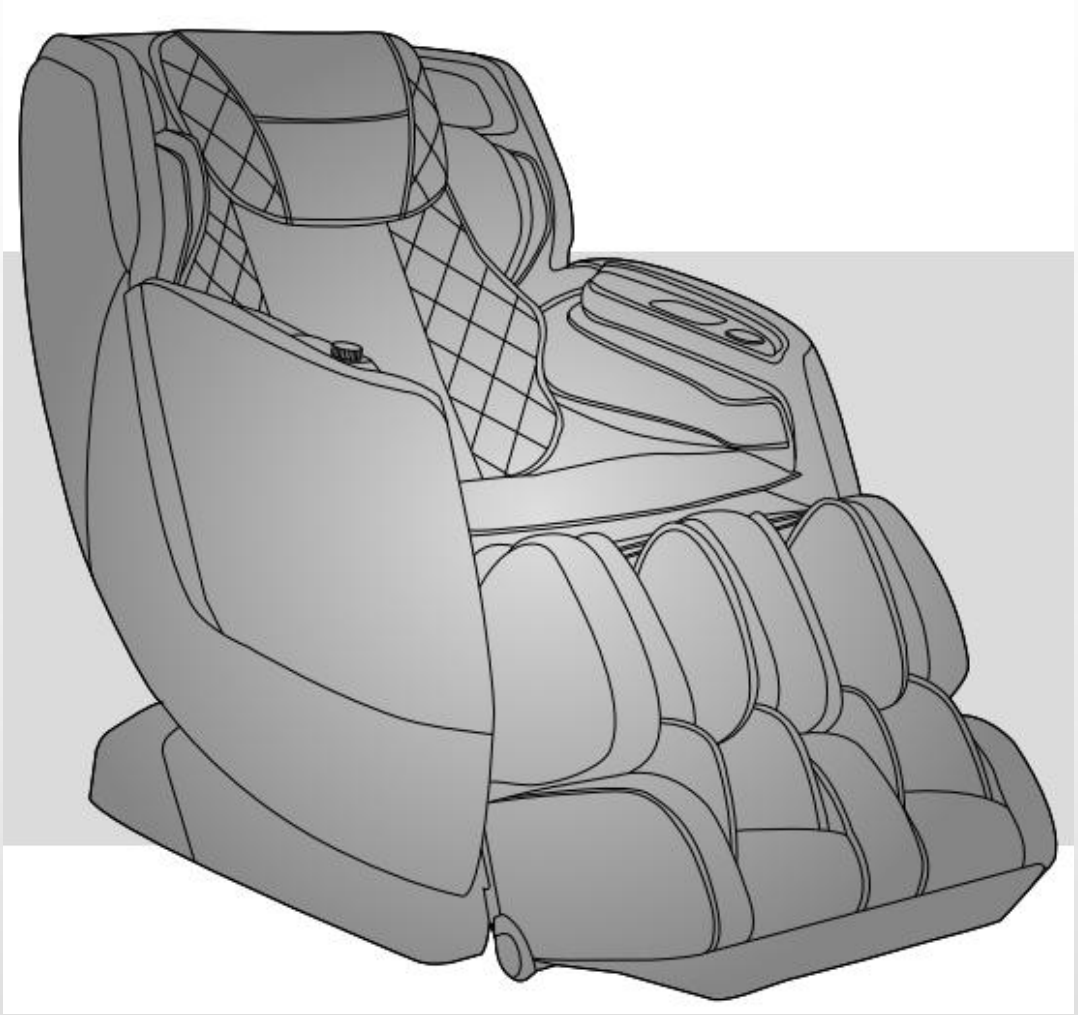
EC-3209M massage chair service



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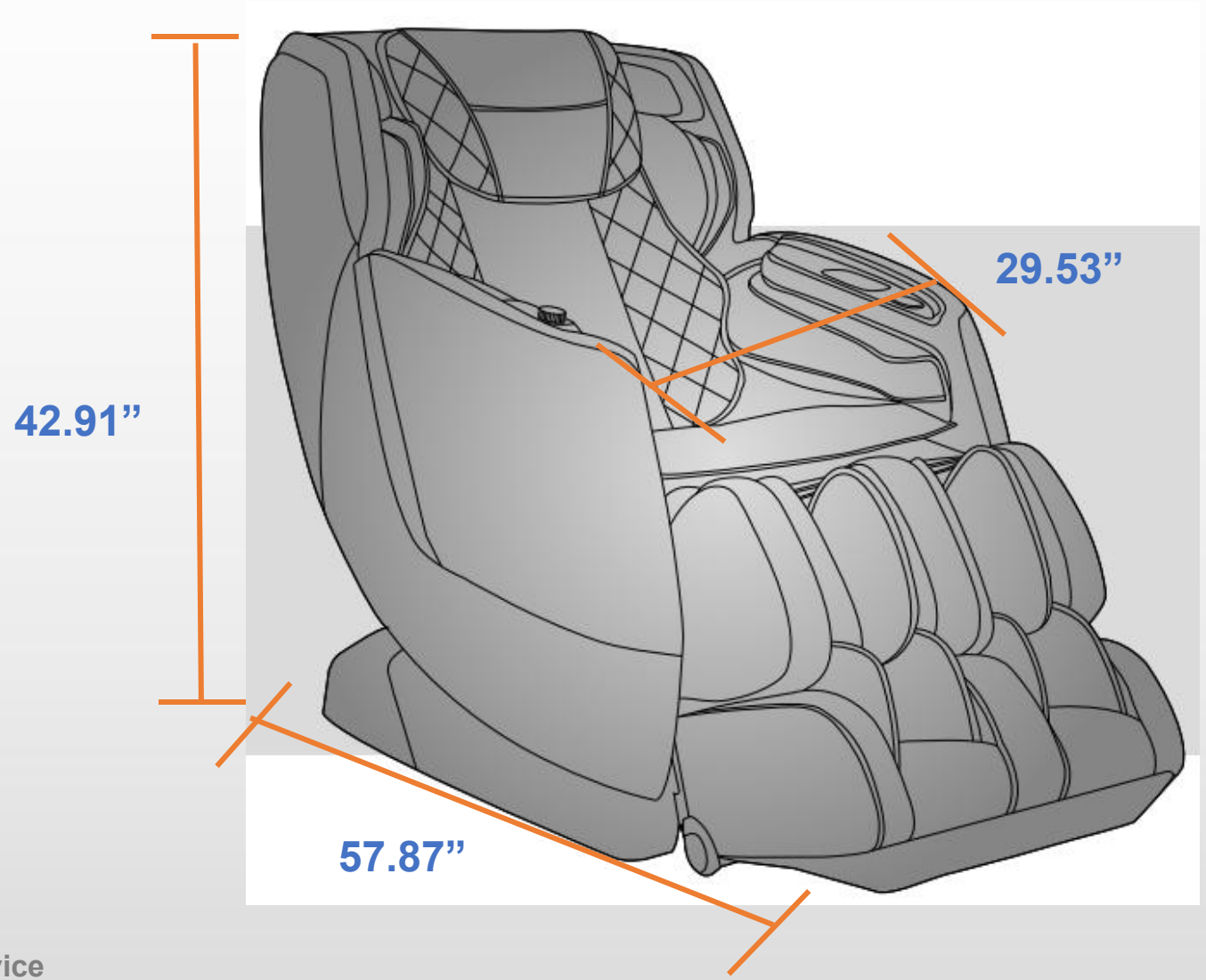
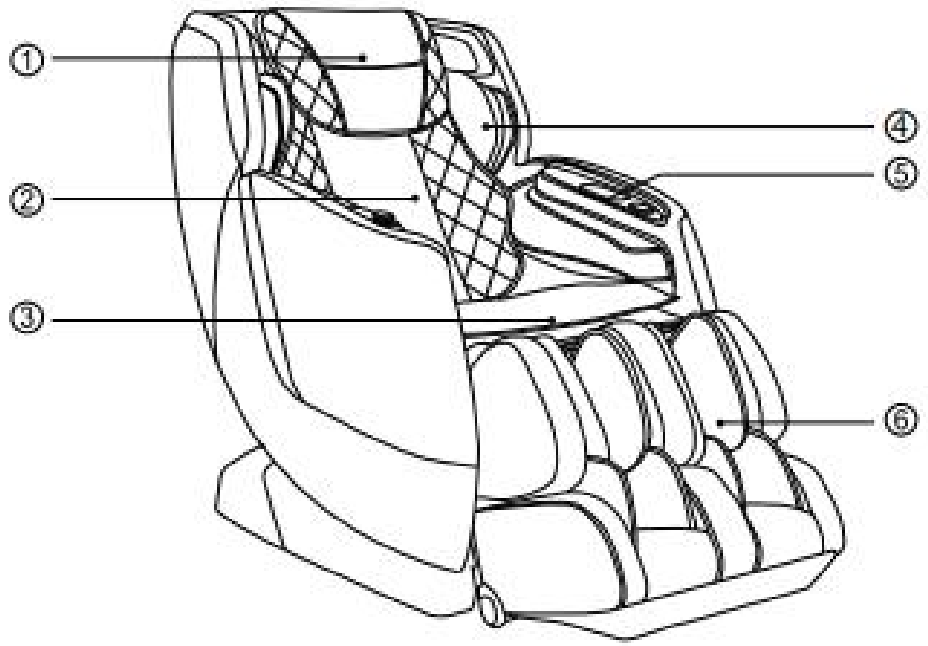
一、Product introduction



