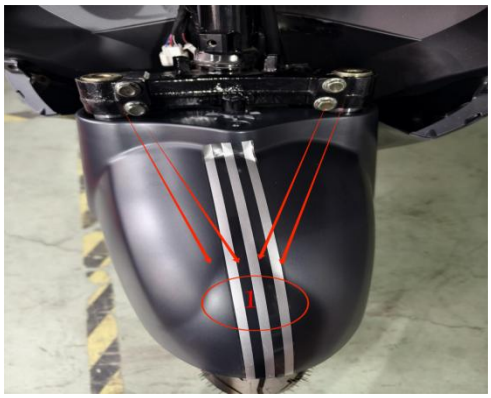
3.3.1 (1) Schematic diagram of front wheel and front disc brake system



(2) Disassembly and replacement sequence of covering parts

Estimated time
10min

Removal Tool	
Hexagon ratchet wrench	8mm
Hexagon ratchet wrench	5mm
open-ended spanner	32mm
open-ended spanner	45mm
Torx ratchet wrench	mm

No.	Part name	Description	picture
1	Directional column	（1）Unscrew all 1 nuts with a 32mm open-ended wrench. （2）Unscrew all 1 nuts with a 45mm open-ended wrench.	
2	Front left and right shock absorption	(1) Unscrew all the left and right 4 screws with a 14mm socket ratchet wrench.	

3	Front brake pump assembly	（1）Unscrew all 2 screws with a (M5) Torx ratchet wrench.	
4	front wheel	(1) Remove the left and right sides of the front wheel with an 8mm Hexagon ratchet wrench.	
5	Front disc brake disc	(1) Unscrew all 3 screws with a 5mm Hexagon ratchet wrench.	

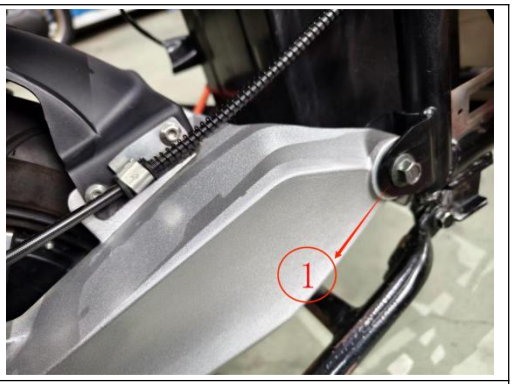
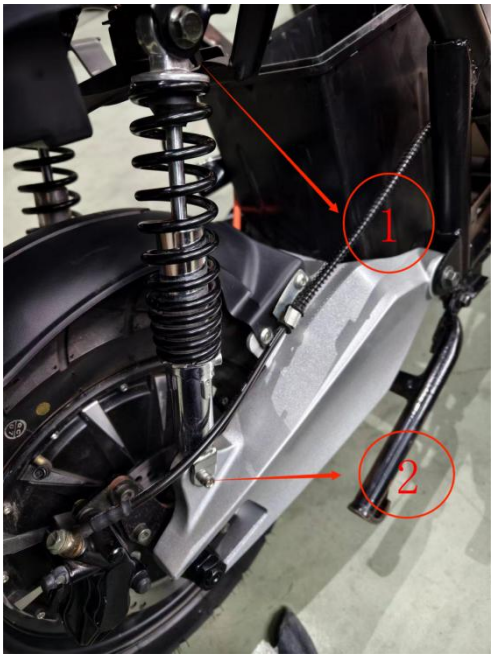
3.4 Rear wheel and rear disc brake system

3.4.1 (1) Disassembly and replacement sequence of rear wheel and rear disc brake system

Estimated time
20min

Removal Tool	
Socket ratchet wrench	16mm
Hexagon ratchet wrench	6mm
Socket ratchet wrench	14mm
Socket ratchet wrench	10mm
Socket ratchet wrench	27mm

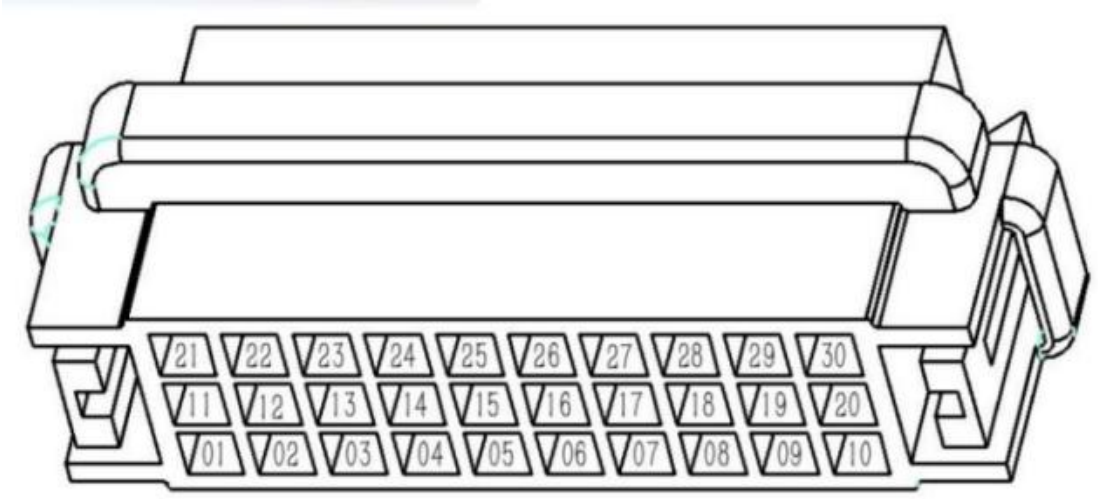
No.	Part name	Description	picture
1	Left rear fork	(1) Unscrew all 1 screws with a 16mm socket ratchet wrench and an open-ended wrench.	
2	Left and right motor housings	(1) Unscrew all the screws with a 6mm Hexagon ratchet wrench.	

