Commercial Cleaning Robot

Phantas S1

GAUSIUM

Disassembly Manual



2023-07-07_1.0

This document is only for on-site troubleshooting

The after-sales Operation Center have the right to modify and interpret this document

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1. Head cover assembly disassembly

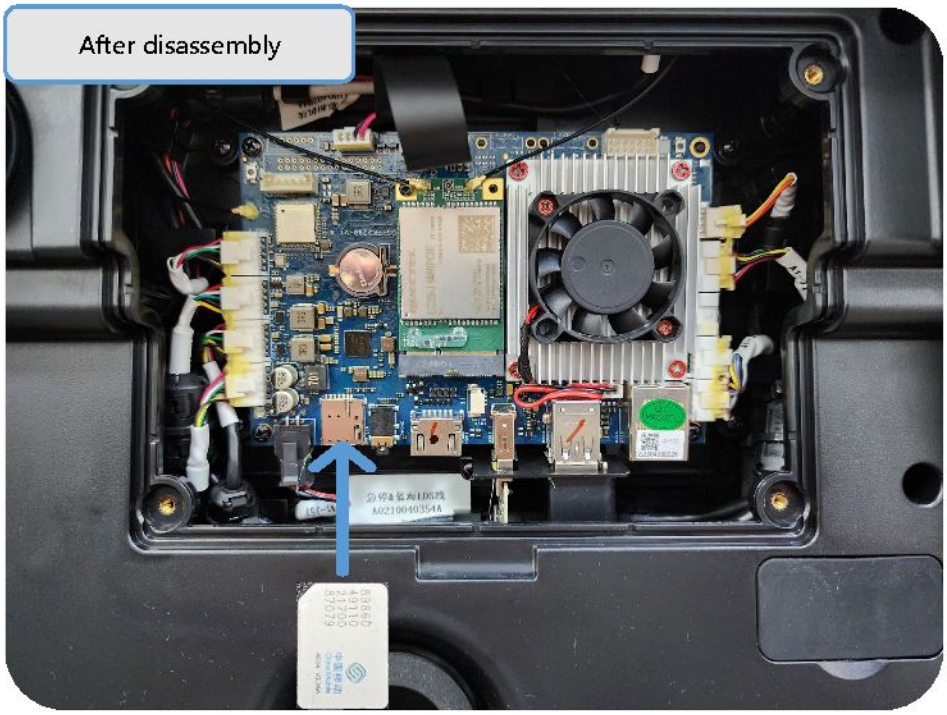
1.1 The upper cover and lower cover disassembly

Before disassembly



① Remove the screw marked in the red circle.
② Remove 【upper cover and lower cover】.

After disassembly

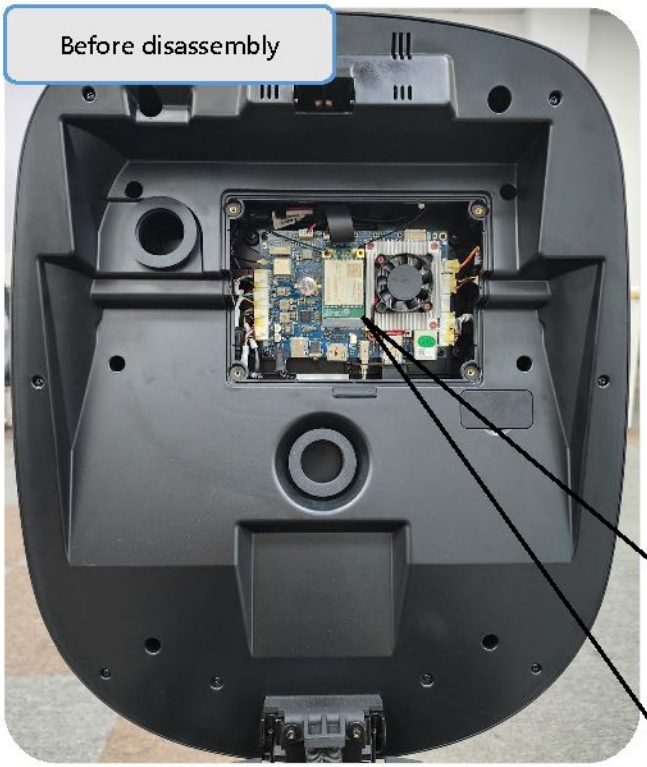


The upper cover and lower cover plate can be removed to expose the upper computer, install the [SIM card], replace the [upper computer battery], and repair the upper computer.

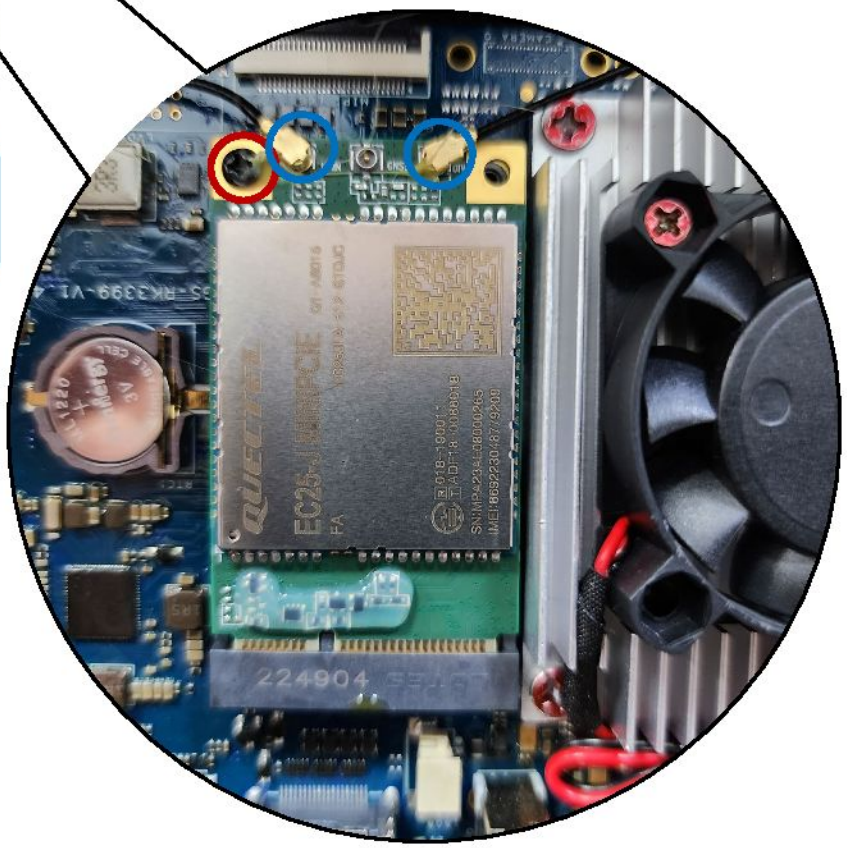
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1.1.1 The 4G module disassembly



① Remove the screw marked in the red circle.
② Unplug the antenna marked by the blue circle.



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1.2 Disassembling the upper cover



Before disassembly

① Remove the screw marked in the red circle.
② Take off 【 top cover 】.



① Remove the air pressure tube marked by the blue circle in the diagram.

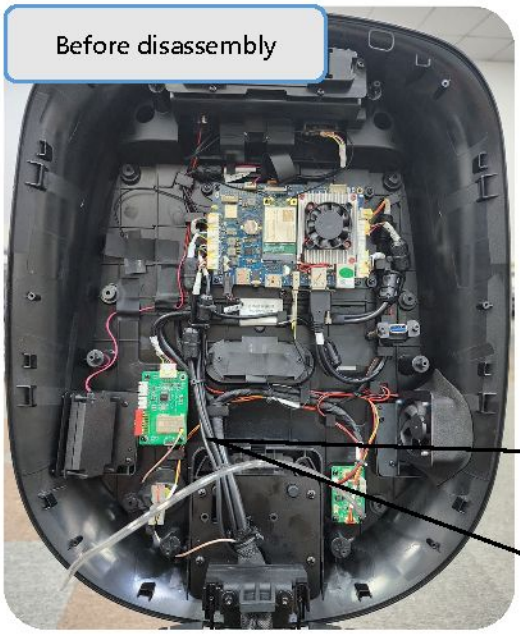


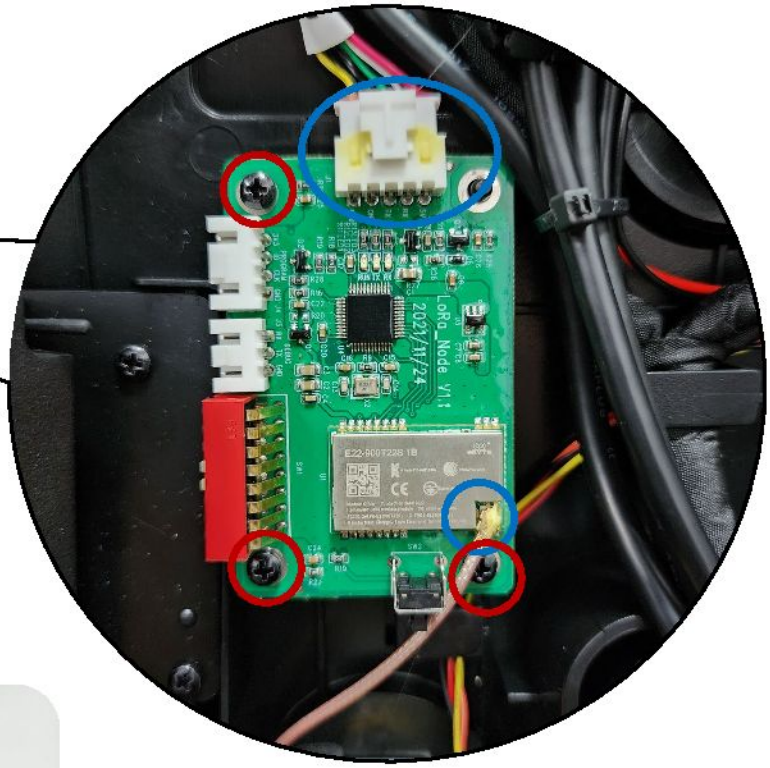
After disassembly

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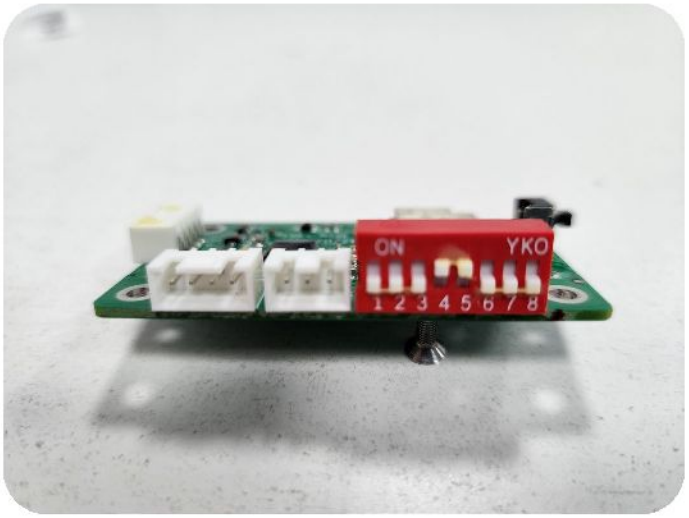
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1.2.1 Lora module disassembly





① Remove the screw marked in the red circle.
② Unplug the data cable and antenna marked by the blue circle2.

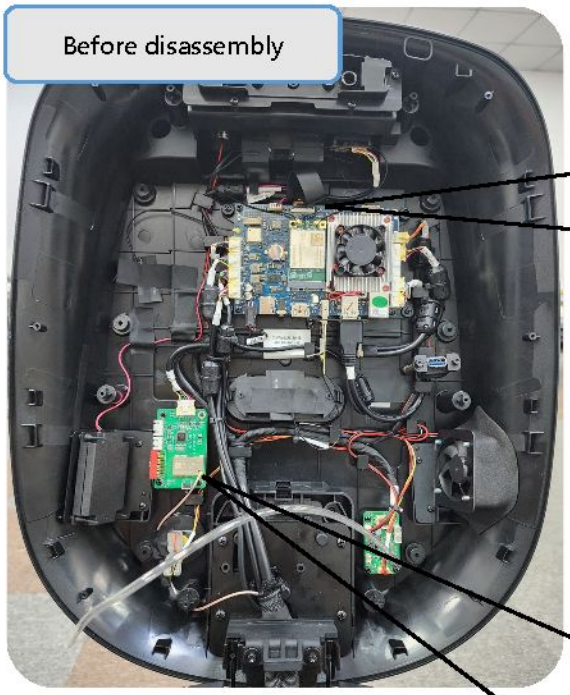


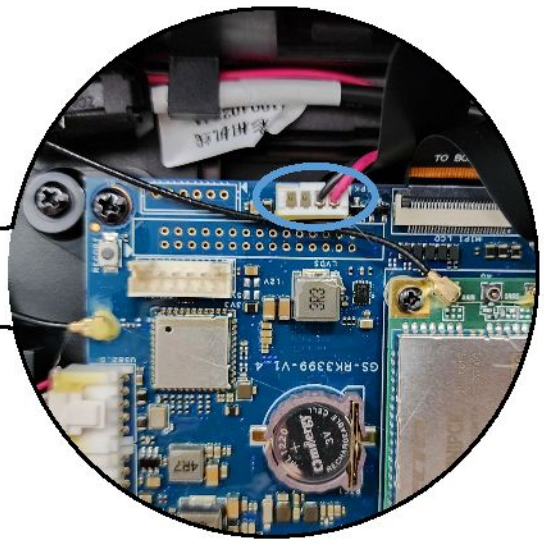
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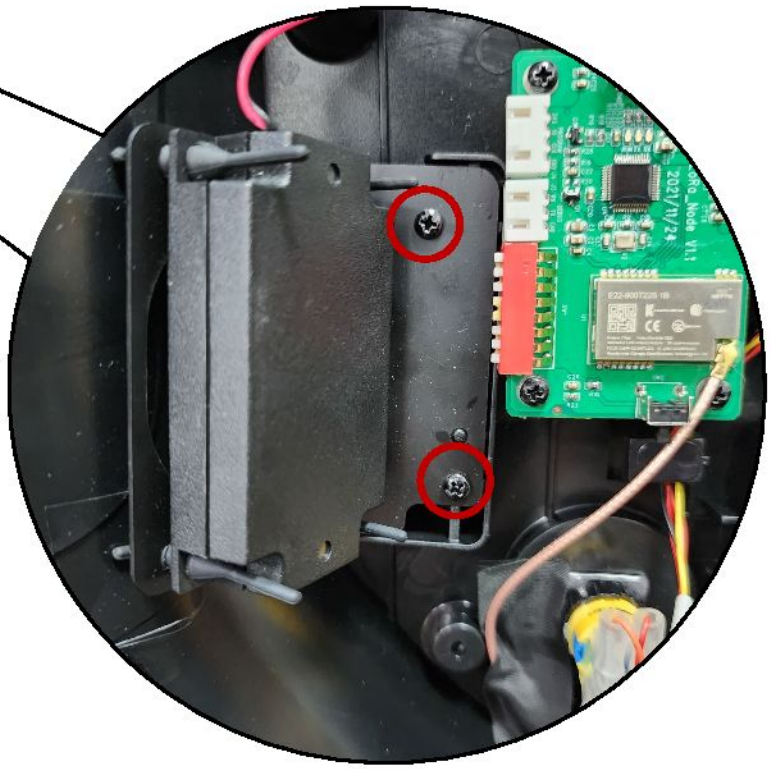
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1.2.2 Loudspeaker disassembly

Before disassembly







① Remove the screw marked in the red circle.
② Unplug the speaker audio cable marked by the blue circle.