Chair Components

Front

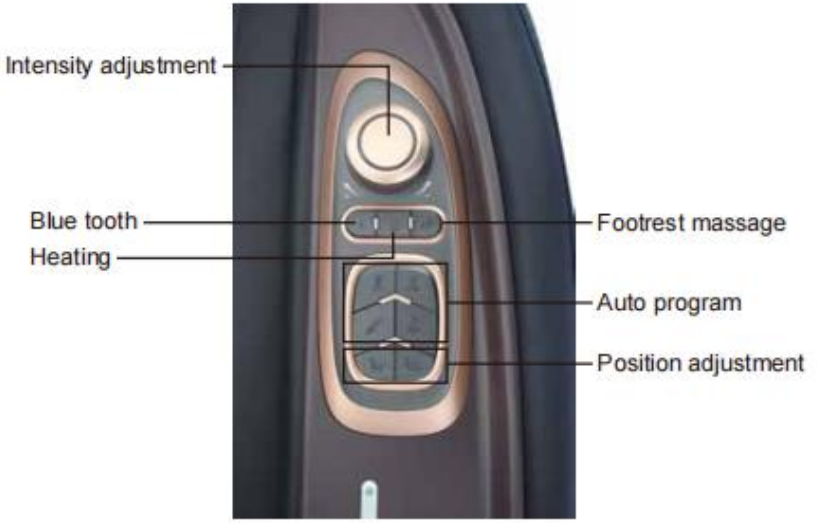


① Pillow Pad
② Backrest Pad
③ Seat Cushion
④ Shoulder side massage section
⑤ Hand and arm massage section
⑥ Legrest

How to Use

Controller

How to Use



Remark:the blue tooth button will light when the blue tooth is open,then remote will show blue tooth icon.

Chair Specifications

Description	Specifications
Model No.	TI - Pandora
Rated Voltage	110–120V~
Rated Frequency	60Hz
Rated Power Consumption	120W
Rated Time	15 minutes
Dimensions(L x W x H)	Upright:57.87" x29.53" x42.91"
	Reclined:71.26" x 29.53" x 33.46"
Weight	Gross Weight: Approx.218.3lbs
	Net Weight: Approx.180.8lbs
Length of Wire	Controller wire: 59.0"
	Power supply wire: 70.9"
Usage Condition	Environment temperature: 32°F~95°F
	Contrasting humidity: 20-80RH
Storage Condition	Storage temperature: 23°F~95°F
	Storage humidity: 20-80RH
Safety Feature	Equipped with overheated and power
Maximum body weight of user	220 lbs

二、Massage chair tools and use

1.tools

					
Screwdriver size 1,2,3	Diagonal cutter and long nose pliers	Soldering Kit	Spanner tools Kit	Test pen	Allen Key set
					
Ratchet Tools Set	24V/DC power	Electric Driver	electrical adhesive tape	Cable Ties	WIRE ONECTORS

2、Use and measurement of digital multimeter

LED display

Data hold switch

Resistance test gear Ω

Buzzer (diode test gear)

Measuring port

HFE test socket

DC voltage Test gear V-

Gear dial

AC voltage test gear V~

Measuring port

2.1、Function of the test gears

Data hold switch：Memorize the measured data for comparison。

Buzzer (diode test gear) ：Measure the quality of diode, the on-off and alarm function of circuit

Resistance gear test gear：Measure the quality and valve of resistance

DC voltage Test gear V-：Measure DC voltage

AC voltage test gear V~：Measure AC voltage

VΩ / COM：VΩ Red pen port (+ pole) during test, black pen port (- pole) during com test

Note: when carrying out resistance or voltage test, it is necessary to select a suitable range. If the range is too small to be measured, and the range is too large, the test error range is large; if the voltage is not known, it is necessary to select a range measurement with a large windlass.

2.2、On / off measurement of lines

open circuit

As shown in the left picture, first set the multimeter to the buzzer and power it
When the switch is on, the multimeter will display "0."; then contact the two probes with the ends of the red wire
At this time, the multimeter still shows "1." there is no change, which means there is an open circuit in the middle of the wire, that is, the line is open.

close circuit

As shown in the picture on the left, if the multimeter shows the number of ". 002" or ". 00n" and gives an alarm, it means that the wire is connected.

2.3、Measurement of AC voltage

As shown in the picture above: measure the household plug-in board power supply (220V), select the range of 750, and the test result shows "224", indicating that the actual voltage of this group of sockets is 224v at the moment (the switch is pressed down, so there is power, and the light is on).

As shown in the above picture: measure the power supply (220V) of our household plug-in board, select the range of 750, and the test result is displayed as "001", indicating that the actual voltage of this group of sockets is 0V at the moment (the switch is not pressed down, so there is no power, and the light is not on).

