

# Disassembling and Assembling

## How to disassemble and assemble the controller box

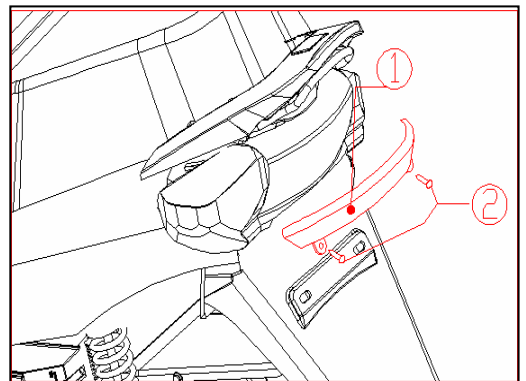
### 1. Disassembling of controller box

Tools:

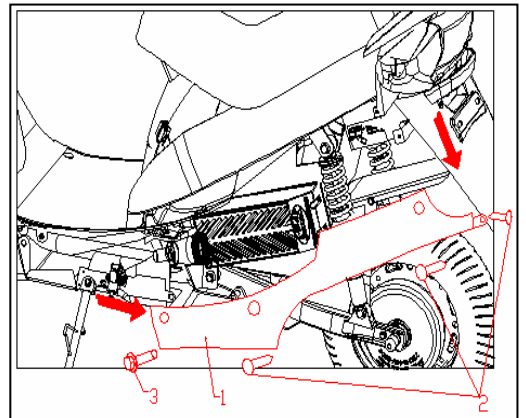
Phillips screwdriver, 8# wrench, scissors or penknife.

Steps:

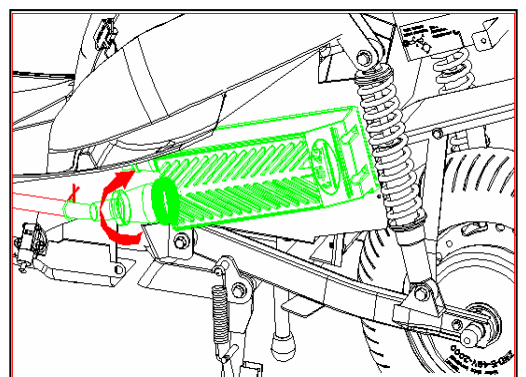
1) First dismantle the rear bottom cover (1) . Step: use the Phillips screwdriver to dismantle the screws(2) which fixes the rear bottom cover, and then pull the rear bottom cover backwards, the rear bottom cover can be taken down.



2) Dismantle the left side cover (1). Step: use the Phillips screwdriver to dismantle the 3 screws(2) and use the wrench to dismantle the flange bolt(3) which fixes the left side cover, then carefully pull out the bottom of the left side cover and push upwards, the left side cover can be taken down.

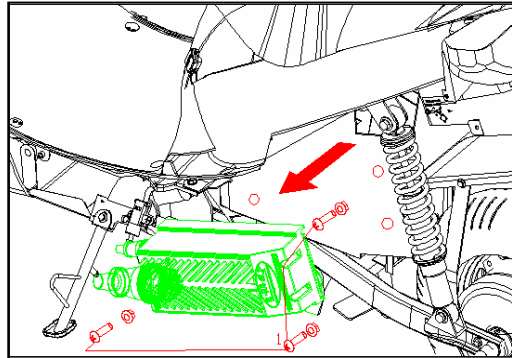


3) Use the scissors or penknife snip the belt which ties the controller wire, then pull out the plugs one by one which connect controller wire and cable. Unscrew the nut of the big plug of the controller, then pull it out. To pull the plug out it needs some force!



4) At last, use the Phillips screwdriver to dismantle the 3 screws which fix the controller to the frame, then the controller can be taken down.

*\*Please note: Please absolutely make sure that the main switch is in OFF position while you disassemble or assembling the controller!*



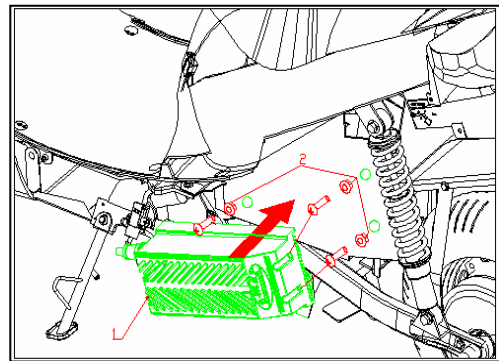
## 2. Assembling the controller box

Tools:

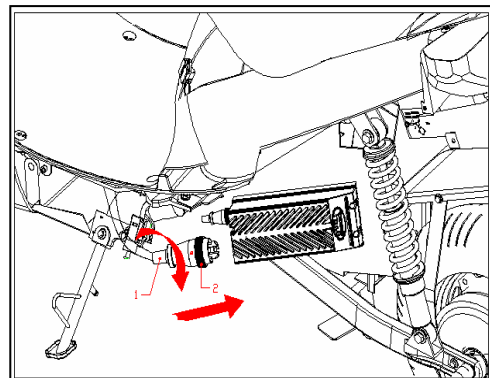
The Phillips screwdriver, 8# wrench, scissors or penknife.

Steps:

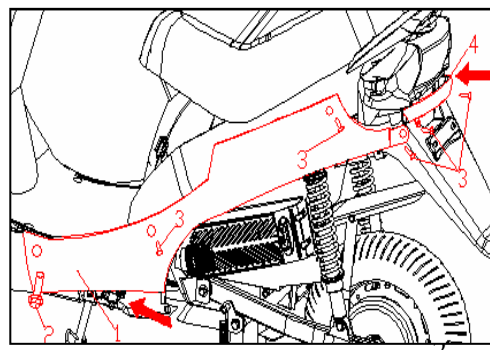
1) Put the controller (1) to the frame, and then use the Phillips screwdriver to tighten the 3 screws(2) which fix the controller to the frame.



2) Insert the big plug(1) into the controller, tighten the nut(2), then connect the controller signal lines with main cable one by one, tidy the lines and tie up.



3) Put the left side cover (1) to the scooter body cover. Pay attention to the position and pull ahead to make sure there is no clearance between the left side cover and the scooter body cover. Use the wrench to tighten the flange bolt (2), Phillips screwdriver to fix screws (3). Put on the rear bottom cover(4). The installation of the controller is finished.



# How to change the motor

*\*Please note: Before changing the motor, please cut off the power. Turn the main switch to "OFF" position. Operating with electricity is forbidden!*

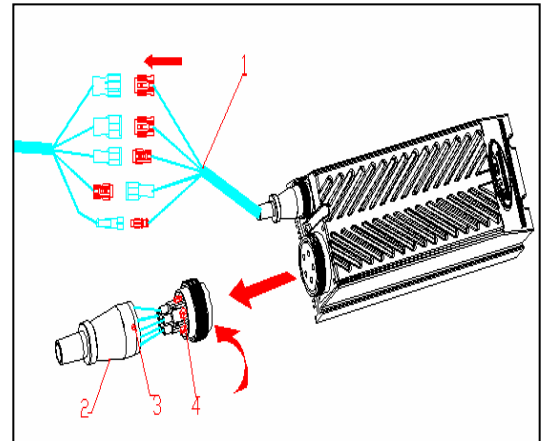
## 1. Disassembling the motor

Tools:

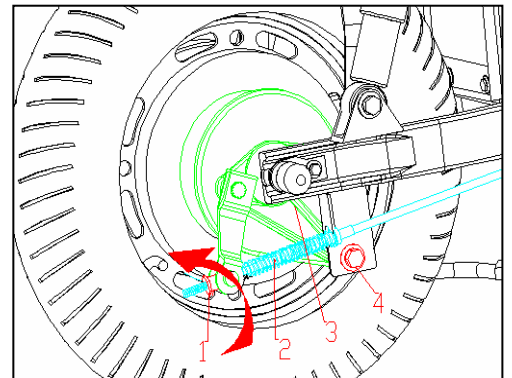
3# screwdriver, 6# screwdriver, 8#13# socket wrench, 14#21#24# wrench and scissors.