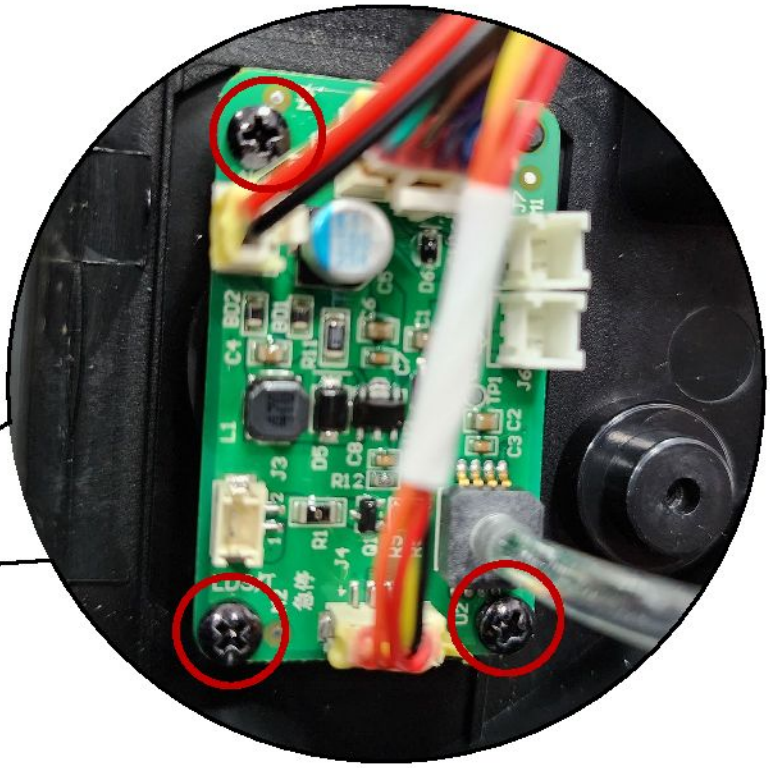
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1.2.3 The key transfer board disassembly

Before disassembly





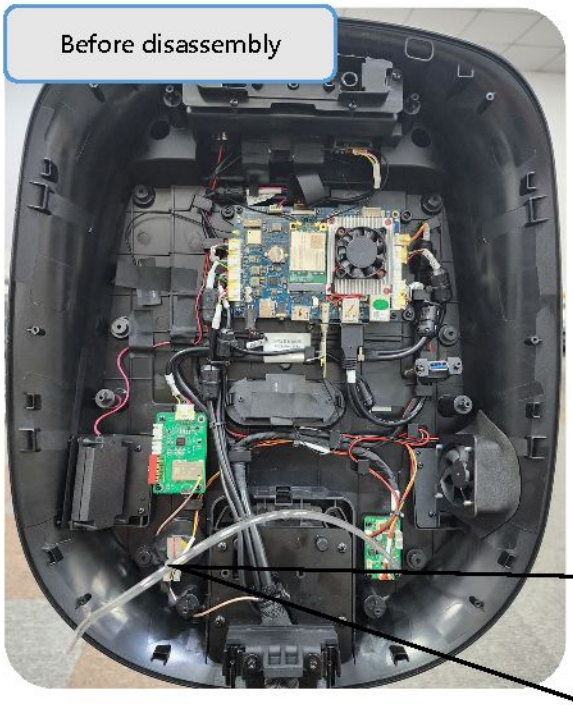
① Remove the screw marked in the red circle.
② Unplug the harness on the [key transfer board].

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1.2.4 Scram switch disassembly

Before disassembly



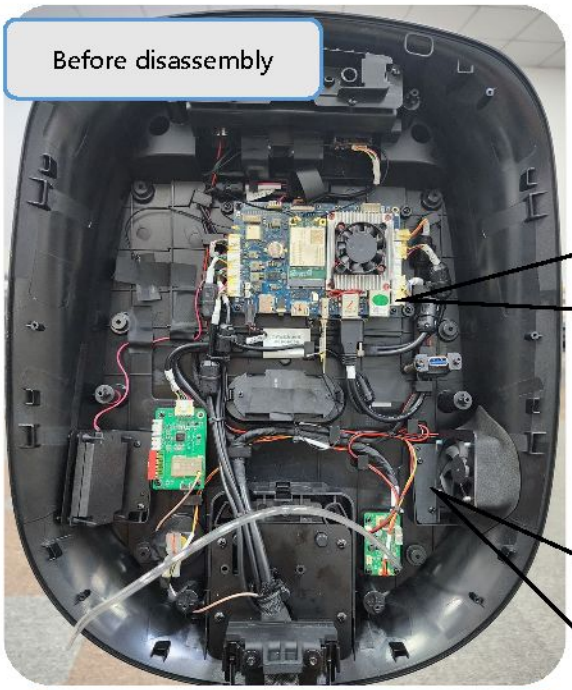


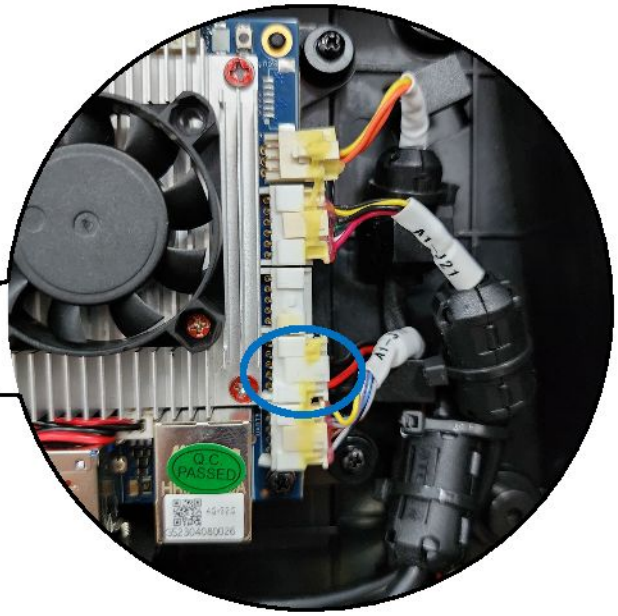
① Remove the screw marked in the red circle.
② Unplug the harness on the [emergency stop switch].

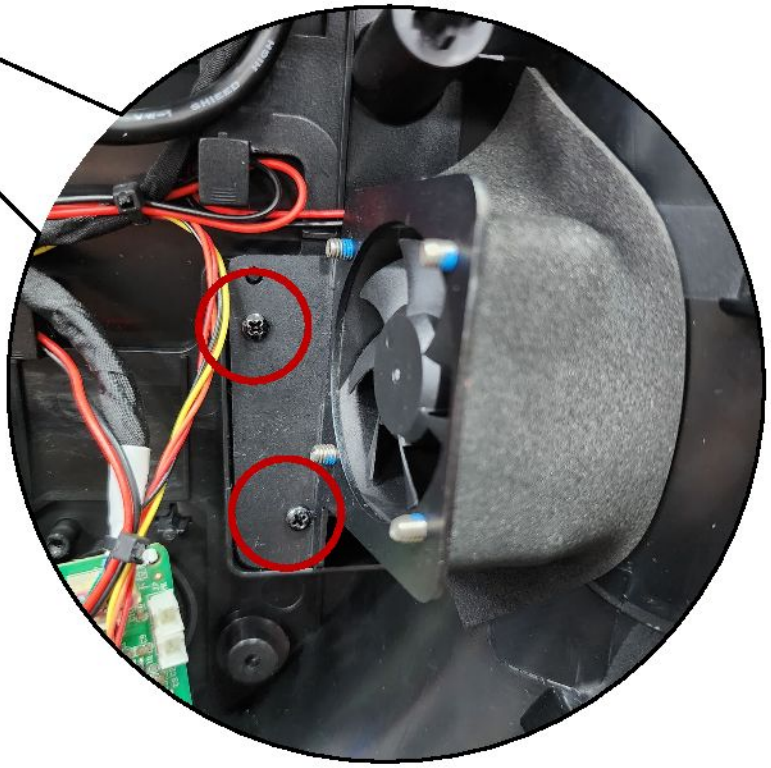
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1.2.5 Fan disassembly





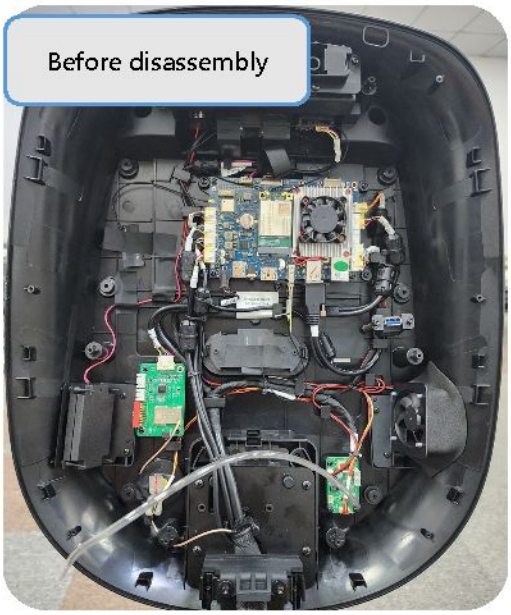


① Remove the screw marked in the red circle.
② Remove the power cable marked with the blue circle.

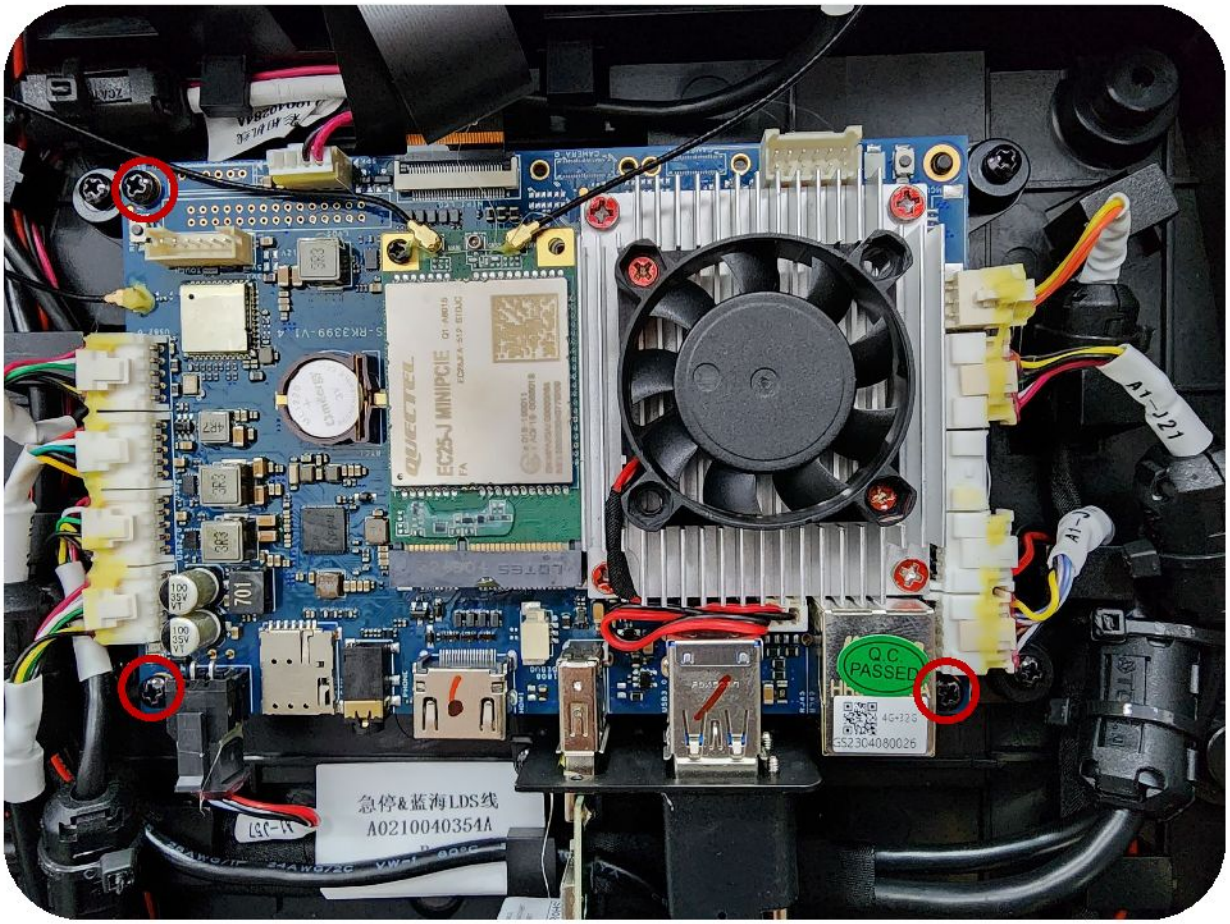
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1.2.6 The upper machine disassembly



① Remove the screw marked in the red circle.
② Unplug the peripheral connector of [upper computer].

