ROBOOTER

E40

Electric wheelchairs

REPAIR MANUAL



Heruntergeladen von Gast (IP 216.73.217.12) am 09.11.2026 um 12:57 Uhr · sana.swiss

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01 Safety Precautions

1.1 Symbol description

Warning

- The text contents with this symbol mean that, in case of being ignored, there may be serious injury.

Notes

- The text contents with this symbol mean that, in case of being ignored, there may be slight or moderate damage or material damage.

1.2 Applicable range of this product

- helping disabled, elderly and frial people who have difficulty walking to move.

1.3 People unsuitable for using this product

Warning

- Contraindications: The patients with mental problems, including the users who temporarily or permanently lose attention or judgment, are not allowed to use this product.

1.4 Precautions for electrical safety

Notes

This electric wheelchair has passed the test in accordance with ISO 7176-9 Climatic Test.

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- This test ensures that the users or escorts of the electric wheelchair have enough time to move the electric wheelchair from the rain to a safe place; Do not operate the electric wheelchair in thunderstorms;
- Do not place this electric wheelchair under a rainstorm;
- Do not place this electric wheelchair in a wet place for a long time;
- Do not spray or wash the electric wheelchair with an automatic car wash. If
- being directly exposed to rain, smog or wet air, the electric wheelchair may have an electrical and mechanical fault or go rusty.

1.5 Product use conditions

Notes

- Environmental temperature: -10°C~50°C; Relative humidity: 20%～95%;
- Atmospheric pressure: 70kpa～110kpa; No strong electromagnetic interference.
- The safety belt is used as a safety accessory; it is used to prevent the user from rushing out of the Electric Wheelchair when it stops in operation to ensure the safety of the user.

1.6 Disposal considerations

Notes

- In accordance with local laws and regulations, your product shall be processed separating from the domestic waste. The product shall be recycled in the recycling point designated by local government. The classified collection and recycling of this product facilitate conservation of natural resources.

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1.7 Precautions during use

(1) Driving on slopes

This electric wheelchair has passed the test requirements of climbing on a slope of not exceeding 9° with a load of 150kg. Do not try to climb the slopes exceeding 9°. During reversing on a slope, please be sure to slow down the electric wheelchair. Do not reverse on a slope exceeding 9°. During reversing, please be extremely careful.

(2)The ability of climbing slope and driving distance are affected by battery and following environment:

For example: Weight of the users; Topography (such as grass or gravel); Gradient of hill; Battery life and service life; Extreme temperature; Use and weight of the fittings, etc.

(3) Braking

When the electric wheelchair brakes, please sit down and hold the handrail firmly. When releasing the upper controller rocker, the electric wheelchair will stop within seconds.

Note: Electromagnetic brake will not take effect immediately and will take effect after the wheel rotates.

(4) Emergency braking

In case of critical situation or unexpected movement, press the power switch key to make the electric wheelchair stop (this emergency brake is effective, however, it shall not be used under normal conditions).

Note: Frequent use of emergency brake may make the motor faulty and further prevents the electric wheelchair from being normally used.

(5) Use of mobile phone

Do not drive the wheelchair with Mobile Application at any time. Please pay attention toroad condition when you driving. The Mobile Application only can be used to help patient move wheelchair and set parameters, NOT used to drive wheelchair.

(6)The Electric wheelchair may not be fixed as a seat in a moving vehicle.

(7)The speed of the whole vehicle will vary depending on the tire pressure, ground, environment and power.

Please follow the traffic rules.

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1.8 Specific warning (please read carefully)

Do not perform snake driving, high-speed sharp turn and other dangerous driving operations, otherwise it may lead to the electric wheelchair tilt and human injury;

- Do not use the electric wheelchair on escalators, which may increase the risk of being injured;
- Do not drive on the motor vehicle lane or non-pedestrian;
- Do not drive on the surface of water, oil, ice or other slippery objects. If not, the electric wheelchair may be out of control;
- Do not try to cross the obstacle or ditch of 40mm. If not, personal injury may be caused;
- Do not sharply bend or move backwards under high speed driving;
- Do not take passengers on the electric wheelchair;
- Do not operate the electric wheelchair without checking the fasteners, connectors or detachable parts for correct connection and fastening. Please always pay attention to the surrounding environment;
- Do not repair any part, fitting or adapter of the electric wheelchair without authorization;
- Do not get on without braking;
- Do not operate the electric wheelchair when your judgment may be affected (such as drink, take drugs or take medicine);
- Do not operate the electric wheelchair when you are suddenly out of sorts;
- Do not operate the electric wheelchair when your sight is seriously weakened;
- For the injury accident caused by violation of local or international laws or regulations, we undertake no responsibility;
- All the functions can only be operated after you correctly sit on the seat;
- Do not place your feet in any part out of the pedal;
- Do not stand on the electric wheelchair;
- Do not try to go up and down the slope exceeding 9°;
- Do not reverse on the slope exceeding 9°;
- When driving on the slope, release the control system, and the electric wheelchair may step back; When moving forward or backward, the electric wheelchair may roll .

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before the braking function takes effect. Please take care of safety;

- Before use of the electric wheelchair, please check the connection of all electrical parts for safety and reliability;
- Do not disconnect, snip or modify the wiring harness parts which have been installed on the electric wheelchair under any condition.
- Do not use other unqualified batteries, such as the lead acid batteries which cannot be recycled, the batteries of other manufacturers, etc.
- Before installation, please read the information related to batteries and battery charger.
- The Electric wheelchair may not be fixed as a seat in a moving vehicle.

In case of violation of the above requirements, there may be unexpected damages.

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1.9 Excerpts from EMC-related guidelines and statements in manufacturer's accompanying documents

EMI Compliance Table(Table 1)

Phenomenon	Compliance	Electromagnetic environment
RF emissions	CISPR 11 Group 1,Class B	Home healthcare environment
Harmonic distortion	IEC61000-3-2 Class A	Home healthcare environment
Voltage fluctuations and flicker	IEC61000-3-3 Compliance	Home healthcare environment

Table 1-Emission

EMS Compliance Table (Table2-5)

Phenomenon	Basic EMC standard	Immunity test levels
		Home healthcare environment
Electrostatic Discharge	IEC 61000-4-2	±8kV contact ±2kV,±4kV,±8kV,±15kV air
Radiated RF EM field	IEC 61000-4-3	20V/m 26MHz-2.5GHz 80% AM at 1kHz 10V/m 80MHz-2.7GHz 80% AM at 1kHz
Proximity fields From RD Wireless communications equipment	IEC 61000-4-3	Refer to table 3
Rated power Frequency Magnetic fields	IEC 61000-4-8	30A/m 50Hz or 60Hz

Table 2-Enclosure Port

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Test Frequency (MHz)	Band (MHz)	Immunity test levels Home healthcare environment
385	380-390	Pulse modulation 18Hz，27V/m
450	430-470	FM,±5kHz deviation 18Hz sine,28V/m
710	704-787	Pulse modulation 217 Hz sine, 28V/m
745		
780		
810	800-960	Pulse modulation 18Hz sine, 28V/m
870		
930		
1720	1700-1990	Pulse modulation 217Hz sine, 28V/m
1845		
1970		
5785		

Table 3 – Proximity fields from RF wireless communications equipment

	Standard	Home healthcare environment
Electrical fast Transients/burst	IEC 61000-4-4	±2KV 100kHz repetition frequency
Surges Line-to-line	IEC 61000-4-5	±0.5kV，±1kV
Conducted Disturbances Induced by RF fields	IEC 61000-4-6	3V, 0.15MHz-80MHz 6V in ISM bands and amateur radio bands Between 0.15MHz and 80MHz 80%AM at 1kHz
Voltage dips	IEC 61000-4-11	0% U_T:0.5 cycle At 0°,45°,90°135°,180°,225°,270° and 315°
		0% U_T; 1 cycle and 70% U_T:25/30 cycles Single phase: at 0°
Voltage interruptions	IEC 61000-4-11	0% U_T; 25/30 cycles U_T=rated input Voltage

Table 4 – Input a.c. power port

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Phenomenon	Basic EMCstandard	Immunity test levels
		Home healthcare environment
Conducted disturbances induced by RF fields	IEC61000-4-6	3V.0.15MHz-80MHz6V in ISM bands and amateur radiobands between 0.15MHz and 80MHz 80%AM at 1kHz

Table 5 – Signal input/output parts port

Cable	Max. cable length, Shielded/unshielded		Number	Cable classification
AC Power Line	1.8M	Unshielded	1 Set	AC Power
DC Power Line(USB Cable)	0.95M	Unshielded	1 Set	DC Power

Table 6-Cable information

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02 Maintenance & Tools

2.1 Daily spot inspection and maintenance

- The electric wheelchair user or operator is responsible for the cleaning, inspection and maintenance;
- General maintenance of the electric wheelchair includes: Clean electric wheelchairs, check tires, check batteries;
- Our suggestion: The electric wheelchair shall be checked every 6 months;
- When the electric wheelchair needs to be cleaned, the upper controller should be wiped with the clean towel;
- Regularly (weekly or monthly, depending on the frequency) check the connecting parts (such as screws and nuts) for loosening, falling and corrosion, etc.;
- Regularly check whether the folding parts are stuck, falling off and other conditions;
- Regularly check the tires for aging and serious wear, etc.;
- In case of rain or wet weather, the electric wheelchair shall be wiped dry as much as possible to prevent rust due to dampness;
- Electric wheelchairs should try to avoid exposure to the sun in hot weather.

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03 Repair and replacement

3.1 Dismantle and install front wheel

Tools:



4mm T-shaped hex wrench
263 grade thread adhesive

3.1.1 front wheel disassembly



1. Grasp the foot pedal handle and lift the wheelchair upwards. Place a 25-30cm support pad at the connection between the foot pedal and the frame.
Lift the front support of the wheelchair to suspend the front wheels.



2. Dismantle the fixing bolt of omni wheel wheel by a 4mm hex wrench.



3. Remove the fixing bolt and dismantle the front wheel.

3.1.2 Front wheel installation



1. Drip 1-2 drops glue of 263 grade thread adhesive onto the front bolt thread of the front wheel.

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2. Put the front fork, insert the bearing bolts through the bearings of front wheel.