Steps:

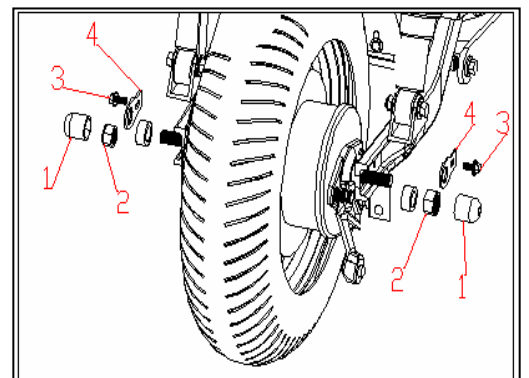
- 1) First the rear bottom cover and the left side cover must be disassembled (to disassemble the rear bottom cover and the left side cover please see the step 1 and 2 of how to disassemble the controller). Now, disassemble the motor line. Find the small screw (3), use the 3# screwdriver to unscrew it. Hold the plug with both hands, turn anticlockwise and pull it out. Now use 6# screwdriver to disassemble the motor lines (4) one by one (*green, blue and yellow wire, only!*). Please keep the black and red wire connected. Use the scissors to snip the belt which ties the motor lines together. Then unplug the five signal lines (1)



- 2) Use the 14# wrench unscrew the adjusting nut (1) of the rear brake line (2) and pull out the brake line.
- 3) Find the fixed bolt of the motor drum cover (4), use the 13# wrench unscrew it.



- 4) Remove the "e-max" plastic cover (1) and use the 21#(right side) 24#(left side) multiplex wrench to unscrew the flange nuts(2) on the two sides of the motor axle. Now use 8#socket wrench to unscrew the flange bolt (3) of the spacer (4) on the two sides of the motor axle. Use the scissors to snip the belt of the motor line, the wheel motor can be taken out and removed.



*\*Please note: We recommend always to change the complete rear wheel in case of an motor brake down.  
DO NOT disassemble the motor from the wheel!*

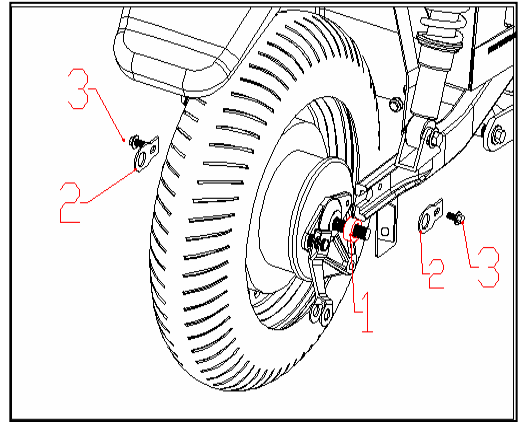
## 2. Assembling the motor

Tools:

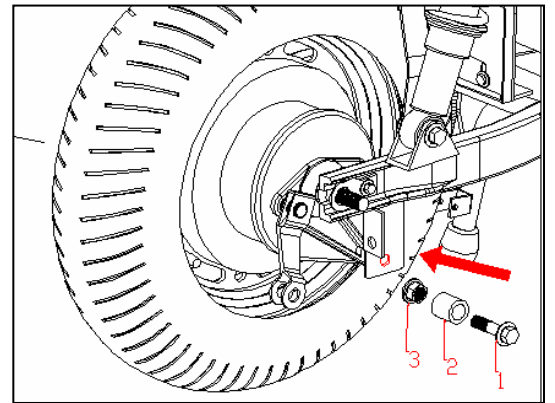
3# screwdriver, 6# screwdriver, 8#13# socket wrench, 14#21#24# wrench and scissors.

Steps:

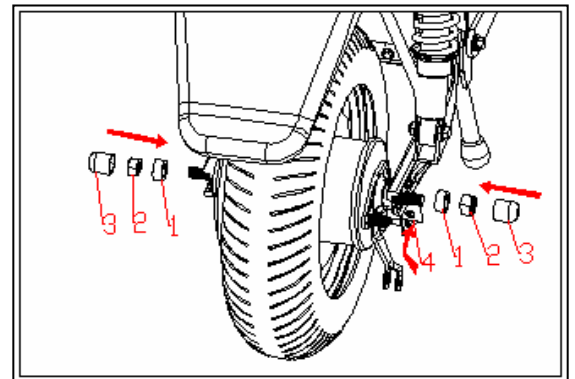
1) First put a 12mm high bushing (1) on the drum cover, then put the motor into the rear brake stay. Put the spacers (2) on both sides of the motor axle, then use the 8# socket wrench to tighten the M6x12 flange nuts(3).



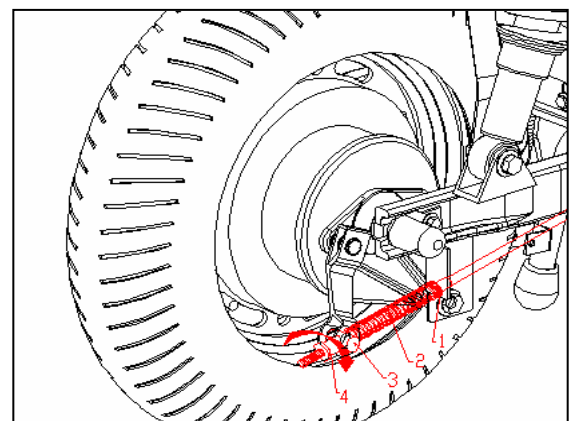
2) Turn the drum cover and match it to the position of the rear brake stay. Put M6 flange bolt(1) through the 14.5mm bushing (2). Then put the M6 flange nut (3) into the opposite side of the drum cover hole, don't tighten it for the moment.



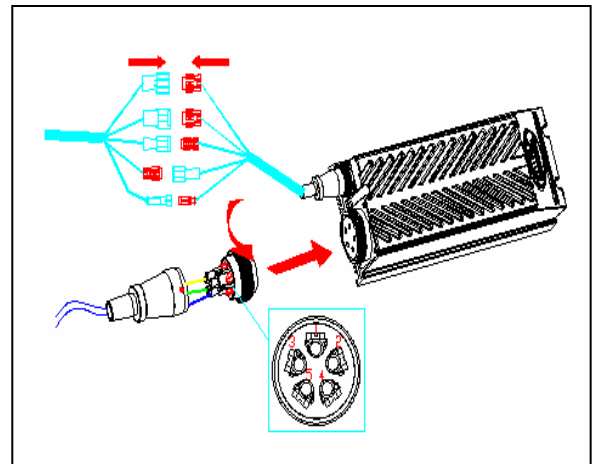
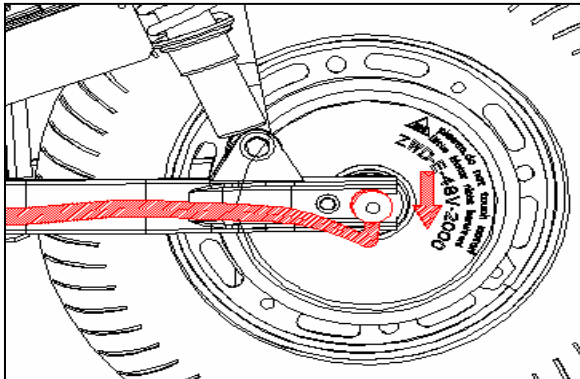
3) Now, put the 8mm bushing (1) on the two sides of the motor axle. Use 21#24# wrenches to tighten the flange nut (2). Cover the nuts with the e-max axle cover(3) After use the 13# wrench to tighten the fixed bolt(4) of the rear brake stay and drum cover.



4) Put the brake line(1) through the fixed hole of the rear brake stay, enclose the spring(2) through the pin of the drum brake arm(3). Use 14# wrench to screw on the adjusting nut(4) and adjust it to a proper position.



4) Bind the motor lines (*Must face downwards, see drawing below!*) along the arm of the rear stay and put the three thick motor lines through the big plug and connect orderly (1=yellow, 2=green, 4=blue). Insert the big plug to the controller, connect and tidy the small plug the motor signal lines.



5) At last, assemble the left side cover and the rear bottom cover. (See the step3 of the installation of the controller).

*\*Please note: When tightening the nuts on the two sides of the axle and the drum brake screw, the torque must reach the minimum standard.*

*Screw of drum brake: 30-35Nm*

*Nuts of axle: 65-85Nm*

# How to disassemble and assemble the front top cover and the front cover; changing the front headlight bulb

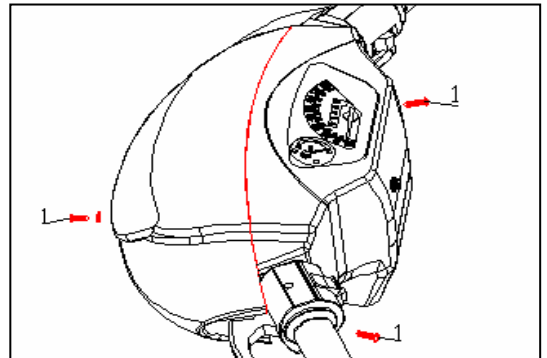
## 1. Disassembling of the front top cover

Tools:

6# Phillips screwdriver.