3	Right rear fork	（1）Unscrew all 1 screws with a 16mm socket ratchet wrench and an open-ended wrench.	
4	Rear right shock absorption	（1）Unscrew all 1 screws with a 14mm socket ratchet wrench. （2）Unscrew all 1 screws with a 6mm Hexagon ratchet wrench. The left rear shock absorber is also removed in the same way.	
5	Rear wheel	（1）Unscrew all 1 screws with a 10mm socket ratchet wrench. （2）Unscrew all 2 nuts with a 27mm socket wrench.	

6	Rear wheel	（1）Unscrew all 1 screws with a 10mm socket ratchet wrench. （2） Unscrew all 2 nuts with a 27mm socket wrench.	
8	Rear disc brake mounting bracket	(1) Remove all 2 screws with a 6mm Hexagon ratchet wrench.	
9	Rear disc brake disc	(1) Remove all 3 screws with a 6mm Hexagon ratchet wrench.	

Chapter 4 An introduction to electrical parts and their repair

4.1. Controller



PIN	Function	Line color		PIN	FUNTION	Line color
1	Motor hall A	Yellow purple		16	Signal ground /GND	green
2	Reduce power consumption	White blue		17	N－ISDN	purple
3	Side brace	White purple		18	/	/
4	Motor hall 5V	Red purple		19	Motor wheel motion signal	Yellow blue
5	/	/		20	/	/
6	Hall GND	Black purple		21	/	/
7	/	/		22	Motor hall C	blue purple
8	gear	Brown white		23	/	/
9	/	/		24	/	/
10	Electric door lock /ACC	yellow		25	Charging stop	pink
11	High brake	Yellow green		26	Throttle GND	black white
13	Motor hall B	Green purple		27	Throttle Signal	Green white
13	/	/		28	Throttle Power 5V	Red white
14	/	/		29	/	/
15	Lock motor signal	Blue and white		30	/	/

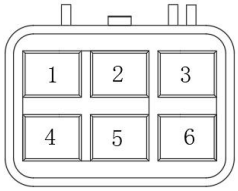
The LED indicator lamp on the controller flashes corresponding table.

Number of LED flashes	Fault type	Fault description	solution
1	Overvoltage protection	The controller detects that the input voltage is too high.	① Please use the battery configured by our company. ② If the controller fails, replace the controller.
2	low-voltage protection	The controller detects that the input voltage is too low.	① Charge the battery to ensure that it is normal. ② Check whether the wiring of the controller is normal. ③ If the controller is abnormal, replace the controller.
3	overcurrent protection	The phase line of the motor is short-circuited or the phase line is short-circuited to the power supply.	① Check whether the motor is normal and replace it. (2) check whether the controller is burnt out and replace the controller.
4	Locked rotor protection	The motor is blocked and cannot run normally.	The motor can't rotate normally due to the excessive load of the battery or the uphill section.
5	HALL protection	HALL input of motor is abnormal.	① Check whether the motor HALL plug-in is well connected with the controller. ② Check whether the motor Hall is burnt out and replace the motor.
6	Power tube protection	Power tube self-check is not normal.	Close the electric door lock and disconnect the battery plug for confirmation and replace the controller.
7	Open-phase protection	One of the phase wires of the motor is disconnected.	① Check whether the connection between the motor phase line and the controller is good; ② The controller is burnt out and replaced.
9	Braking state	The controller is in braking state.	(1) check whether the brake handle is in normal position and whether the brake switch is burnt out, and replace it. (2) check whether the return of the single-support switch is normal and whether the single-support power-off switch is burnt out, and replace it.

10	Self-checking error protection	The power-on self-test of the controller found abnormality.	Close the electric door lock and disconnect the battery plug for confirmation and replace the controller.
11	Overtemperature protection	Controller temperature is too high	When the vehicle is running, the controller temperature is too high, so stop the vehicle for a period of time, and then it can run normally when the controller temperature is lowered.
14	Turn handle protection	Throttle knob failure	Check whether the throttle knob is returned or burnt out, and replace it if burnt out.