3. Install and tighten the front wheel fastening bolts by a 4mm hex wrench.

3.2 Dismantle and install rear wheel

Tools:



4mm T-shaped hex wrench
243 grade thread adhesive

3.2.1 Rear wheel disassembly



1. Supported by the anti-roll wheels makes rear wheels suspended.



2. Dismantle the wheel hub decoration cover.

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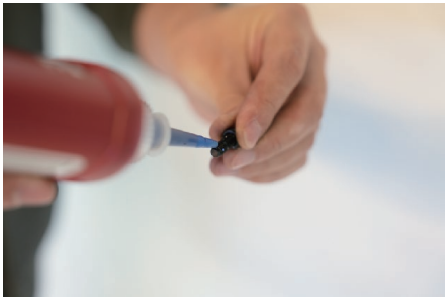


3. Disassemble the wheel hub by a 4mm hex wrench and three M4 hex screws.



3. Install the rear wheel decorative cove.

3.2.2 Rear wheel installation



1. Drip 1-2 drops glue of 243 standard thread adhesive into the front screw thread of the wheel hub .



2. Install three M4 hex fastening screws by a 4mm hex wrench.

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3.3 Disassemble and install the main controller (lower controller)

Tools:



3mm T-shaped hex wrench
Cross screwdriver
243 grade thread adhesive

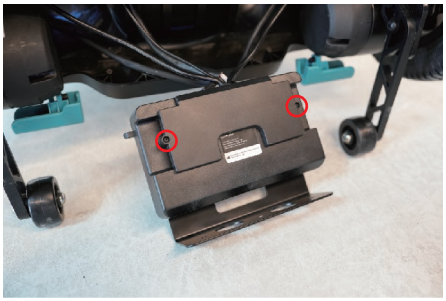
3.3.1 Disassemble the main controller



1. Lift wheelchair upwards at 90 °.



2. Remove 7 M3 hex fastening screws by a 3mm hex wrench.

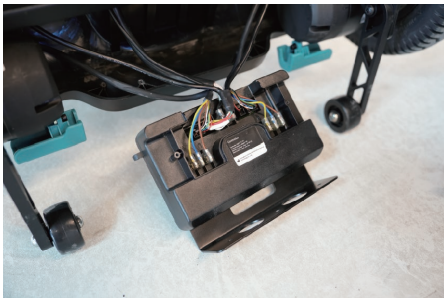


3. Remove the two cross screws of the main control wire pressing cover plate by a cross screwdriver.



4. Remove the controller plugs in sequence.

3.3.1 Install the main controller (lower controller)

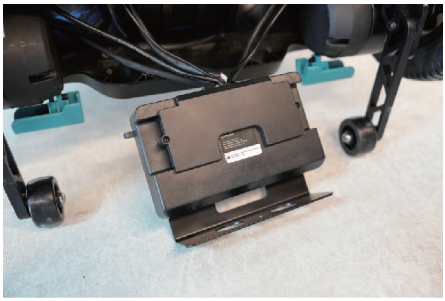


1. Cable and Port Connection
The brown wire of the motor phase: U port,
The blue wire: V port
Yellow wire: W port
(M1 right motor - M2 left motor)
2. The red power line links +port, while the black line links - port

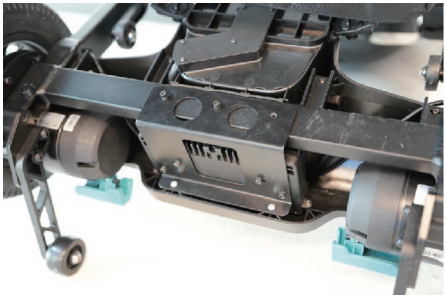
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3. Motor Hall wire links controller HALL1 (right motor) \ HALL2 port (left motor)
4. The light wire links the controller EXPN port
5. Connect the upper and lower control cables to the controller JSM port



6. Install the controller with two Phillips screws on both sides by a Phillips screwdriver



7. Install 7 M3 hex screws to secure the screws by a 3mm hex wrench.

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3.4 Disassemble and install the motor

Tools:



1. 4mm T-shaped hex wrench
2. 5mm T-shaped hex wrench
3. 4 * 150mm zip ties
4. Cross screwdriver
5. 3mm T-shaped hex wrench
6. 243 grade thread adhesive

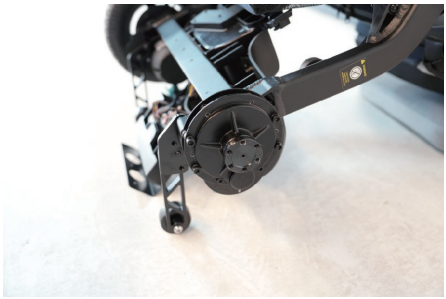
3.4.1 Motor disassembly



1. Supported by the anti-roll wheels makes rear wheels suspended.



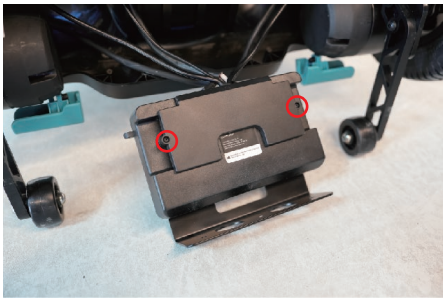
2. Dismantle the wheel hub decoration cover.



3. Disassemble the wheel hub by a 4mm hex wrench. Remove three M4 hex screws and remove the wheel hub.



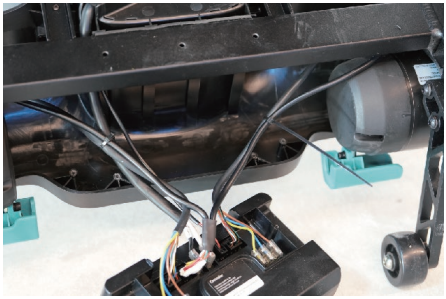
4. Remove 7 M3 hex fastening screws by a 3mm hex wrench.



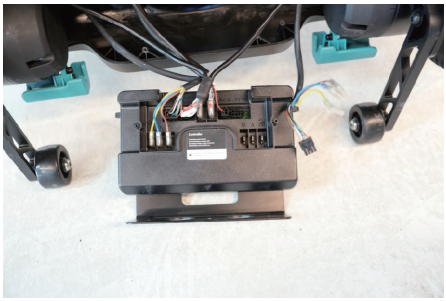
5. Remove the two cross screws of the lower control wire pressing cover plate by a cross screwdriver

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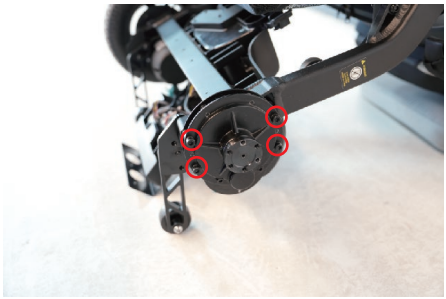
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6. Cut the cable tie quickly.



7. Remove the motor phase wire and Hall wire plug from the controller U \ V \ W \ HALL1 \ HALL2 port (M1 right motor-M2 left motor HALL1 (right motor) \ HALL2 port (left motor)

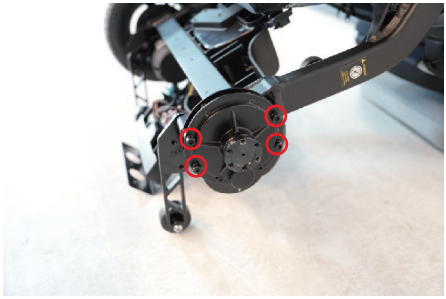


8. Remove the four M5 hex screws from the motor and remove the motor by a 5mm hex wrench

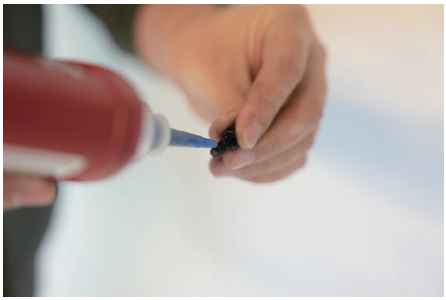
3.4.2 Motor installation



1. Drip 1 drop of 243 standard thread adhesive on the front end of the motor fastening screw thread pattern.



2. Install the motor onto the frame motor, install 4 M5 hex screws at the installation station by a 5mm hex wrench.



3. Drip a drop of 243 standard thread adhesive on the screw thread of wheel hub.

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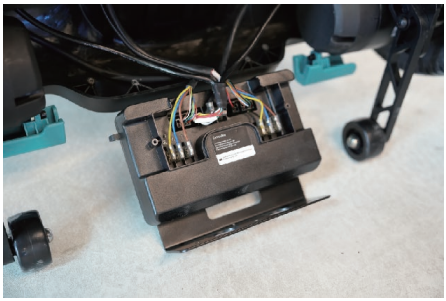
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4. Place the rear wheel at the motor rear wheel installation station and use a 4mm hex wrench to install three M4 hex screws.

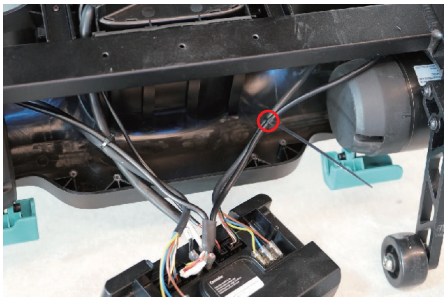


5. Install the rear wheel decorative cover.

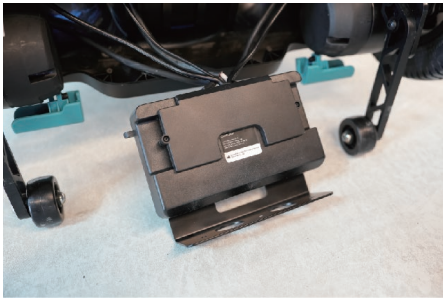


6. The brown wire of the motor phase links U port, the blue wire links V port, and the yellow wire links the controller W port (M1 right motor - M2 left motor)

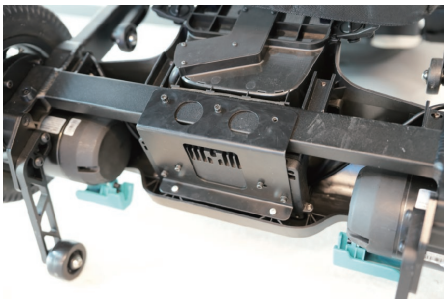
7. Motor Hall wire connected to controller HALL1 (right motor) \ HALL2 port (left motor)



8. Tie ties 10-15cm behind the controller and 15-20cm behind the motor by zip ties.



9. Install the controller with two Phillips screws on both sides by a Phillips screwdriver.



10. Install 7 M3 hex screws to secure the screws by a 3mm hex wrench.

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3.5 Replace left and right upper controller and armrest

Tools:



3mm T-shaped hex wrench

3.5.1 Disassemble the upper control and armrest lights



1. Lift the armrest and remove the upper control and armrest light by a 3mm hex wrench



2. Remove the upper control and armrest lights and remove the connector plug.

3.5.2 Disassemble the upper control and armrest lights



1. Swap the upper control and armrest lights and plug in the connecting wire plug.



2. Install three hex screws on the upper control and armrest lights by a 3mm hex wrench.

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3.6 Maintain and Replace of Upper and Lower Control Connection Lines

Tools:



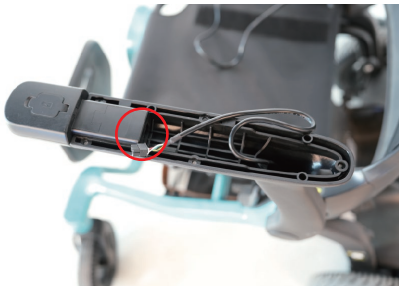
3mm T-shaped hex wrench
4 * 150mm zip tie, diagonal pliers
4mm T-shaped hex wrench
Cross screwdriver
243 grade thread adhesive
Iron wire

3.6.1 Remove the upper and lower control cables





1. Flip the armrest up 90 degrees.
2. Remove the 5 fixing screws of the cross armrest cover on both sides by a cross screwdriver.
3. Flatten the left and right armrests 90 °.