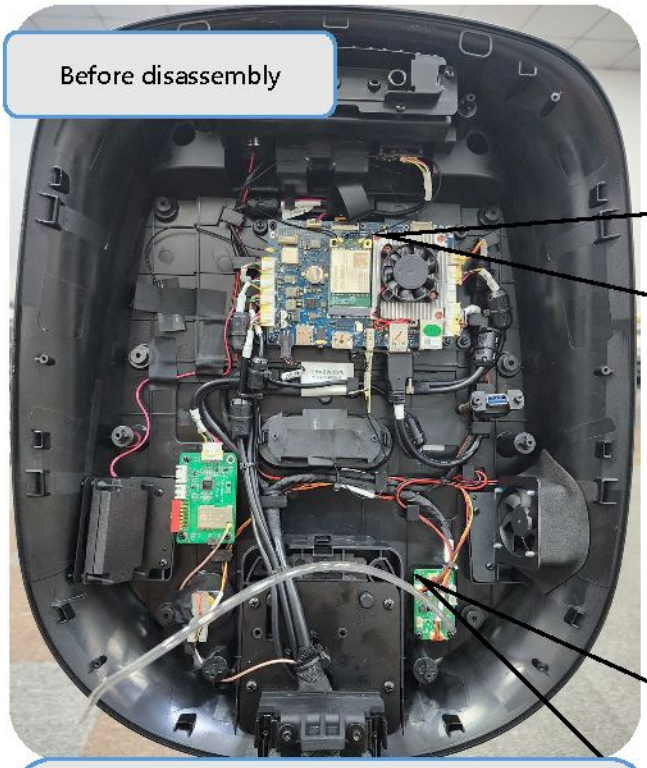


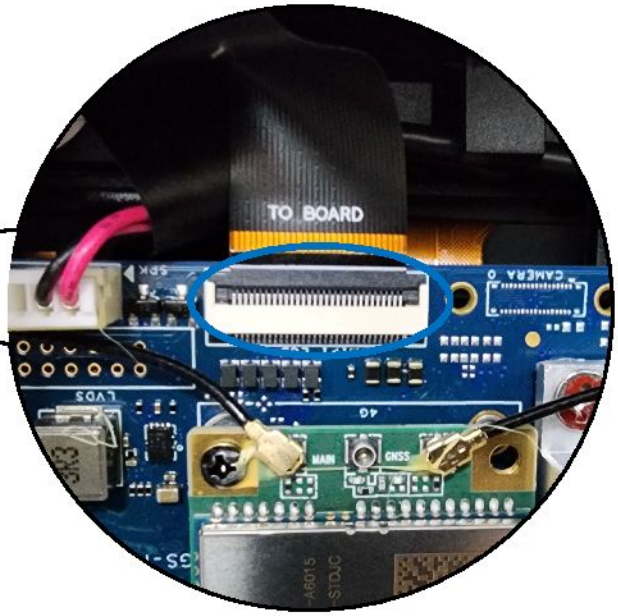
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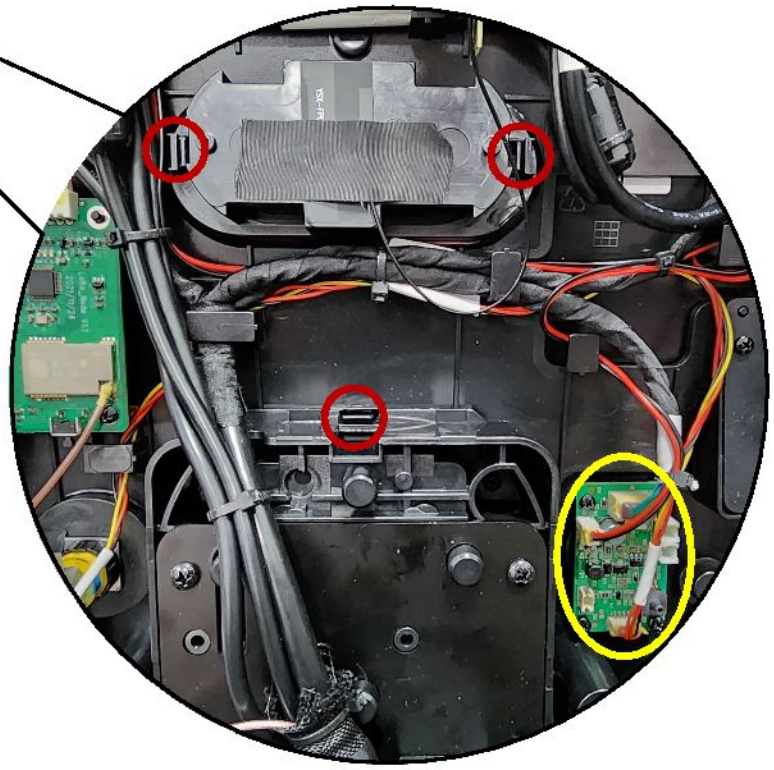
1.3 Cover components & touch screen disassembly

Before disassembly





① Remove the [key transfer board] marked by the yellow circle on the icon.
② Pull out the line at the mark of the basket
③ Exit the latch marked in the red circle on the icon.



After disassembly

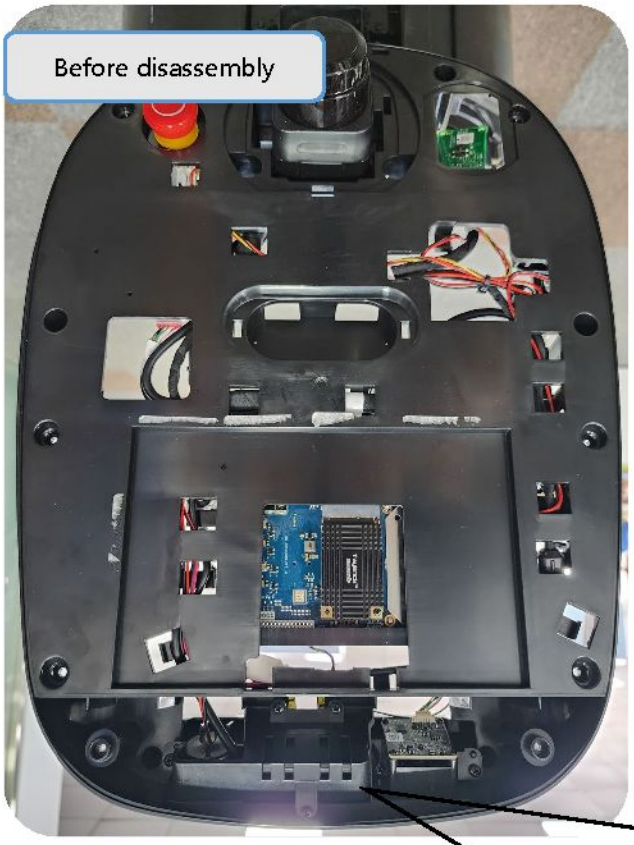


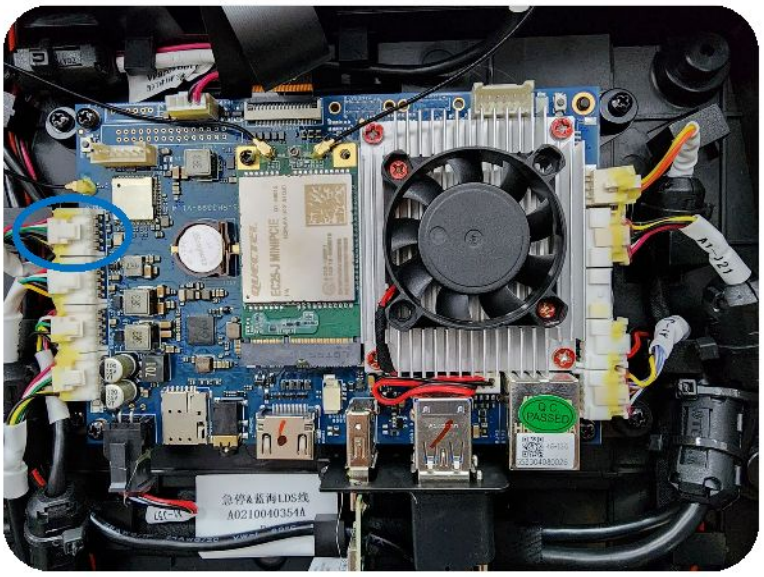
Precautions: [Touch screen] is glued to [upper cover assembly] with double-sided adhesive, it is not removable, and the entire upper cover assembly needs to be replaced during maintenance.

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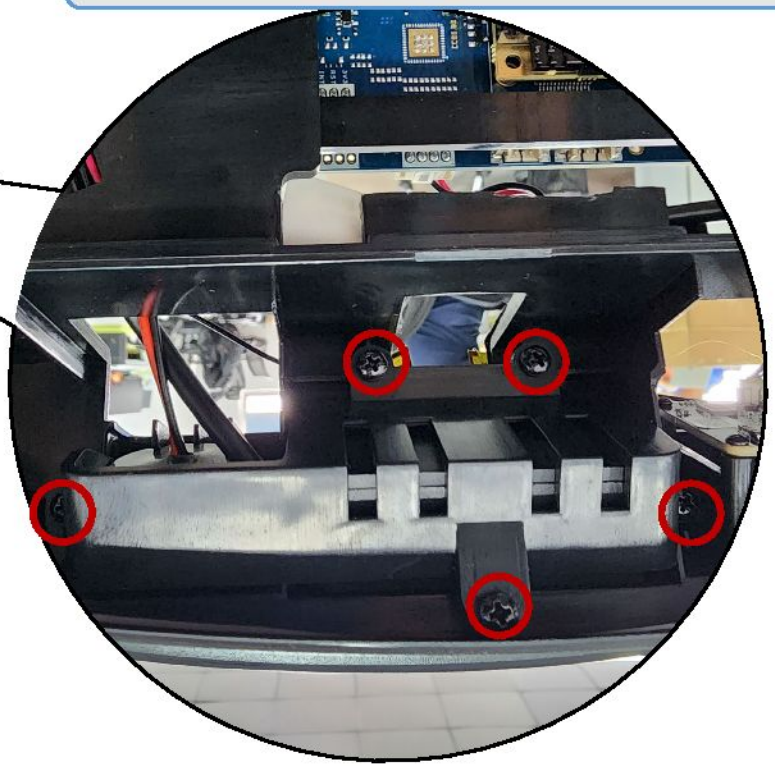
1.4 Front oblique camera disassembly





② Unplug the communication cable marked by the basket.

① Remove the screw marked in the red circle.

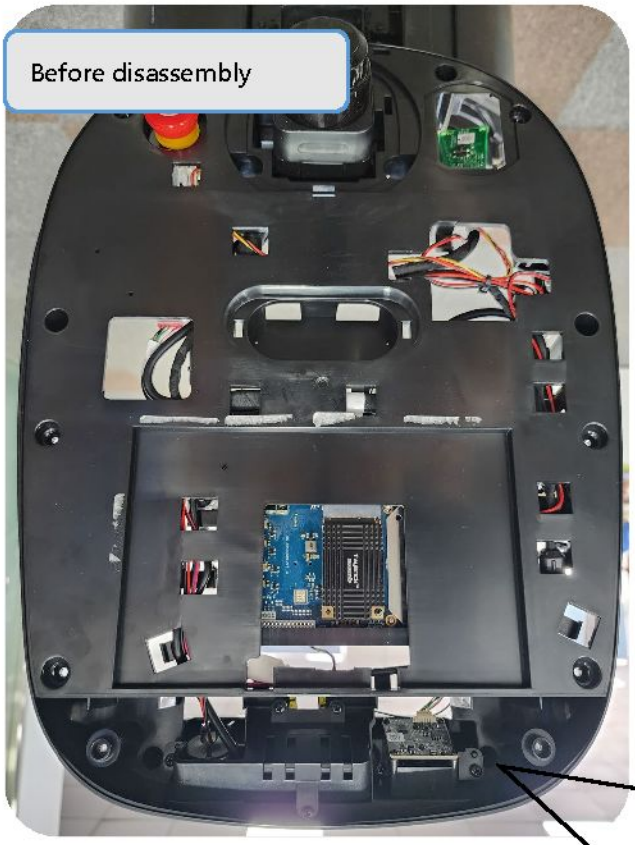


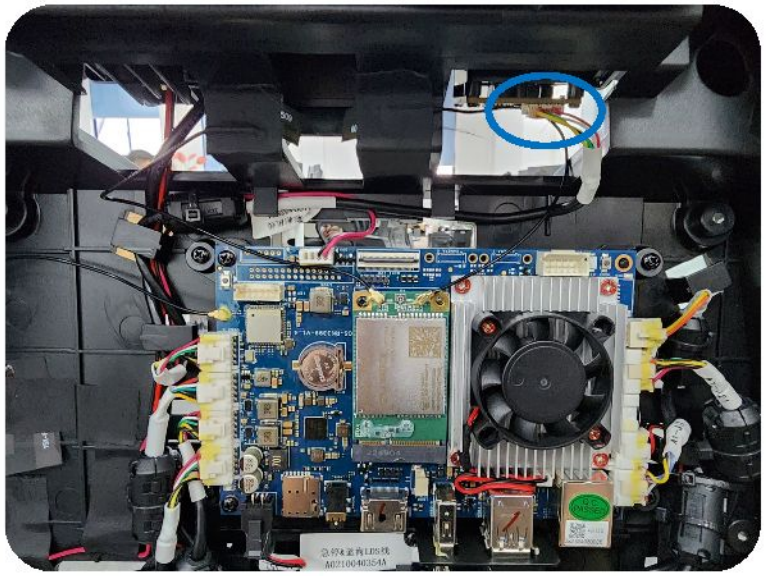
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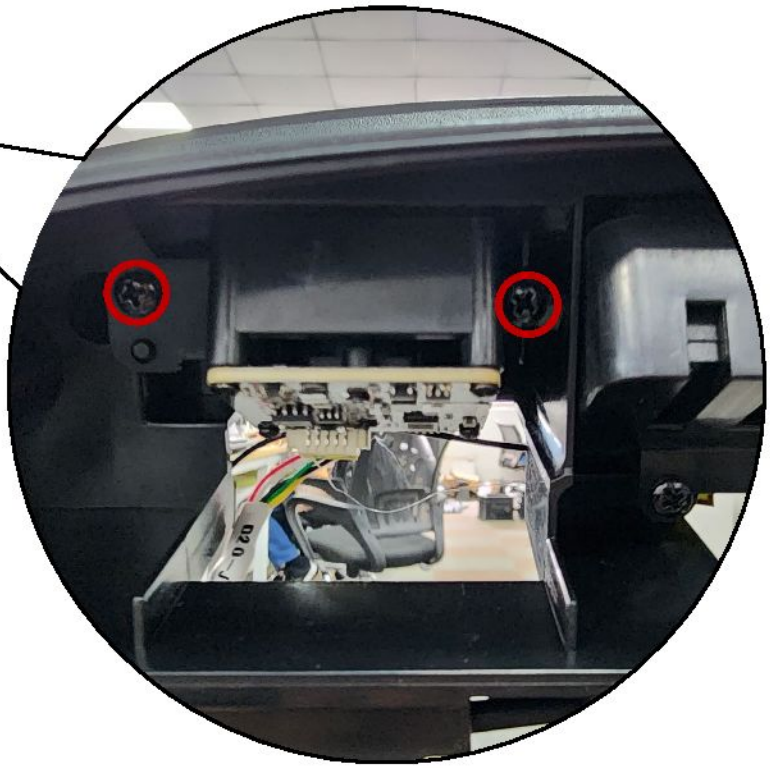
1.5 Disassembly of the front medium color camera