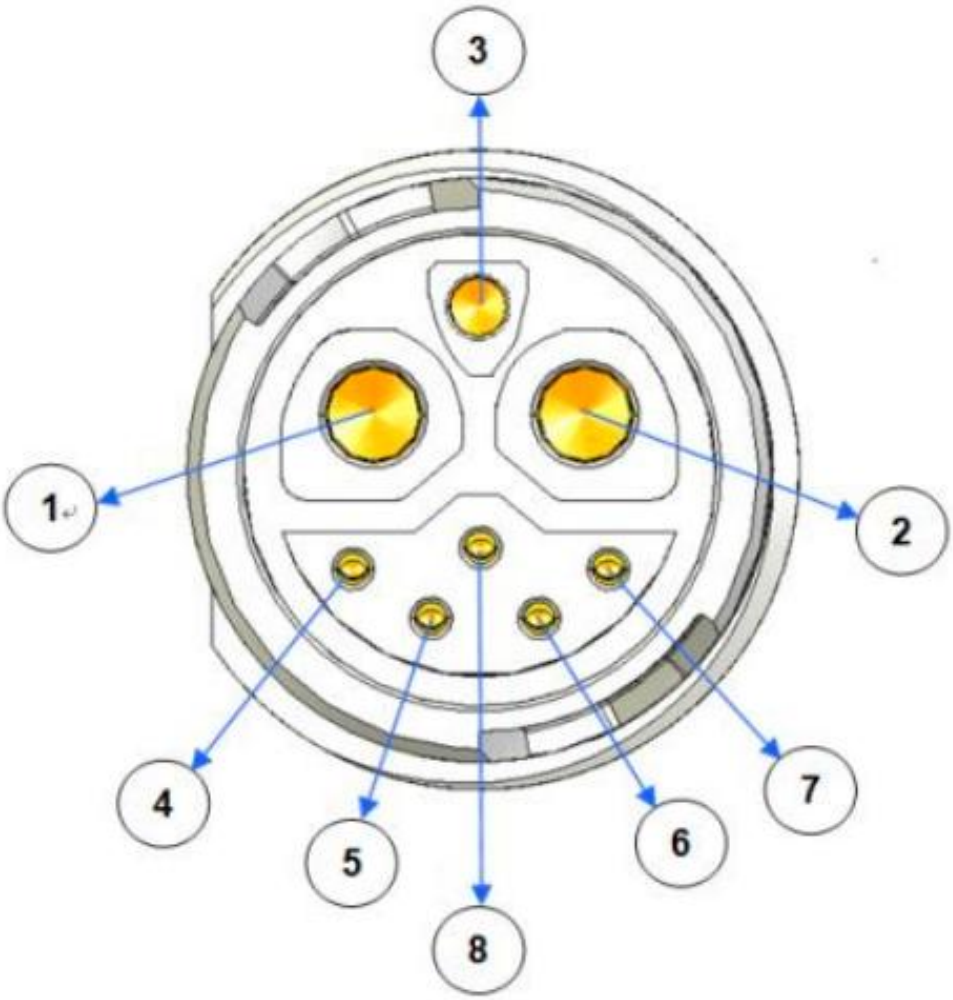
Fault	Description	analyse	Solution	Fault
The e-scooter can't ride and the motor won't turn.	electric door lock	Abnormal electric door lock and poor contact	Open the electric door lock and measure whether the electric door lock is on with a multimeter.	Repair or replace the electric door lock
	Gear key	The shift key is damaged and has poor contact.	Press the key and measure whether the key is on with a multimeter.	Repair or shift key
	Side support switch	Temple switch is damaged.	Lift or lower the temple, and measure whether the temple switch can be turned on or off normally with a multimeter.	Repair or replace the temple switch.
	brake switch	Brake switch is damaged.	Operate the brake switch and measure whether the brake switch can be turned on or off normally with a multimeter.	Repair or replace the brake switch.
	Turn the handle	Handle damage	Processing method of pressing the knob	
	battery	Battery failure	According to the treatment method of battery	
	electrical machinery	Motor failure	According to the treatment method of motor	

4.2 Motor

Plug-in picture	Pin No.	Wire Color	Definition	Wire Color Connected to the Controller
	1	Red	Hall +5V	Red-Purple
	2	/	/	/
	3	Black	Hall Negative Pole	Black-Purple
	4	Yellow	Hall U	Yellow-Purple
	5	Green	Hall V	Green-Purple
	6	Blue	Hall W	Blue-Purple
		Yellow	Phase U	Yellow Wire
		Green	Phase V	Green Wire
		Blue	Phase W	Blue Wire

Fault	Description	Inspection	Solution
Motor does not rotate or has abnormal sounds during rotation	Motor Hall signal malfunction	Manually rotate rear wheel and measure voltage between Hall negative pole and Hall U, V, W with a multimeter to check for normality.	Replace motor Hall sensor.
	Motor lacks phase.	Inspect motor phase wires for poor contact or circuit breaks.	Repair motor phase wires.
	Motor has water ingress.	Disassemble motor to observe for water ingress leading to rust or damage.	Clean or replace motor.
	Plug terminal loose.	Inspect Hall signal connectors for poor contact and circuit breaks.	Repair Hall signal harness or connectors.
	Motor is functioning normally.	Inspect battery, controller, throttle, side stand switch, parking button, and other potential issues.	

4.3 battery

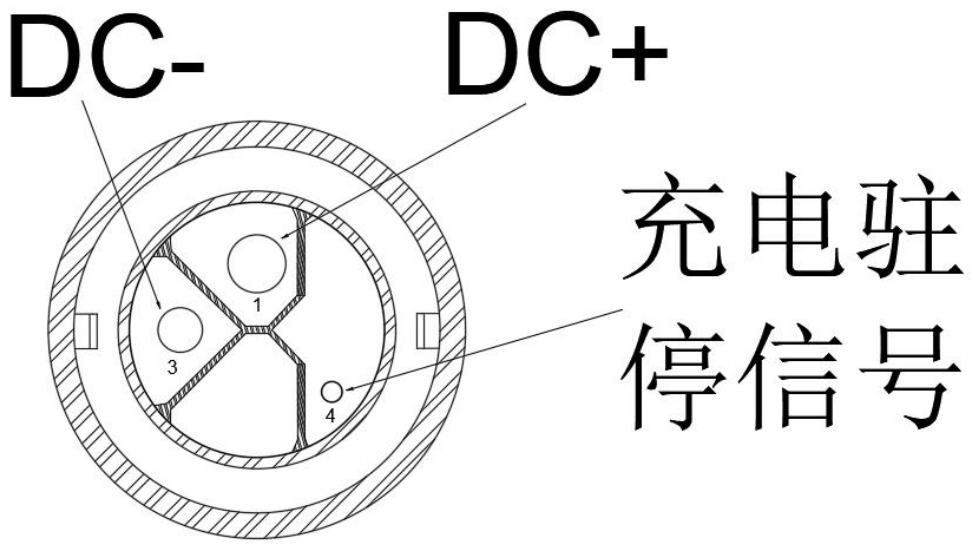


Pin No.	Definition		
1	P+/C+	72V charge/discharge positive electrode	
2	P-	72V discharge negative electrode	
3	C-	72V charging negative electrode	
4	/		
5	CAN H	Communication H	Supplies SOC for display
6	CAN L	Communication L	Supplies SOC for display
7	CAN ID	Communication ID	Distinguish SOC display between two battery groups
8	K-	Ignition Switch Signal	Shorted with P+, battery can output normally