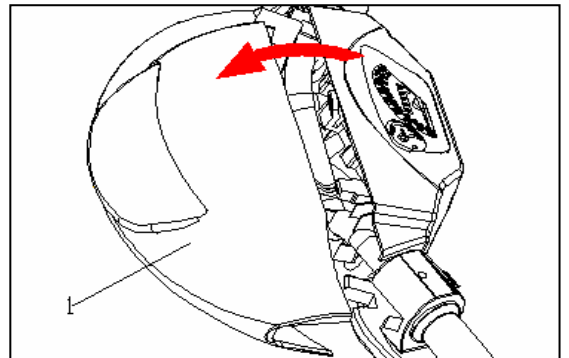
Steps:

1). First use the 6# Phillips screwdriver to disassemble the 2 screws and the bolt of the front top cover.



2). Then use your hands to hold the front top cover, flap the connection point between the speedometer cover and the front top cover, the front top cover will be remove easily.

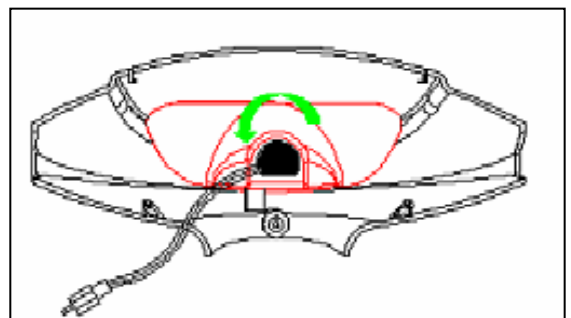
Please note: when flapping, must be careful, keep gently.



## 2. Changing the bulb of the front headlight

Steps:

Take up the front top cover as above, turn the lamp holder anticlockwise. When the lamp holder is separated from the front top cover, grasp the lamp holder, press the bulb carefully inside and turn it to remove.



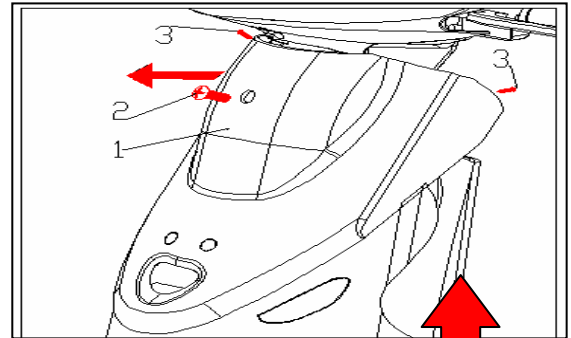
### 3. Disassembling the front cover

Tools:

6# Phillips screwdriver.

Steps:

- 1). Use the 6# Phillips screwdriver to unscrew the bolt(2) of the front cover and the screw(3) of the fixed cover.
- 2). Grasp the top of the front cover and pull; the front cover can be removed.



### 4. Assembling of the front cover

Tools:

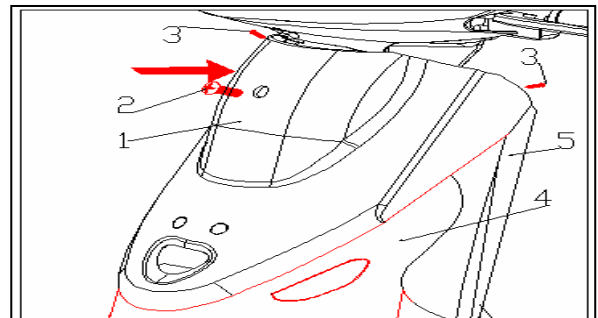
6# Phillips screwdriver.

Steps:

- 1). Grasp the front cover (1); make sure the position of the bottom of the front cover matches the front light cover. Then put on the front cover, make sure the front cover (4) matches the front store-case (5).
- 2). Use the 6# Phillips screwdriver to tighten the bolt (2) and screw (3) of the front cover.

*Torque of screw: 16kgf.cm*

*Torque of bolt: 10Nm*



### 5. Assembling of the front top cover

Tools:

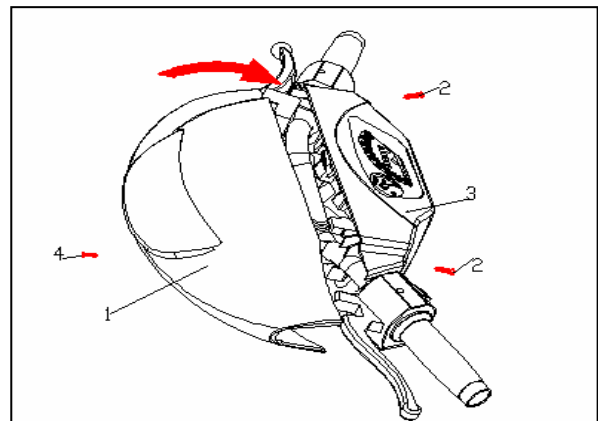
6# Phillips screwdriver.

Steps:

- 1). Take up the front top cover(1), match it with the speedometer(3).
- 2). Make sure the front top cover does not press the wires, then use the 6# Phillips screwdriver to tighten the screws(2) and the bolt(4).

*Torque of screw: 16kgf.cm*

*Torque of bolt: 5Nm*



# How to change the horn

## 1. Disassembling the horn

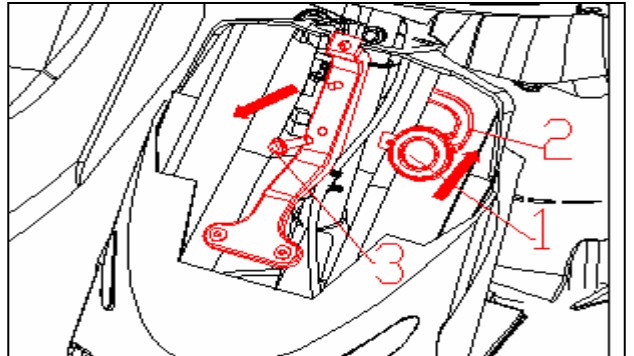
*\*Please note: Before operation, please turn off the power!*

Tools:

6# Phillips screwdriver, 10# wrench.

Steps:

- 1). First disassemble the front cover. (Please see the disassembling the front cover.)
- 2). Find the horn (1) and pull out the horn wire (2). Then use the 10# wrench unscrew the bolt (3). The horn can be removed.



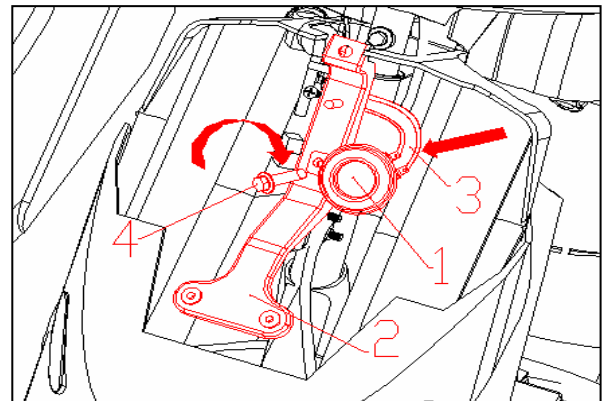
## 2. Assembling the horn

Tools:

6# Phillips screwdriver, 10# wrench.

Steps:

- 1). Set the horn (1) to the horn stay(2) and match the holes. Then use the 10# wrench to tighten the bolt (4). Fit on the wires (3). Test the horn first, if everything is ok, go to the next step.
- 2). Assemble the front cover. (Please see the assembling of the front cover)





# How to change the side stand switch

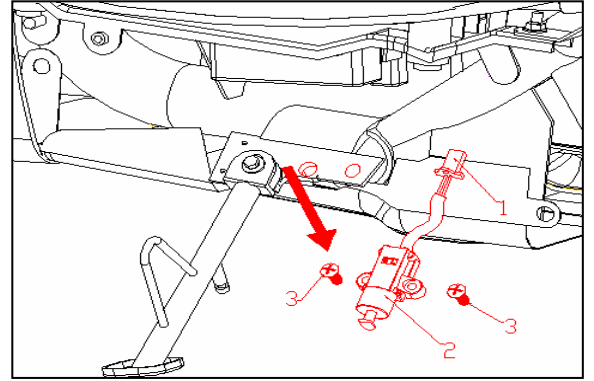
## 1. Disassembling of the side stand switch

Tools:

6# Phillips screwdriver

Steps:

- 1). First disassemble the rear bottom cover and the left side cover (Please see the step1 and 2 of disassembling the controller)
- 2). Then use the 6# Phillips screwdriver unscrew the 2 bolts(3) of the side stand switch(2). Disconnect the plug(1).
- 3). The side stand switch can be taken off.