4. Remove the armrest cover.
5. Press and hold the switch of the upper control and armrest light connection line plug, unplug the plug.





6. Remove the two fastening screws of the armrest by a Phillips screwdriver, and remove the cover plate of the wiring harness.

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7. Remove the two R-shaped buckle fastening screws on both sides by a Phillips screwdriver.
8. Open the opening position of the R-shaped buckle, remove the thread speed (Note: Opening too large may cause the buckle to break).



9. Remove the seat cushion.




10. Remove the fastening screws of the R-shaped linear speed buckles by a 3mm hex wrench as well as the left and right folding brackets.
11. Open the opening position of the R-shaped buckle, remove the thread speed (Note: Opening too large may cause the buckle to break).



12. Press and hold the folding switch with your left hand, fold the wheelchair forward with your right hand, and fold it into a bow shape to stop folding.




13. Cut the fixing straps of the left and right folding brackets by diagonal pliers or scissors.




14. Remove the fixing screws of the left and right R-shaped wiring harness buckles on the side pipes of the rear bracket by a 3mm hex wrench.
15. Open the opening position of the R-shaped buckle, take out the wire speed.

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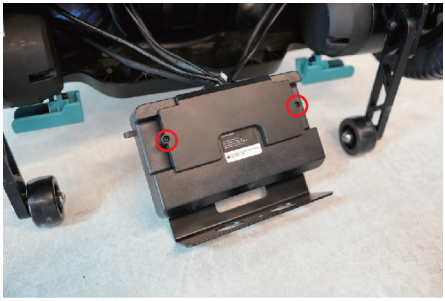
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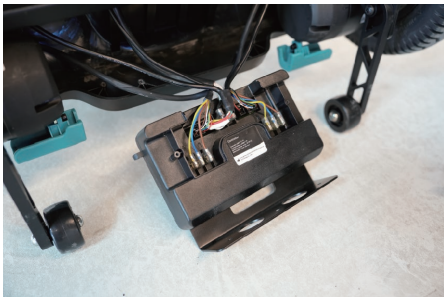
16. Prepare a soft cushion.
17. Hold the pedal handle, drag the top of the backrest backwards and lift the wheelchair to a 90 degree vertical position (Note: to avoid scratching the backrest, place it on a soft cushion).



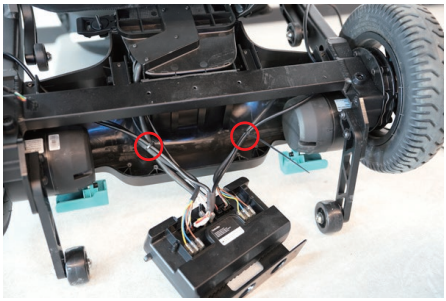
18. Remove the 8 Phillips fastening screws at the bottom of the rear cover by a Phillips screwdriver.



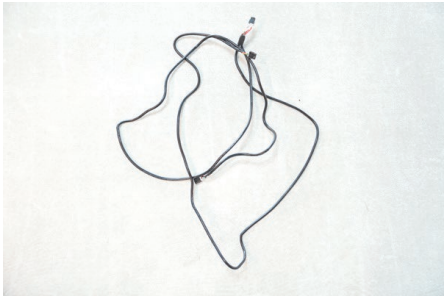
19. Remove the two fixed screws on the controller cable cover plate by a Phillips screwdriver.



20. Press and hold the upper and lower control cable plug to remove the plug.



21. Cut 2 wire speed zip ties by diagonal pliers or scissors.

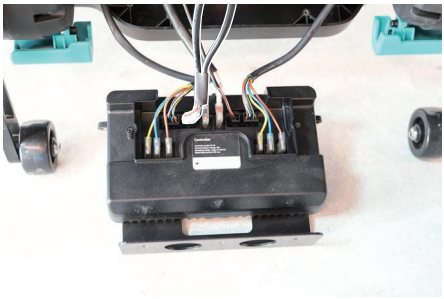


22. Pull out the connecting wire from the bottom wire hole of the left and right rear bracket side pipes.

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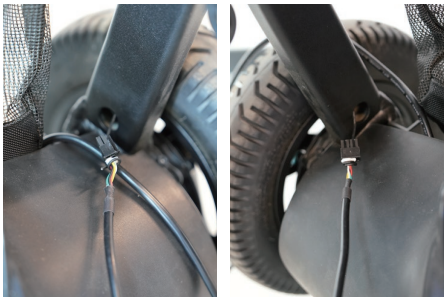
3.6.1 Remove the upper and lower control cables



1. The lower control plug is where the two plugs are connected together.
2. Connect the offline control plug. Insert it into the lower controller.



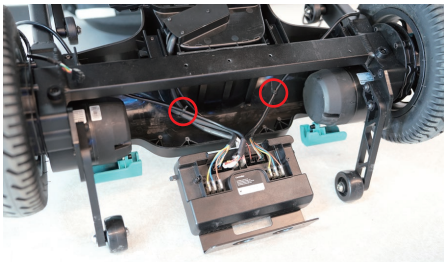
3. Insert the steel wire downwards through the inner thread hole at the rear bracket side pipes.



4. Insert the steel wire into the wireless hole of the left and right connecting wire plugs.
5. After threading, bend the steel wire into a hook shape and hook it onto the plug.



6. Pull the steel wire upwards to feed the plug into the wire hole.
7. Pull the steel wire upwards and pull out the connector plug.



8. Smooth the connection between the left and right upper and lower controls.
9. Tie the left and right upper control wires together with the Hall wires of the left and right motor phase lines, approximately 10-15cm from the rear of the lower control and 15-20cm from the rear of the motor, using zip ties.



10. Hold the upper and lower control connecting wires of the left and right rear bracket side pipes and pull them all out.

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11. Press and hold the folding switch with your left hand, fold the machine forward with your right hand, and fold it into a bow shape to stop folding.



12. Insert the R-shaped wire buckle into the connecting wire at the inner line hole of the left and right side pipes on the rear bracket.
13. Install the fixing screws of the R-shaped buckles on the inner side of the left and right pipes into the screw holes by a 3mm hex wrench.
14. Pinch the left and right connecting wires and pull out all the wires from the gap.
15. Connect two wire speed fixing holes between the left and right folding brackets and the rear brackets. Use a 4 * 150mm zip tie to pass through the front hole and tighten the upper and lower control connection wires.





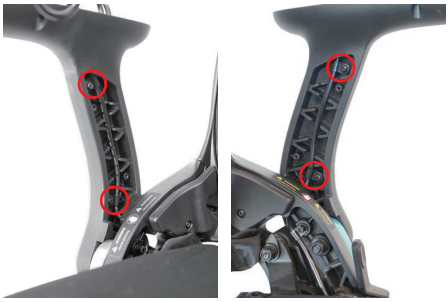
16. Thread the left and right connecting wires out from the inside of the folding bracket and pull them out.
17. Insert the R-shaped line speed snap fastener on the inner side of the left and right folding brackets to connect the wires.
18. Install the R-shaped buckle fixing screws into the screw holes by a 3mm hex wrench.



25. Thread the upper and lower control connecting wires through the left and right armrest wire holes and pull it out.

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26. Press the connecting wire into the wire groove of the wire pressing chamber.
27. Insert the buckles from the opening position of the R-shaped buckles and install fastening screws.
28. Install two cross R-shaped linear speed snap fasteners by a cross screwdriver and tighten the screws.



29. Mark L (left) and R (right) on the cover plate.
30. Move the wire pressing cover plate to the top of the wire pressing compartment.
31. Install the two compression line cover plate fastening screws by a Phillips screwdriver.





32. Insert the connector plug switch facing downwards into the upper control and armrest light.
33. Pinch the end of the connecting wire and rotate it 180 ° clockwise to form a circle and press it into the wire compartment.



34. Cover the handrails on both sides with the pointed end facing back and the flat end facing forward.

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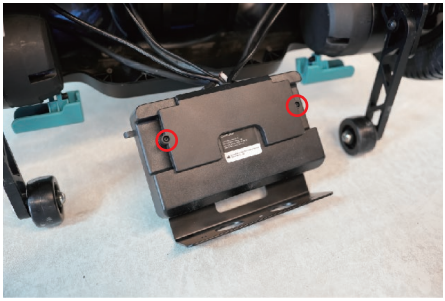




35. Hold down the armrest cover and lift it up 90 degrees.
36. Install the 5 Phillips fixing screws at the bottom of the armrest by a Phillips screwdriver.



39. Prepare a soft cushion.
40. Hold the pedal handle, drag the top of the backrest backwards, lift up a 90 ° angle (Note: to avoid scratching the backrest, it needs to be placed on a soft cushion)cushion).



37. Cover the controller wire pressing cover plate.
38. Install two Phillips fastening screws by a Phillips screwdriver.



41. Install the 8 Phillips fastening screws at the bottom of the rear cover by a Phillips screwdriver.



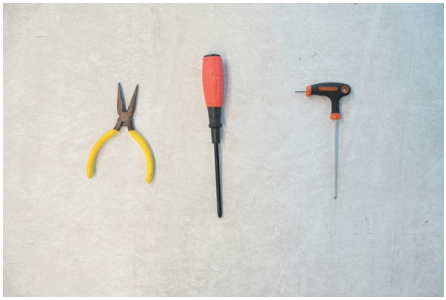
42. Grasp the backrest armrest and lift it 90°.

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03 Repair and replacement

3.7 SOP for Maintenance and Replacement of Rear Cover and Power Cord

Tools:



3mm hex T-wrench
Phillips screwdriver
Pointed nose pliers

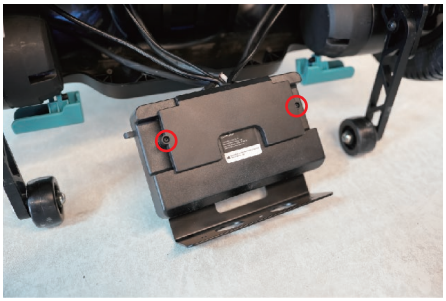
3.7.1 Disassemble the rear cover shell



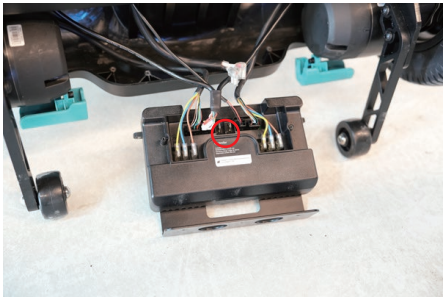
1. Prepare a soft cushion.
2. Grasp the pedal handle, drag the top of the backrest backwards, lift the wheelchaor up (Note: to avoid scratching the backrest, it needs to be placed on a soft cushion).