Protection Item	Parameter	Description
Under-voltage Protection	56V	Please recharge the vehicle promptly after use to ensure the battery is adequately charged. Prolonged storage with low battery levels may result in inability to recharge.
Over-voltage Protection	84V	Please use a dedicated charger to charge the vehicle to prevent battery over-voltage protection and ensure normal usage.
Discharge High-temperature Protection	≥65℃	When the battery triggers discharge high-temperature protection, the vehicle should be parked for a period until the battery temperature is ≤55℃ before continued use.
Discharge Low-temperature Protection	≤-20℃	When the battery triggers discharge low-temperature protection, the vehicle should be parked indoors until the battery temperature is ≥-15℃ before continued use.
Charge High-temperature Protection	≥55℃	When the battery triggers charge high-temperature protection, disconnect the charger and allow the battery temperature to decrease to ≤50℃ before resuming charging.
Charge Low-temperature Protection	≤0℃	When the battery triggers charge low-temperature protection, the vehicle should be parked indoors until the battery temperature is ≥2℃ before resuming charging.
Discharge Over-current Protection	50±5A (<10S)	Non-original parts should not be replaced arbitrarily to prevent triggering the battery's over-current protection and ensure normal usage.
Charge Over-current Protection	13±3A (<30S)	Please use a dedicated charger to charge the vehicle to prevent triggering the battery's over-current protection and ensure normal usage.

Battery unable to supply power to the vehicle properly.	Measure the voltage between DC+ and DC- terminals of the charging port using a multimeter set to the direct current voltage range when turning on the ignition switch.
	Check if prolonged storage of the battery has caused depleted; initially charge the battery using a charger.
	Investigate Whether the battery is in a state of discharge temperature protection.
	Problematic Battery Management System (BMS), please replace it.
Battery unable to charge.	Check if the battery is in a state of charge temperature protection.
	Troubleshoot charger issues
	Disassemble the battery and measure the total voltage of the battery cells using a multimeter set to the direct current voltage range; charge the battery cells using a direct current regulated power supply until the total voltage exceeds 64V, then proceed with normal charging using a charger.
	Disassemble the battery and measure the voltage difference between individual cells using a multimeter set to the direct current voltage range; use a direct current regulated power supply to charge the low-voltage individual cells until the voltage difference among cells is consistent.
	Problematic Battery Management System (BMS), please replace it.

4.4 charger



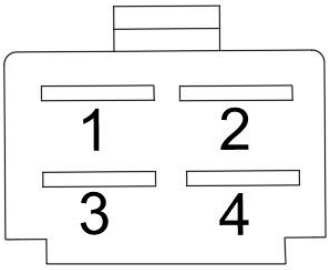
Charging Connection Method: First, connect the output plug of the charger to the charging port on the vehicle or the socket on the battery, then plug the input plug of the charger into the AC socket.

① During charging: Red indicator light stays on continuously;
② Charging completed: Green indicator light stays on continuously;
③Red/Green indicator lights alternately flash: Charging is not normal, please repeat the charging connection method steps again.

Fault	Description	Inspection	Solution
Unable to charge	Charger malfunction	Connect the charger input plug to the charging gun head, and within 15 seconds, measure the voltage of DC+ and DC- with a multimeter in voltage mode to determine if it's normal.	Replace the charger.
	Battery malfunction	Troubleshoot battery issues	
	Poor contact of charging	Inspect the charging plug of the charger or the charging socket on the vehicle.	Repair or replace the charging plug or charging socket.
Indicator light not illuminated	Charger indicator light damaged	Able to charge normally, but indicator light not illuminated.	Repair or replace the indicator light.

Charging parking signal: give a signal to the controller so that the e-scooter can't ride while charging.

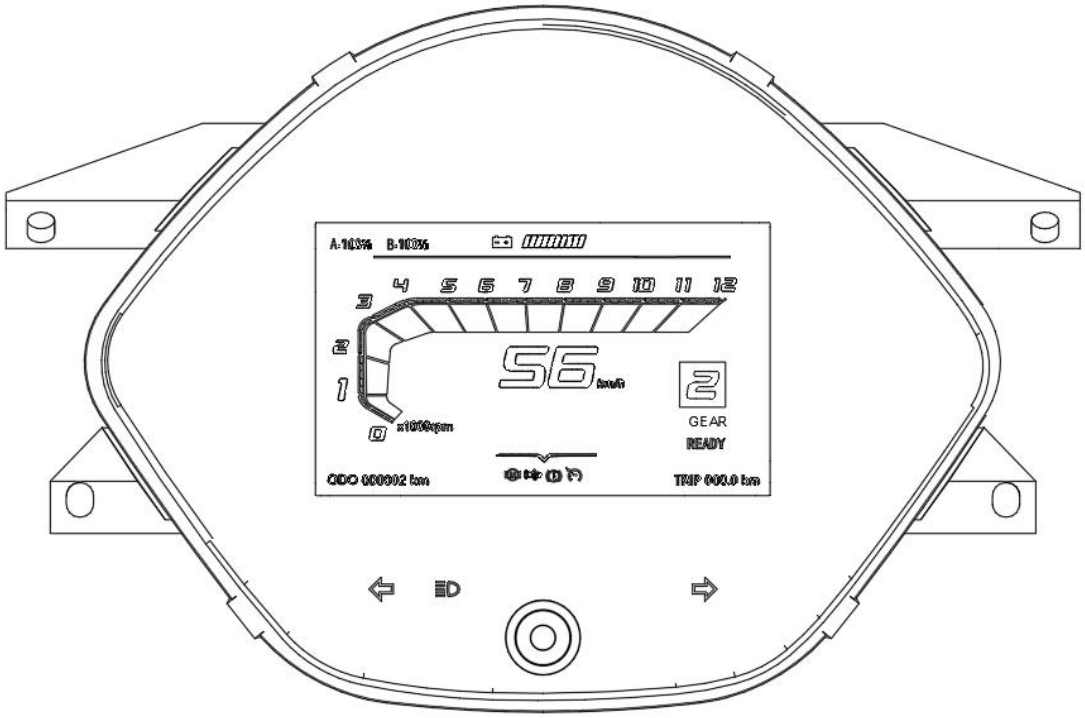
4.5. DC-DC converter: Power supply for lights and Horn.