## 2. Assembling of the side stand switch

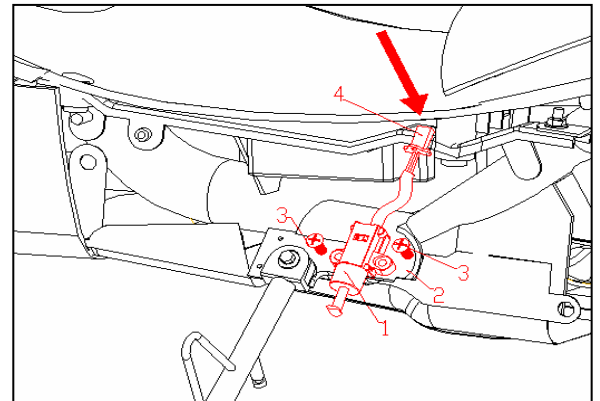
Tools:

6# Phillips screwdriver

Steps:

- 1). Set the side stand switch(1) on the relevant holes of the frame(2), use 6# Phillips screwdriver to tighten the 2 bolts(3) and then connect the plug(4).
- 2). Assemble the left side cover and the rear bottom cover (Please see the step3 and 4 of assembling the controller). Then the assembling of the side stand switch is finished.

*Torque of M5 bolt: 5Nm*



# How to change the speedometer

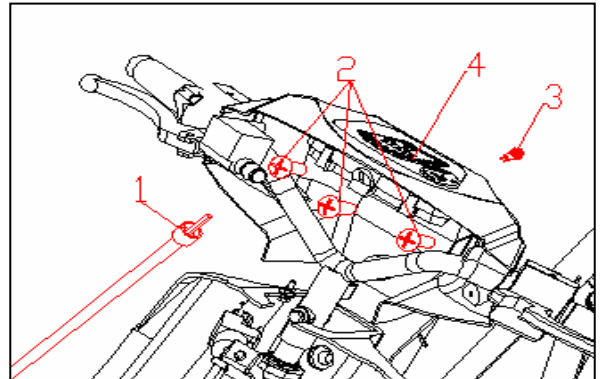
## 1. Disassembling of the speedometer

Tools:

6# Phillips screwdriver

Steps:

- 1). First disassemble the front top cover (Please see reference of disassembling the front top cover)
- 2). Pull out the connected plugs one by one, disassemble the counter line(1), then use the 6# Phillips screwdriver to unscrew the 3 screws(2) which fix the speedometer(4) and the speedometer cover together, at last disassemble the battery indicator button(3).



## 2. Assembling of the speedometer

Tools

6# Phillips screwdriver

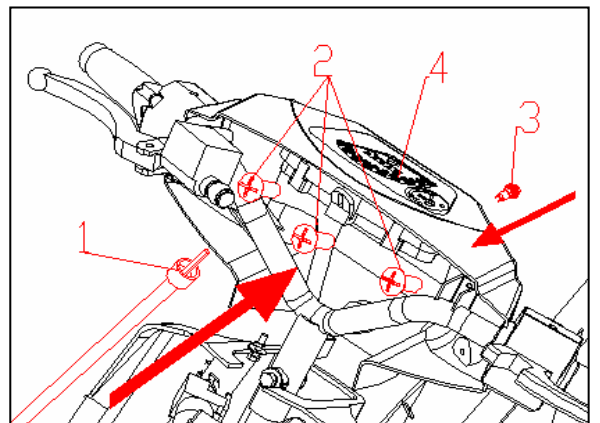
Steps:

- 1). Put the battery indicator button (3) into the speedometer cover and fix it, then put in the speedometer (4). (\*Please pay attention to match the speedometer and the cover of the speedometer nicely). Now, tighten the 3 screws (2) with the 6# Phillips screwdriver, assemble the counter (1) line and plug the speedometer in.

- 2). Assemble the front top cover.

(Please see the assembling of the front top cover)

*Torque of screws: 16kgf.cm*



# How to change the transform switch

*\*Please note: before operation, please make sure the main switch is turned OFF!*

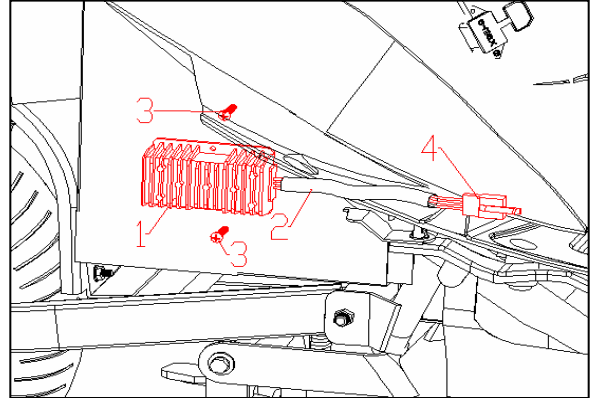
## 1. Disassembling the transform switch

Tools:

6# Phillips screwdriver, scissors.

Steps:

- 1). Use the scissors to cut off the thermoplastic pipe(2) which binds the transform switch wire, pull out the plug(4).
- 2). Then use the 6# Phillips screwdriver to unscrew the 2 bolts(3) which fix the transform switch(1) to the frame.



## 2. Assembling the transform switch

Tools:

6# Phillips screwdriver, scissors, hot-air gun, heat shrink tube.

Steps:

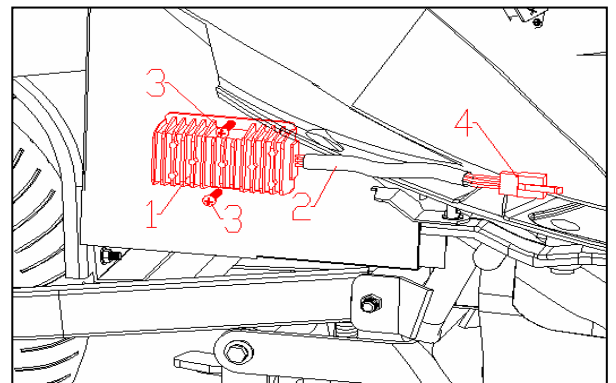
- 1). Set the transform switch(1) on the proper position to the frame, then use the 6# Phillips screwdriver to fix the bolts(3).

- 2). Cover the wire with the right length of the heat shrink tube(2) and then plug in the plug(4).

Use the hot-air gun to cover the wire with the heat shrink tube. Do not shrink it too tight!

*\*Please note: when use the hot-air gun, because of the high temperature, you should move the gun continues to avoid burning the heat shrink tube, the process should last about 3-5 seconds.*

*Torque of M4 bolt: 4Nm*



# How to change the counter

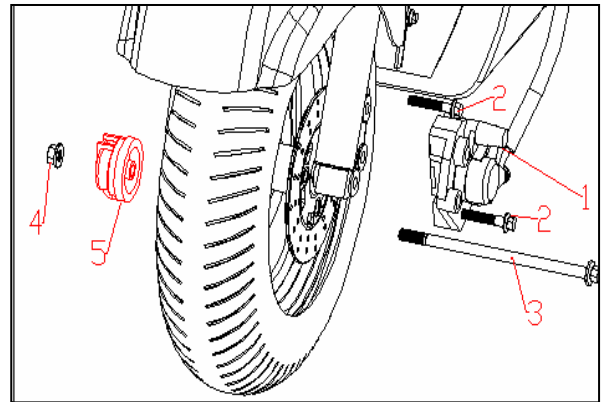
## 1. Disassembling the counter

Tools:

12# and 14# wrench

Steps:

- 1). Disassemble the holder(1) of the front disc brake off the front shock, use the 12# wrench to unscrew the bolt(2).
- 2). Now use the 14# and 12# wrench to loosen the nut(4) and the front axle(3), the counter(5) can be taken off.