Before disassembly





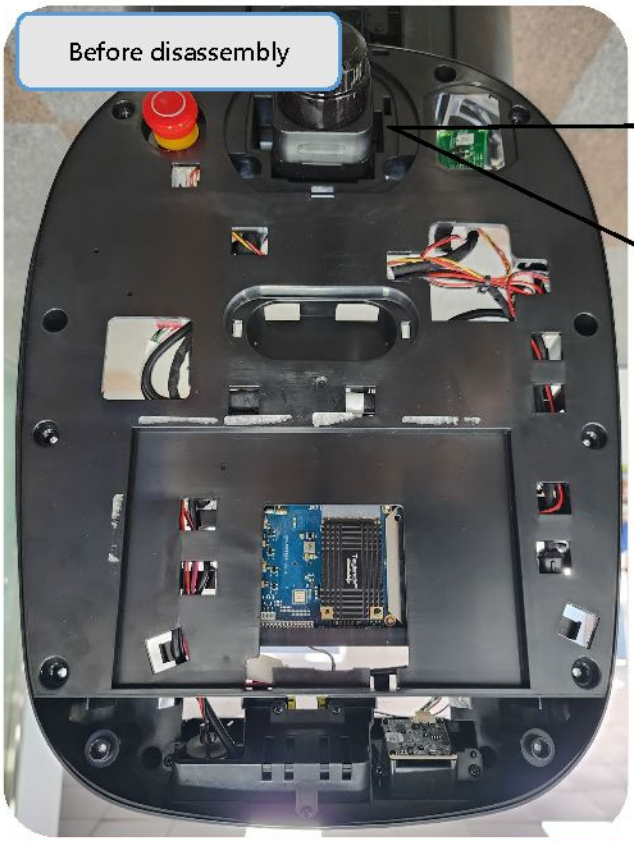
① Remove the screw marked in the red circle.
② Pull out the line at the mark of the basket.

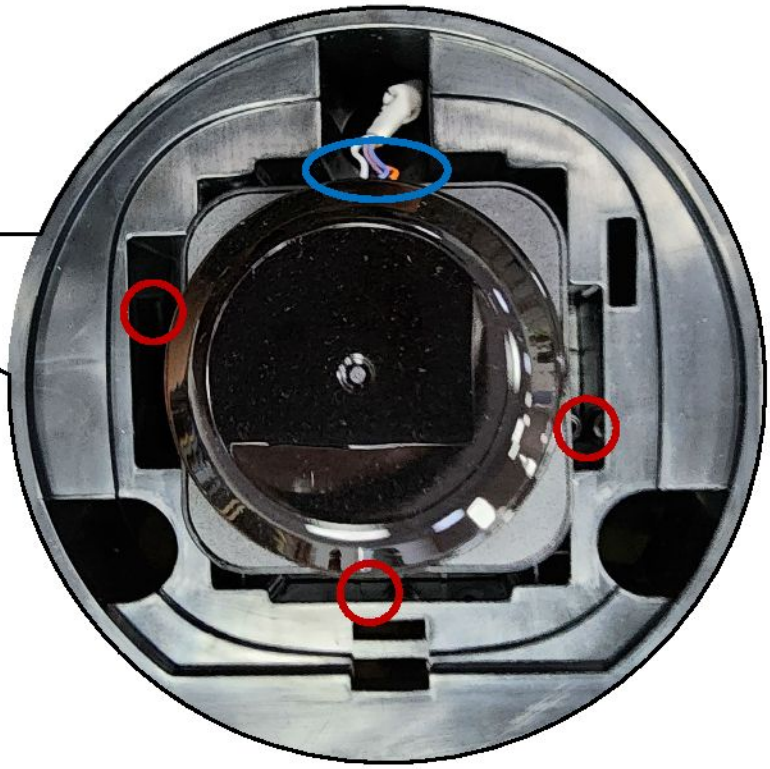


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1.6 Horizontal sight laser disassembly





① Soften the flat laser data cable plug with alcohol and pull it out.
② Remove the screw marked in the red circle.

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2. Exterior shell components disassembly

2.1 Exterior shell components recognition



Fuselage side cover -L&R

Front cover assembly

Impact plate assembly



Rear shell

Rear suction party assembly

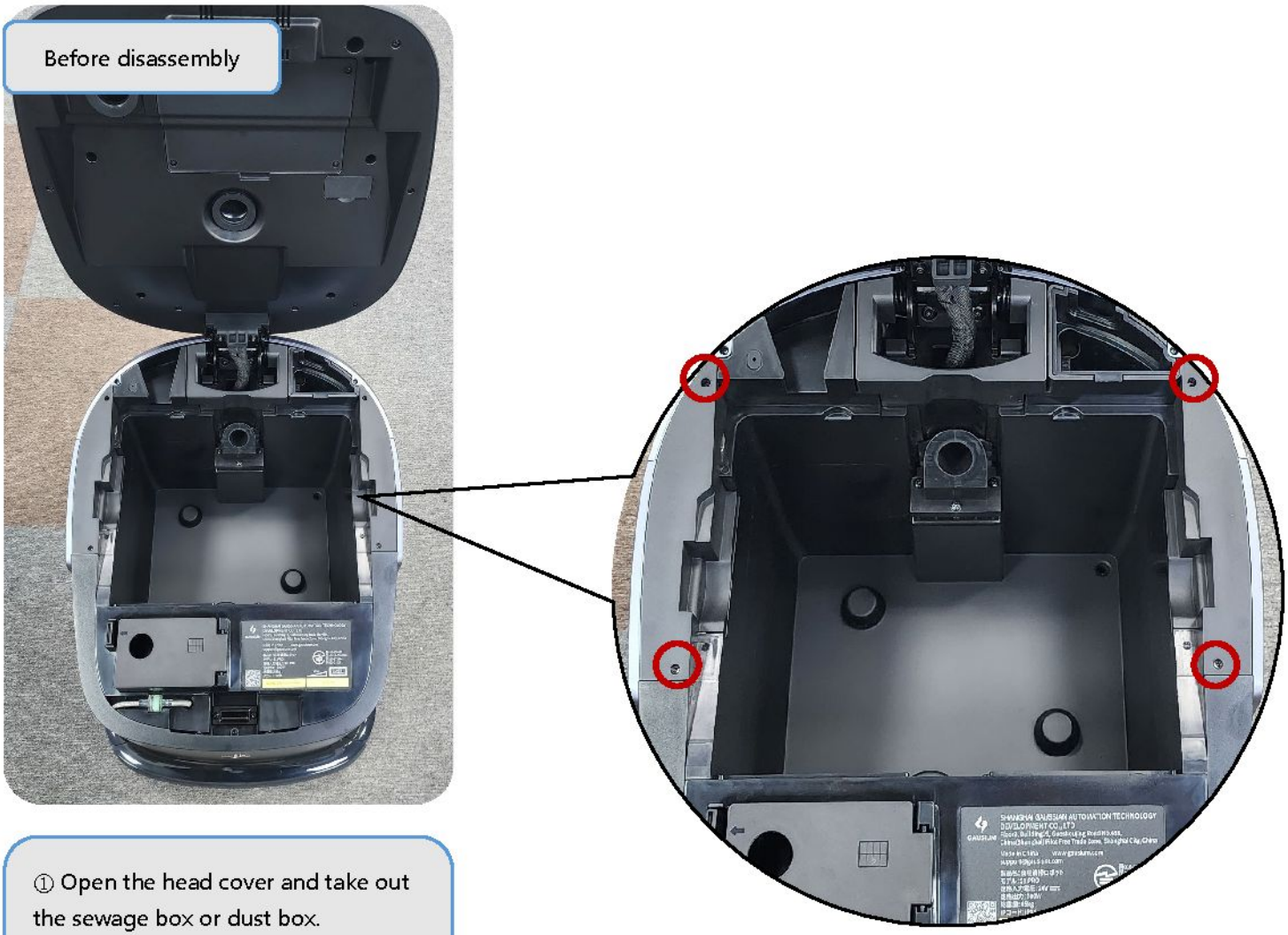
There is no open maintenance window because of the compact design of Model S. Internal control panels, electrical components and motors can be exposed only after the relevant housing components are removed.

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2.2 Fuselage side cover -L&R disassembly

2.2.1 Remove left & right upper decorative cover

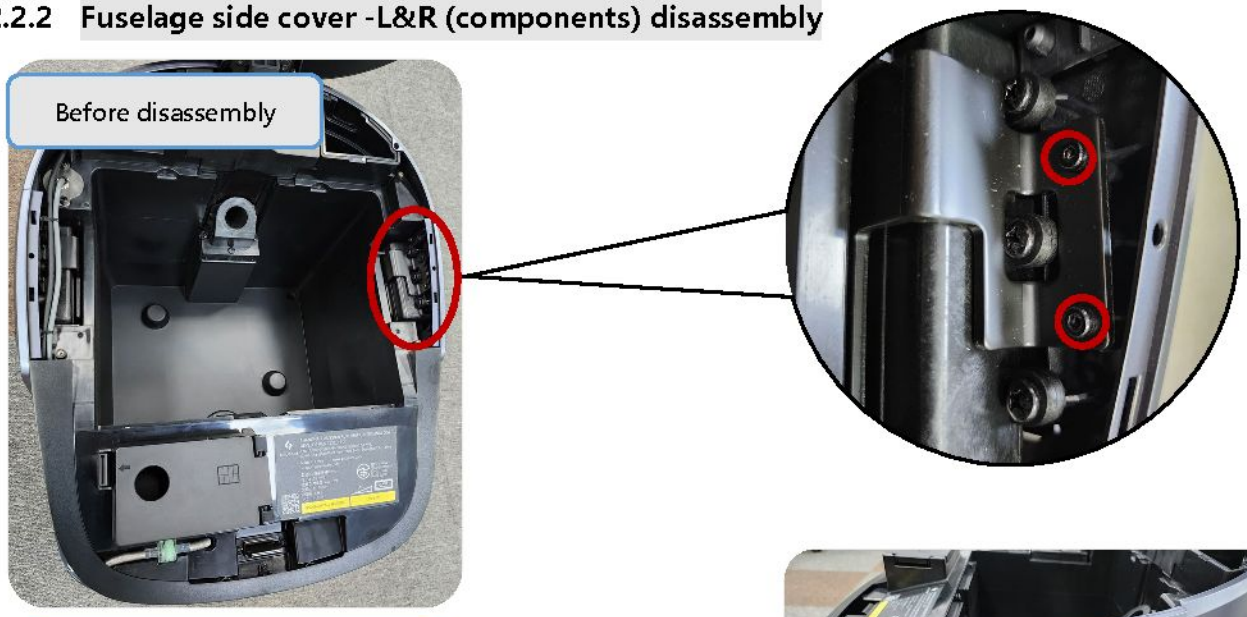


① Open the head cover and take out the sewage box or dust box.
② Remove the screw marked in the red circle.

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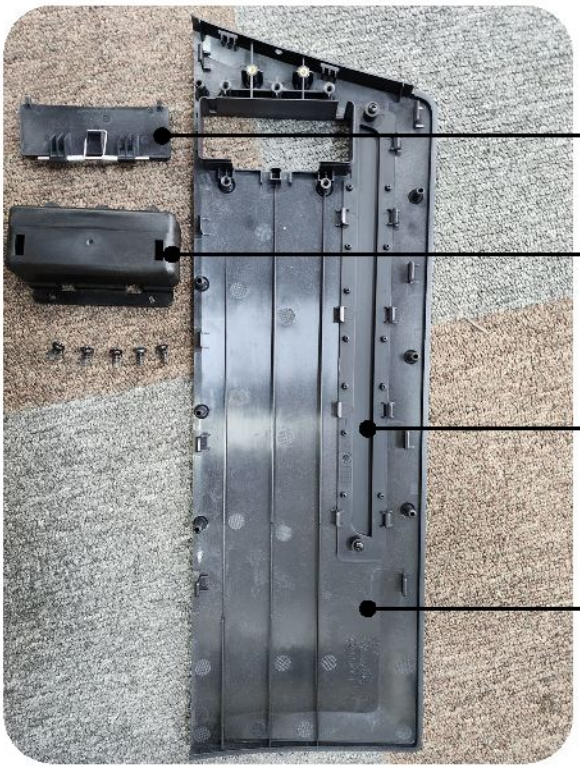
2.2.2 Fuselage side cover -L&R (components) disassembly



① Remove the screw marked in the red circle.
Remove the right side in the same way.



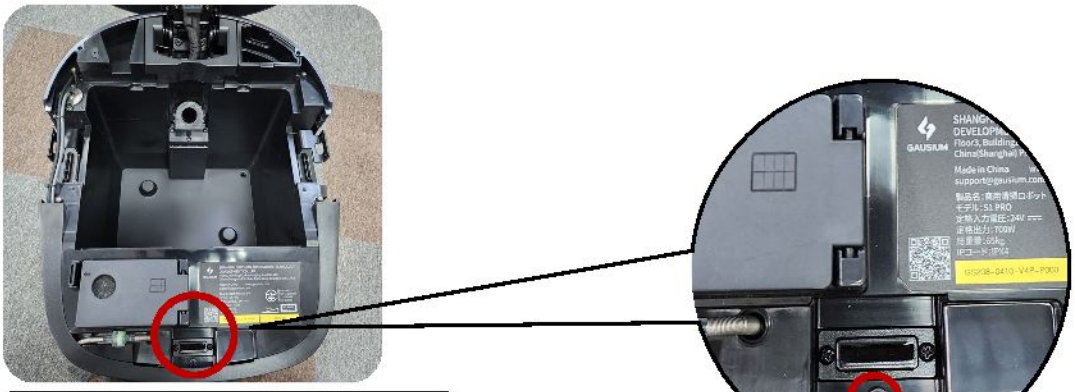
② Due to the fixed buckle structure and few bottom buckle , we should pulled it from the bottom first.



