

# HORWIN EK3 WORKSHOP MANUAL



# Contents

|  |    |
|--|----|
| Chapter 1   Plastic parts, black parts, lamps, lanterns.....   | 3  |
| 1.1 Instrument board .....                                     | 3  |
| 1.2 Left and right edge trims .....                            | 5  |
| 1.3 Left and right fork guard plates .....                     | 7  |
| 1.4 Seat cushion and seat bucket .....                         | 9  |
| 1.5 Rear handrest .....  | 11 |
| 1.6 Headlight upper and lower cover.....                       | 12 |
| 1.7 Display case and display case lower cover .....            | 15 |
| 1.8 Cowl and cowl lower cover .....                            | 17 |
| 1.9 Front Turn signal.....                                     | 19 |
| 1.10 Front cover of storage box .....                          | 20 |
| 1.11 Left and right side covers .....                          | 22 |
| 1.12 Left and right side lights .....                          | 28 |
| 1.13 Rear connection and taillight .....                       | 29 |
| 1.14 Front wheel fender.....                                   | 30 |
| 1.15. Hook.....  | 31 |
| 1.16 Tool box .....  | 31 |
| 1.17 Upper and lower ends of front lockers and pedals .....    | 33 |
| 1.18 Rear inner mud tile.....                                  | 36 |
| 1.19 Rear fender and license plate lamp cover up and down..... | 37 |
| 1.20 Frame web.....  | 39 |
| 1.21 Tail warp .....   | 40 |
| Chapter 2   Electrical parts .....                             | 41 |
| 2.1 Instrument.....  | 41 |
| 2.2 Right switch combination assembly .....                    | 43 |
| 2.3 Left switch combination assembly .....                     | 45 |
| 2.4 Converter.....   | 46 |
| 2.5 Controller .....   | 47 |
| 2.5 Speaker.....   | 48 |
| 2.7 Motor .....  | 49 |

|   |    |
|---|----|
| 2.8 Throttle converter .....            | 51 |
| 2.9 Side support power switch .....     | 53 |
| 2.10 Vehicle-mounted charger .....      | 54 |
| 2.11 Key/Lock set .....                 | 55 |
| 2.12 Main Cables .....                  | 57 |
| 2.13 USB .....                          | 58 |
| 2.14 Alarm .....                        | 59 |
| 2.15 Body elbow .....                   | 60 |
| Chapter 3   Mechanical parts .....      | 61 |
| 3.1 Front disc brake .....              | 61 |
| 3.2 Rear disc brake .....               | 62 |
| 3.3 Front wheel .....                   | 64 |
| 3.4 Rear wheel .....                    | 65 |
| 5. Rear suspension .....                | 67 |
| 3.6 Brake lever .....                   | 69 |
| 3.7 Front brake oil pump .....          | 70 |
| 3.8 Front Suspension .....              | 72 |
| 3.9 Steering Handlebar .....            | 73 |
| 3.10 Steering Column .....              | 74 |
| 3.11 Front/Rear brake disc .....        | 75 |
| 3.12 Left and right pedal removal ..... | 76 |
| 3.13 Side support .....                 | 77 |
| 3.14 Chain .....                        | 78 |
| 3.15 Rear fork .....                    | 79 |
| 3.16 Disc brake assembly .....          | 80 |
| 3.17 Motor sprocket .....               | 81 |
| 3.18 Rear wheel sprocket .....          | 82 |
| 3.19 Rear mudguard bracket .....        | 83 |

## Chapter 1 | Plastic parts, black parts, lamps, lanterns

### 1.1 Instrument board

Remove the three tapping screws in the red circles with Phillips screwdriver.



Remove the three tapping screws in the red circles with Phillips screwdriver.



Remove the rubber part in the red circle.



Remove the two tapping screws in the left and right red circles with Phillips screwdriver.

Remove the M6 (10 sides) flange screws in the middle red circle with 10mm socket wrench and remove the instrument board.

**Attention: When removing the last screw, press the instrument board with your hand to prevent the instrument board from slipping off.**



## 1.2 Left and right edge trims

### *Left edge trim*

Remove the two tapping screws in the red circles with Phillips screwdriver, and then remove the left edge trim.



Remove the left edge trim in the direction indicated.



### Right edge trim

Remove the two tapping screws in the red circles with a Phillips screwdriver, and then remove the right edge trim.



Remove the left edge trim in the direction indicated.



## 1.3 Left and right fork guard plates

### *Left fork guard plate*

Remove the fork guard plate decorative cover in the red circle with straight screwdriver.



Remove the two M6 (10 side) flange screws in the red circle with 10mm socket wrench, and then remove the left fork guard plate.



### *Right fork guard plate*

Remove the fork guard plate decorative cover in the red circle with straight screwdriver.



Remove the two M6 (10 side) flange screws in the red circle with 10mm socket wrench, and then remove the right fork guard plate.