3. Remove the 8 Phillips fastening screws at the bottom of the rear cover by a Phillips screwdriver.



7. Remove the two fixing screws on the controller cable cover plate by a Phillips screwdriver.



8. Use pointed pliers to clamp the bottom of the positive and negative plug and remove the positive and negative plug of the power.
9. Press and hold the light wire plug switch to remove the controller light wire plug.
Attention: Use sharp nose pliers to lightly clamp the positive and negative plugs of the power cord.

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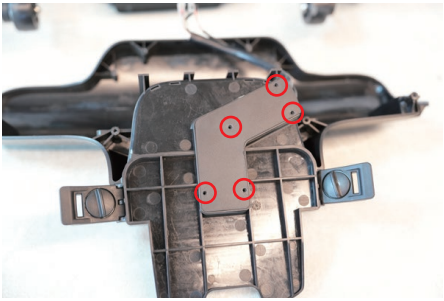
03 Repair and replacement



4. Grasp the backrest armrest and lift it up 90 degrees.



5. Remove the inner hexagon fastening screws on the left and right sides on the front of the rear cover by a 3mm hex wrench.
6. Remove the rear cover.



11. Remove the 5 Phillips fastening screws from the bottom cover plate of the rear cover by a Phillips screwdriver.
12. Remove the wire pressing cover plate.



10. Remove the power cord, power plug, and two Phillips fastening screws by a Phillips screwdriver.



13. Pinch the power cord battery plug and pull the power cord out of the cable hole upwards.

3.7.2 Install the power cord for the rear cover



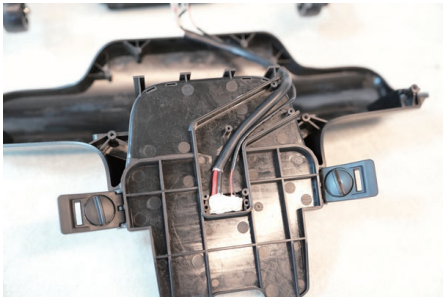
1. Plug the positive and negative terminals of the power cord, and pull out the power cord by threading the light cord plug.

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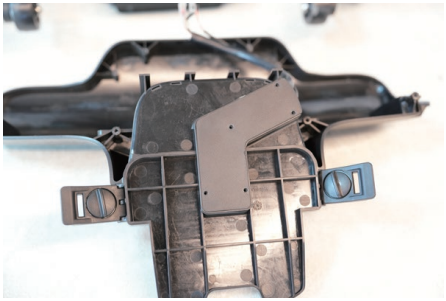
03 Repair and replacement



2. Place the power cord battery plug into the battery plug. Install the power cord battery plug by two Phillips fastening screws and a Phillips screwdriver.



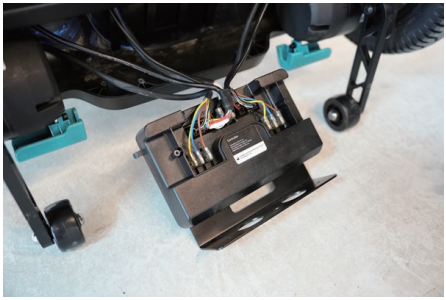
3. Place the power cord and light cord in the pressure wire compartment.



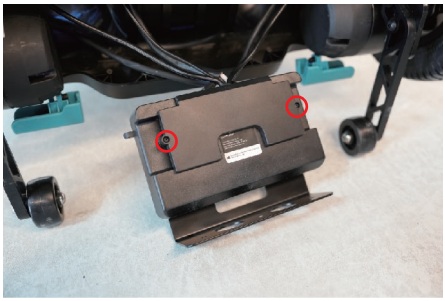
4. Cover the rear cover pressing wire cover plate and use a Phillips screwdriver to install 5 Phillips fastening screws.



1. Prepare a soft cushion.
2. Grasp the pedal handle, drag the top of the backrest backwards, lift the wheelchaor up (Note: to avoid scratching the backrest, it needs to be placed on a soft cushion).



5. Insert the light wire plug into the controller's EXPN interface.
6. Insert the positive pole of the power cord into the controller+interface, and the negative pole plug into the controller - interface.



7. Cover the controller cable pressing cover.
8. Install two Phillips fastening screws by a Phillips screwdriver.

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11. Install the 8 Phillips fastening screws at the bottom of the rear cover by a Phillips screwdriver.