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2.3 The front cover disassembly



① Remove the screws



② Remove the screw shown in the figure, and remove the right side in the same way.



③ Lift up and remove

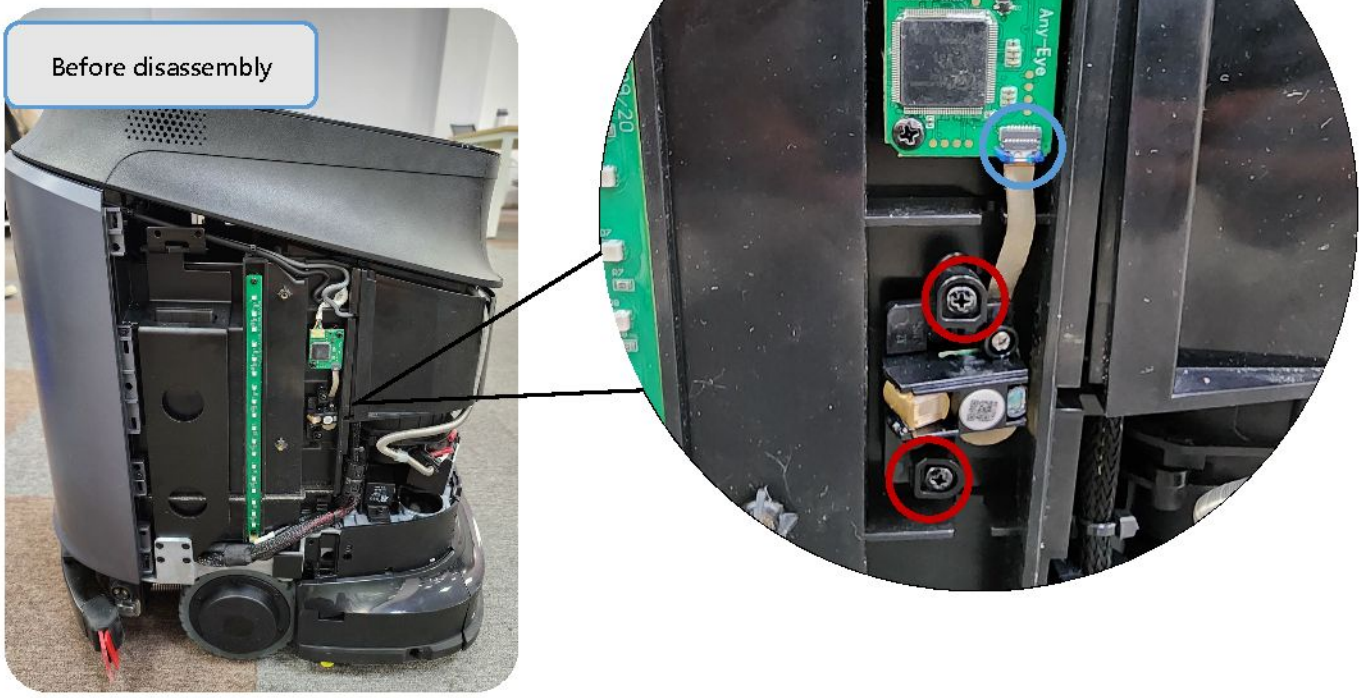
After disassembly



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2.3.1 Right side laser disassembly

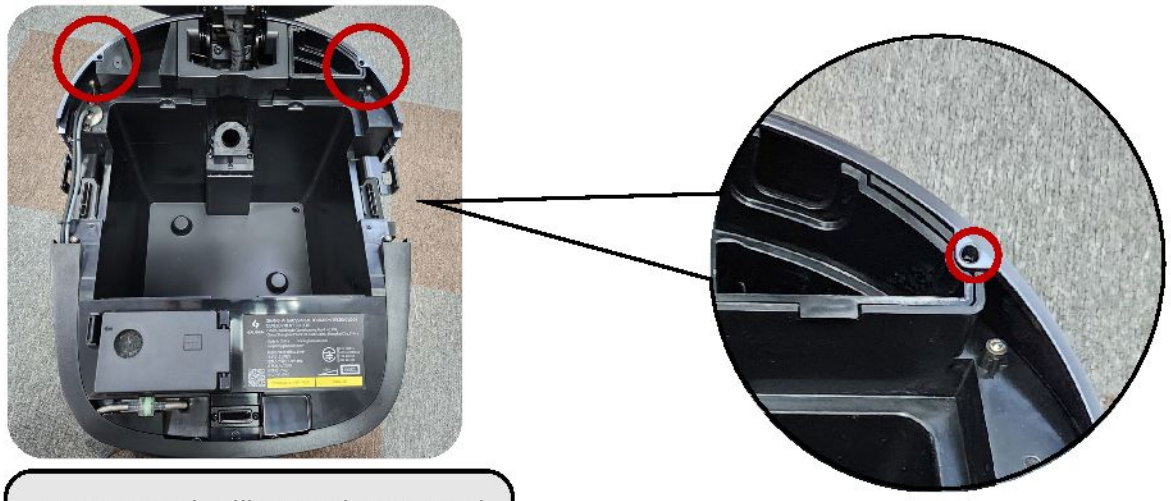


① Remove the screw marked in the red circle.
② Unplug the laser data cable at the mark of the basket.

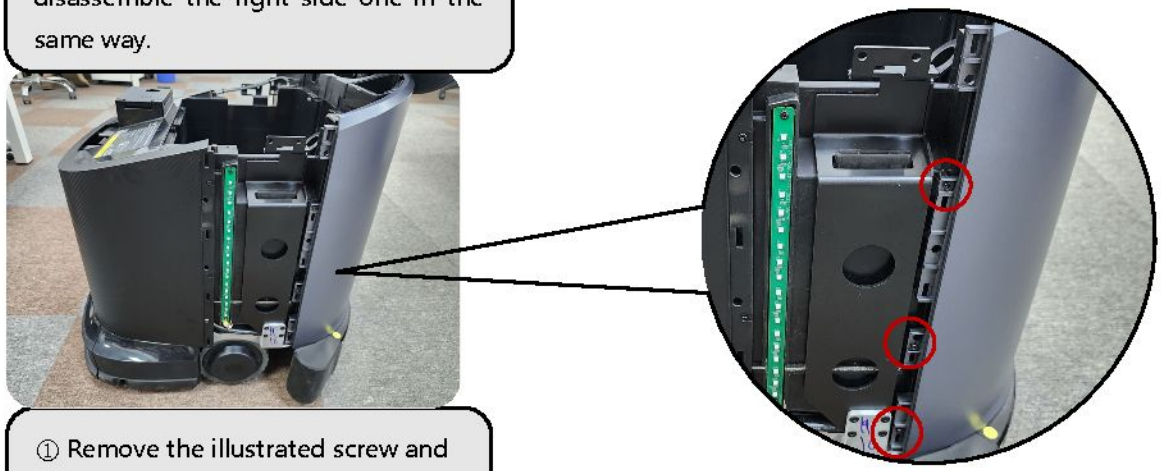
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2.4 Rear cover components disassembly



① Remove the illustrated screw and disassemble the right side one in the same way.



① Remove the illustrated screw and disassemble the right side one in the same way.



③Lift up and disassemble.

After disassembly



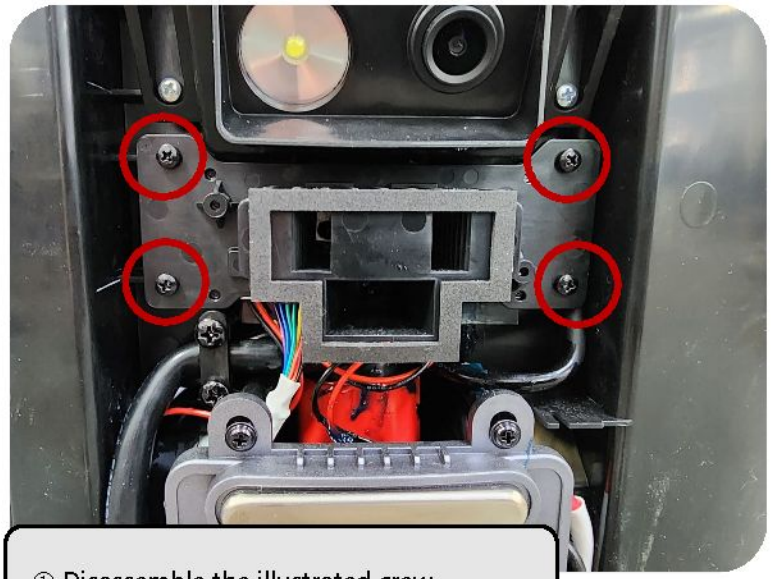
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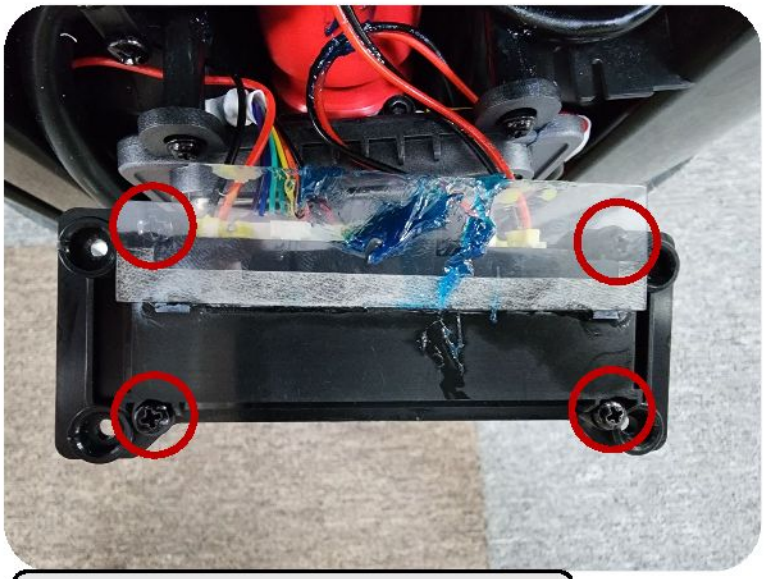
2.4.1 Infrared tube components disassembly



Before disassembly



① Disassemble the illustrated crew.



② Disassemble the illustrated crew.

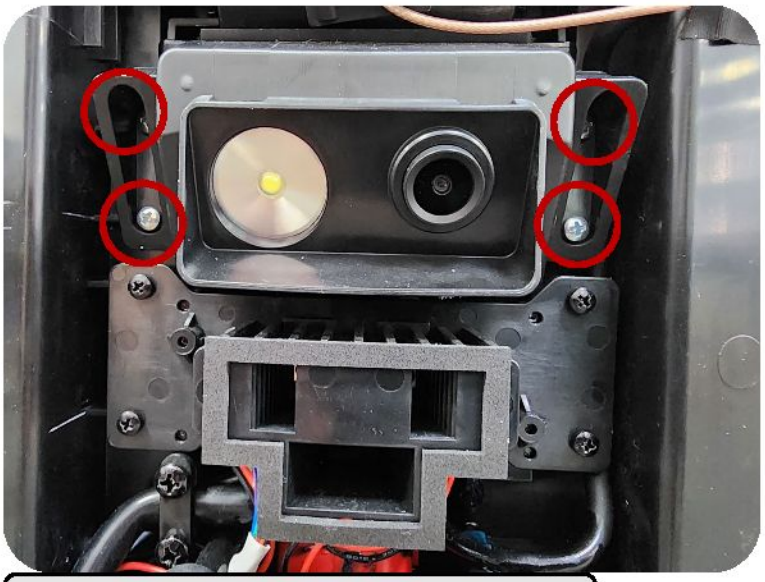
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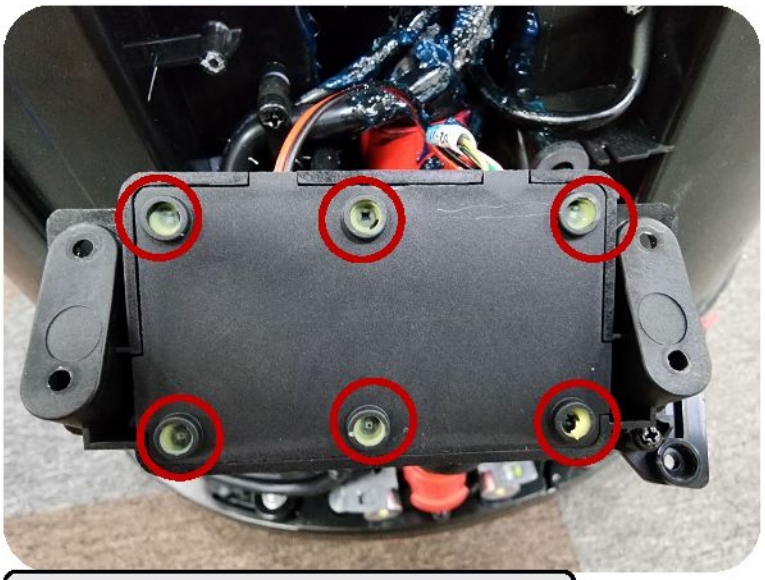
2.4.2 The rear oblique camera disassembly



Before disassembly



① Disassemble the illustrated crew.