## 2. Assembling the counter

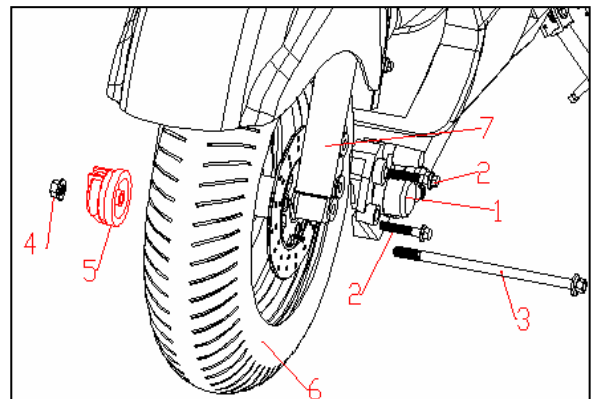
Tools:

12# and 14# wrench

Steps:

- 1). Lube the connective position of the front wheel(6) and the counter(5), then set the counter(5) in. Put the wheel to the relevant holes of the front shock(7) and insert the front axle(3). Now, use the 12# and 14# wrench to tighten the axle and the nut(4).
- 2). Assemble the holder(1) of the front disc brake to the front shock(7), use the 12# wrench to tighten it.

*Torque of front axle: 50-55Nm*



# How to change the battery

## 1. Disassembling the batteries

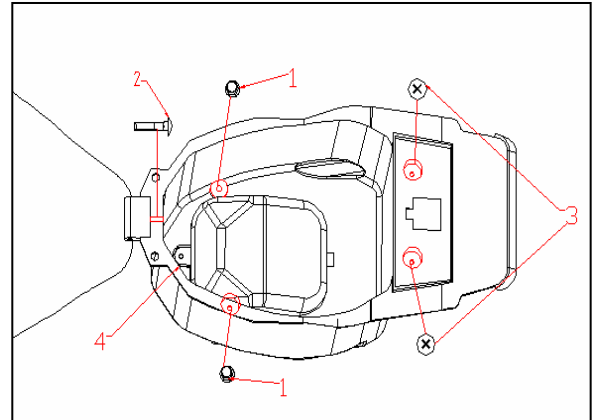
Tools:

6# Phillips screwdriver, 10# socket wrench

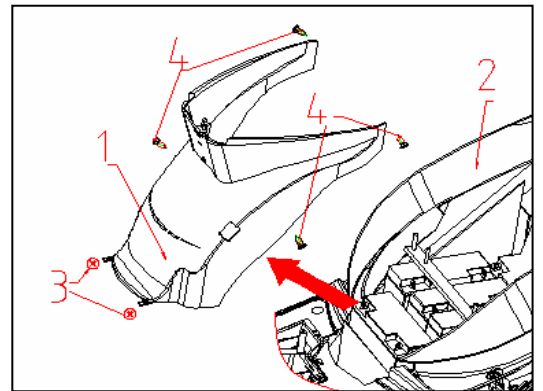
Steps:

1). First disassemble the seat assembly.

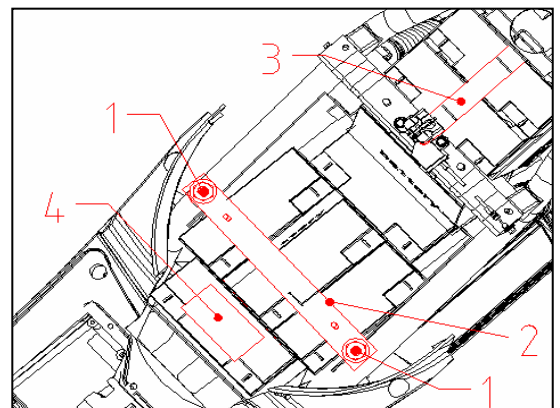
Open the seat. Use the 10# socket wrench to unscrew the bolt, then use the 6# Phillips screwdriver to unscrew the screw, pull out the seat.



2). Now disassemble the central cover. First use 6#short Phillips screwdriver to disassemble the screws(4) (ST3X8) which fixes the central cover(1) and the left and right top cover(2) together, then use the 6# Phillips screwdriver to unscrew the screws(3) which fixes the central cover and the front plate, the central cover can be removed.



3). Use the 10# socket wrench to unscrew the screws(1) of the strip(2) which holds the batteries, then take off the charging box of the front battery and the belt(3) of the rear battery case.



4). Use the 6# Phillips screwdriver to unscrew the screws of the wires which connect the batteries together, then take out the batteries one by one.

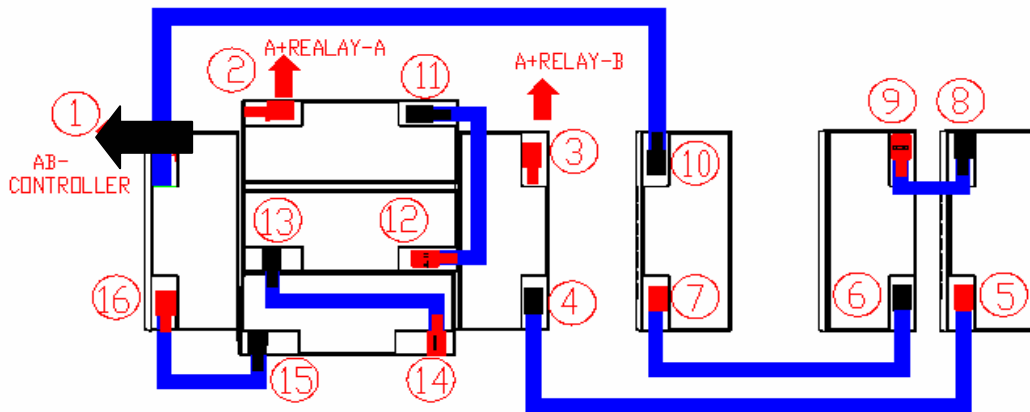
## 2. Assembling the batteries

Tools:

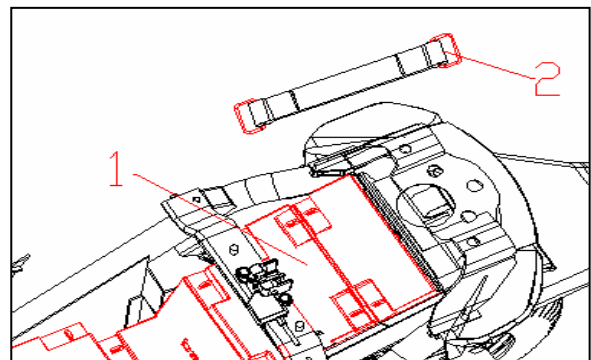
6# Phillips screwdriver, 10# socket wrench, double side adhesive tape.

Steps:

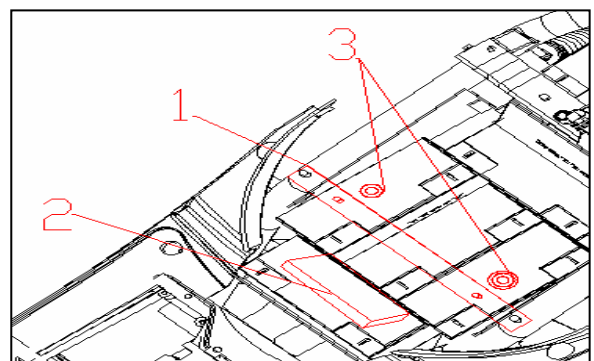
1). Put the batteries to the appointed position of the frame and connect them according to the drawing:



2) Put the rubber strip(2) on top of the rear battery case(1) to fix the 2 rear batteries.  
(Please note: put in some pily cushion to reduce the noise)

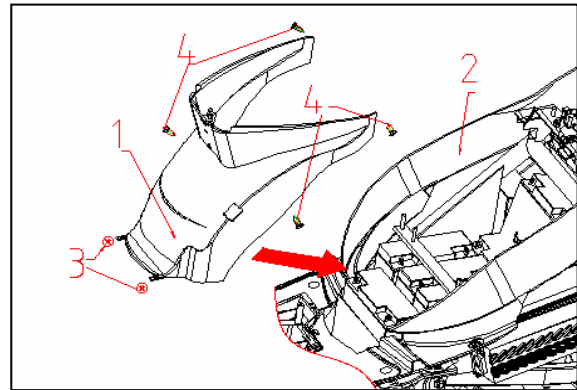


3) Put the steel strip(1) which fixes the batteries on the relevant position to the frame, put some pily cushion under the steel strip. Use the 10# socket wrench to affix the 2 flange nuts (3). Put the double sided adhesive tape on the bottom of the black charging box (2) and glue it on top of the front battery.