12. Grasp the backrest armrest and lift it up 90 degrees to level the wheelchair.

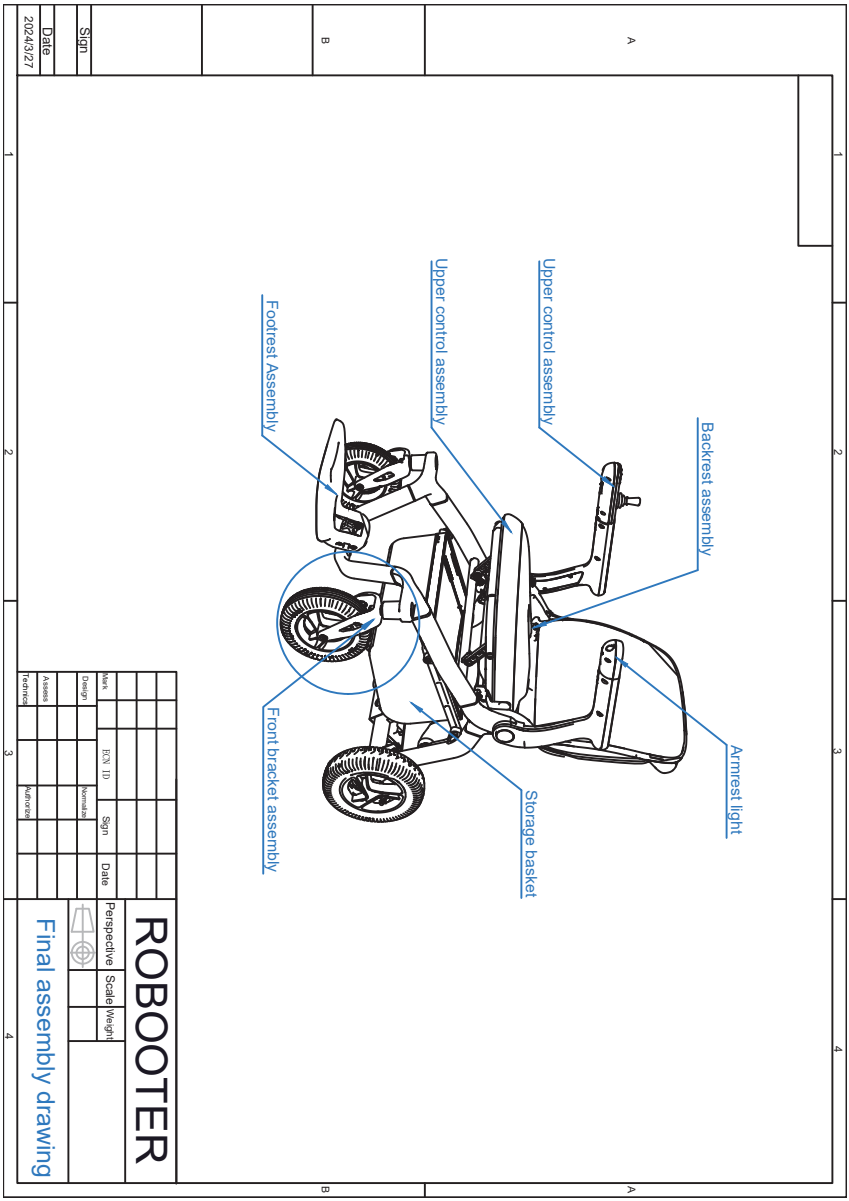


13. Install the fastening screws on the left and right sides of the front inner hexagon by a 3mm hex wrench.

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04 Explode View

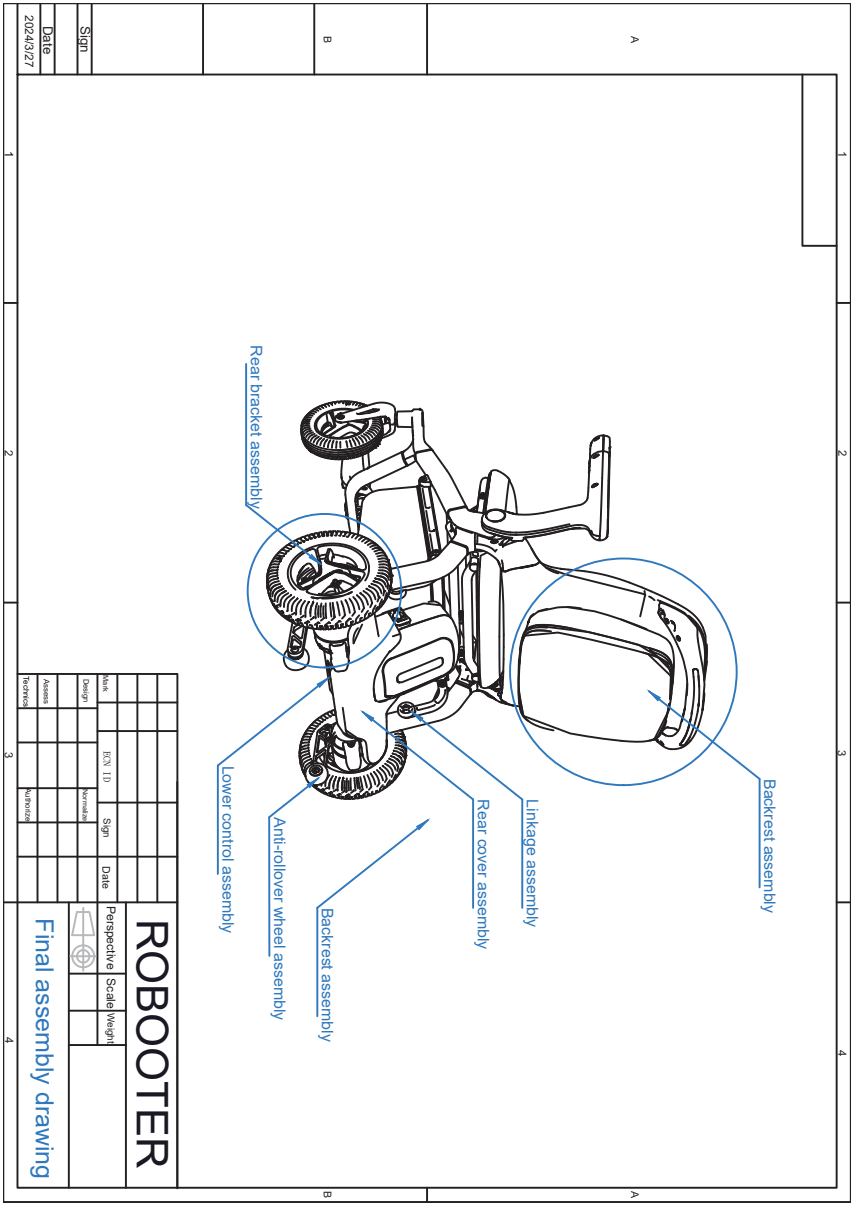
4.1 Final assembly drawing



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04 Explode View

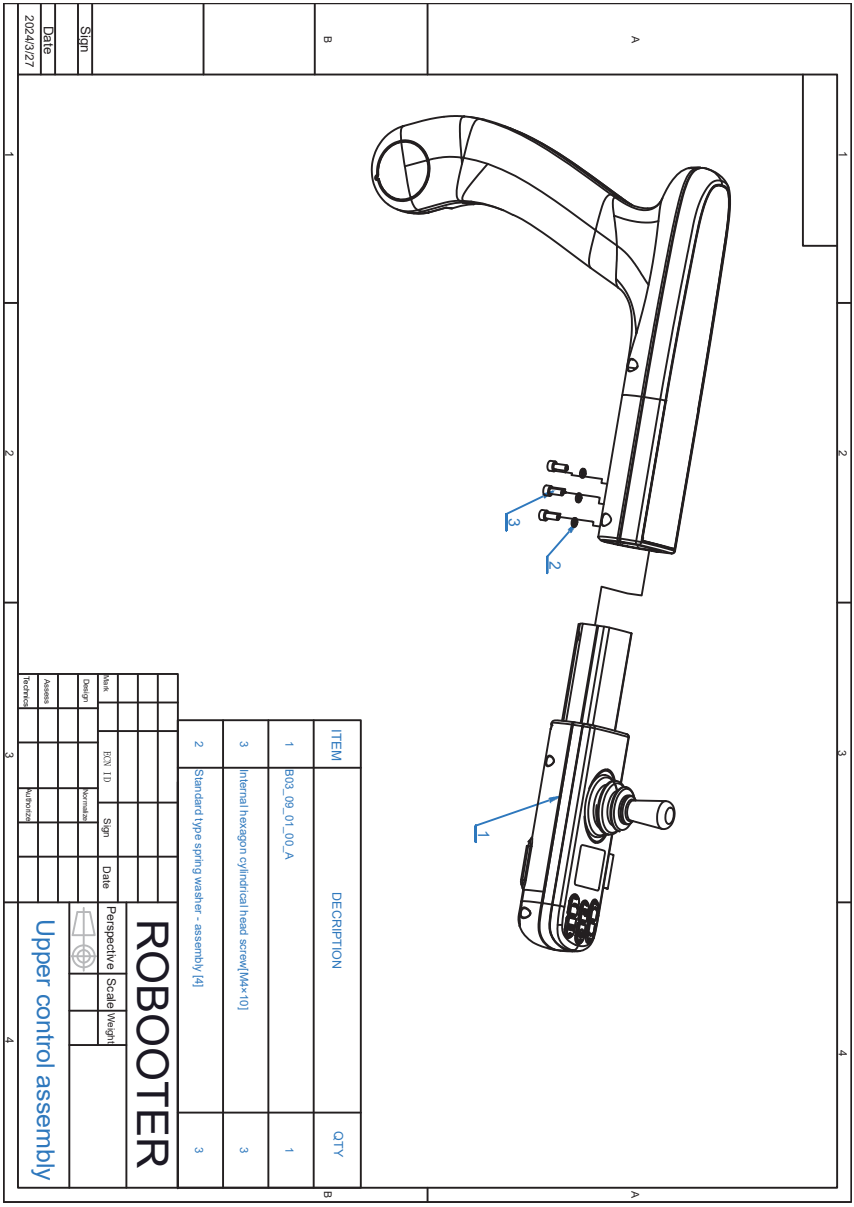
4.2 Final assembly drawing



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04 Explode View

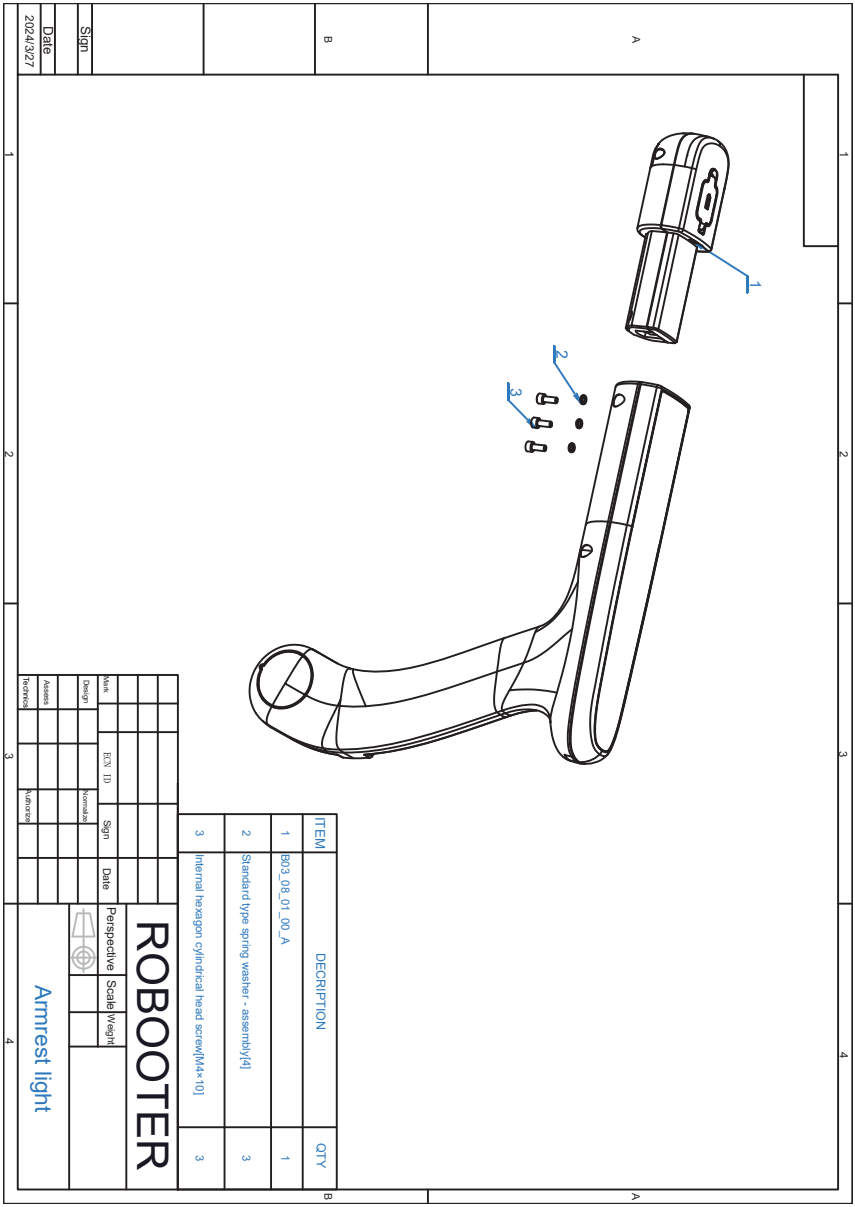
4.3 Upper control assembly



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04 Explode View

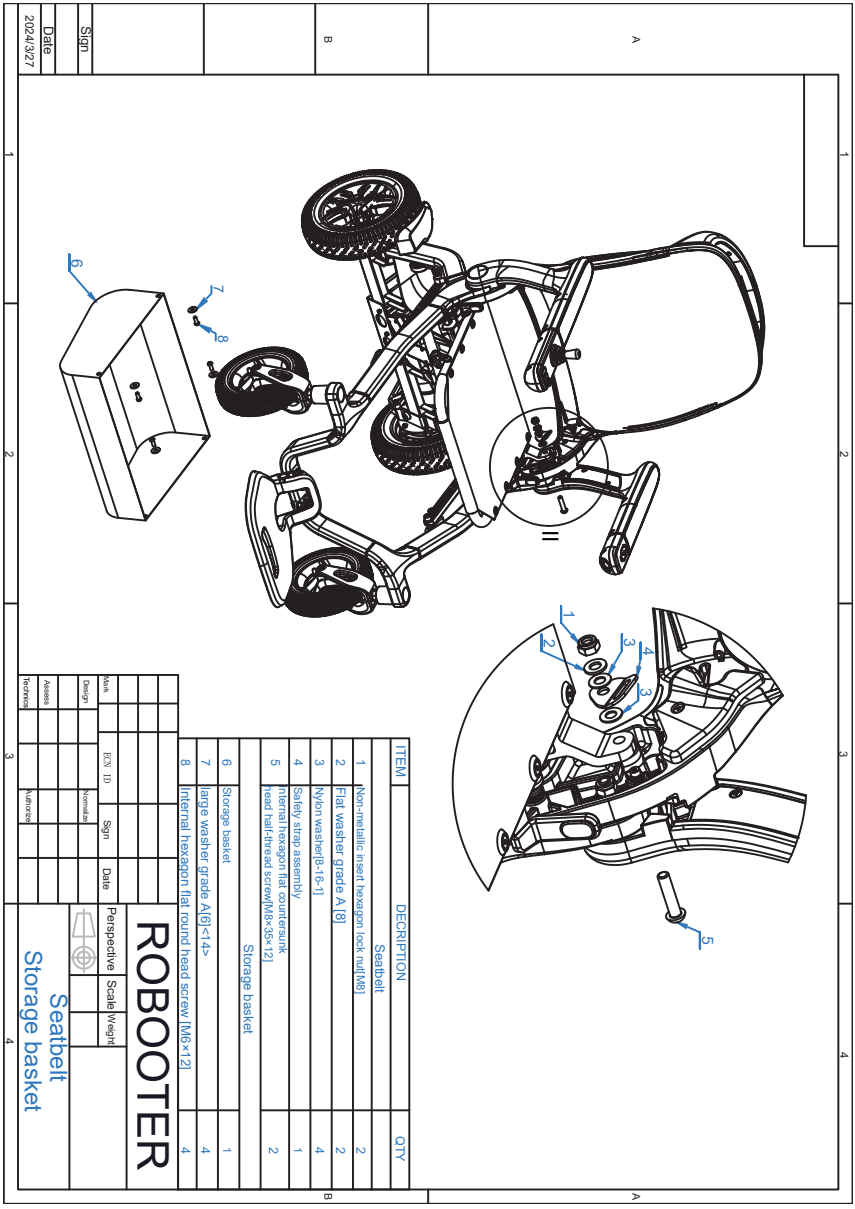
4.4 Armrest light



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04 Explode View

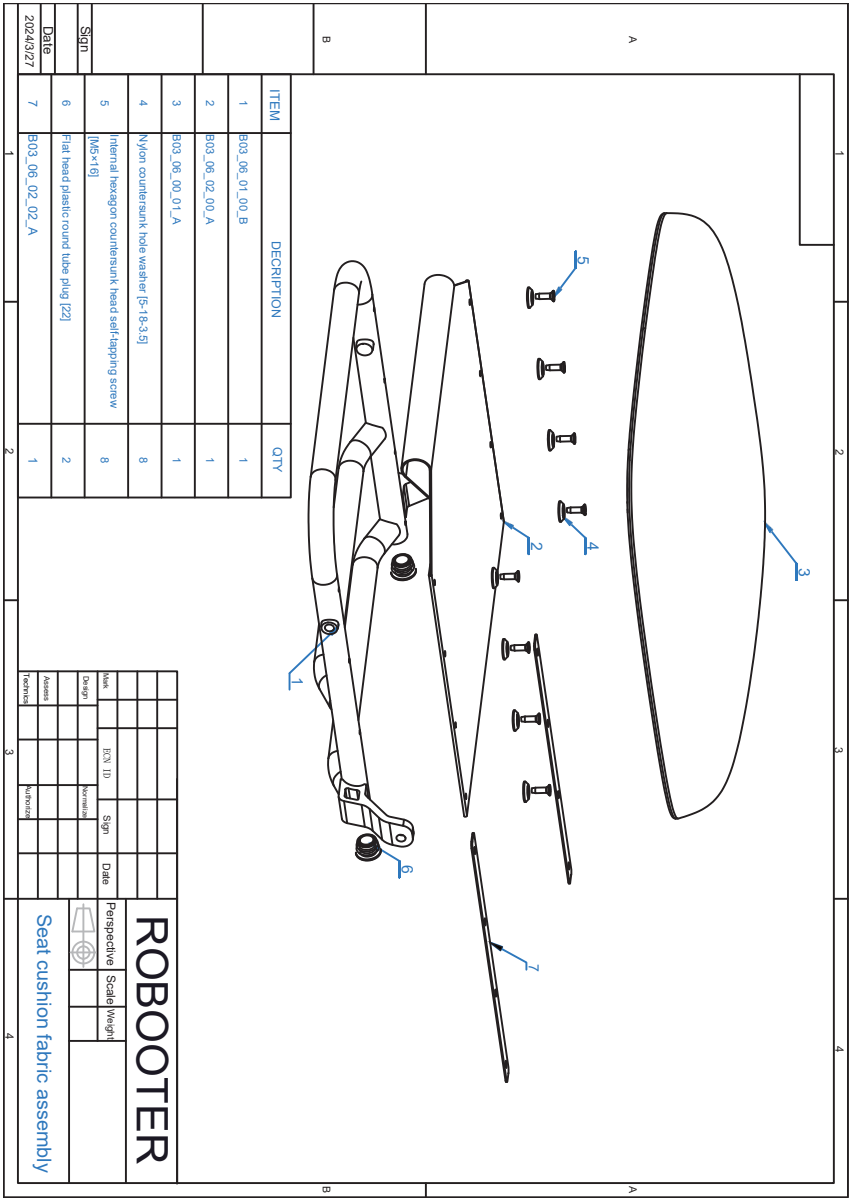
4.5 Seatbelt Storage basket