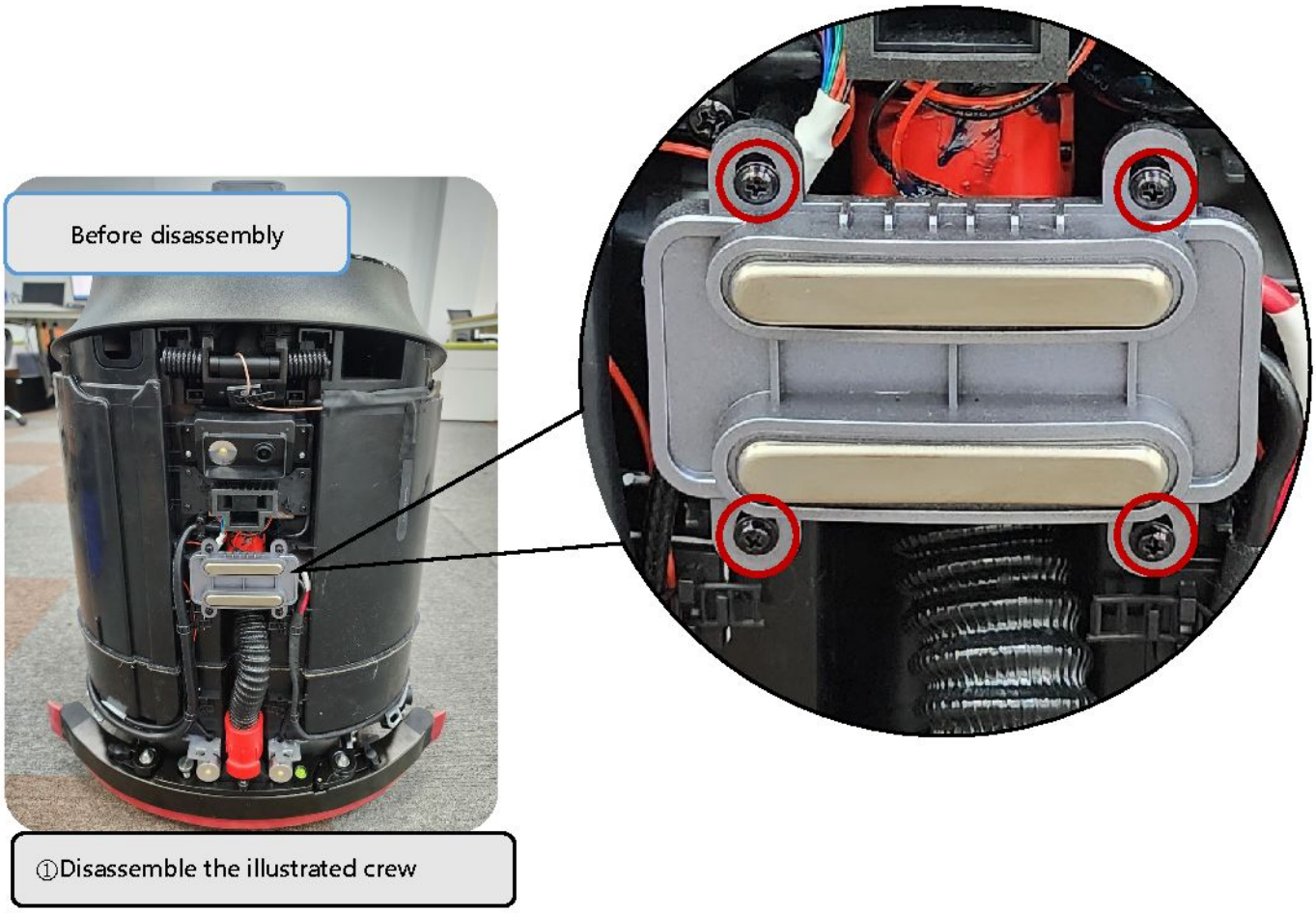


②Disassemble the illustrated crew.

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2.4.3 The receiver plate assembly disassembly



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2.5 Impact plate assembly disassembly



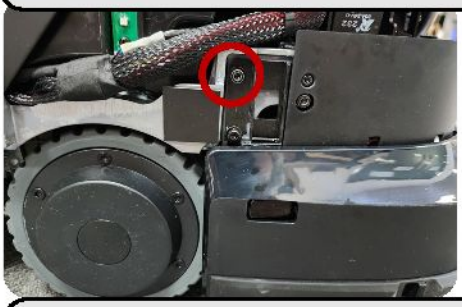
①Remove the screw marked in red circle.



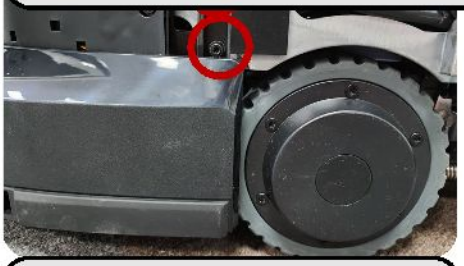
Before disassembly



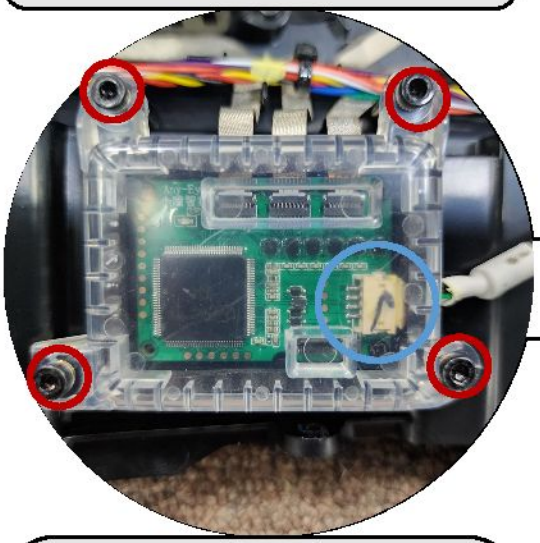
②Remove the screw marked in red circle.



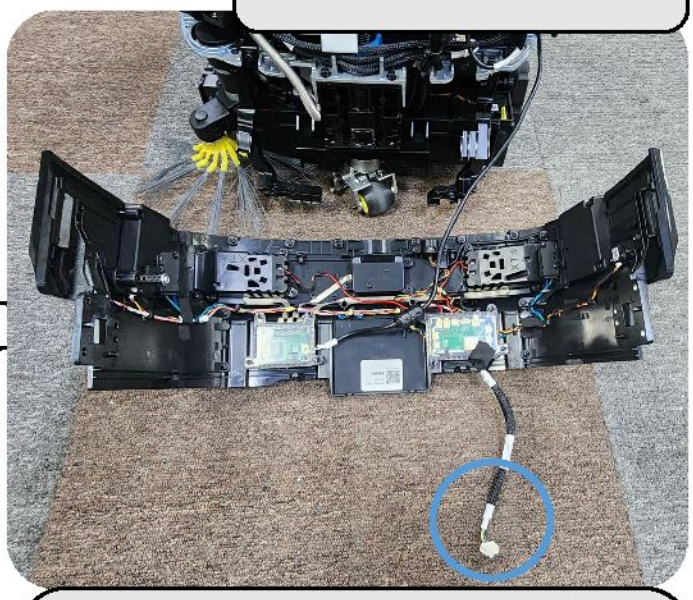
③Remove the screw marked in red circle.



④Remove the screw marked in red circle.



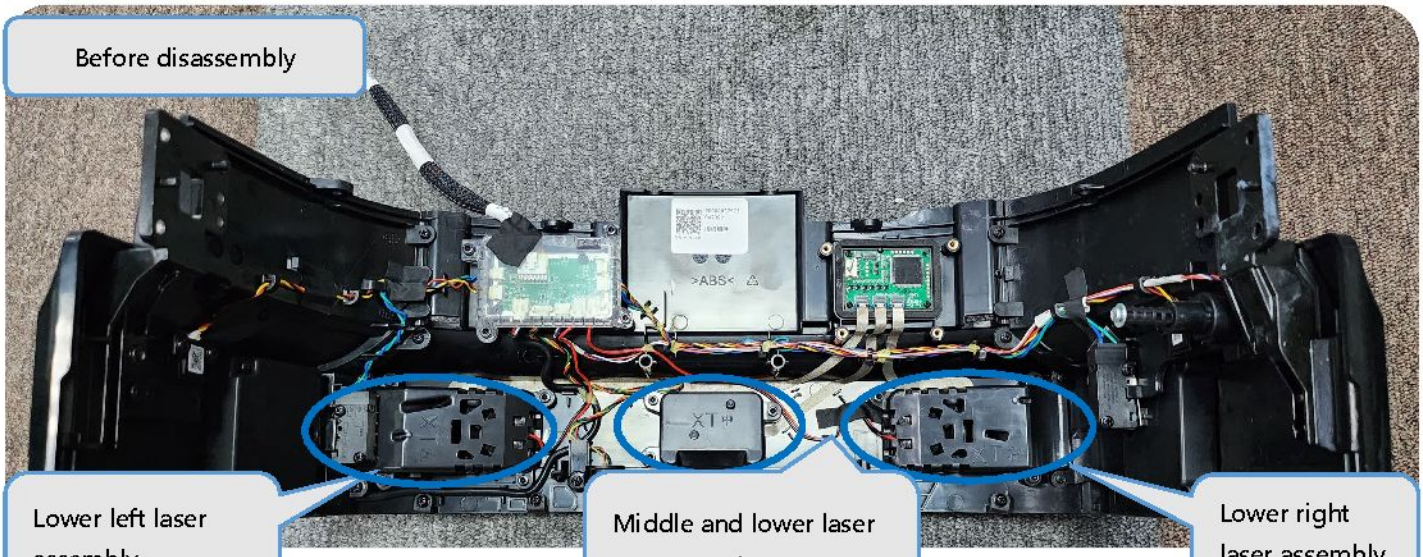
⑦ Remove the screw marked by the red circle in the figure.
⑥ Remove the plug of the small pupil laser cable marked by the illustrated basket circle.

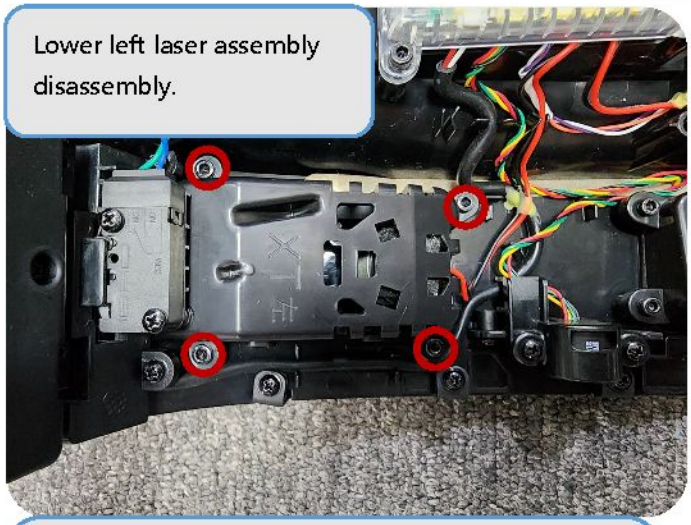


⑤ Pull outward to remove the impact plate assembly.
⑥ Unplug the adapter plug of the collision plate at the mark of the basket circle.

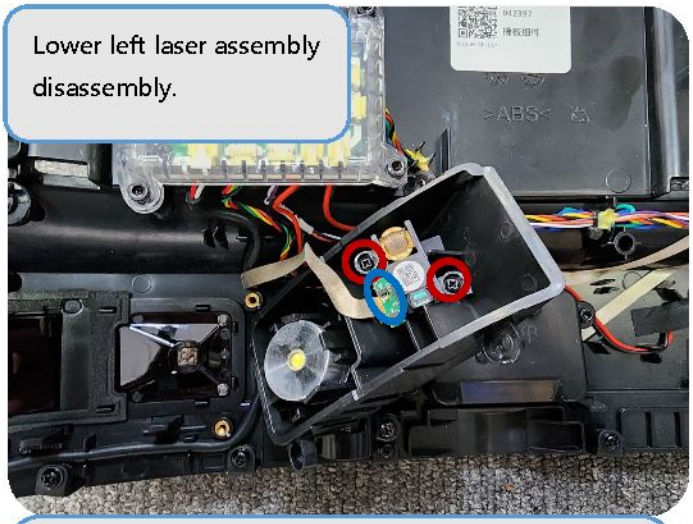
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2.5.1 Lower left & lower middle @ Lower right small pupil laser disassembly





① Remove the screw marked in the red circle.
② Take out the lower left laser assembly.



① Remove the screw marked in the red circle
② Remove the small pupil laser cable.

The lower middle laser and the lower right laser can be disassembled with the same method.

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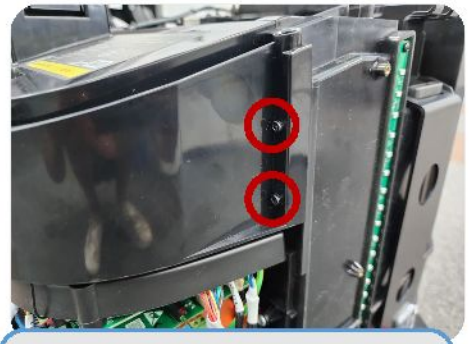
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3. Inner components disassembly

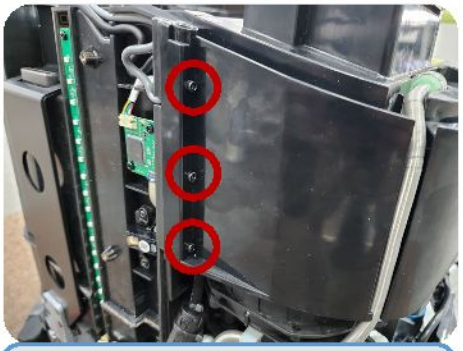
3.1 Front fixed support plate removed

Before disassembly





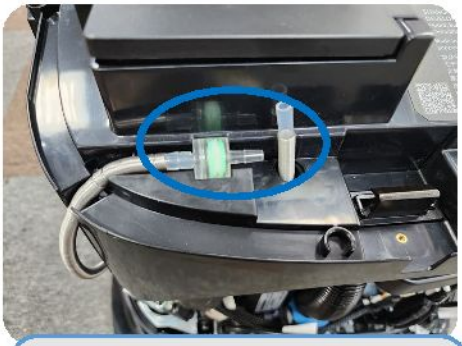
① Remove the screw marked in the red circle.



②Remove the screw marked in red circle.

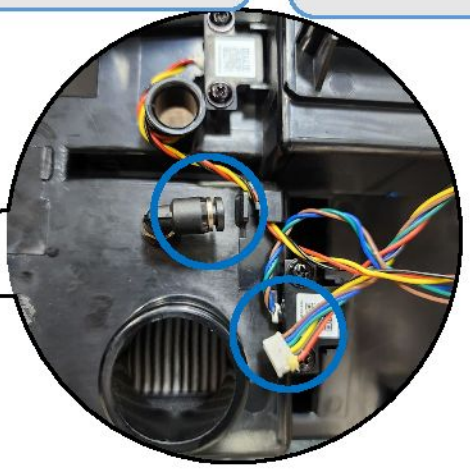


③Remove the screw marked in red circle.



④Remove the water pipe marked by the blue circle in the diagram.





⑤Remove the gas pipe and plug marked in the blue circle.

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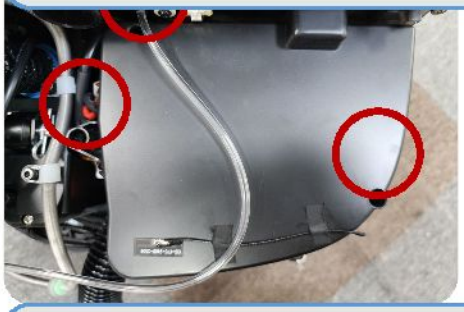
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3.2 PCB shield disassembly

Before disassembly



①Remove the suction pipe clamp and pull out the suction pipe.