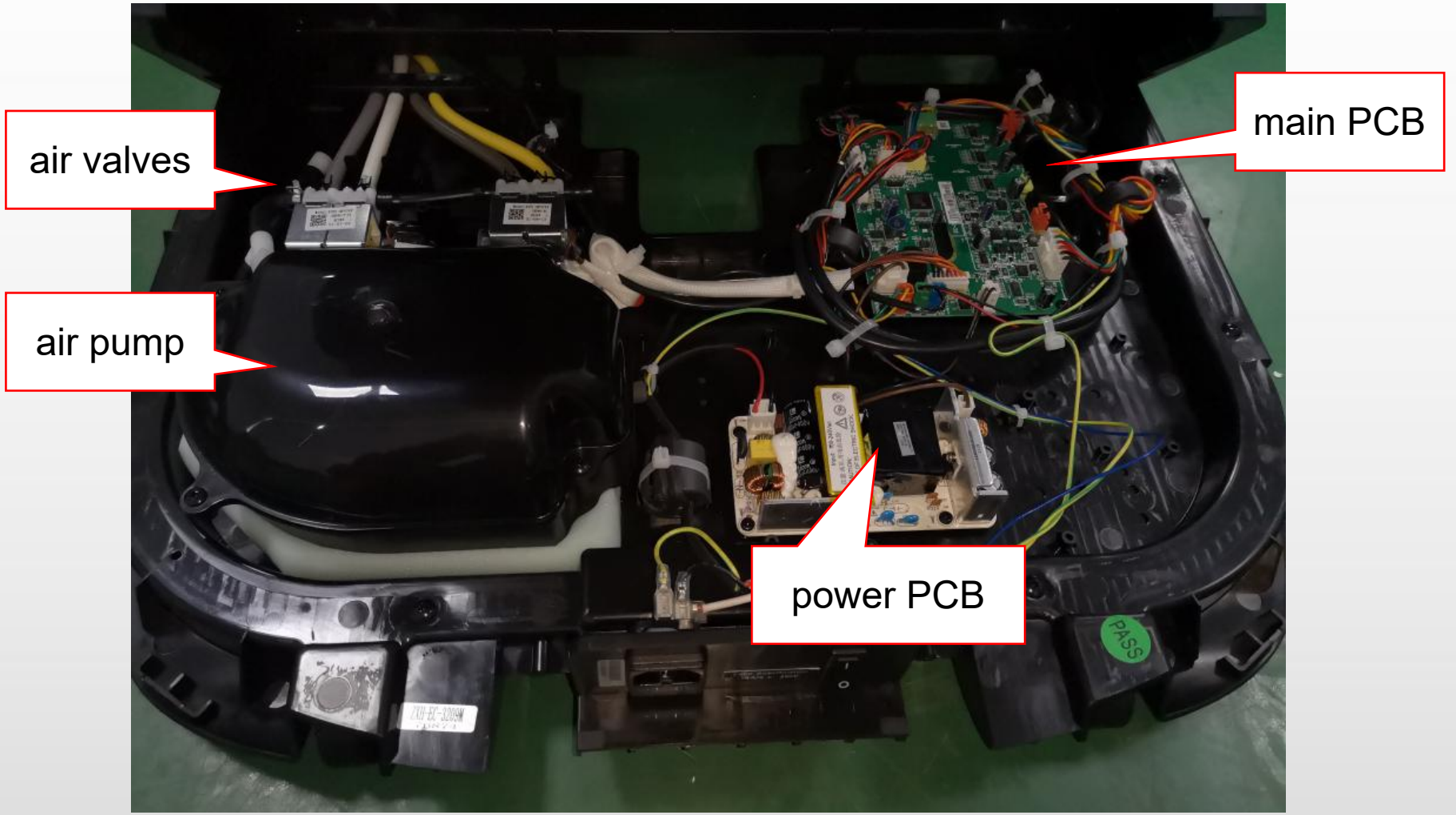
2.4、DC voltage measurement

As shown in the picture above: the test result is "1.58", indicating that the voltage at both ends of the battery is 1.58v, and the red lead is connected to the "+" pole of the battery, and the black lead is connected to the "-" pole of the electromagnetic.

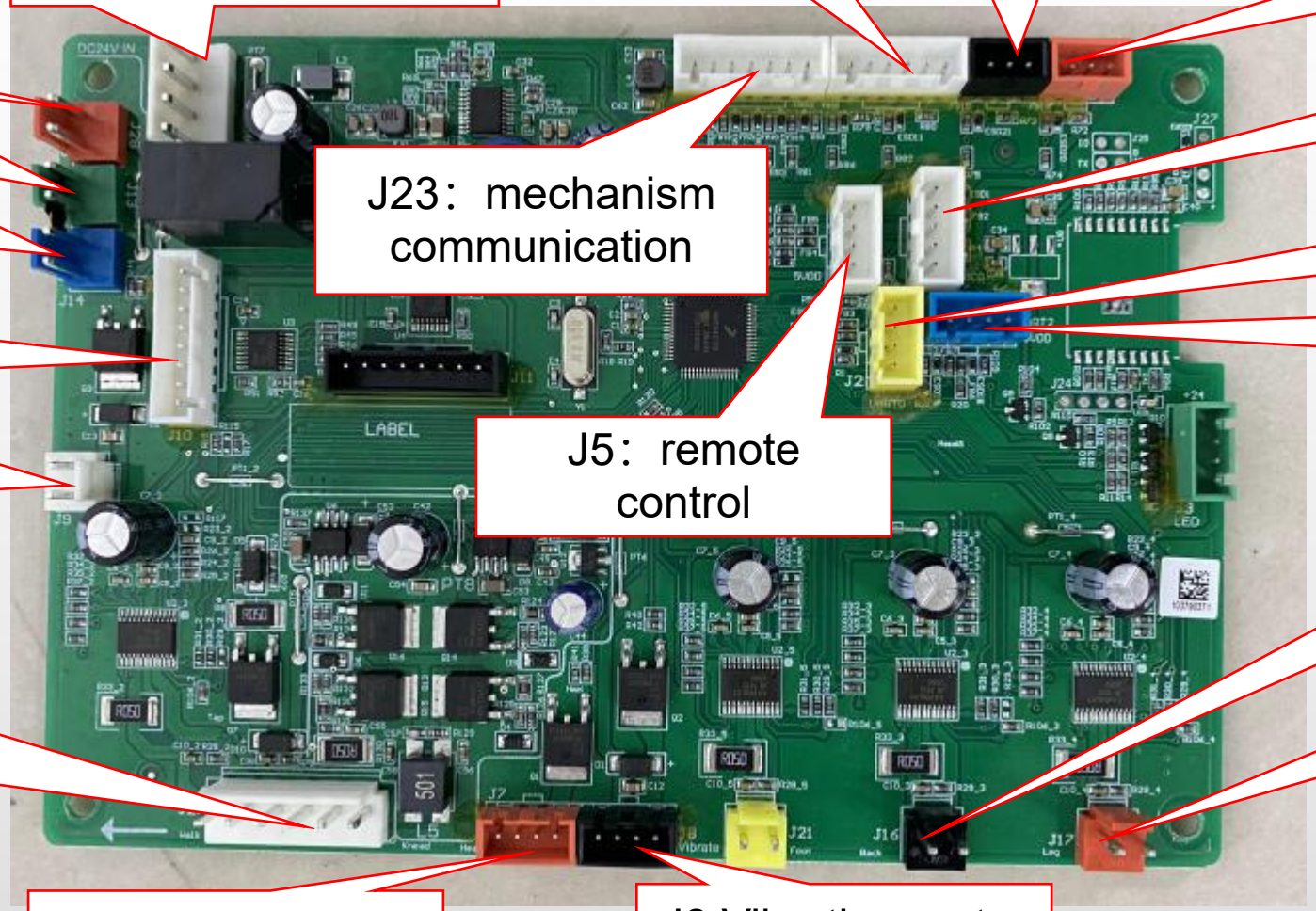
As shown in the above picture: the test result is "- 1.58", indicating that the voltage at both ends of the battery is 1.58v, and the red lead is connected to the "-" pole of the battery, and the black lead is connected to the "+" pole of the electromagnetic