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04 Explode View

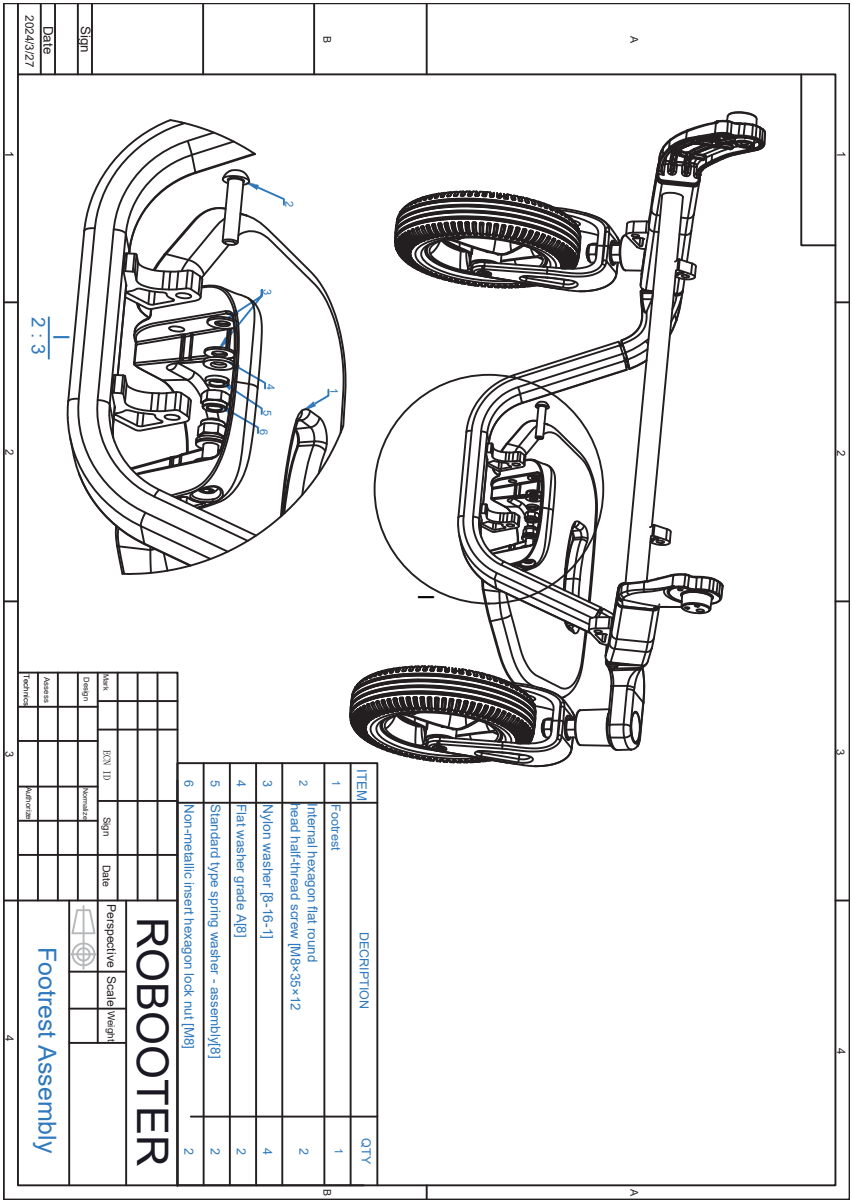
4.6 Seat cushion fabric assembly



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04 Explode View

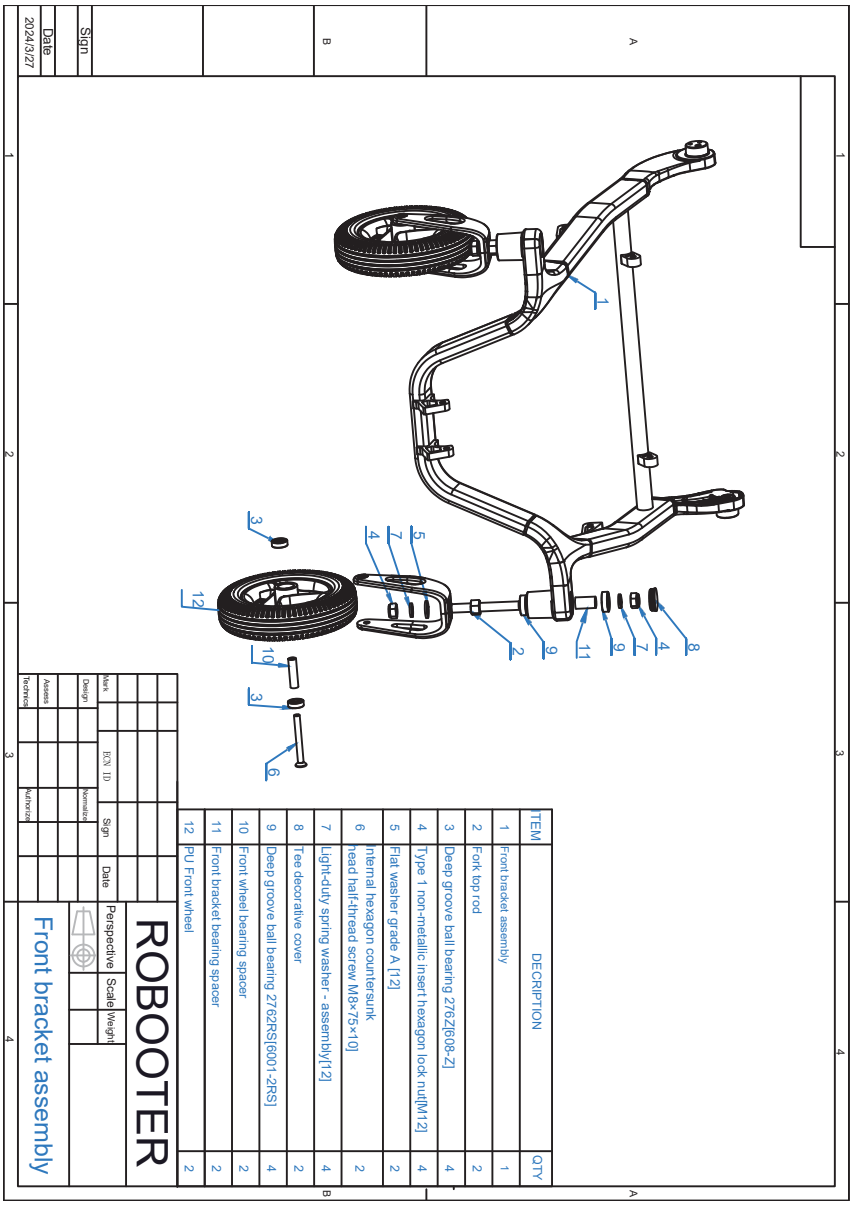
4.7 Footrest assembly



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04 Explode View

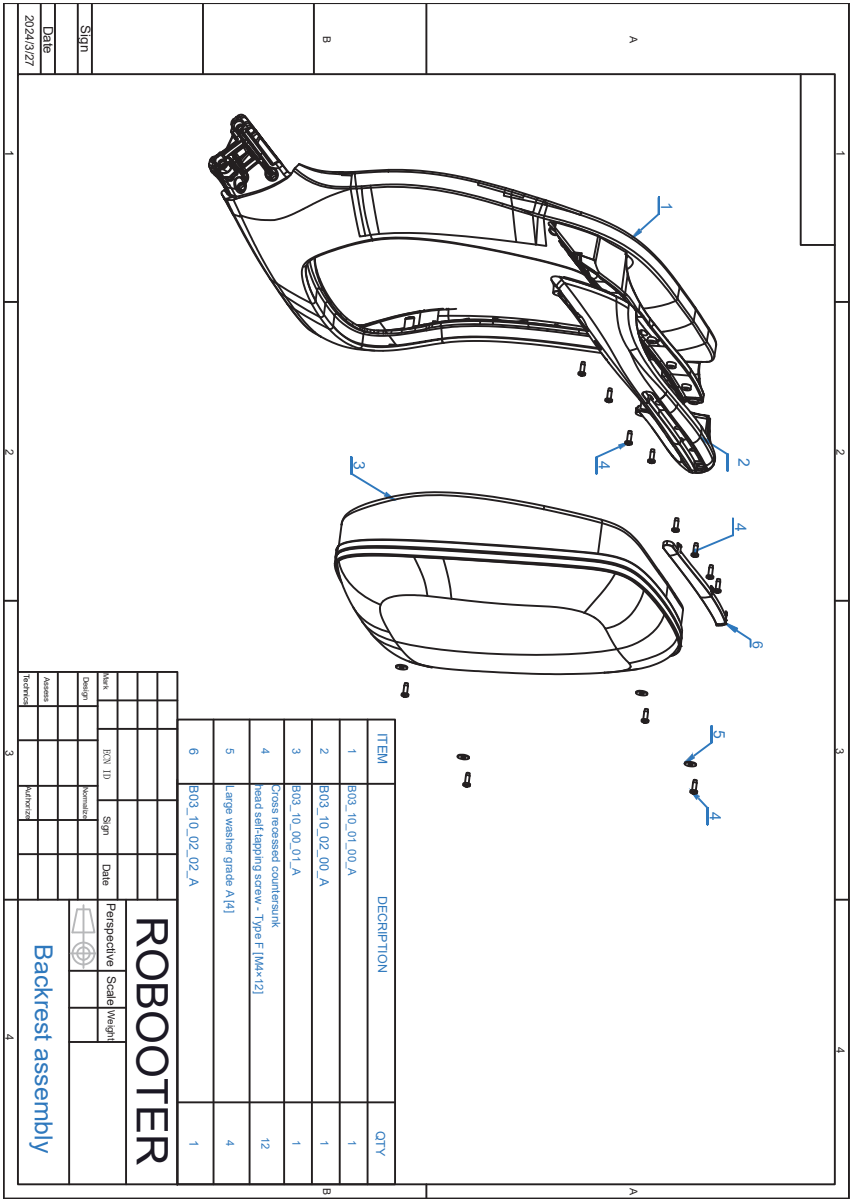
4.8 Front bracket assembly



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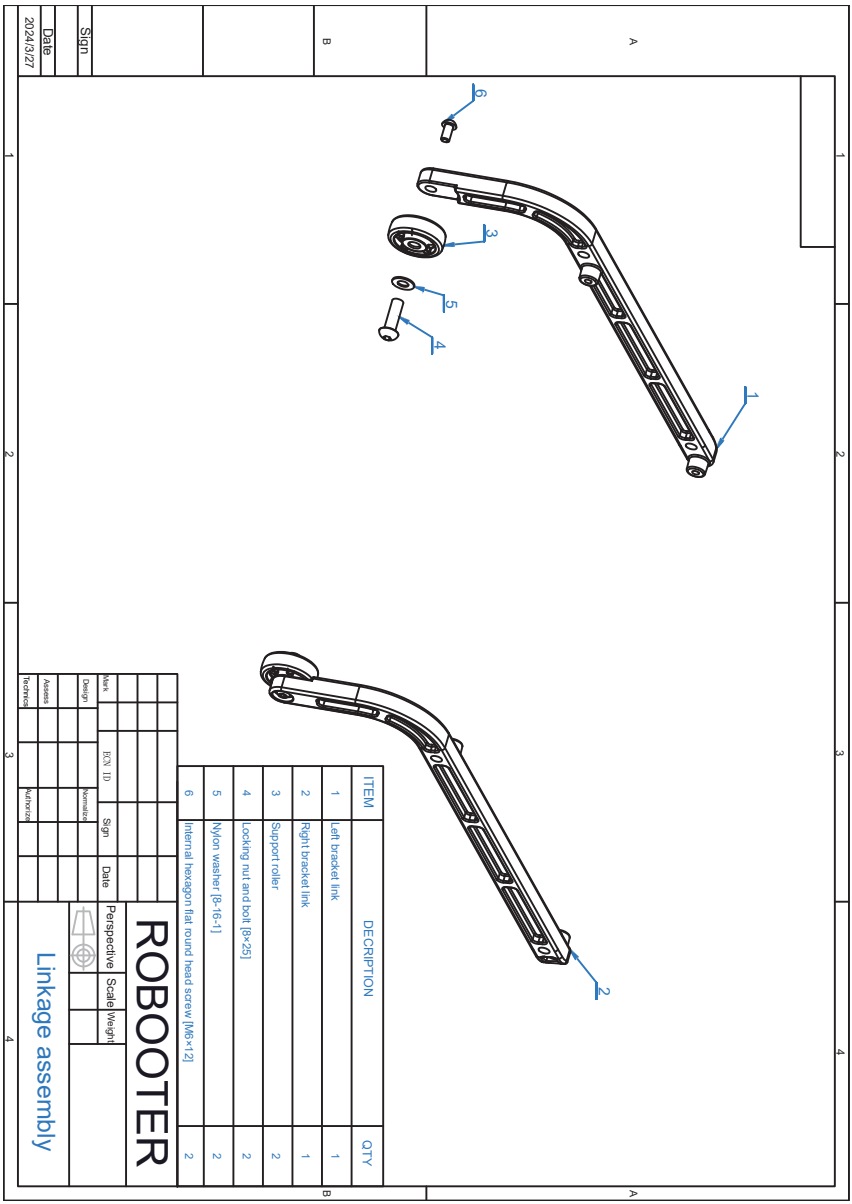
4.9 Backrest assembly



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4.9 Linkage assembly



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04 Explode View

4.10 Rear cover assembly Anti-rollover wheel assembly Lower control assem

ITEM	DECRIPTION	QTY
	Rear cover assembly	
1	Rear cover assembly	1
2	Internal hexagon cylindrical head screw[M4×14]	2
3	Standard type spring washer - assembly[4]	2
4	Flat washer[M4]	2