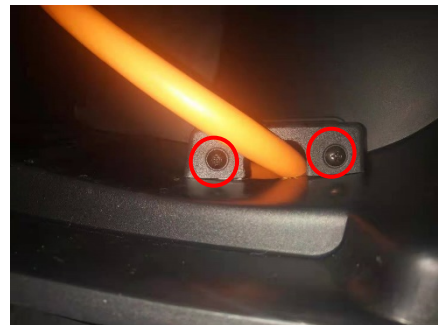
## 1.4 Seat cushion and seat bucket

### *Seat cushion*

Remove the two M6 (10 side) flange screws in the red circle with 10mm socket wrench, and then the seat cushion can be replaced.



Remove the two tapping screws in the red circles with Phillips screwdriver, and then remove the power plug cover(seat bucket inner lid).



## Seat bucket

Remove the four M6 (10 side) flange screws in the red circle with 10mm socket wrench, and then remove the sitting bucket.



## 1.5 Rear handrest

### Preparations

#### 1.4 Seat Cushion and seat bucket

Remove the four M6 (10 side) flange screws in the red circles with 10mm socket wrench, and then remove the rear handrest.



Remove the four M6 round Allen screws in the red circles with 6mm Allen key, and then remove the left and right rear handrail.



## 1.6 Headlight upper and lower cover

Remove the two tapping screws in the red circles with Phillips screwdriver.



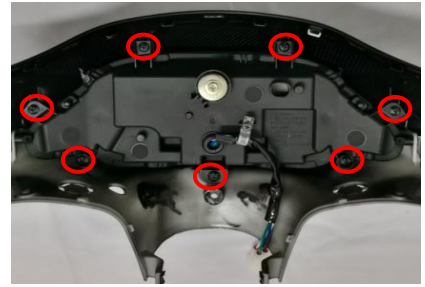
Remove the two tapping screws in the red circles with Phillips screwdriver.



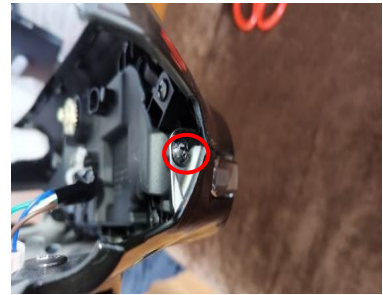
Remove the red circle M6 (8-sided) flange screw with 8mm socket wrench, pull out the plug, and then remove the headlight.



Remove the seven self-tapping screws in the red circles with Phillips screwdriver.



Remove the two tapping screws in the red circles with Phillips screwdriver, and then remove the upper and lower headlight covers and headlight.



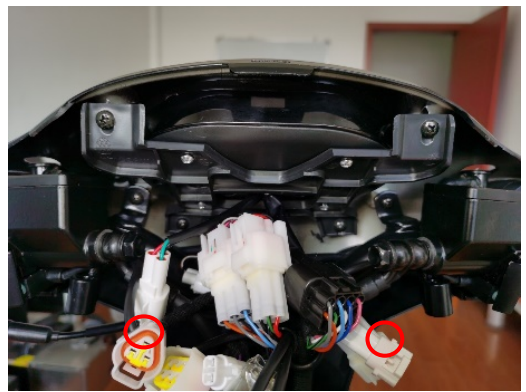
## 1.7 Display case and display case lower cover

### *Preparations:*

#### *1.6 Headlight upper and lower covers and headlight*

#### *2.1 Display*

Remove the three tapping screws in the red circles with Phillips screwdriver.



Remove the M6 (8-sided) flange screws in the red circle with 8mm socket wrench, and then remove the display case and display lower cover.



Remove the three tapping screws in the red circles with Phillips screwdriver, and then remove the display case and display lower cover.



## 1.8 Cowl and cowl lower cover

### *Preparations:*

#### *1.1 Instrument board*

Remove the two tapping screws in the red circles with Phillips screwdriver.



Remove the two tapping screws in the red circles with Phillips screwdriver.



Remove the six tapping screws in the red circles with Phillips screwdriver.



## 1.9 Front Turn signal

### *Preparatory work:*

#### *1.8 Cowl and front cowl lower cover*

Remove the four tapping screws in the red circles with Phillips screwdriver, and then remove the cowl and front turn signal.



## 1.10 Front cover of storage box

Remove the two tapping screws in the red circles with Phillips screwdriver, and then remove the controller cover.



Remove the two tapping screws in the red circles with Phillips screwdriver

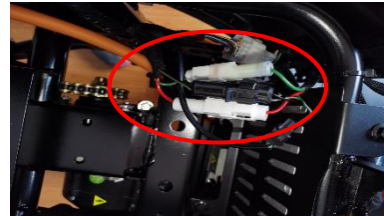
Remove the two M6 (10 side) flange screws in the red circles above with 10mm socket wrench.



Remove the two tapping screws in the red circles with Phillips screwdriver



Pull out the plug in the red circle, cut off the cable tie, and remove the cover of the front storage box.



## 1.11 Left and right side covers

### *Preparations:*

*1.2 left and right edge trims*

*1.4 cushions and buckets*

*1.10 Front cover of storage box*

*1.5 rear handrest*

Remove the two shaped Allen screws in the red circles with 5mm Allen key.