三、Circuit working principle

1.Internal structure diagram (main PCB box):



2、main PCB:


J22：up&down limit sensor
J19：backrest counting sensor
J12：DC24V power in
J18：legrest counting sensor
J28:24V power for legrest
J1:side panel control
J13:24V power for Bluetooth PCB
J23：mechanism communication
J2:legrest PCB
J14:24V power for USB charge
J6:Bluetooth communication
J10:air valve
J5：remote control
J9：air pump
J16：backrest actuator
J20：power for mechanism motors
J17：legrest actuator
J7:heater
J8:Vibrating motor

四、Massage chair removal instructions

1、disassembly of the pillow:

unzip the zipper

remove the pillow

unzip the zipper

Remove the pillow liner

2、Disassembly of the backrest pad:

unzip the top zipper

unzip the zipper fixing legrest and backrest pad

unzip the zipper fixing legrest and seat

unzip the zipper on both side of backrest pad

disconnected the terminal

remove backrest pad

3、disassembly of the legrest:

unzip the zipper fixing legrest and backrest pad

remove 2 limit baffles

the baffles

Push out the leg to the right

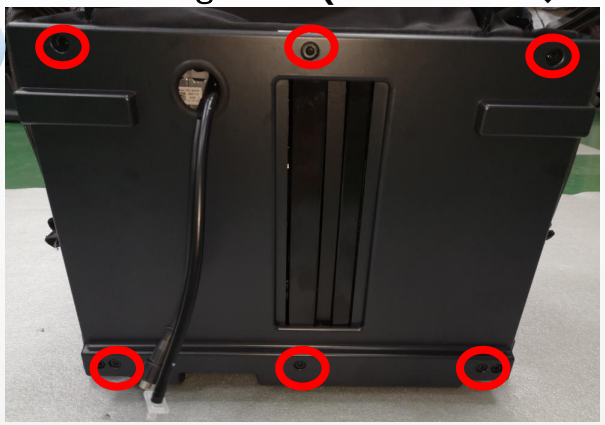
disconnected the air hose and terminal

remove legrest

4、disassembly of legrest PCB:

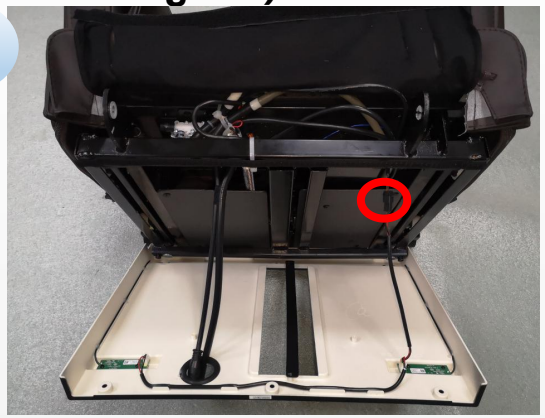
remove the legrest (refer to 3、**disassembly of the legrest)**