4). Reassembling of the central cover.

Step: put back the central cover(1) on the body cover(2), first use the 6# Phillips screwdriver tighten the 2 screws(3) which fix the central cover to the front plate, then put the central cover into the left and right top side cover, use the 6# Phillips screwdriver to fix the screws(4)



5). Finally put in the seat assembly and match the correct position, use the 10# socket wrench to tighten the nuts, then use the 6# Phillips screwdriver tighten the bolts.

*Torque of the M8 flange nut (step 4): 20 Nm*

*Torque of screws (step 4): 16kgf.cm*

# How to change the taillight

## 1. Disassembling the taillight

Tools:

6# Phillips screwdriver, 10#wrench

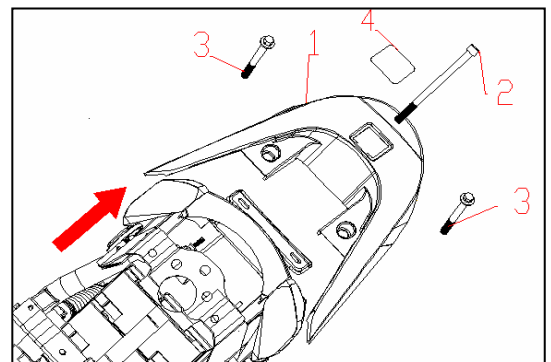
Steps:

1). First disassemble the left and right side cover and the rear bottom cover (See step1 and 2 of disassembling the controller)

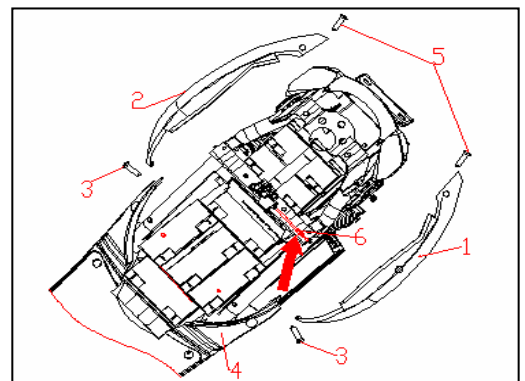
2). Disassemble the seat assembly. (See step1 of disassembling the batteries)

3). Disassemble the central cover. (See step 2 of disassembling the battery)

4). Disassemble the rear handle assembly(1). Step: open the cover(4) of the rear handle, use the 10# socket wrench to loosen rear long flange bolt(2) and the 2 left and right flange bolts(3).

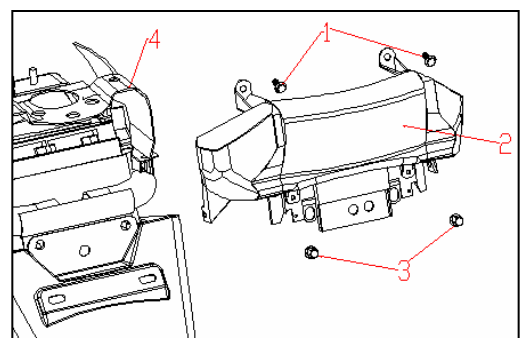


5). Disassemble the side top cover(1=right, 2=left). Step: use the 6# Phillips screwdriver to unscrew the screws(3) which fix the side top cover and the front plate(4); unscrew the screws(5) which fix the side top cover and the taillight, pull out the slide fastener(6) of the seat lock, the side top cover can be removed.



6). At last, disassemble the taillight (2).

Step: use the 10# socket wrench unscrew the flange bolts (1), and the round cover flange nuts (3) of the taillight stay (4), pull out the plug and take out the taillight.





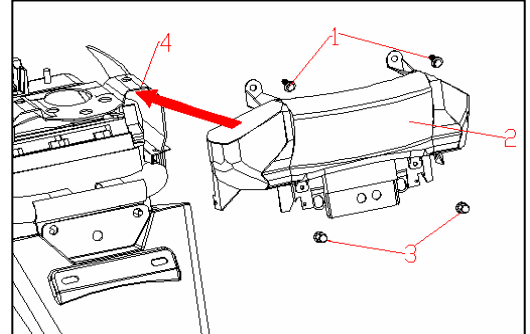
## 2. Assembling the taillight

Tools:

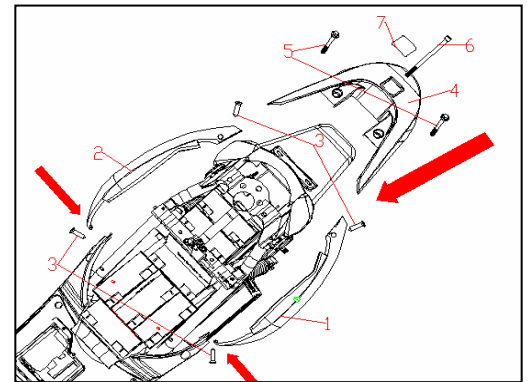
6# Phillips screwdriver, 10# socket wrench

Steps:

1). First put the taillight(2) on the taillight stay, use 10#wrench tighten the 2 flange bolts(1) and the 2 round cover flange nuts(3). Insert the taillight plug, then do a simple test: turn on the power switch, test the brake light by pulling the right and left brake lever. If it works go to the next step.



2). Put on the left(1) and right(2) side top covers, match the holes. Use the 6# Phillips screwdriver to affix it with the 4 screws (3) to the front plate and the taillight. Now put on the rear handle assembly(4), use the 10# socket wrench to tighten the left and right flange bolts(5) and the long flange bolt(6), put on the small cover(7).



3). Assemble the central cover. (See step3 of assembling the battery)

4). Assemble the left and right side top cover and the rear bottom cover (See step3 and 4 of assembling the controller)

5). At last, assemble the seat assembly. (See step4 of assembling the battery)

*Torque of M6 flange bolt: 10 Nm*

# How to change the main switch assembly

## 1. Disassembling the main switch assembly

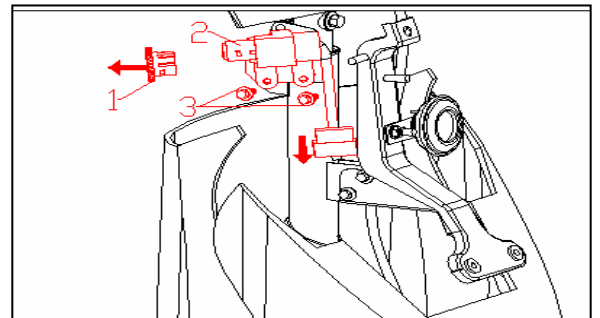
Tools:

6# Phillips screwdriver, 10# socket wrench

Steps:

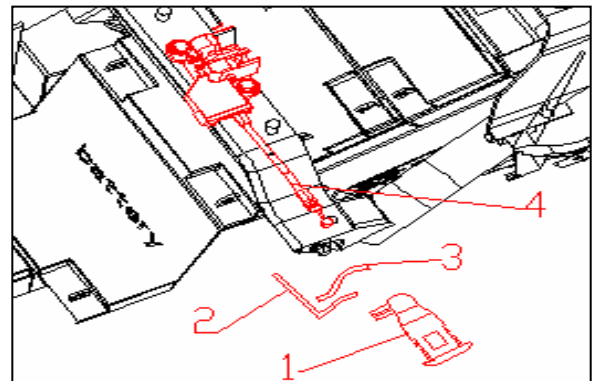
1). First disassemble the front top cover and the front cover. (See the disassembly of the front top cover and the front cover)

2). Then take out the cover of the main switch (1). Use the 10# socket wrench to unscrew the 2 flange bolts (3) which fix the main switch (2) to the frame. Pull out the plug, after the main switch can be taken out, and pull.



3). Disassemble the seat assembly (See step1 of changing the batteries)

4). Then pull out the slide fastener (4) of the seat lock, take out the stay of the seat lock (2) and the spring (3). Now take out the seat lock and the whole main switch assembly (1).