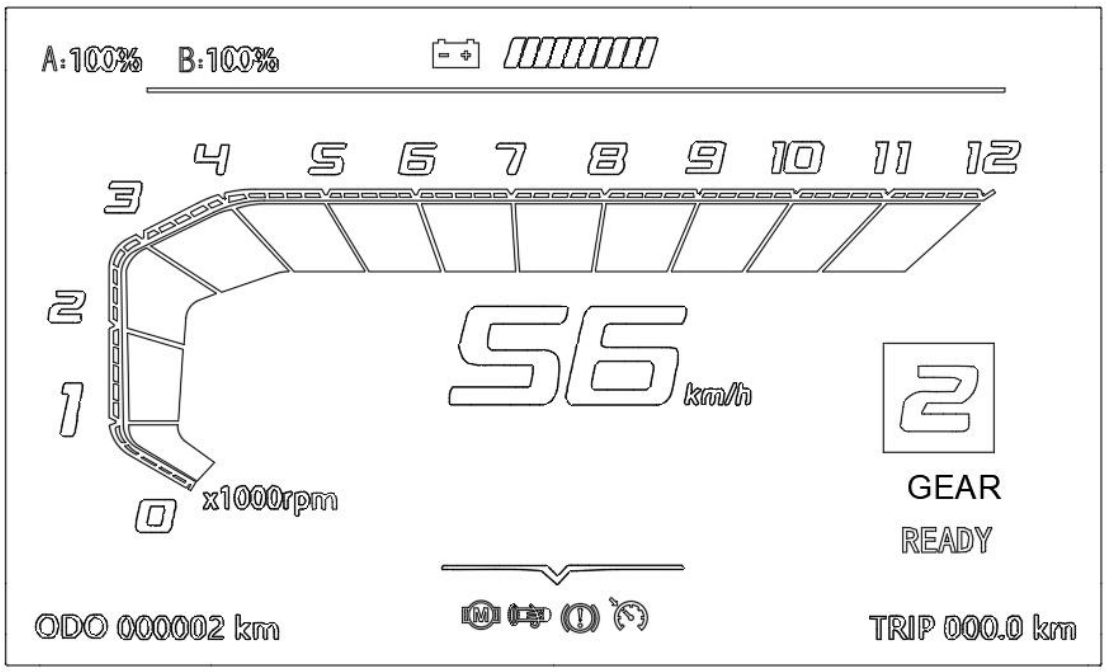


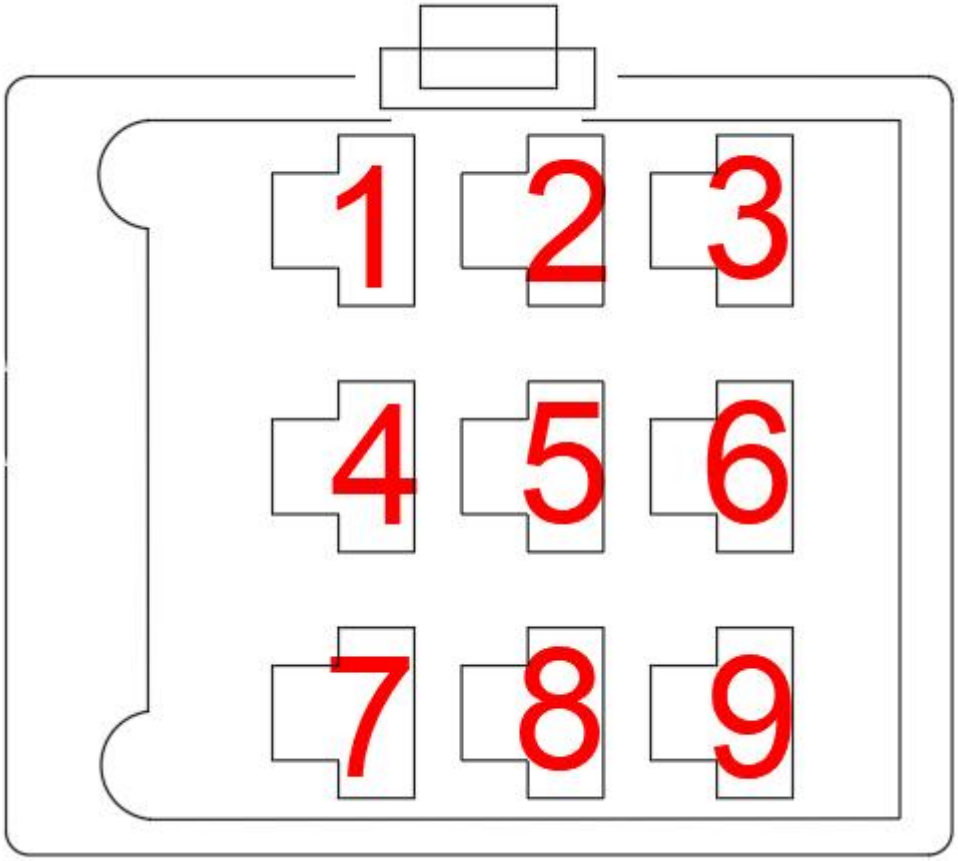
Pin No.	Definition	Parameter	Description
1	Output	12V+	
2	Ignition Switch	72V+	Control the output of the converter
3	Negative Pole	GND	
4	Input	72V+	

Fault	Description	Inspection	Solution
Open the ignition switch, the display does not light up, the lights do not illuminate, the horn does not sound	Abnormal input voltage	Troubleshoot battery issues.	Repair battery.
		Measure the input voltage of DC converter pins 1 and 2 with a multimeter.	Repair wiring harness.
	Abnormal ignition switch voltage	Troubleshoot ignition switch issues.	Repair or replace ignition switch
		Measure if the voltage of pins 2 and 4 of the ignition switch is normal with a multimeter.	Repair wiring harness.
	No 12V voltage output	Measure the voltage of DC converter pins 2 and 3 with a multimeter.	Replace converter
	Poor contact of connectors		Repair or replace connectors.