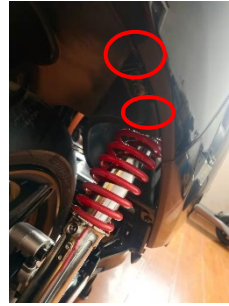
Remove the four M6 (10 side) flange screws in the red circles with 10mm socket wrench.



Remove the M6 (10 side) flange screw in the red circles with 10mm socket wrench.



Remove the four tapping screws in the red circles with screwdriver.



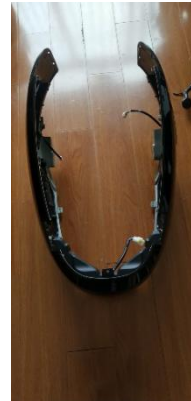
Unplug the plug in the red circle.



Unplug the plug in the red circle.

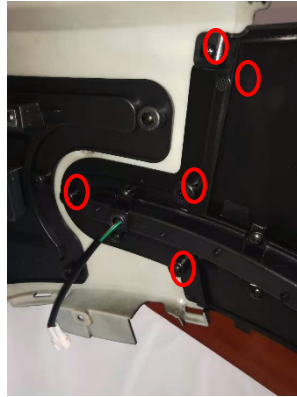


Remove the entire rear assembly.



*Left side cover*

Remove the four tapping screws in the red circles with screwdriver.



Remove the four tapping screws in the red circles with screwdriver. And then remove the left part.



## Right Side Cover

Remove the four tapping screws in the red circles with screwdriver.



Remove the four tapping screws in the red circles with screwdriver. And then remove the right part.



## 1.12 Left and right side lights

*Preparatory work:*

*1.2 left and right side*

*1.4 seat cushion and seat bucket*

*1.10 front cover*

*1.11 side cover*

*Left side lamp + left cover decorative cover*

Remove the 4 self-tapping screws in the red circle with a Phillips screwdriver, remove the left lamp, and the left cover decorative cover.



*Right lamp + right cover decorative cover*

Remove the 4 self-tapping screws in the red circle with a Phillips screwdriver, remove the right light, and cover the decorative cover on the right.



## 1.13 Rear connection and taillight

### *Preparatory work:*

*1.2 left and right side*

*1.4 seat cushion and seat bucket*

*1.10 front cover*

*1.11 side cover*

### *Right cover*

Remove the 4 self-tapping screws in the red ring with a Phillips screwdriver and remove the rear tail connection and taillight.

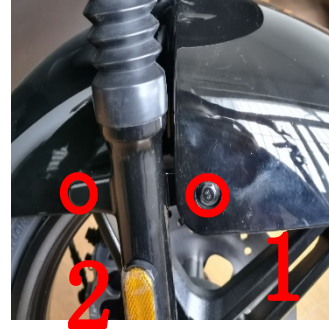


## 1.14 Front wheel fender

### *Right Side*

Use the 10mm socket wrench to remove one of the M6 (10 sides) flange screws in Red Ring 1.

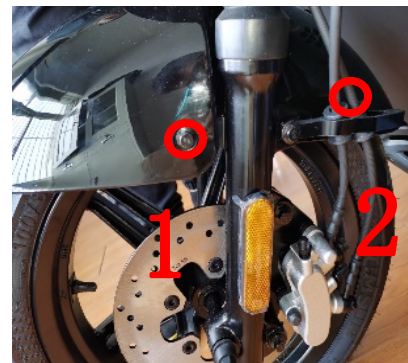
Use the 10mm open wrench to remove a flange screw from the inside of the M6 (10 sides) in Red Ring 2.



### *Left Side*

Use the 10mm socket wrench to remove one of the M6 (10 sides) flange screws in Red Ring 1.

Remove a flange screw of M6 (10 sides) in Red Ring 2 from inside with 10mm open wrench and remove the front wheel mud plate.



## 1.15. Hook

Use the 10mm socket wrench to remove the M6 (10-side) flange screw in the red ring and replace the hook.



## 1.16 Tool box

**Preparation:**

**1.1 panel**

**1.8 avant-garde and front cover**

Remove the 2 self-tapping screws in the red circle with a Phillips screwdriver.



Remove the two self-tapping screws in the red circle with a Phillips screwdriver and take out the tool box.



### *Toolbox cover lining and damper*

Remove the four self-tapping screws in the red ring with a Phillips screwdriver to replace the tool box cover lining and damper.



## 1.17 Upper and lower ends of front lockers and pedals

### *Preparation work:*

*1.1 panel*

*1.2 left and right side*

*1.4 seat cushion and seat bucket*

*1.5 rear handrail*

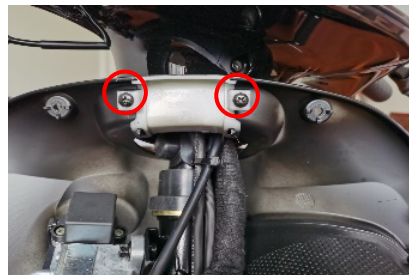
*1.8 front circumference and front circumference lower cover*

*1.10 front cover*

*1.11 front cover*

*1.15 hook*

Remove the two self-tapping screws in the red circle with a Phillips screwdriver and remove the connecting bar in the center of the box.