1



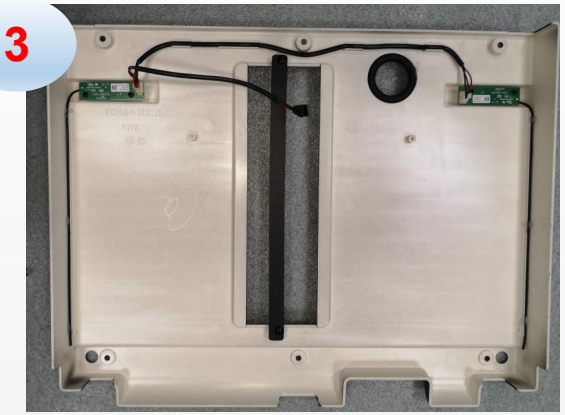
remove 6 screws

2



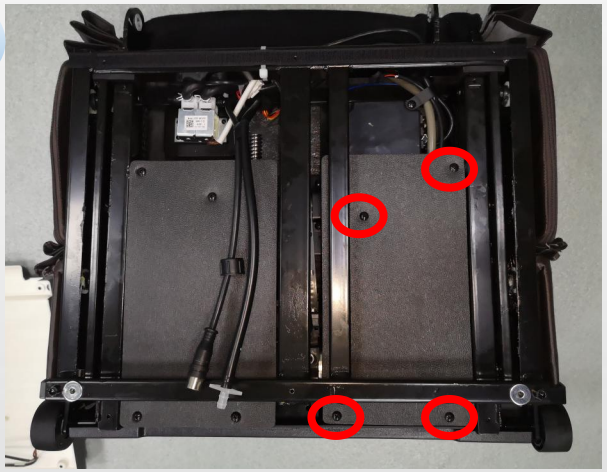
disconnected the terminal

3



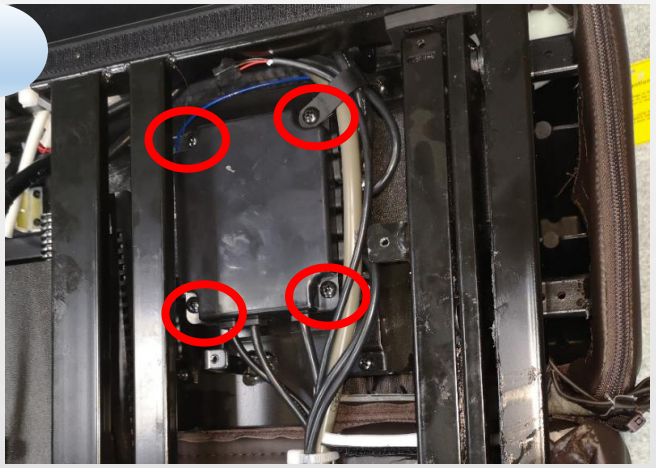
remove the cover

4



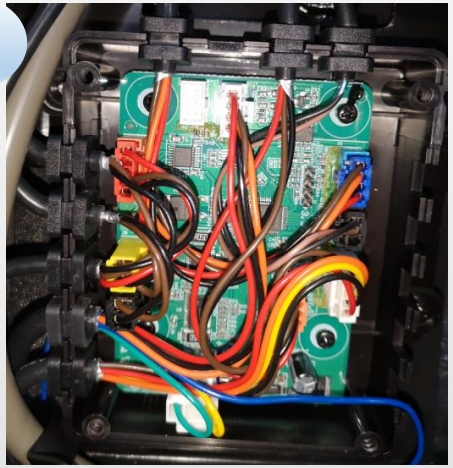
remove 4 screws

5



remove 4 screws fixing the cover

6

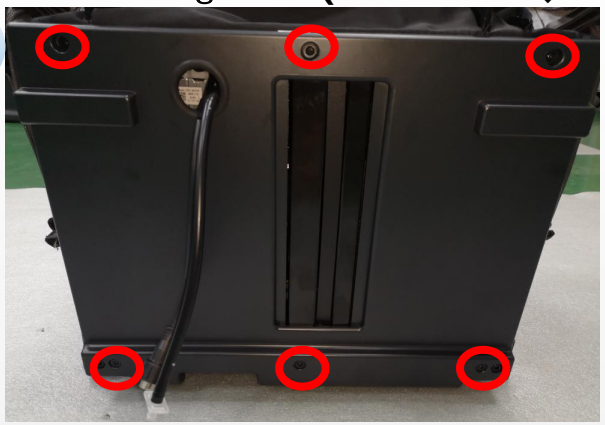


disconnected all the terminals and remove 4 screws, then remove the legrest PCB

5、disassembly of air valve

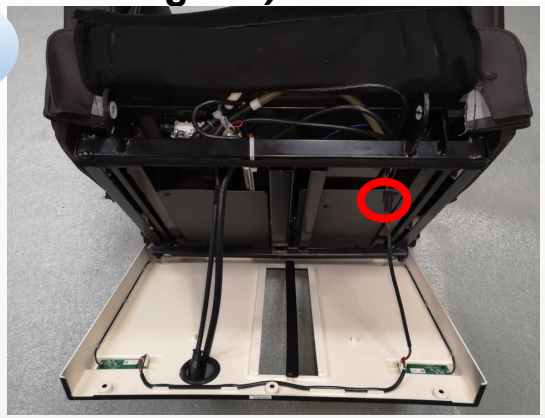
remove the legrest (refer to 3、**disassembly of the legrest)**

1



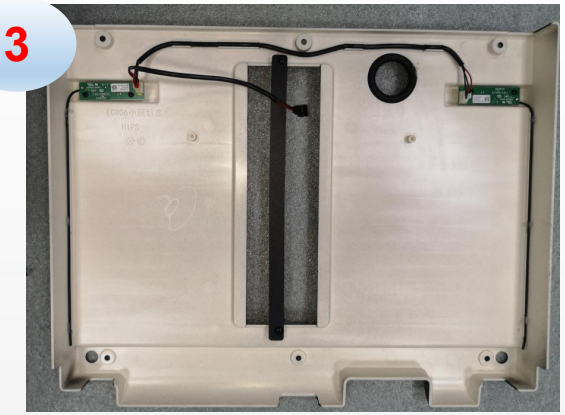
remove 6 screws

2



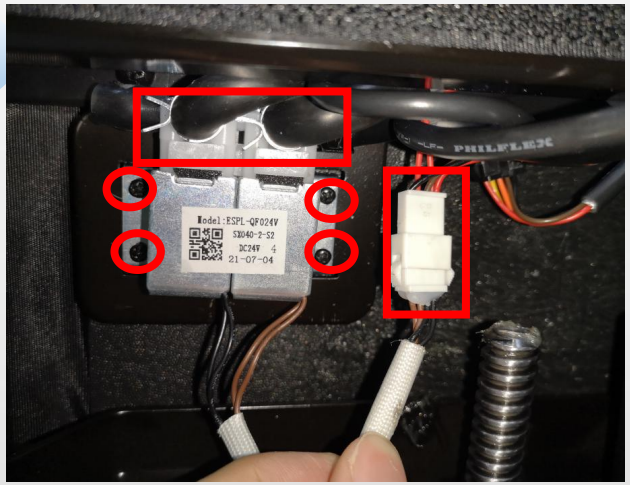
disconnected the terminal

3



remove the cover

4

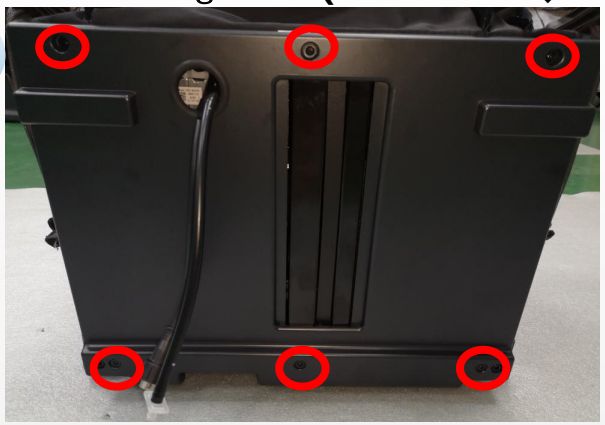


disconnected the air hose and terminal, remove 4 screws

6、disassembly of upper legrest:

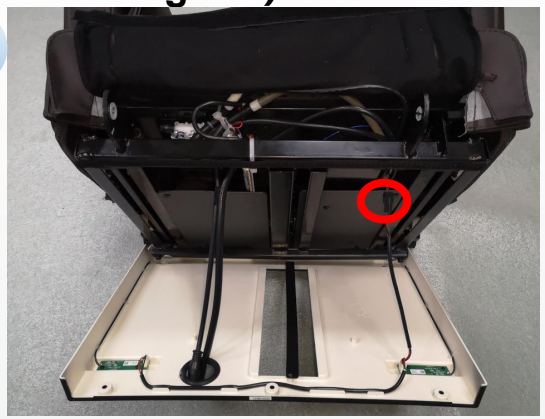
remove the legrest (refer to 3、**disassembly of the legrest)**