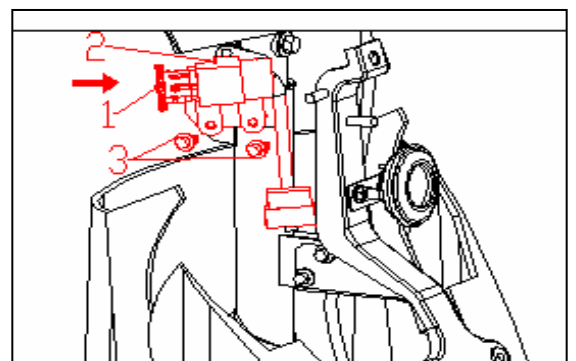
## 2. Assembling the main switch assembly

Tools:

6# Phillips screwdriver, 10# socket wrench

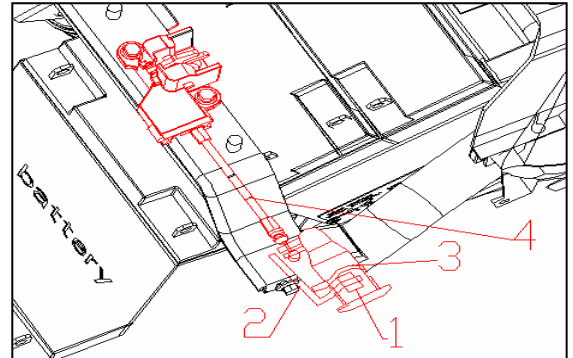
Steps:

1). Put the new main switch assembly(2) to the frame, use the 10# socket wrench to tighten it with the 2 flange bolts(3) (GBM6x16), put the main switch cover on by turning it in.



2). Assemble the front top cover and the front cover (See the assembling of the front top cover and the front cover)

3). Insert the seat lock(1) into the left top side cover and put the stay(2) and the spring(3) to the left top side cover. Then assemble the cable (4) of the seat lock to the left top side cover.



4). At last assemble the seat assembly (See step4 of how to assemble the batteries)

*Torque of M6 flange bolts: 10 Nm*

# How to change the left and right switch

## 1. Disassembling the left and right switch

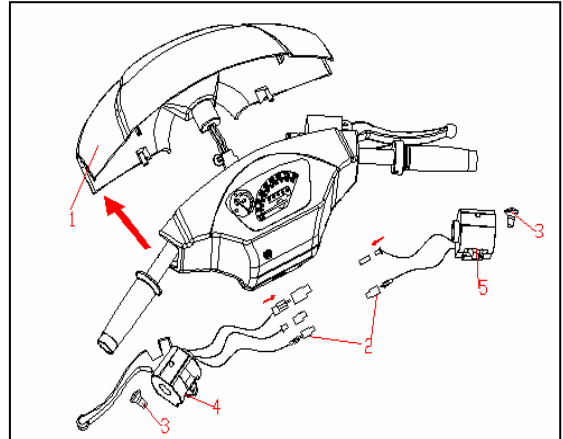
Tools:

6# Phillips screwdriver

Steps:

1). First disassemble the front top cover (1) (See the disassembly of the front top cover). Check for the connective plugs, 3 plugs on the left, 2 plugs on the right, pull out respectively.

2). Use the 6# Phillips screwdriver to unscrew the screws(3) which fix the left(4) and right(5) switch, then take off the left and right switch assembly.



## 2. Assembling of the left and right switch

Tools:

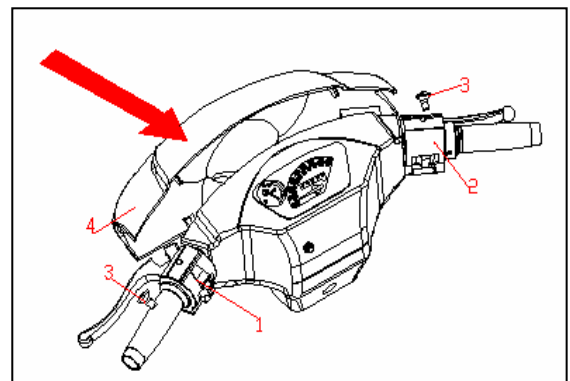
6# Phillips screwdriver

Steps:

1). First put the left(1) and right(2) switch on the handle lever, pay attention to the match the left and right switch to the correct side. Then use the 6# Phillips screwdriver to tighten the screws (3) to the handle lever.

2). At last assemble the front top cover (See the installation of the front top cover)

*Torque of bolts: 5 Nm*



# How to change the throttle handle

## 1. Disassembling the throttle handle

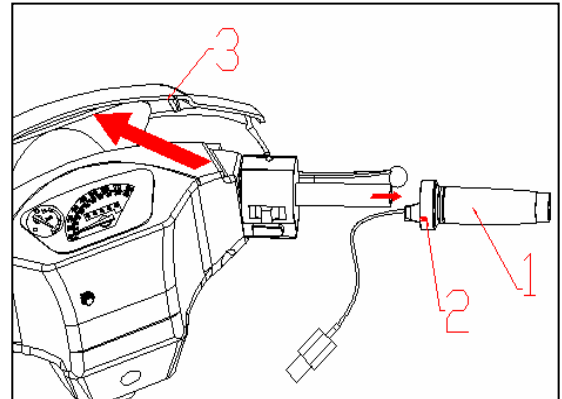
Tools:

6# Phillips screwdriver and 2.5# Allen key.

Steps:

1). First disassemble the front top cover (3) (See the disassembly of the front top cover) and then pull out the plug of the throttle handle (1).

2). Use the 2.5# Allen key loosen the Allen screw(2) of the throttle handle, now the throttle handle can be removed.



## 2. Assembling the throttle handle

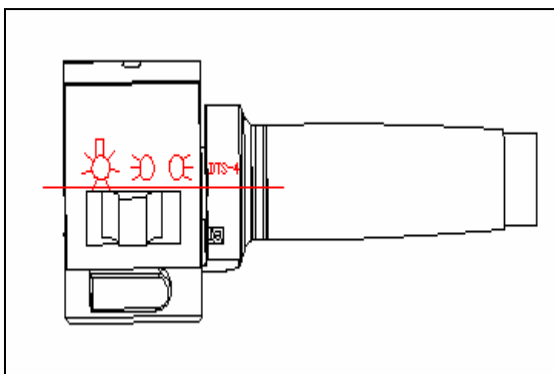
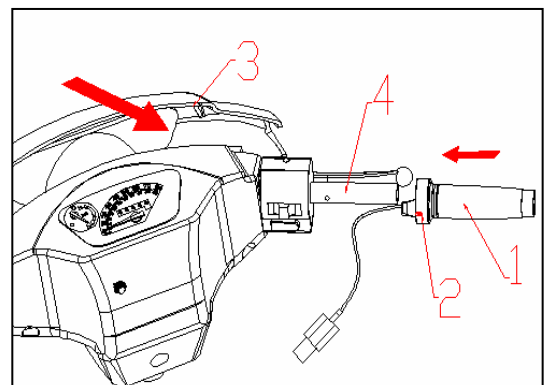
Tools:

6# Phillips screwdriver and 2.5# Allen key.

Steps:

1). Put the throttle handle (1) on the handle lever (4). Make sure the "DTS-4" marking is level with the lighting marking (see drawing below!). Use the 2.5#Allen key to tighten the Allen screw (2).

2). Then install the front top cover (3) (See the installation of the front top cover)



# How to change the relays

## 1. Disassembling the relays

Tools:

6# Phillips screwdriver, 7#10#wrench.

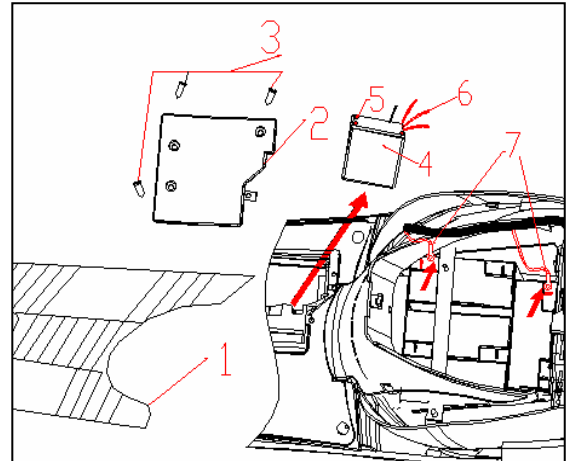
Steps:

1.) Disassemble the seat assembling (see No.1 how to change the batteries)

2.) Disconnect battery group A and B (A and B is 7) and assure that the wire does not touch any metal parts and skin the terminal.