Use a Phillips screwdriver to remove a flat screw from the red ring.



Press the direction of the red arrow and rotate to the left to remove the switch lock cover..

Unplug the plug-in in the red circle and remove the switch lock cover.



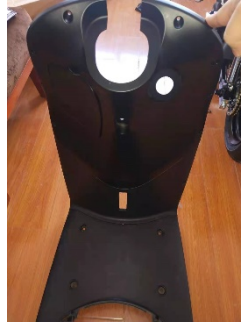
Remove the pedal screw cover in the red circle with a word screwdriver.



Remove the 4 M6 (10-side) flange screws in the red ring with a 10mm socket wrench.



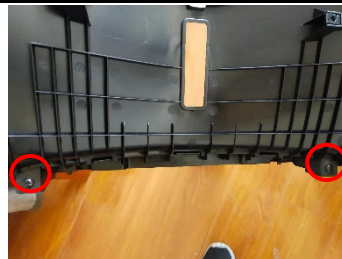
Remove the upper and lower cover of the front compartment and the pedal assembly.



Remove the 4 tapping screws in the red circle with a Phillips screwdriver, remove the upper cover of the box, and place the lower cover of the box and the pedal.



Remove the 2 tapping screws in the red circle with a Phillips screwdriver and remove the lower cover and pedal of the locker.



## 1.18 Rear inner mud tile

*Preparation: 1.4 cushions and buckets*

Remove the three self-tapping screws (left and right sides) in the red ring with a Phillips screwdriver to remove the rear inner mud tile.



## 1.19 Rear fender and license plate lamp cover up and down

### *Preparatory work:*

*about 1.3 flat fork guard (only remove the right flat fork guard)*

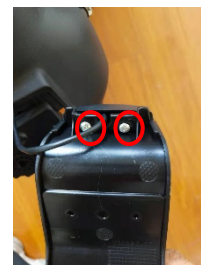
Use the 10mm socket wrench to remove the 2 M6 (10-side) flange screws in the red circle and remove the rear fender and license plate lamp cover.



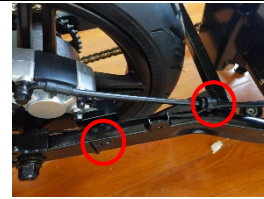
Remove the upper cover and lower cover of the license plate lamp, and the upper cover of the license plate lamp can be replaced.



Remove the two self-tapping screws in the red circle with a Phillips screwdriver, remove the license plate lamp, and replace the license plate lamp cover.



Cut the tie in the red circle.



Unplug the plug-in and replace the license plate lamp.



## 1.20 Frame web

### *Preparatory work:*

#### *1.2 side strip*

Use the 10mm socket wrench to remove the 2  
M6 (10-side) flange screws in the red ring.



Use the 10mm socket wrench to remove the 2  
M6 (10-side) flange screws in the red ring and  
remove the frame web.