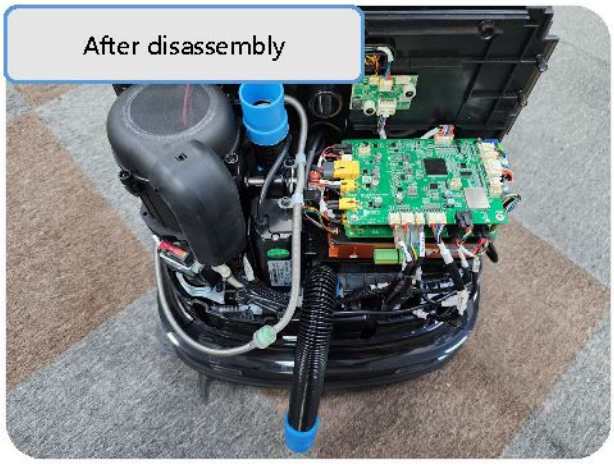


②Remove the screw marked in red circle.



③Remove the shielding cable at the blue circle mark.

After disassembly



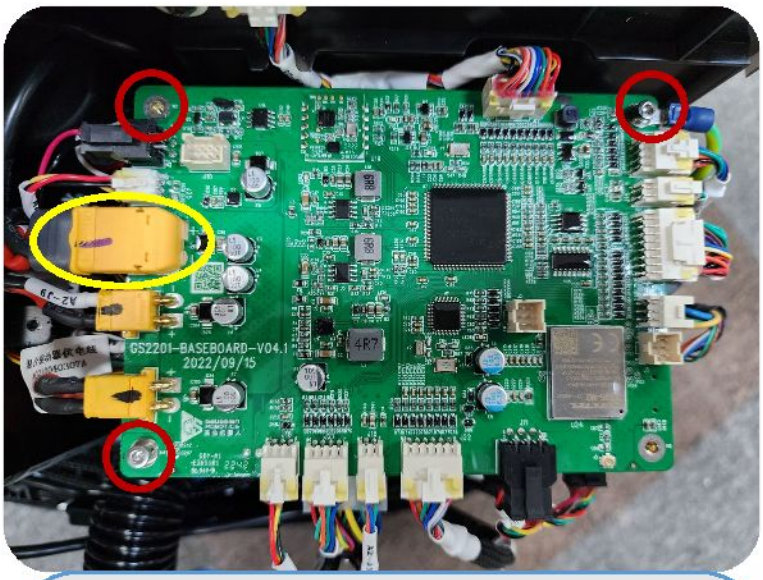
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3.3 Lower machine disassembly

Before disassembly





①Unplug the battery power supply at the yellow circle marked on the diagram.
② Remove the screw marked in the red circle.
③ Remove the connector after softening the electronic yellow glue with alcohol.

After disassembly



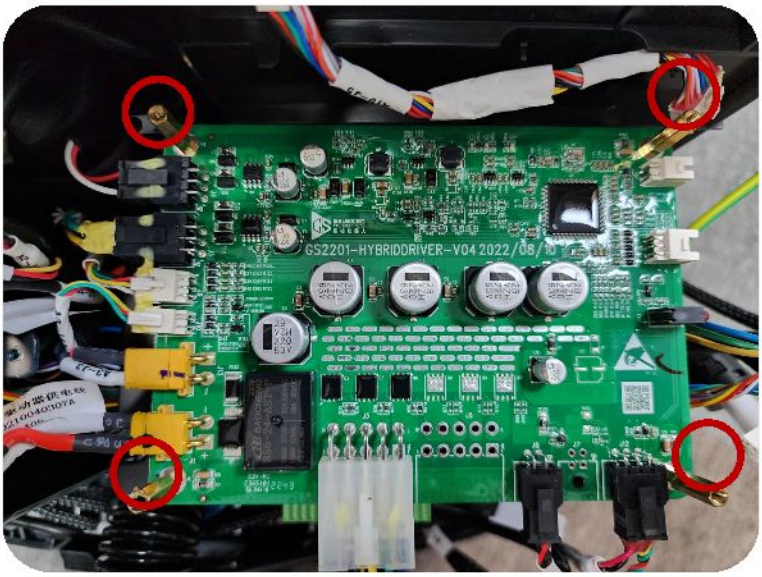
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3.4 Hybrid drive disassembly

Before disassembly





①Remove the stud marked by the red circle .
② Use alcohol to soften the external connector electronic yellow glue and unplug the connector.

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3.5 The suction motor disassembly

Before disassembly





①Remove the screws fixing the suction motor shown in the figure.



②Rotate the suction motor counterclockwise and pull it out.

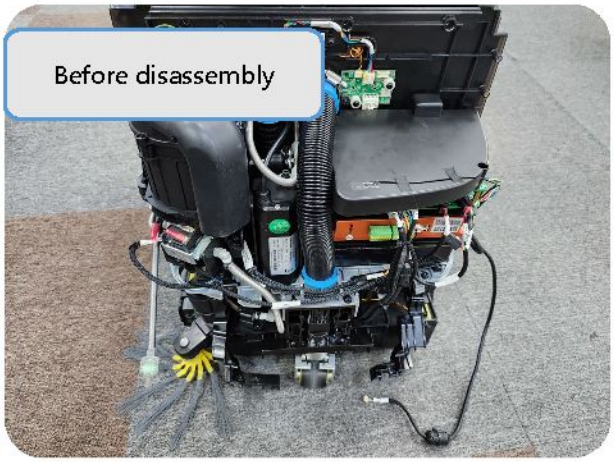


③Remove plug and water pipe clamp marked in red circle.

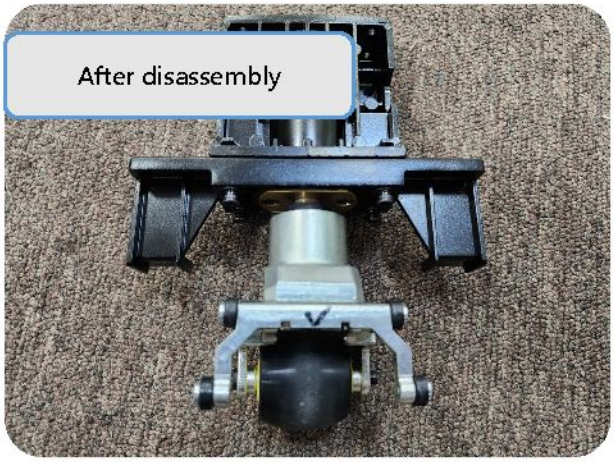
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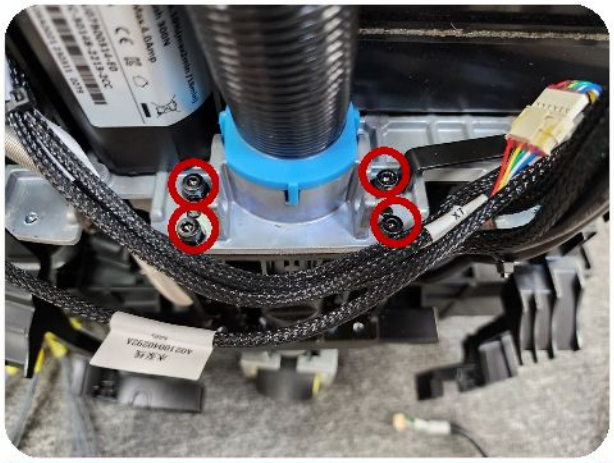
3.6 Front universal wheel assembly disassembly



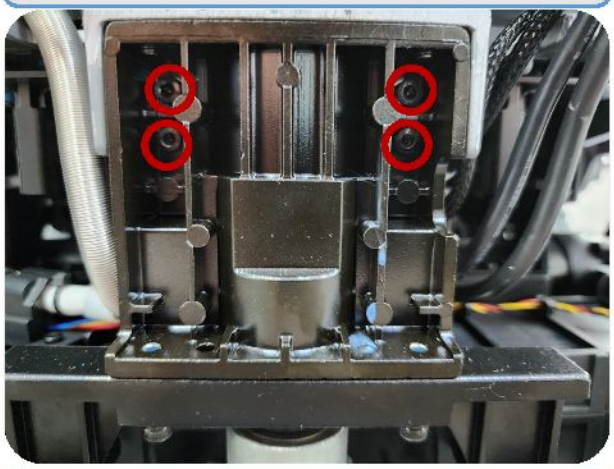
Before disassembly



After disassembly



①Remove the screw marked in red circle.



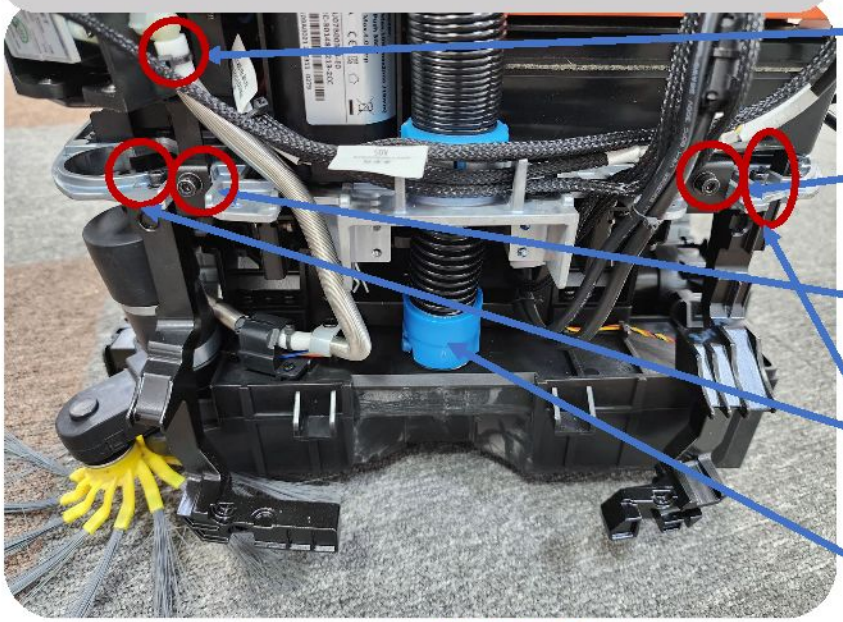
②Remove the screw marked in red circle.

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3.7 Double roll brush assembly disassembly

Attentions: Before disassembly, manually operate and turn off the boat type switch when the double-rolling brush assembly is in the lower state. Ensure that the double-rolled brush assembly is in the lower state when removing.



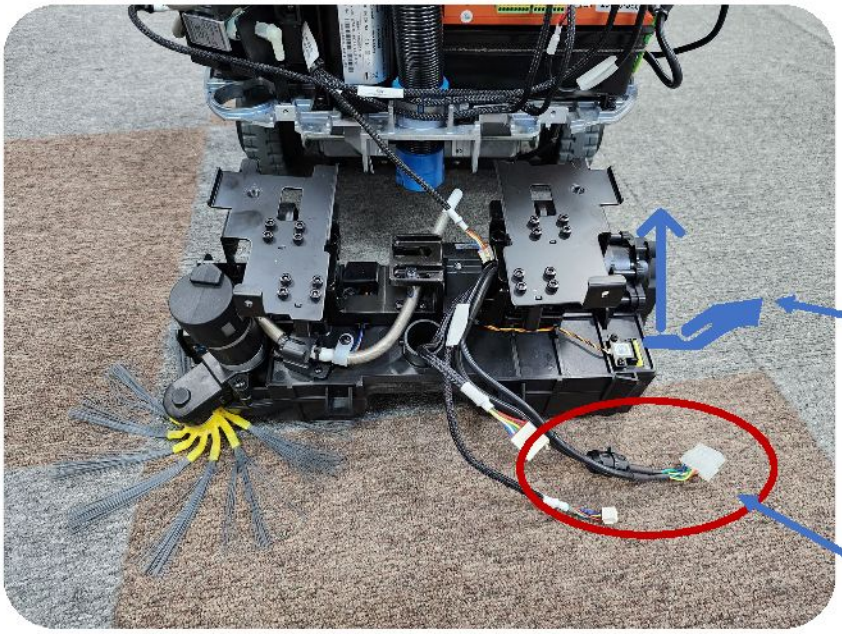
① Cut off the cable ties and remove the spray pipe.

② Remove the screw and remove the left bracket of the front impact plate.

③ Remove the screw and remove the right support of the front impact plate.

④ Remove the screws fixing the double roller brush assembly.

⑤ Remove the suction pipe.



⑥ Pull out the double roller brush assembly after lifting up.

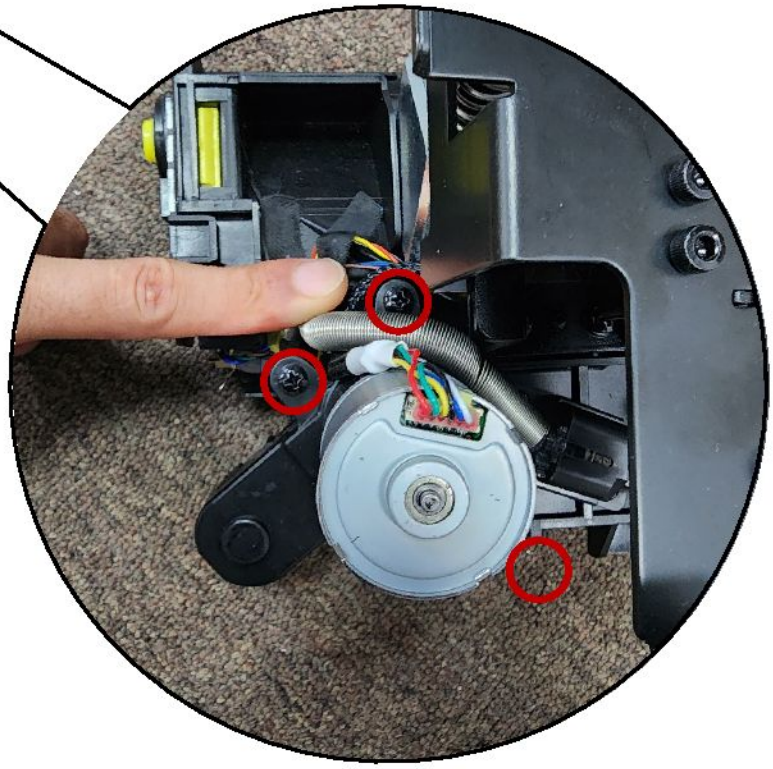
⑦ Unplug the terminals on the double roller brush assembly.