3.) Lift the mat of the footplate(1), then use the 6# Phillips screwdriver to loosen the 4 screws(3) of the cover of the relays case(2) in the front plate. Take off the cover of the relays case.

4.) Pull out the complete waterproofed relays case (4) (since it is fixed to the ground with a double sided adhesive tape you must pull it out with some force). Use the 6# Phillips screwdriver to loosen the 4 bolts (5) of the waterproofed relays case to open it (the lid is sealed with silicone; the silicone must be removed before opening the box. You will now see the two relays fixed to the lid of the waterproofed relays case with 2 bolts. Use the 6# Phillips screwdriver to loosen the two bolts. Take 7# and 10#wrench to loosen all the wires on the relay. The relays can be removed.



## 2. Assembling the relays

Tools:

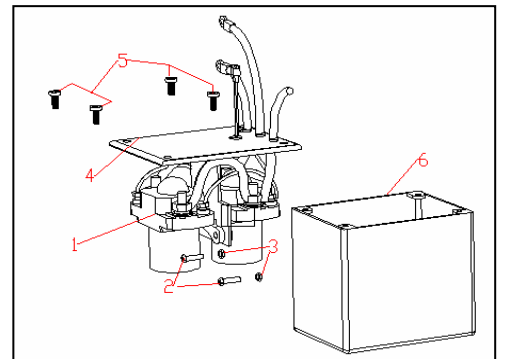
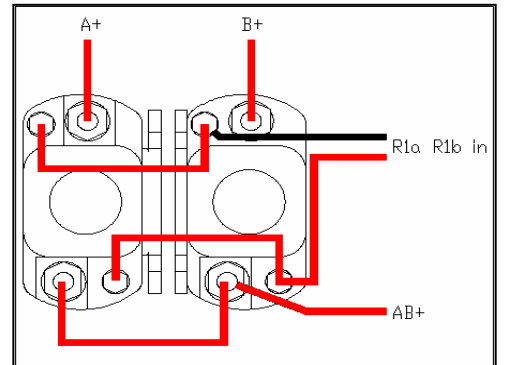
6# Phillips screwdriver, 7#10#wrench.

Steps:

1). Use 7#and10# wrench to connect the new relay following the drawing. To test the relays individually connect the battery group A, turn ON the ignition and fold the side stand in and out. If the relays is working properly you can hear it opening and closing. Disconnect battery group A again and to same action with battery group B.

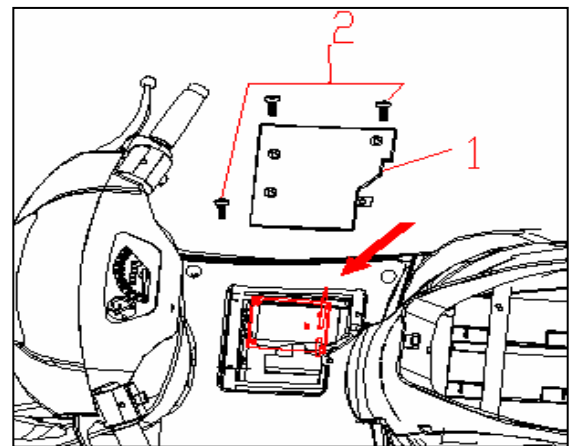
After the individual testing disconnect again BOTH battery groups to do the final assembling!

Now, use the 6# Phillips screwdriver to fix the two relays with bolt(2) and nut(3) on the stay of the cover(4) from the waterproofed relays case(6). Embed the relay(1) into the case(6). Use the 6# Phillips screwdriver fix it with the 4 bolts(5).



2). Put on the cover of the waterproofed relays case and use the 6# Phillips screwdriver to fix it with the 4 screws.

3). At last, lay down the mat of footplate and put it into matching position.



# How to change the front winker and the front position light

## 1. Disassembling the front winker and the front position light

Tools:

6# Phillips screwdriver

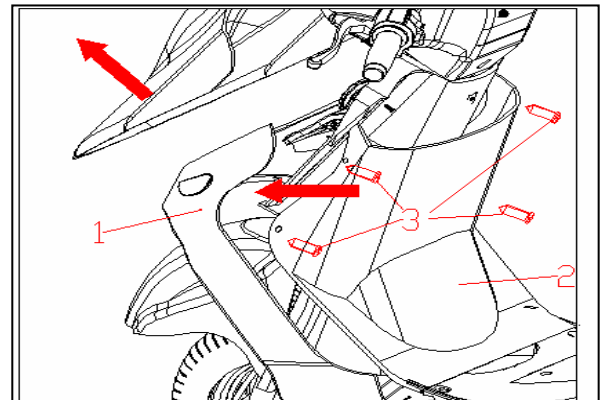
Steps:

1). First disassemble the left and right side cover and the rear bottom cover. (See No. 1 of how to disassemble the controller)

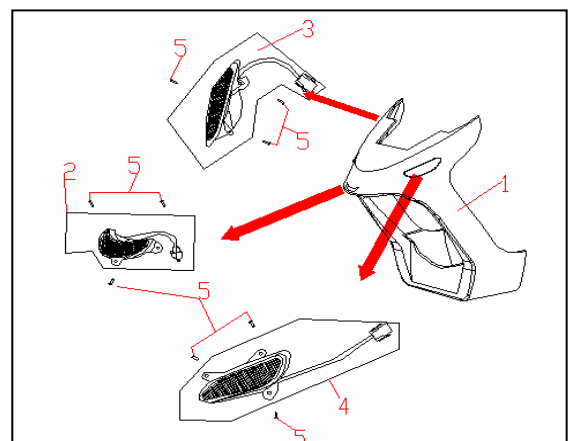
2). Now disassemble the front top cover (See the disassembly of the front top cover)

3). Disassemble the front cover (See the disassembly of the front cover)

4). Disassemble the front light cover. Step: use the 6# Phillips screwdriver to unscrew the 4 screws (3) which fix the front light cover (1) to the front store-case (2). By taking the front light cover off you can reach the right and left front winker and the front position light.



5). Use the 6# Phillips screwdriver to unscrew the screws(5) which fix the right(3) and left(4) front winker and the front position light(2) to the front light cover(1). Unplug the plugs, the front winker and the front position light can be removed.





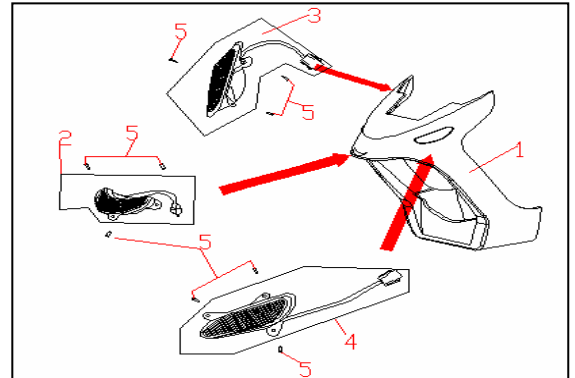
## 2. Assembling the front winker and the front position light

Tools:

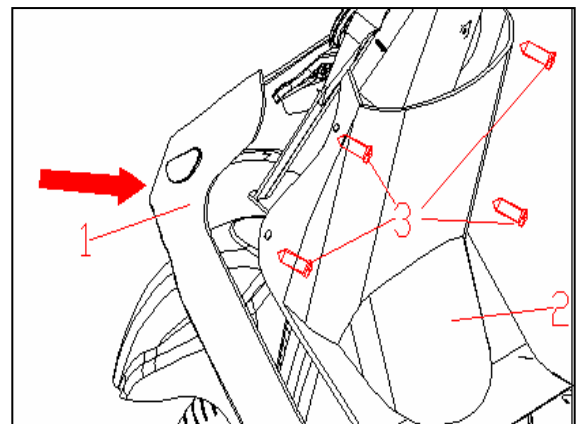
6# Phillips screwdriver

1). Put the right(3) and left(4) front winker and the front position light(2) on the front light cover(1), pay attention to the match. Use the 6# Phillips screwdriver fix it with the screws (5), reconnect the plugs.

*Torque of screws: 16 kgf.cm*



2). Make sure the front light cover(1) matches the front store-case(2), use the 6# Phillips screwdriver to fix it with the screws(3).



3). Assemble the left and right side cover and the rear bottom cover (See step3 and 4 of how to assemble the controller)

4). Assemble the front cover (See the installation of the front cover)

5). At last assemble the front top cover (See the installation of the front top cover)