# 1.21 Tail warp

Preparation: chapter 1-004 cushion and bucket 018 inner mud tile



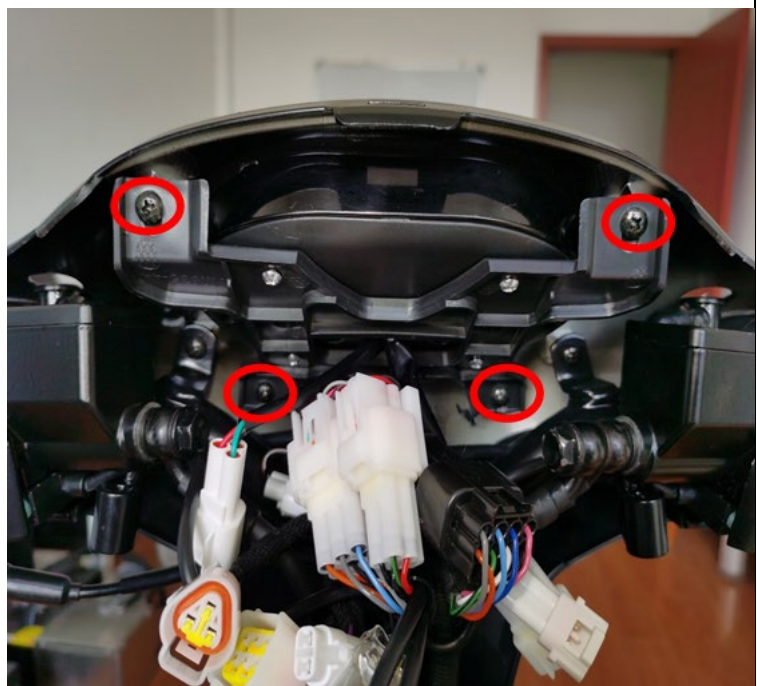
## Chapter 2 | Electrical parts

### 2.1 Instrument

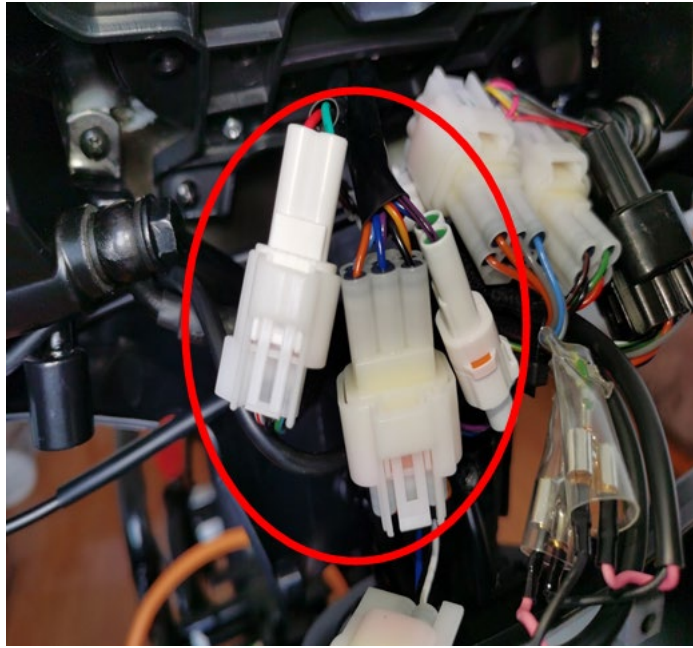
**Preparation:**

*1.6 headlight, upper and lower cover*

Remove the red-circled 4 tapping screws with a cross screw driver.



Unplug the red-circled 3 connectors to remove the instrument.



## 2.2 Right switch combination assembly

### *Preparatory work:*

*1.6 headlight, upper and lower cover*

*1.7 instrument shell and lower cover*

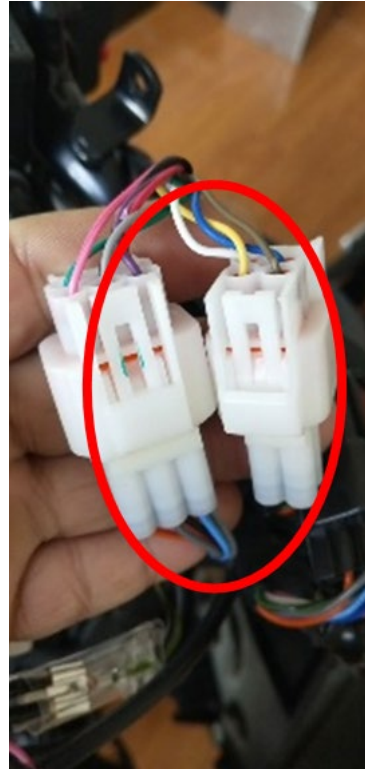
Remove the red-circled 2 screws on right switch combination assembly with a cross screw driver.



Remove the red-circled 2 screws on right switch combination assembly with a cross screw driver.



Unplug the right switch combination assembly connector and pull out the wire harness.



Take out the throttle wire of the right switch combination assembly so that it can be replaced.



## 2.3 Left switch combination assembly

### *Preparatory work:*

*1.6 headlamp, upper and lower cover*

*1.7 instrument shell and lower cover*

Unplug the connector of the left switch combination assembly and cut the ribbon to take out the wire harness.



Remove the red-circled 3 screws on left switch combination assembly with a cross screw driver



## 2.4 Converter

### Preparatory work:

#### 1.4 saddle and seat bucket

Remove the red-circled 4 flange screws (10 sides) with a 10MM socket wrench to remove the controller bracket.



Remove the red-circled 2 flange screws (8 sides) with a 8MM socket wrench to remove the 3 ports converter.



Remove the red-circled 2 flange screws (8 sides) with a 8MM socket wrench to remove the 4 ports converter.



## 2.5 Controller

### *Preparatory work:*

#### *1.4 saddle and seat bucket*

Remove the red-circled 2 tapping screws with a cross screw driver to remove controller outer cover.



Unplug the red-circled controller connector.



## 2.5 Speaker

### *Preparatory work:*

#### *1.1 Front panel*

#### *1.8 Front wall and front wall lower cover*

Unplug the speaker wiring plug in the red circle.



Use a 10mm open-end wrench to remove one M6 (10-side) flange screw in the red circle, and then remove the speaker.



## 2.7 Motor

*Preparatory work:*

*Saddle and seat bucket*

*Controller*

Use a 10mm open-end wrench to remove the nut in the red circle



Pull out the motor shaft as per the direction of the arrow.



Use a 10mm open-end wrench to remove the nut in the red circle and pull out the motor shaft in the direction of the arrow to remove the motor.

Note: When taking out the motor, hold it with your hands or jack.



Use a Phillips screwdriver to remove the screws in the red circle.



Unplug the plug in the red circle.