1



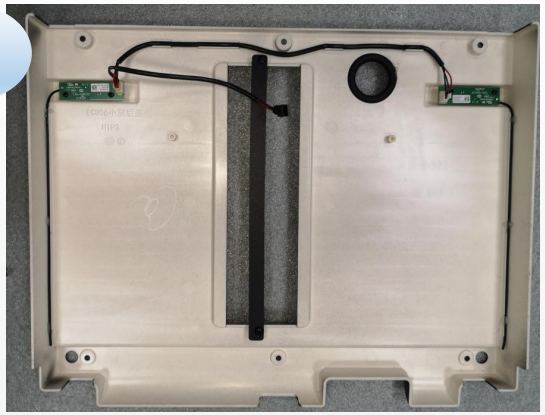
remove 6 screws

2



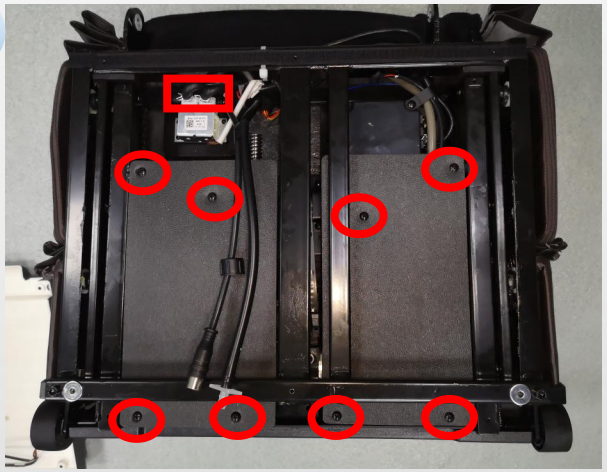
disconnected the terminal

3



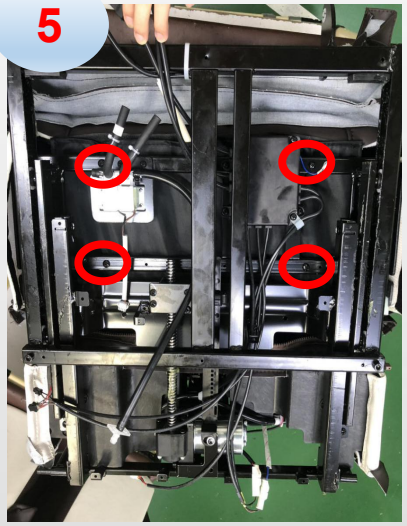
remove the cover

4



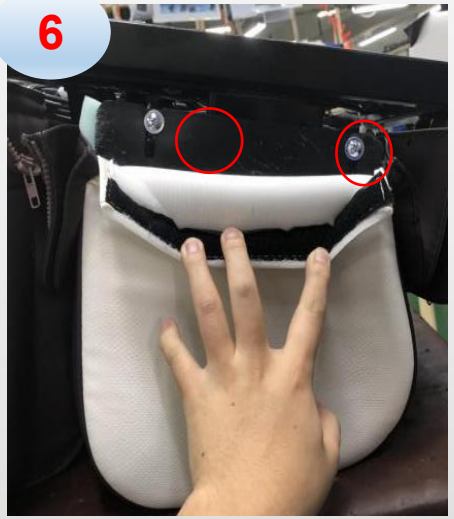
remove 8 screws and disconnected the air hose

5



remove 4 screws

6



remove 2 screws both side

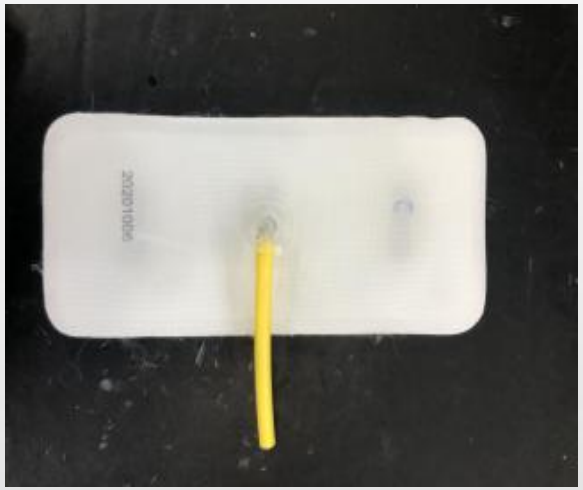
7

remove upper legrest

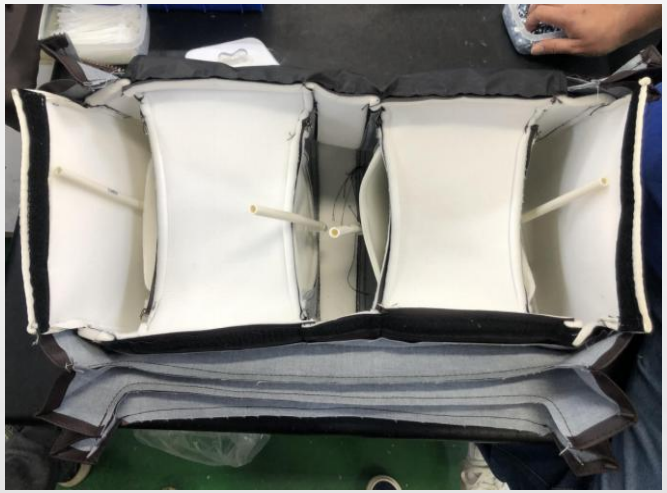
open the cloth cover

disconnected the air hose

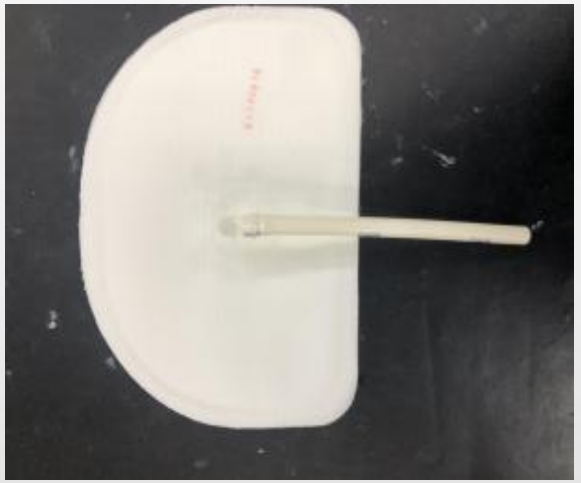
remove the air bag



middle air bag



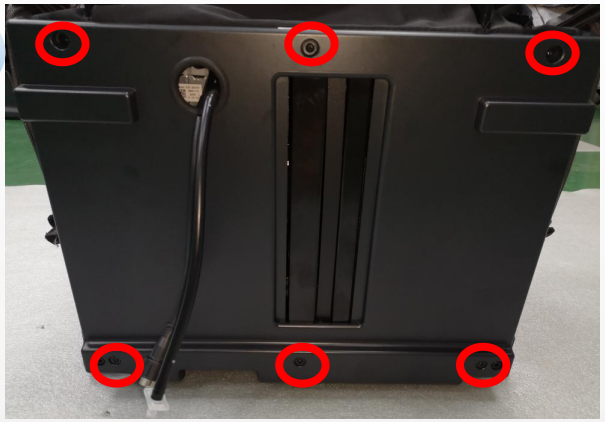
remove the cover and air bag



side air bag

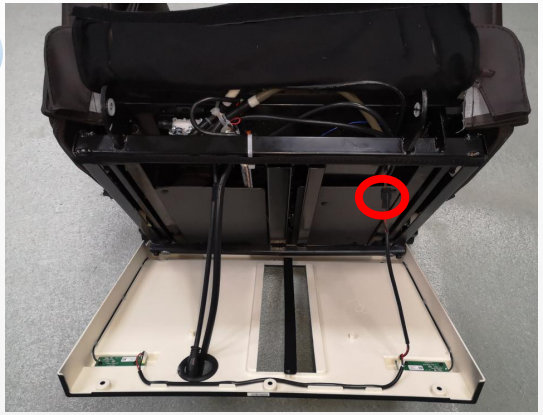
7、disassembly of lower legrest:

1



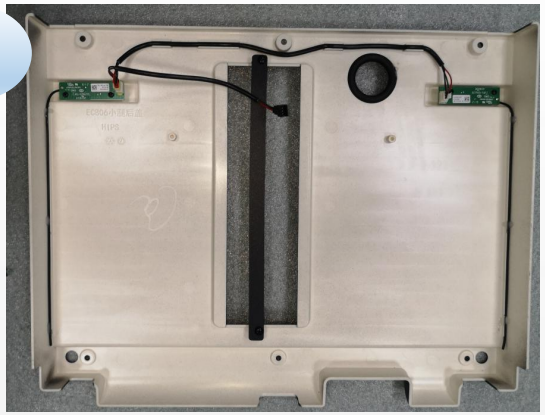
remove 6 screws

2



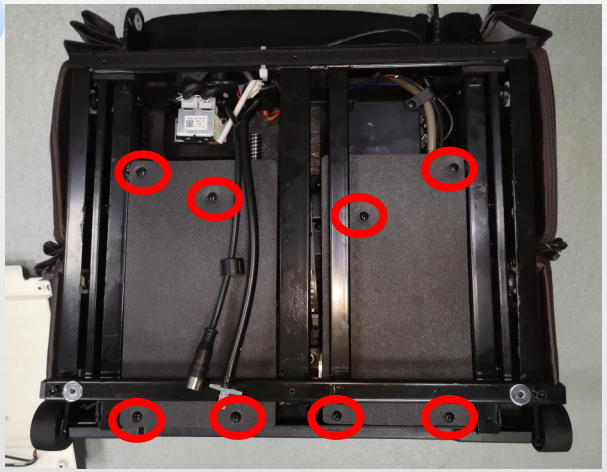
disconnected the terminal

3



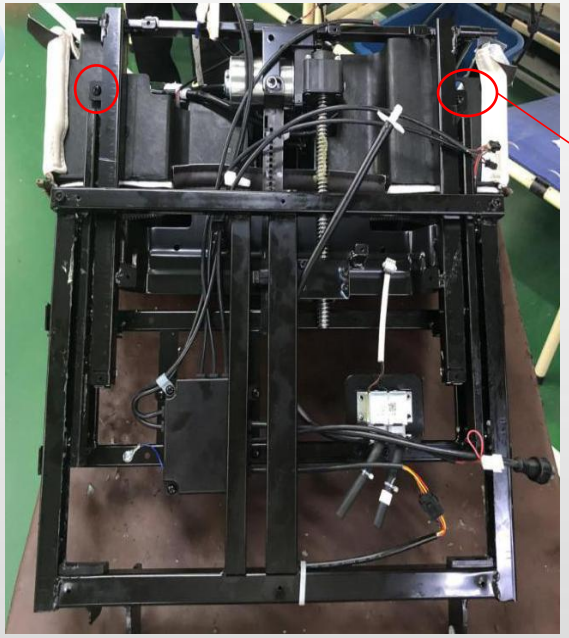
remove the cover

4



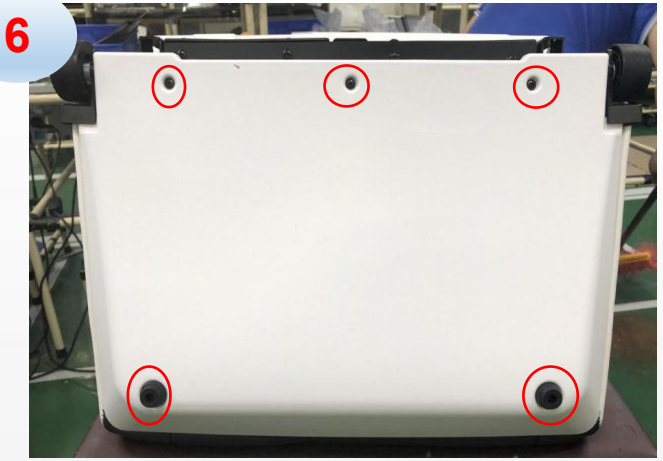
remove 8 screws

5



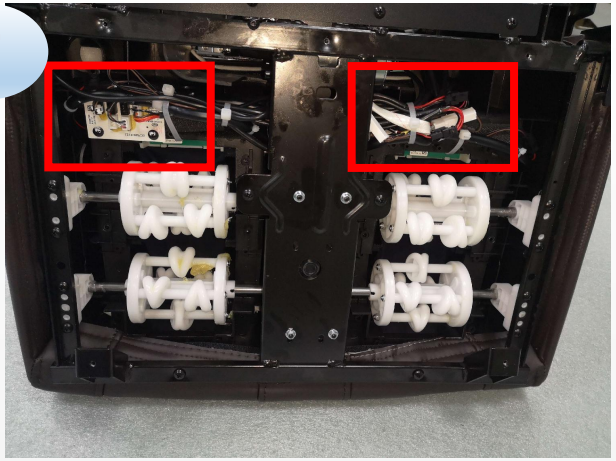
remove 2 screws

6



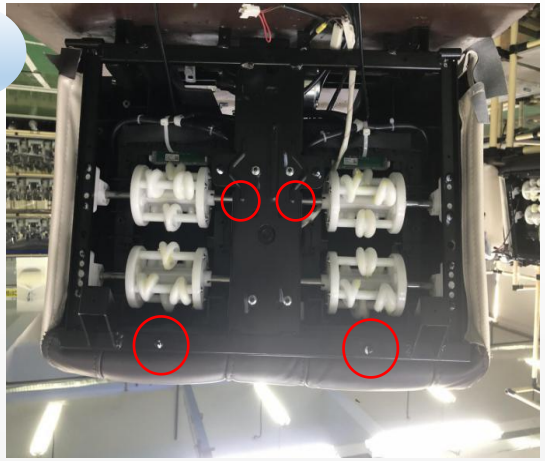
remove 5 screws

7



disconnected the terminals and air hose

8

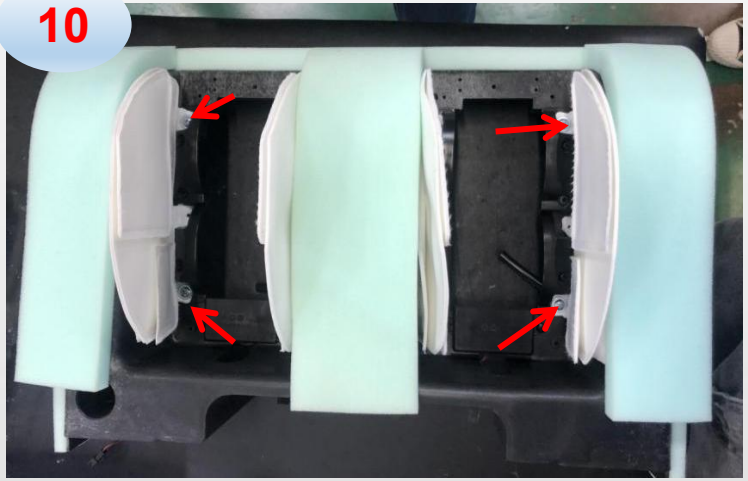


remove 4 screws

9

remove the lower legrest cover

10

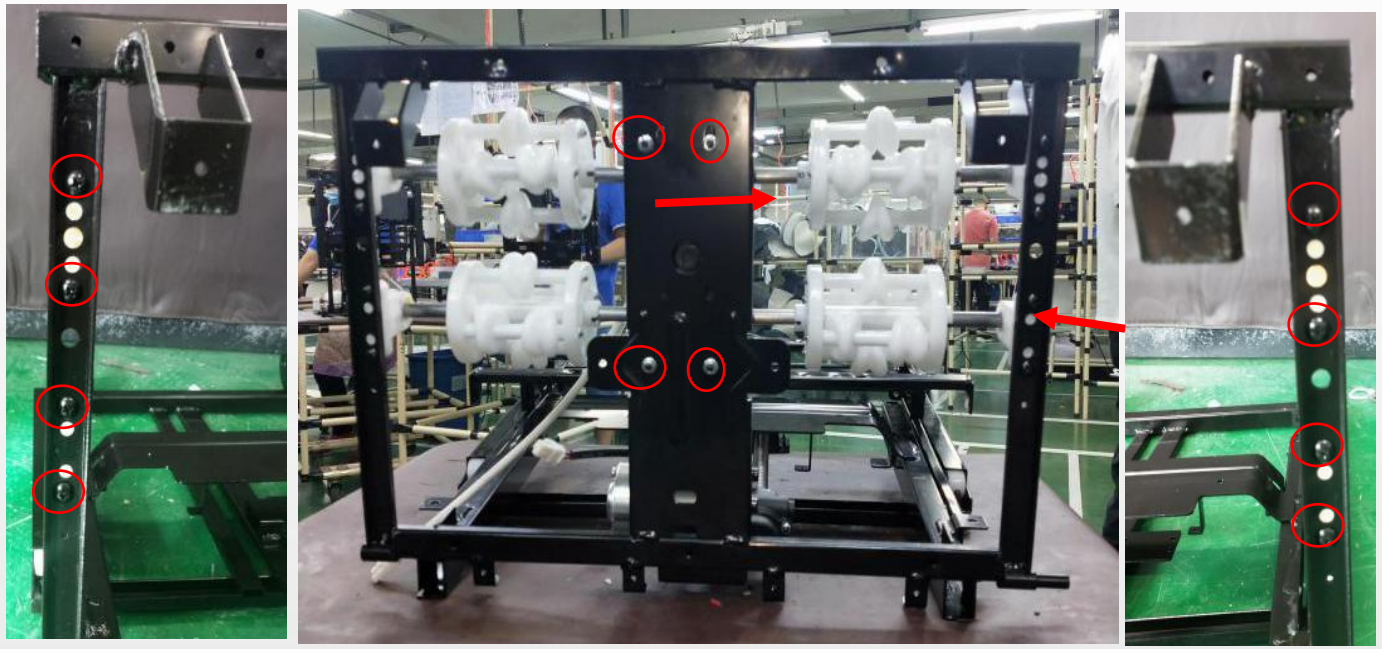


remove the screws fixing air bag

11