5	Cross recessed countersunk head self-tapping screw - Type F[M4×16]	4
	Anti-rollover wheel assembly	
6	B03_12_00_01_A	2
7	Nylon washer[8-16-2]	2
8	B03_12_00_03_A	2
9	Locking nut [8×38]	2
10	Standard type spring washer - assembly[6]	4
11	Internal hexagon flat round head screw[M6×20]	4
	Lower control assembly	
12	B03_11_00_01_B	1
13	B03_11_00_01_B	1
14	Internal hexagon cylindrical head screw [M4×8]	4
15	Standard type spring washer - assembly[4]	4
16	Standard type spring washer - assembly[4]	3
17	Internal hexagon cylindrical head screw[M4×25]	3
18	Cross recessed countersunk head self-tapping screw - Type F[M4×16]	4
19	B03_11_01_03_A	2
20	Cross recessed countersunk head self-tapping screw - Type F [M3×8]	2

Mark	ECN ID	Sign	Date
Design	Examined		
Assess			
Technics	Authorize		

ROBOOTER

Perspective | Scale | Weight

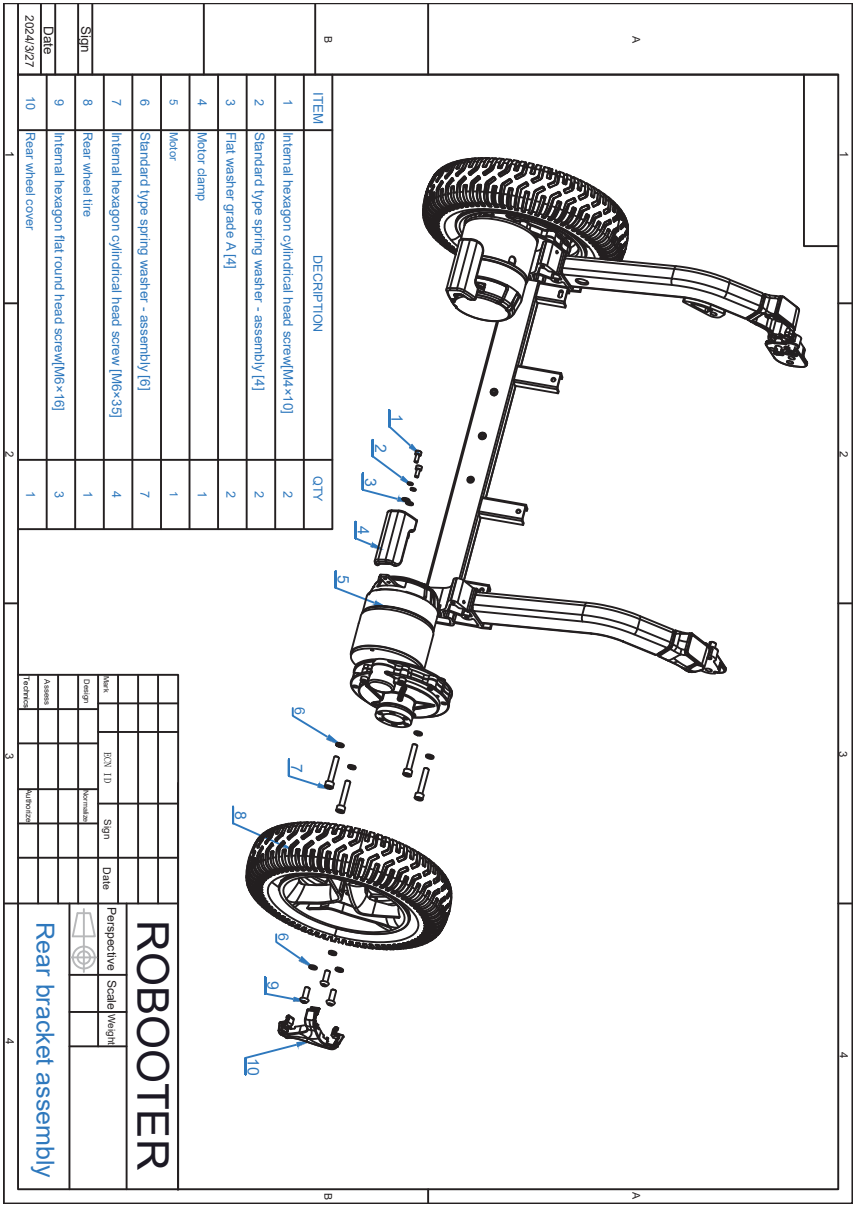
Rear cover assembly
Anti-rollover wheel assembly
Lower control assembly