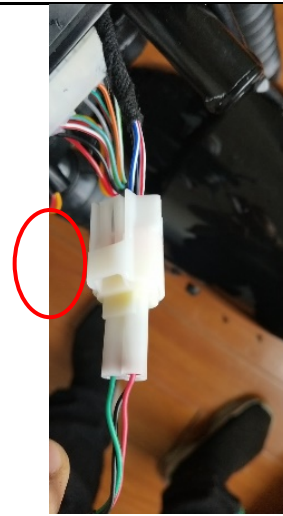


## 2.8 Throttle converter

*Preparatory work:*

*Panel*

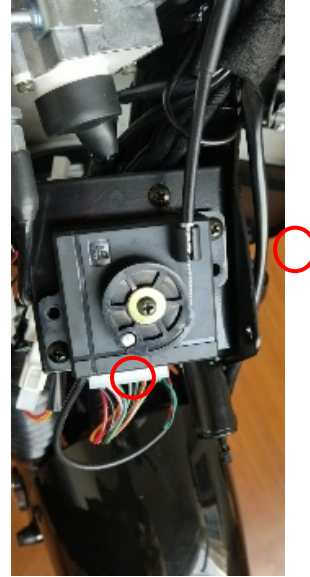
Unplug the plug of the throttle converter in the red circle.



The throttle cable will be removed.



Use a Phillips screwdriver and a 10MM open-end wrench to remove the 2 M6 flat head screws and 2 M6 flange nuts in the red circle in the picture, and take out the throttle converter.



## 2.9 Side support power switch

### Preparation

*Left and right side bars (only remove the left side bar)*

Unplug the flameout switch.



Use a 5mm Allen key to loosen the 2 round-head Allen screws at the two red circles, and then remove the flameout switch.



## 2.10 Vehicle-mounted charger

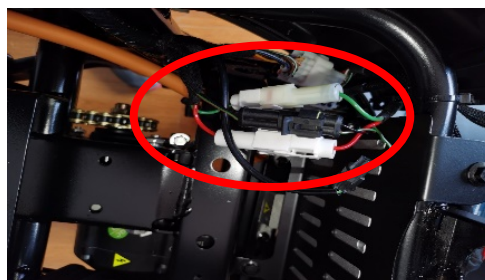
*Preparatory work:*

*saddle and seat bucket*

Use a Phillips screwdriver to remove the 2 self-tapping screws from the charging port.



Unplug the plug in the red circle to remove the car charging port.



## 2.11 Key/Lock set

### *Preparatory work:*

#### *1.1 panel*

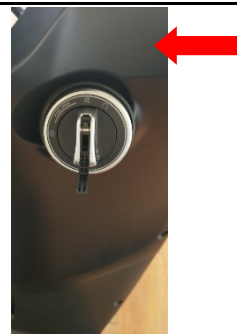
#### *1.15 hook*

Use a Phillips screwdriver to remove one flat head screw in the red circle.



Follow the direction of the red arrow and turn left to remove the electric door lock cover.

Unplug the plug in the red circle and remove the electric door lock cover.



Unplug the socket lock port plug.



Use a Phillips screwdriver to remove 1 screw in the red circle and take out the lock wire.



Use an 8MM open-end wrench to remove the two M6 (8-sided) flange screws in the red circle to remove the lock.



## 2.12 Main Cables

*Preparatory work:*

*1.1 panel*

*1.2 left and right side strips*

*1.4 seat cushion and sitting bucket*

*1.5 rear armrest*

*1.6 headlight upper and lower covers and headlights*

*1.7 instrument shell and instrument lower cover*

*1.8 front and front wall lower covers*

*1.11 left and right side covers*

*1.15 hooks*

*1.17 upper and lower ends of the front box Foot pedal*

Take out the main cable.



## 2.13 USB

### *Preparatory work:*

#### *1.1 Panel*

Use a Phillips screwdriver to remove the 2 self-tapping screws in the red circle



Unplug the 2 plug-ins in the red circle and remove the USB charging stand.

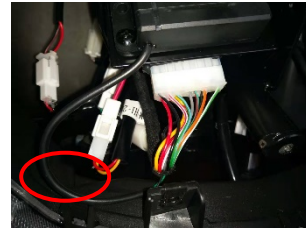


## 2.14 Alarm

### *Preparatory work:*

#### *1.1 Panel*

Remove the plug in the red circle.



Use a Phillips screwdriver and a 10MM open-end wrench to remove the 2 screws and nuts in the red circle, and remove the alarm



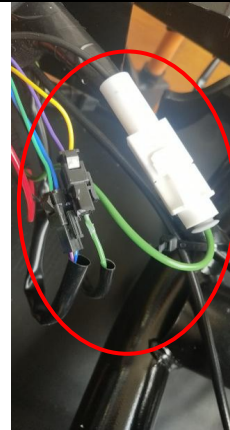
## 2.15 Body elbow

*Preparatory work:*

*1.4 Cushion and sitting bucket*

*2.5 Controller*

Remove the plug in the red circle.



Take out the body elbow.



## Chapter 3 | Mechanical parts

### 3.1 Front disc brake

Remove the two M8 (10-side) flange screws in the red circle in the picture with a 10mm socket gun head, and then remove the brake.



Take out the front brake connecting bracket in the direction of the arrow.



Use a 4MM Allen key to remove the screws in the red circle to remove the brake pads.



## 3.2 Rear disc brake

*Preparatory work: 1.2*

*Left and right side strips (only remove the right flat fork guard plate)*

Remove the two M8 (10-side) flange screws in the red circle with a 10MM socket gun head, and remove the rear disc brake pump.