4.6 instrument







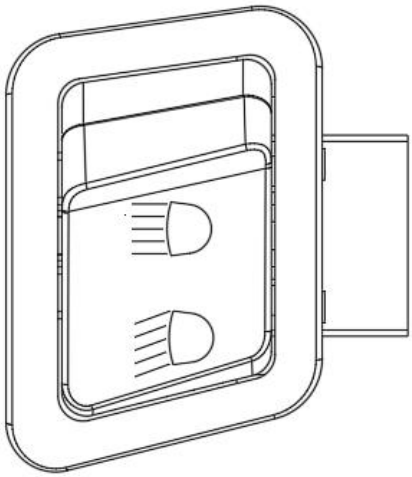
Pin No.	Definition		
1	Left turn signal		Turn on the double flashing or turn signal switch, the body turn signal lights up normally, but the turn signal light on the instrument will not light up, so the instrument problem needs to be replaced.
2	full beam headlight		Turn on the high beam switch, the high beam can light up normally, but the high beam indicator on the instrument will not light up, so the instrument problem needs to be replaced.
3	Power supply negative pole	GND	
4	Right turn signal		Turn on the double flashing or turn signal switch, the body turn signal lights up normally, but the turn signal light on the instrument will not light up, so the instrument problem needs to be replaced.
5	N－ISDN		Communicate with the controller to display the vehicle speed, P gear, handle failure, motor failure, controller failure, etc. When there is no gear and vehicle speed display on the instrument, it is necessary to check whether the connectors of

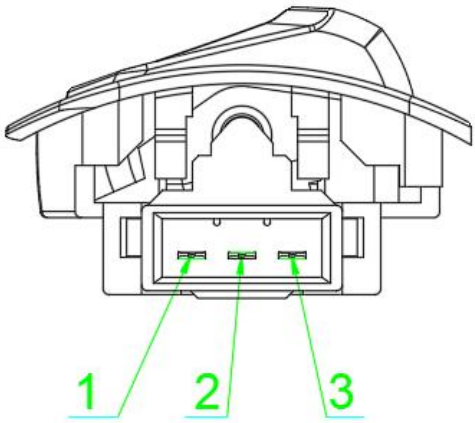
			the instrument, controller and related electrical devices are connected normally.
6	Power cathode	72V+	The electric door lock outputs power supply. When the instrument is not working, it is necessary to check whether the connectors of the battery, the electric door lock and related electrical devices are connected normally.
7	Reduce power consumption		When the instrument shows that there is only one group of battery SOC or the SOC values of two groups of batteries differ greatly, reduce the power of the motor.
8	CAN L		Communicate with the battery and display the SOC. When there is no SOC display on the instrument, it is necessary to check whether the connectors of the battery, shunt, instrument and related electrical devices are connected normally.
9	CAN H		

	Motor Malfunction	When this icon appears on the display, it indicates a malfunction in the motor, requiring troubleshooting of the motor.
	Throttle Malfunction	When this icon appears on the display, it indicates a malfunction in the throttle, requiring troubleshooting of the throttle.
	Brake Malfunction	When there is no braking action and the motor does not rotate, this icon appears on the display, it indicates a malfunction in the brake switch, requiring troubleshooting of the brake switch.

4.7 switch

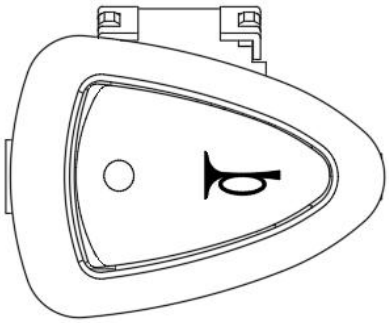
(1) Far and near optical switch

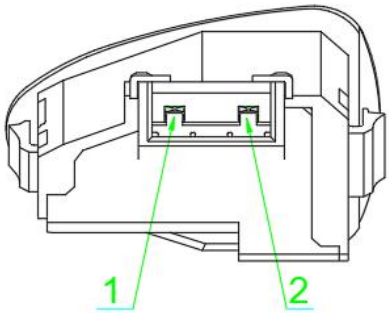




Pin No.	Definition	
1	Low beam	Connect 12V+ effectively. If the switch is damaged and the low beam cannot be turned on, the switch needs to be repaired or replaced. If the switch is normal, the headlight needs to be checked or replaced.
2	Headlight power supply	12V+
3	High Beam	Connect 12V+ effectively. If the switch is damaged and the high beam cannot be turned on, the switch needs to be repaired or replaced. If the switch is normal, the headlight needs to be checked or replaced.