Sign
Date 2024/3/27

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04 Explode View

4.11 Rear bracket assembly



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05 Troubleshooting

6.1 Performance fault table of the electric wheelchair

Fault code	Anomaly status	Fault phenomenon
E1	Key abnormality	The key corresponding function does not work.
20	The rocker ground line is disconnected	The rocker function does not work.
21	The rocker power cord is disconnected	The rocker function does not work.
22	The rocker X-axis is disconnected	The rocker function does not work.
23	The rocker Y-axis is disconnected	The rocker function does not work.
24	The rocker is a non-zero start	The rocker function does not work.
E6	CAN communication is abnormal	The rocker cannot control the driving of the electric wheelchair.
E7	FLASH fault	FLASH device ID cannot be detected and the device cannot work.
82	Left motor Hall fault	The left motor Hall is not connected or faulty, and the motor does not function.
81	Right motor Hall fault	The right motor Hall is not connected or faulty, and the motor does not function.
40	Flat in the electromagnetic brake of left motor	To release the electromagnetic brake handle of left motor, close the electromagnetic brake.
41	Flat in the electromagnetic brake of right motor	To release the electromagnetic brake handle of right motor, close the electromagnetic brake.
80	Low-voltage fault	The motor cannot run.
88	Pre-charge fault	The motor cannot run.
84	Short-circuit fault of lower gear MOS in the right motor	The motor cannot run.
85	Short-circuit fault of upper gear MOS in the right motor	The motor cannot run.
86	Short-circuit fault of upper gear MOS in the left motor	The motor cannot run.
87	Short-circuit fault of lower gear MOS in the left motor	The motor cannot run.
90	High voltage fault	After detecting the high pressure before starting, keep it locked.
91	The Left motor phase loss and disconnection fault	The motor cannot run.
92	The right motor is out of phase and disconnected	The motor cannot run.
93	The Left motor and The right motor are out of phase and disconnected	The motor cannot run.
94	The Right motor stall	The motor cannot run.
95	The Left motor stall	The motor cannot run.
96	Left and right motors are stuck	The motor cannot run.

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05 Troubleshooting

6.2 Instruction of safety warning

Voice prompts	Corresponding scene description.
Enter novice mode	Press the novice mode button.
Quit the novice mode	Press the novice mode button again.
Alart	Long press SOS key to trigger SOS.
LOCK	It is in default that after the product is locked after it is powered on. Switch non-locking status to locking status.
Unlock	Switch locking status to non-locking status.
Start the remote control	Voice prompt when the remote control or APP Bluetooth is connected successfully.
car has been locked my bluetooth	Press the lock key.
Upgrade	When the APP detects new version, click to upgrade.
Upgrade complete	End of the single-module upgrade.
Upgrading	The equipment is upgrading.
Powering on tone	Press and hold the power-on key for 3s to start the power-on and the power-on sound.
Key tone	Touch the button to produce a prompt sound.
Charging	Charging
Charging complete	Unplug the charger and trigger the voice prompt of charging completed.
breaks open	The band-type brake opens.
Bluetooth connected	Voice prompt when the remote control or APP Bluetooth is connected successfully.
Drive protection	Voice prompt for a drive failure.
Machine protection	Voice prompt for a machine failure.
Rocker protection	Voice prompt for a rocker failure.
Powering off tone	Press and hold the power-off key for 3s to start the power-off and the power-off sound.
Bluetooth disconnected	Voice prompt when the remote control or APP Bluetooth is disconnected.
Upgrade failed	There is something wrong during upgrading.
The horn sounds	Touch the horn button.
Low battery, please charge	Trigger when the power is lower than 20%.
bluetooth unlocking the car	Press the remote control to unlock.
implementation mode	Long press "∧" button and "∨" button 3 seconds to enter the pushing mode, accompanied by the pushing mode prompt.
Exit implementation mode	Shake the rocker to quit the pushing mode.

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05 Troubleshooting

5.4 Production date and service life

- The service life of this product is 5 years after the product is delivered. Please use within the effective date. In case of expiration, Do not use the product to avoid occurrence of accident.
- Refer to product tag for date of production.

5.5 Product cleaning method

- Cleaning method of electric wheelchair: Wipe with the clean towel inside of the product.

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06 Technique Norm

6.1 Technical Specifications

Product model	BBR- E40-01
the type class of the wheelchair: Class A, Class B or Class C	Class A
Folding mode	Manual folding
Maximum speed	8km/h
Maximum barrier height	40mm
Maximum crossing ditch width	10cm
Minimum turning radius	450mm
Total weight	27kg
Battery number	1
Battery weight	3.4kg
Specifications of front and rear wheels	8-inch front wheel, 10-inch rear wheel
Maximum load	150kg
Battery capacity	20Ah
Overall dimension (length * width * height)	1000*624*930mm
Folding shape dimension (length * width * height)	700*624*450mm
Seat wide	46cm
Theoretical driving distance	23km
Bearing capacity of the storage basket:	⩽5kg
the minimum width of corridor in which the wheelchair can be turned to face the opposite direction	1800mm
the rated slope, expressed in degrees	9°
the type(s) of tyres that can be used on the wheelchair	Pneumatic rubber tires; PU tires
if the wheelchair can be dismantled or has any removable parts, the mass of the heaviest part	23.5kg
Overall length with legrest	1000mm
Static stability downhill	9°
Static stability uphill	9°
Static stability sideways	9°
Dynamic stability uphill	9°
Minimum braking distance from max speed	1100mm
Footrest to seat distance	400mm
Leg to seat surface angle	100°
Armrest to seat distance	230mm
Front location of armrest structure	500mm
Waterproof grade	IPX4

Table 7.1

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7.1 What are the reasons and troubleshooting methods if the machine fails to start?

- Remove the battery, connect the charger to the power supply, insert it into the charging port at the bottom of the upper controller, and turn on the power to check whether the upper controller can start normally. If it can start normally without generating a fault code, use a multimeter to measure whether the DC voltage of the battery is > 19.4V. If the battery voltage output is normal, adjust the multimeter to the buzzer gear to measure whether the positive and negative poles of the circuit are open-circuited.
- Connect the charger to the power supply and insert it into the charging port at the bottom of the upper controller. If the upper controller cannot start, replace the upper controller to troubleshoot the fault.
- Connect the charger to the power supply and insert it into the charging port at the bottom of the upper controller. If the upper controller can start but the instrument shows a fault code, replace the lower controller to troubleshoot the fault. If the fault is not eliminated after replacing the lower controller, it indicates that there is a fault in the connection line between the upper and lower controllers, and replace the connection line.

7.2 What's the situation when the machine doesn't move when the joystick is pushed for starting?

- When the machine is turned on, it is in a locked state. You need to press the power key of the machine to unlock and press the lock key to unlock.
- Does the machine report fault codes 42, 41, 40 or give an alarm of brake opened? Are the two red brake switches at the bottom at the rear of the machine lifted upward and in a closed state? If in a closed state, check whether there is a fault in the motor and the lower controller.

7.3 What should I do if the battery's endurance is insufficient?

- Does the battery normally show a red light and enter the charging mode when charging? If the red light cannot be lit, it is recommended to replace the charger.
- Use a multimeter to measure the fully charged voltage of the battery at 29.4V (with an error of -0.3V). If the fully charged voltage of the battery cannot be lower than the normal fully charged voltage, replace the battery to troubleshoot the fault.

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● If the battery voltage is normal, it is recommended to fully charge and discharge the battery three times first to see if the endurance is improved. If there is no improvement, contact the official after-sales service for battery after-sales judgment.

7.4 What should I do if the battery cannot be charged due to long-term disuse?

● The battery may enter hibernation mode because it has not been charged for a long time.

7.5 Why does it enter hibernation mode?

● Even when in use, the battery will consume a certain amount of power. If the battery is not used for a long time, it is recommended to remove the battery from the machine and store it after fully charging. It is recommended to charge the battery once every 3 to 6 months.

● If the user causes the battery to enter hibernation due to improper storage and use of the battery, the battery will no longer be covered by the warranty and the user needs to replace the battery at his own expense.

7.6 Can the battery be activated?

● You can try to use a 16V charger to charge the battery for 2-3 hours to activate it, but it is not recommended. After the battery enters hibernation and is then activated, the battery's endurance and lifespan cannot be guaranteed. It is recommended to replace the battery.

7.7 What's the situation when there is abnormal noise during the folding of the machine?

● When starting folding, listen to the silver part under the seat. The one that looks like a jack is the push rod motor. Confirm whether the sound is emitted by the push rod motor. If so, replace the push rod motor. If not, check whether there is loose screw on the seat frame.

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7.8 Why does the brake downshift occur after parking or reversing?

● Open the APP to check if the automatic downshift setting is enabled. If it is set to not downshift, it will be fine. If the APP is set to not downshift but downshifting still occurs, it is judged as an upper controller problem. Replace the upper controller.

7.9 All the buttons on the upper controller are malfunctioning and there is no response when pressed.

● Pull out the battery to cut off the power of the whole vehicle for about 30 seconds. Reconnect the battery and turn on the power. If it still cannot return to normal, replace the upper controller.

7.10 How to deal with abnormal noise in the front wheel during driving?

● Lift the front wheel of the machine and leave it suspended. Rotate the bearing on the omni-directional wheel by hand to find out which one makes abnormal noise. Find the place with abnormal noise and spray and wash along the gap of the bearing with rust removal lubricant. (During the spraying and washing process, rotate the bearing synchronously by hand to achieve thorough cleaning). If there is still abnormal noise after spraying and washing, replace the omni-directional wheel (X series).

● Check whether the bearing of the universal wheel has a lot of stains or is rusty. Use rust removal lubricant to clean the bearing.

7.11 How to deal with abnormal noise in the rear wheel during driving?

● Lift up the two rear wheels and leave them suspended. Turn on the machine and let it run idly. If there is only the sound of current, it is normal. If there is any sound other than the current, it is abnormal noise of the motor. Replace the motor. (The abnormal noise standard is that the sound when driving at full speed in gear 5 does not exceed 60 decibels, which is normal).

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7.12 How to troubleshoot serious deviation when the vehicle is driving in a straight line?

- For deviation, check whether there is a speed difference in the motor. If there is a difference, replace the motor.

7.13 The upper controller prompts that the brake is released and the machine cannot run.

- Check whether the brake switch is turned on. If it is not turned on, check the fault code. Check whether there is a fault in the switch for code 40 (left motor) and code 41 (right motor). For code 42, check whether there is a fault in the lower controller.

7.13 There will be a "da" sound after the vehicle is parked.

- The sound emitted by the electromagnetic brake is a normal sound.

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