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3.7.1 Side brush motor disassembly





①Remove motor data cable plug after softening edge brush with alcohol.
② Remove the screw marked in the red circle.

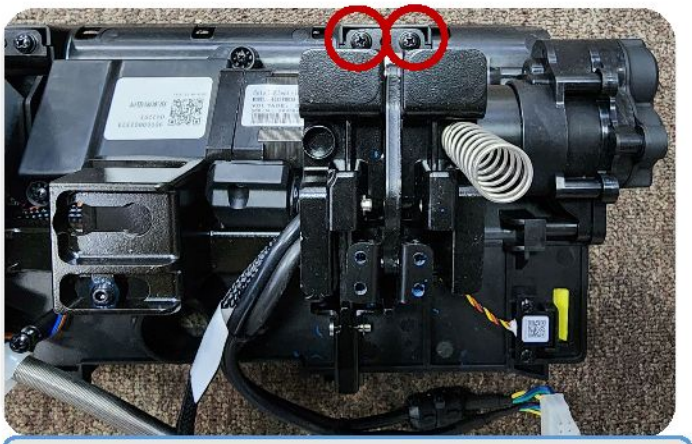
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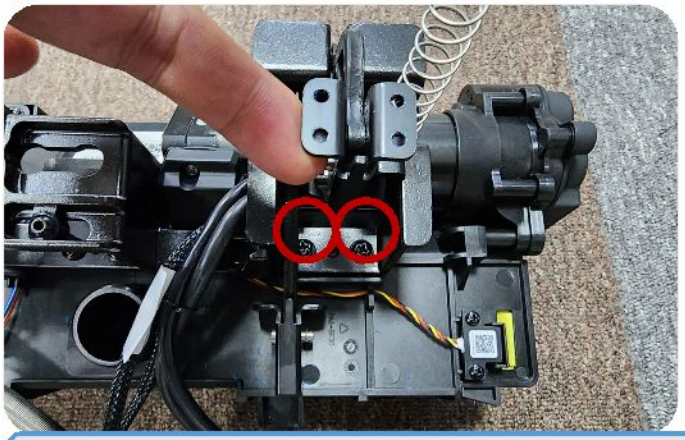
3.7.2 Rolling brush motor disassembly



①Remove the screw marked in red circle.



②Remove the screw marked in red circle.



③ Remove the screws marked in the red circle.



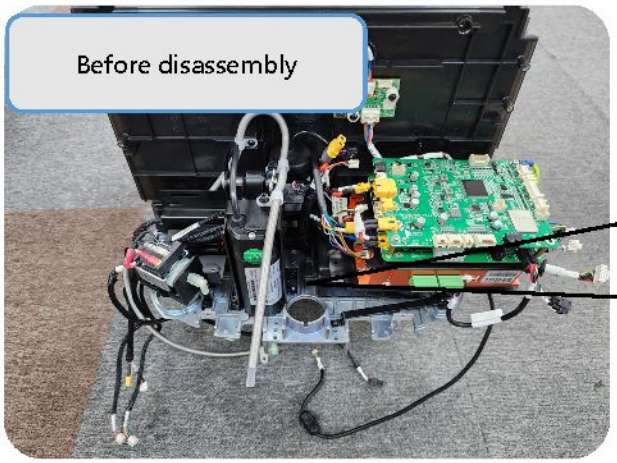
④Remove the screw marked in red circle.



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3.8 Roll brush push rod motor disassembly





①Remove the screws fixing the suction motor in the picture.

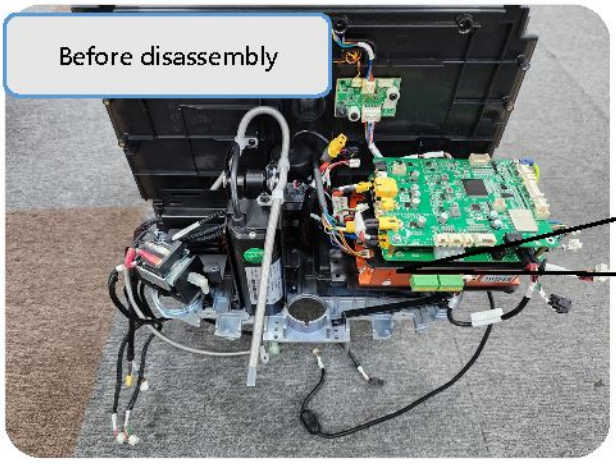


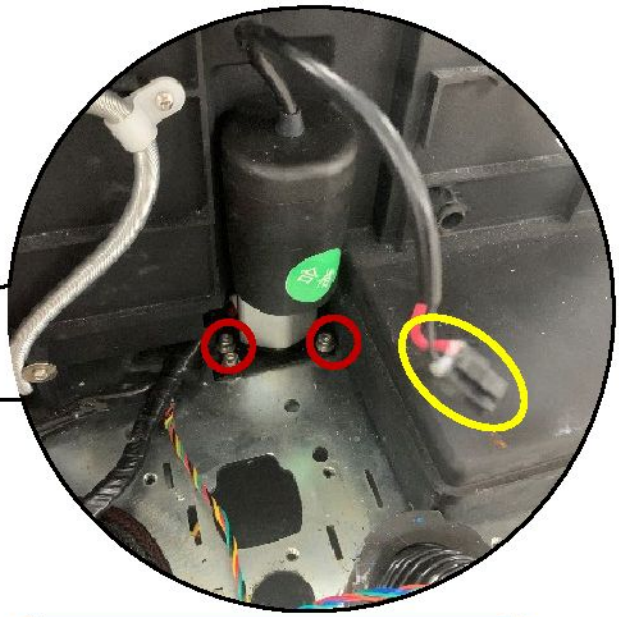
②Remove the R-shaped pin marked in red circle and remove it.

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3. 9 Disassemble the push-rod motor of the suction.





①Remove the screws at the red circle mark in the picture.
② Unplug the motor power plug at the yellow circle mark.



③Remove the screws at the red circle mark in the picture.

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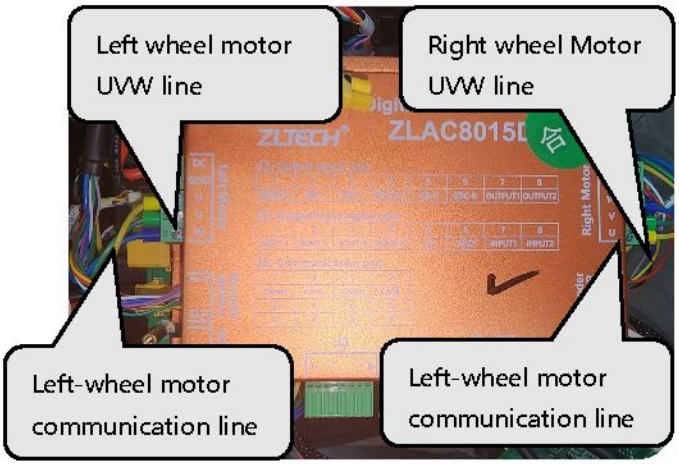
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4. Chassis component disassembly

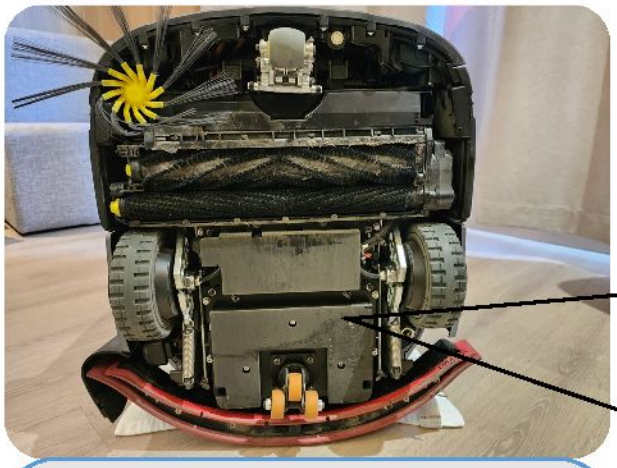
4.1 Drive wheel disassembly

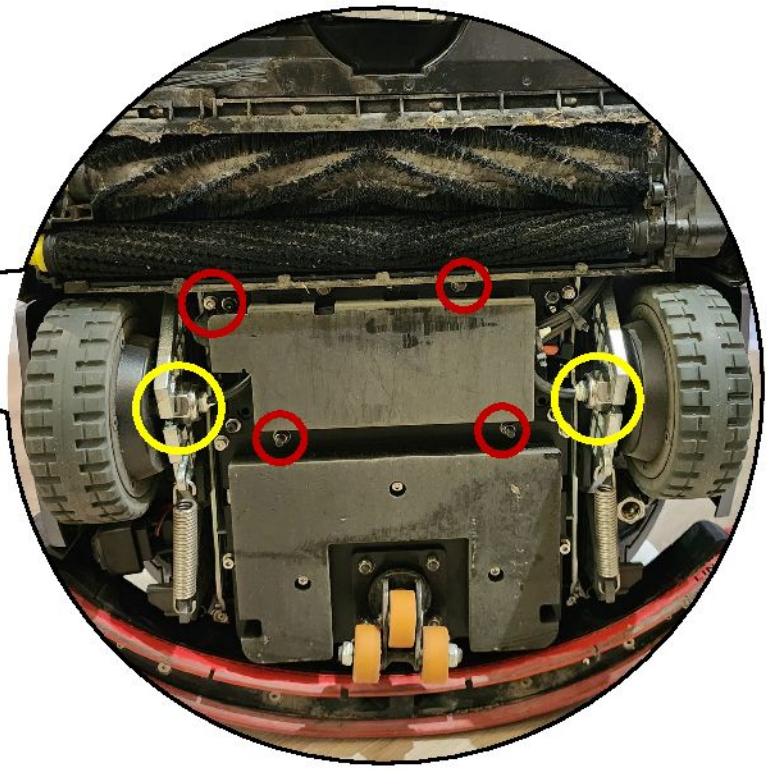


①Disassemble to exposed hub driver.



②Unplug the left and right wheel motor UVW wire and communication wire.





③Remove the fixing screw for [trough cover] marked in red circle.
④ Remove the wheel hub motor nut marked in yellow circle.

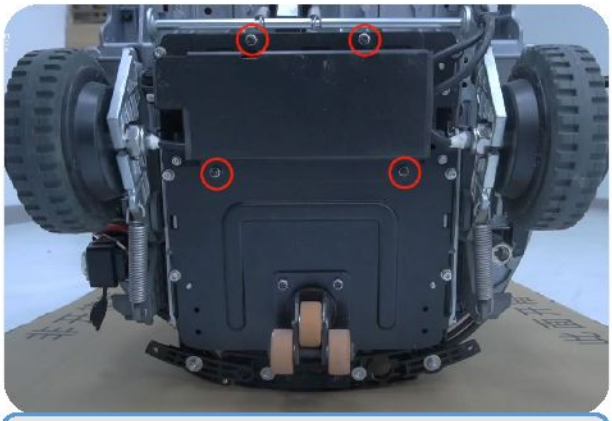
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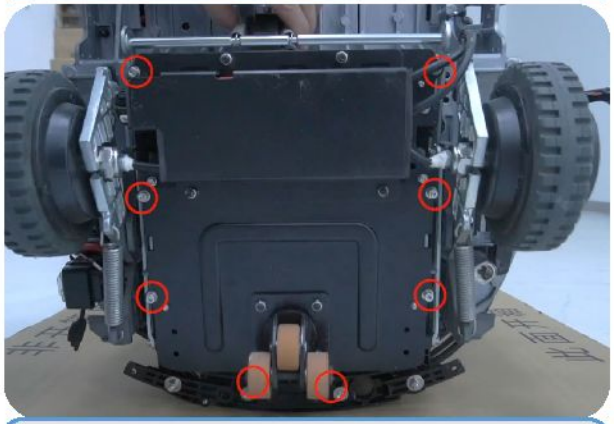
4. 2 Battery disassembly

Before disassembly





①Remove the screw [trough cover plate] .

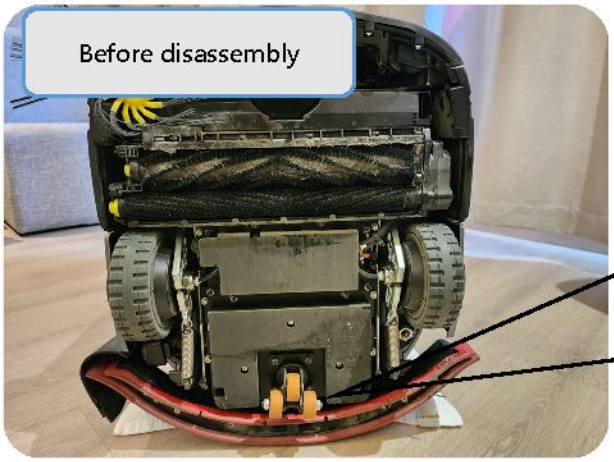


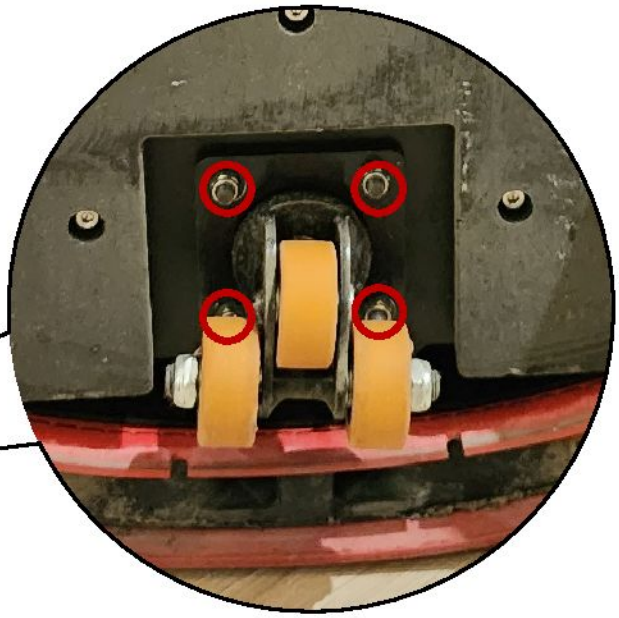
②Remove the battery cover screw .

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4.3 Rear universal wheel disassembly





①Remove the screw marked in red circle .

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4.4 Suction componenets disassembly

Before disassembly



①Remove water suction shell.





②Remove the hand-tight nuts on the left and right sides of the absorbent assembly.

After dissassembly



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