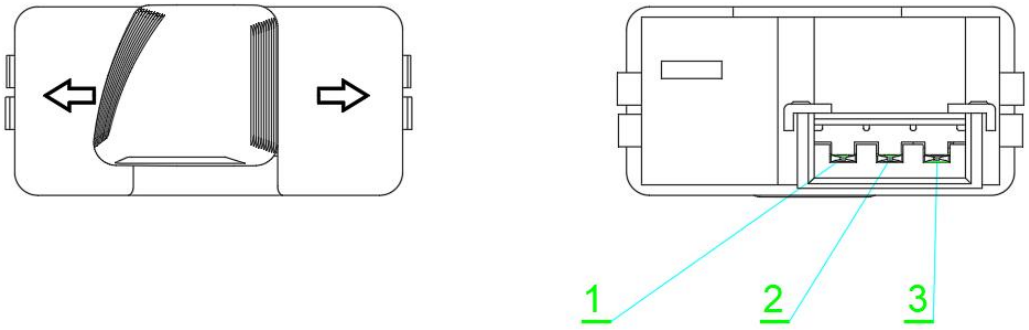
(2) Horn switch





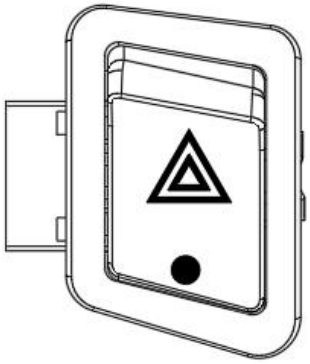
Pin No.	Definition	
1	12V+ power supply	Power the horn
2	horn	When connecting to 12V+ effective, if the switch is damaged and the horn does not sound, repair or replace the horn. If the switch is normal, check or replace the horn.

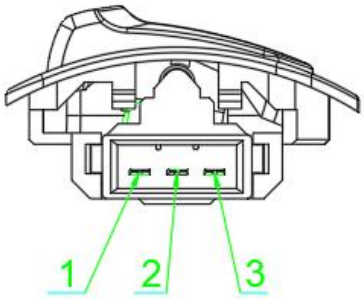
(3) Turn signal switch



Pin No.	Definition	
1	Left turn signal	When the 12V+ power supply to the turn signal is effective, if press the left turn signal and the turn signal does not turn on, repair or replace the switch. If some turn signals do not turn on, it is necessary to troubleshoot or replace the lights that do not turn on.
2	Right turn signal	When the 12V+ power supply to the turn signal is effective, if press the right turn signal and the turn signal does not turn on, repair or replace the switch. If some turn signals do not turn on, it is necessary to investigate or replace the lights that do not turn on.
3	Turn signal power supply	12V+, when the power is supplied through the output of the flasher, press the turn signal switch, and measure the voltage with the DC voltage range of a multimeter. If the voltage is abnormal, it is necessary to troubleshoot or replace the flasher.

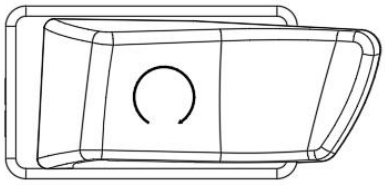
(4) Double flashing switch

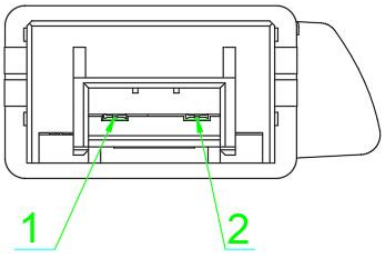




Pin No.	Definition	
1	Turn signal power supply	12V+, supply power through the output of the flasher, press the turn signal switch, and check or replace the flasher when the voltage measured by the multimeter DC voltage range is abnormal.
2	Right turn signal	Connect the power supply of the turn signal 12V+effectively. Press the right turn signal switch. When all the turn signals don't light up, the switch needs to be repaired or replaced. When some turn signals don't light up, it needs to be checked or replaced.
3	Left turn signal	Connect the power supply of the turn signal 12V+effectively. Press the left turn signal switch. When all the turn signals don't light up, the switch needs to be repaired or replaced. When some turn signals don't light up, it needs to be checked or replaced.

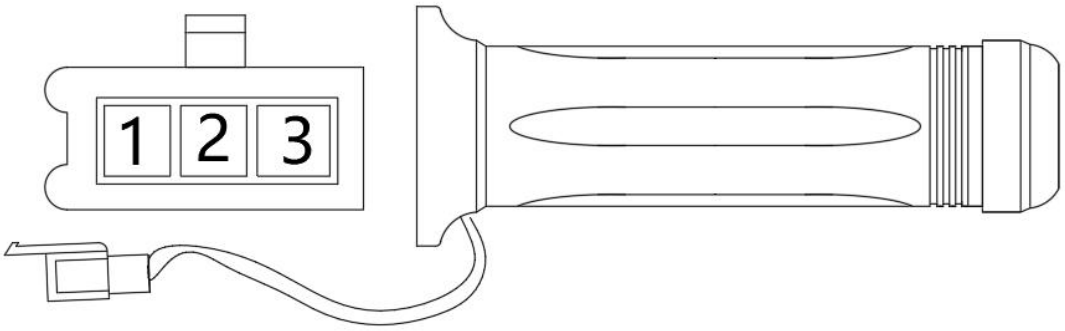
(5) gear switch





Pin No.	Definition	
1	gear	When connecting to GND effective, and the switch is damaged, so it is impossible to switch gears. The switch needs to be repaired or replaced.
2	negative pole	GND