Take out the cover of the rear disc brake in the red circle.



Pull out the pin in the red circle and pull out the screw to remove the brake pad.



## 3.3 Front wheel

### *Preparatory work:*

*To remove the front wheel, you need to prepare a frame to support the vehicle so that it will remain stable after the front wheel is removed.*

### *3.1 Front Disc Brake*

Remove the nut and dust boot on the left and right sides of the front wheel



Use a 17mm socket wrench and a 15mm open-end wrench to remove the nut in the red circle, and pull out the front wheel shaft in the direction of the arrow to remove the front wheel.



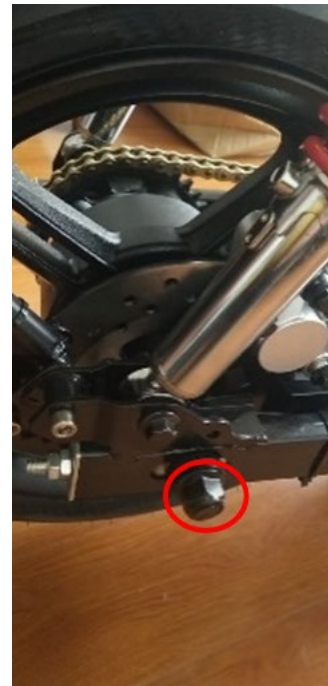
## 3.4 Rear wheel

### *Preparatory work:*

#### *1.3 Left and right flat fork guard*

#### *3.19 Rear mud board bracket*

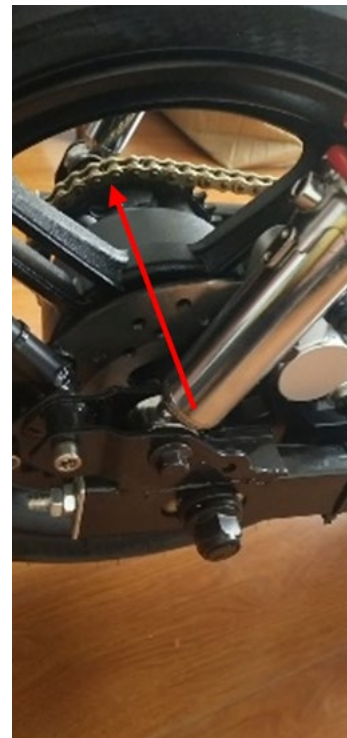
Use a 21mm socket gun head and a 17mm open-end wrench to remove the rear axle nut in the red circle.



Use a 14mm open-end wrench to remove the chain adjuster nuts (left and right) in the red circle.



After removing the axle bolt, then pull out the axle according to the direction of the arrow.



## 5. Rear suspension

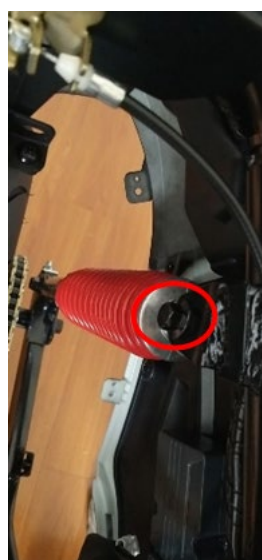
### *Preparatory work:*

#### *1.3 Left and right flat fork guard*

#### *1.4 Cushion and sitting bucket*

### *Left side*

Use a 12mm socket gun head and a 15mm open-end wrench to remove the rear shock-absorbing screw and nut in the red circle in the picture.



Use a 12mm socket gun head and a 15mm open-end wrench to remove the rear shock-absorbing screw and nut in the red circle in the picture, and remove the left rear shock-absorbing.



*Right side*

Use a 12mm socket gun head and a 15mm open-end wrench to remove the rear shock-absorbing screw and nut in the red circle in the picture.



Use a 12mm socket gun head and a 15mm open-end wrench to remove the rear shock-absorbing screw and nut in the red circle in the picture, and remove the right rear shock-absorbing.



## 3.6 Brake lever

**Preparatory work:**

**1.6 Headlight upper and lower cover and headlight**

**1.7 Display case and display lower cover**

Use a 10mm socket wrench and a 10mm open end wrench to remove the brake lever bolts.



After the bolt is removed, the handle can be removed and replaced.



## 3.7 Front brake oil pump

*Preparatory work:*

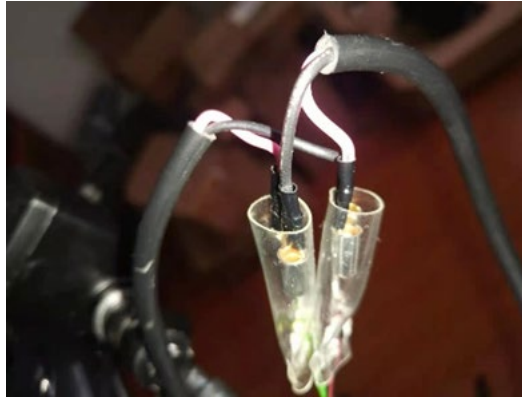
*1.6 Headlight upper and lower cover and headlight*

*1.7 Display case and display lower cover*

Use 8mm T-shaped sleeve to remove the two brake lever bolts



Unplug the short brake wire.