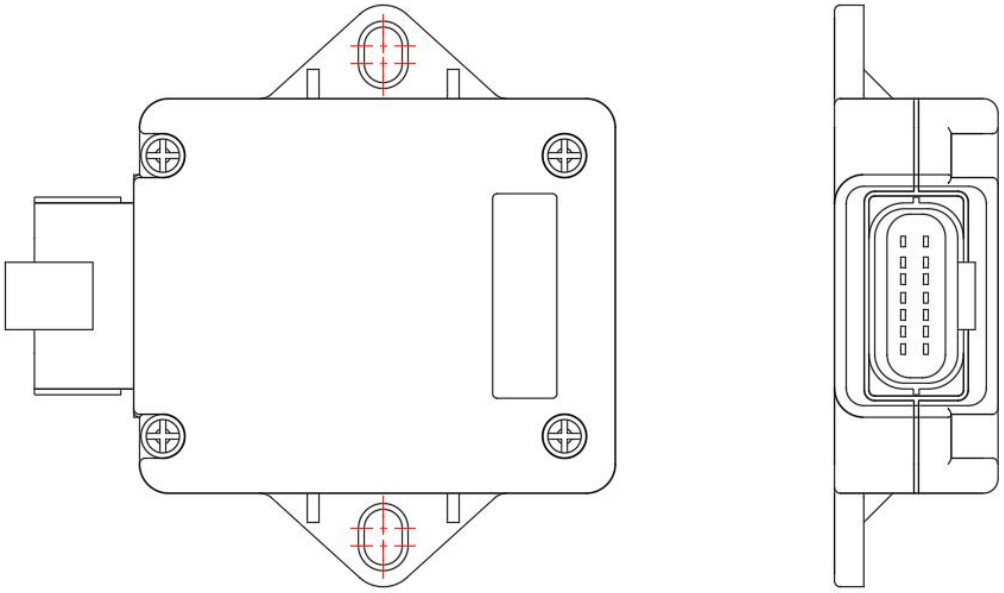
4.8 Throttle

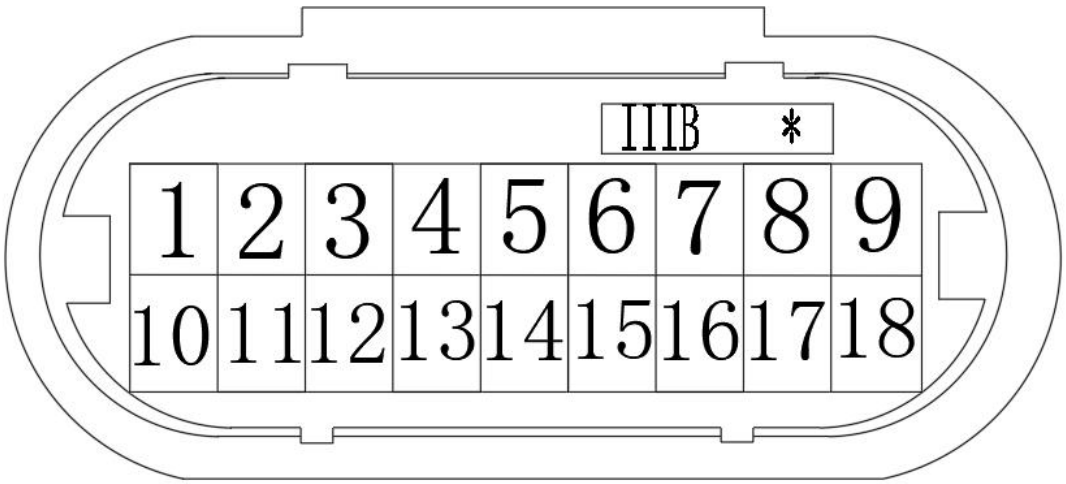


	Pin No.	Definition	
3P plug	1	Throttle 5V+	Power supply by the controller, when the vehicle powered on, measure the 5V+ and GND negative terminals of the handlebar with the DC voltage range of a multimeter to be 4.2V. If this is not normal, it is necessary to troubleshoot the controller issue.
	2	Throttle signal	Output the signal to the controller. When the vehicle powered on, use the DC voltage range of a multimeter to measure the voltage of throttle signal and the negative GND of the throttle. Rotate the throttle voltage from 0.8 to 4.2V. If the voltage remains unchanged, the Hall element in the throttle is damaged. The Hall element, throttle, or the entire right switch assembly can be

			replaced.
	3	Negative Pole of Throttle	GND

4.9 burglar alarm





PIN	Function	Line color		PIN	FUNTION	Line color
1	/			10	negative pole	green
2	Knob solenoid valve control	Red white B		11	Negative pole of knob solenoid valve	Black white B
3	72V positive electrode	red		12	Negative pole of knob indicator lamp	Black B
4	electric door lock	yellow		13	The knob triggers the negative pole of the key.	Blue B
5	Left turn signal	orange		14	/	
6	Right turn signal	light blue		15	Lock motor signal	Blue white
7	12V positive electrode	black		16	Knob indicator control	Red B
8	Buzzer positive pole	Red grey		17	Wheel motion signal	Yellow and blue
9	Buzzer cathode	black grey		18	The knob triggers the key signal	Pink B

Fault	Description	Inspection	Solution
There is no response when press the remote control, can't turn on the Ignition switch	When pressing any button on the remote control, the vehicle does not respond. Observe whether the indicator light on the remote control is on	Remote control battery is dead	Replace the remote control battery
	Battery malfunction	Follow the procedure for the battery	
	DC converter malfunction	Follow the procedure for the DC converter	

When there is no response when pressing the remote control, the mechanical key can be taken out from the remote control handle and inserted into the electric door lock for emergency use.

Report errors and advice

If you find any errors or if you have any advice to manual produced by JiangSu Ator New Power Co., Ltd., we would like to listen.

You can report the error and advice toJiangSu Ator New Power Co., Ltd. through email, our contacting information is as follows:

While contacting, please prepare the following info.:

- Your name:
- Your vehicle's identification No.
- The description of the issue that you are concerned with
- Necessary relevant info.(such as a sample or marked page)

JiangSu Ator New Power Co., Ltd.will reply to your problem in the following methods:

- Present your problem to relevant repair engineers
- Ask relevant repair engineers to reply
- Provide the answer to your problem in 10 working days

We welcome ATOR customers to send their concerned issue to After Sale Department of JiangSu Ator New Power Co., Ltd. Tel: +33 643434610

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