After removing the oil brake pump, remove the oil bolt with a 14mm wrench with the brake lever facing upwards (to avoid spilling brake fluid).



## 3.8 Front Suspension

### *Preparatory work:*

*To disassemble the front wheel, you need to prepare a frame to support the vehicle so that it will remain stable after the front wheel is removed.*

### *1.1 Panel*

### *1.8 Front guard and front guard lower cover*

### *3.1 Front disc brake*

Loosen the fixing bolts on the left and right sides of the front shock-absorbing upper link plate with a 6mm Allen key. After loosening the bolts, use a rubber hammer to knock and pull out the shock absorber.



## 3.9 Steering Handlebar

### *Preparatory work:*

#### *1.1 Instrument assembly*

#### *1.6 Headlamp upper and lower cover and headlamp*

#### *1.7 Display case and display case lower cover*

#### *2.2 Right switch assembly 003 Left switch assembly*

#### *3.7 Front brake pump*

Remove the rubberized gasket cap of the screw of the steering main rod.



Use a 12mm socket gun head and a 15mm open-end wrench to remove the screw of the steering main rod, pull out the screw in the direction of the arrow, and then remove the handle assembly.



## 3.10 Steering Column

*Preparatory work:*

*Uplift the front part of CR6 before disassemble*

*3.1 front disc brake*

*3.3 front wheel*

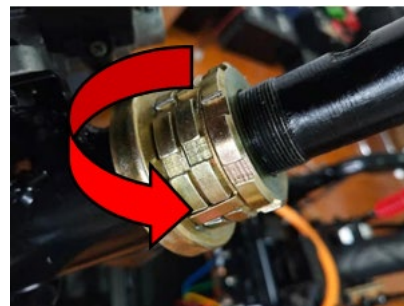
*3.8 front shock absorber*

*3.9 handle assembly*

Remove the rubber boot of the steering main rod.



The 45-52 hook wrench loosens the steel headset of steering main rod in the counterclockwise direction of the arrow, then remove the nut and remove the steering main rod.



## 3.11 Front/Rear brake disc

### *Preparatory work*

Use a 6MM hex wrench to remove the five fixing bolts of the front and rear brake discs, and then remove the brake discs

Note: As the brake disc screws are treated with glue during installation, attention should be paid when disassembling the bolts to avoid the slipping of the hexagon socket bolts and the disassembly personnel will be injured!

## 3.12 Left and right pedal removal

*Preparatory work:*

*1.2 left and right side strip*

*1.4 seat cushion assembly and seat bucket*

Use a 5mm Allen key to remove the bolts in the red circle in the picture.



Use a 10mm open-end wrench to remove the nut in the red circle in the picture, pull out the screw, and then remove the pedal.



## 3.13 Side support

*Preparatory work:*

*1.2 left and right side strips (only remove the left side strip)*

Use a 17mm socket wrench to remove the screw of side support in the red circle in the picture, and then remove the spring to remove the side support.



## 3.14 Chain

*Preparatory work:*

*1.3 left and right fork guard plate (only remove the left fork guard plate)*

*2.4 Rear wheel*

Use needle-nose pliers to remove the chain link in the red circle



Remove the chain link, then remove the chain.



## 3.15 Rear fork

### *Preparatory work:*

#### *1.3 Left and Right fork guard plate*

#### *3.2 Rear Disc Brake*

#### *3.4 Rear Wheel*

#### *3.5 Rear Shock Absorber*

#### *3.14 Chain*

#### *3.19 Rear Mudguard bracket*

Use a 14mm socket gun head and a 15mm open-end wrench to remove the rear flat fork screws and nuts (left and right sides) in the red circle in the picture, and take out the rear flat fork.



## 3.16 Disc brake assembly

### *Preparatory work:*

*1.1 Instrument assembly*

*1.2 left and right side strips*

*1.4 seat cushion and seat bucket*

*1.5 rear armrest*

*1.6 headlamp upper and lower cover and headlamp*

*1.7 display case and display case lower cover*

*1.8 front wall and front wall lower cover*

*1.11 left and right side covers*

*1.15 hooks*

*1.17 front storage box upper and lower ends and pedals*

*3.1 front disc brake*

*3.2 rear disc brake*

Take out the disc brake assembly.



## 3.17 Motor sprocket

*Preparatory work:*

*2.7 Motor*

Use a 19mm open-end wrench to remove the nut in the red circle to remove the sprocket



## 3.18 Rear wheel sprocket

*Preparatory work:*

### *3.4 Rear wheel*

Use circlip pliers to remove the circlip and washer from the red circle



Use a 12mm socket wrench to disassemble the nut in the red circle to remove the sprocket.



## 3.19 Rear mudguard bracket

*Preparatory work:*

*1.3 Left and Right fork guard palte (only remove the right fork guard plate)*

*1.19 Rear mudguard and license plate lamp upper and lower cover*

Use a 6mm Allen key to remove the screws in the red circle.



Pull out the screws in the direction of the arrow to remove the rear mudguard bracket.





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