left&right air bag for lower legresr

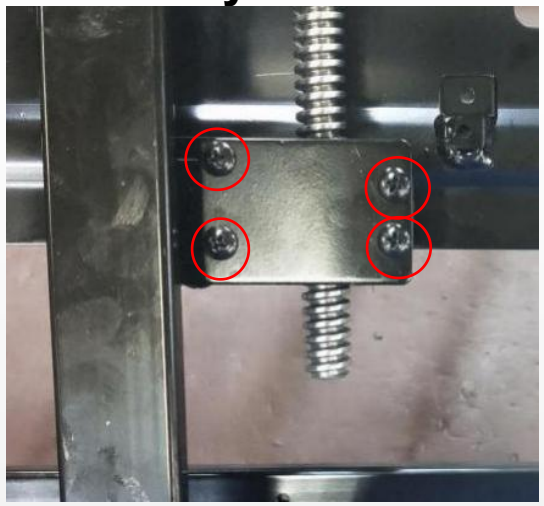
8、disassembly of foot massage unit:



remove screws fixing foot massage unit

foot massage unit

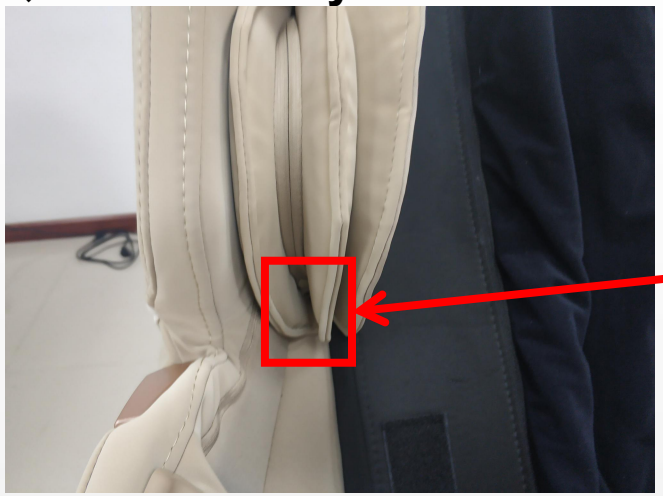
9、disassembly of Telescopic motor assembly：



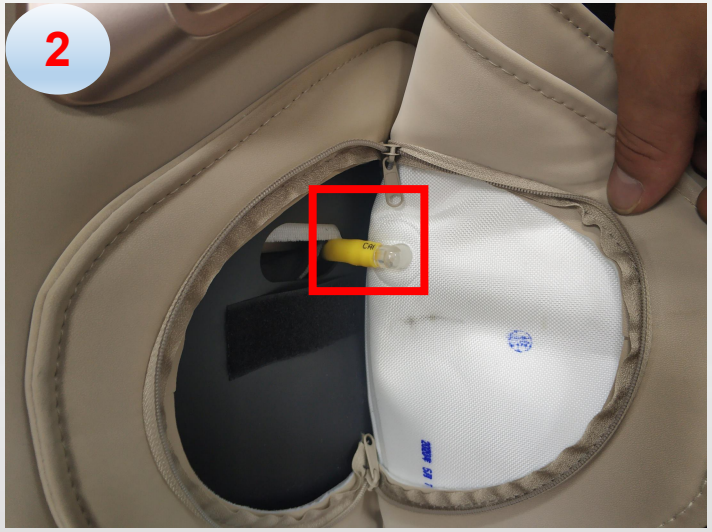
remove screws fixing **Telescopic motor assembly**

Telescopic motor assembly

10、disassembly of shoulder:



a. unzip the zipper



b. disconnected the air hose

c. remove 2 screws

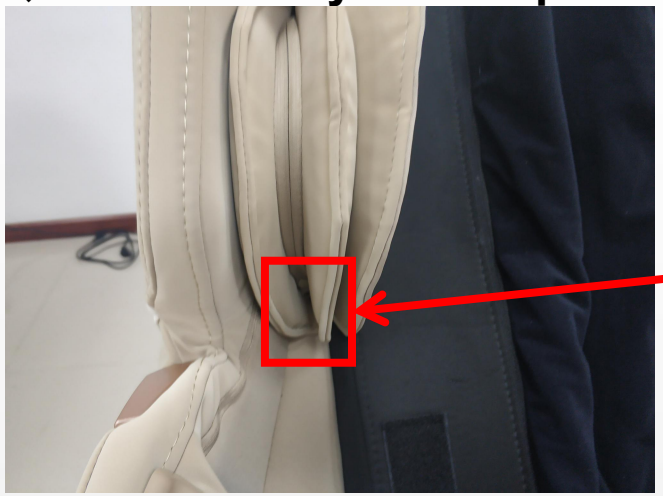
d. Tear off the sticky buckle

e. remove 2 screws

f. remove the shoulder

g. then we can remove the cover

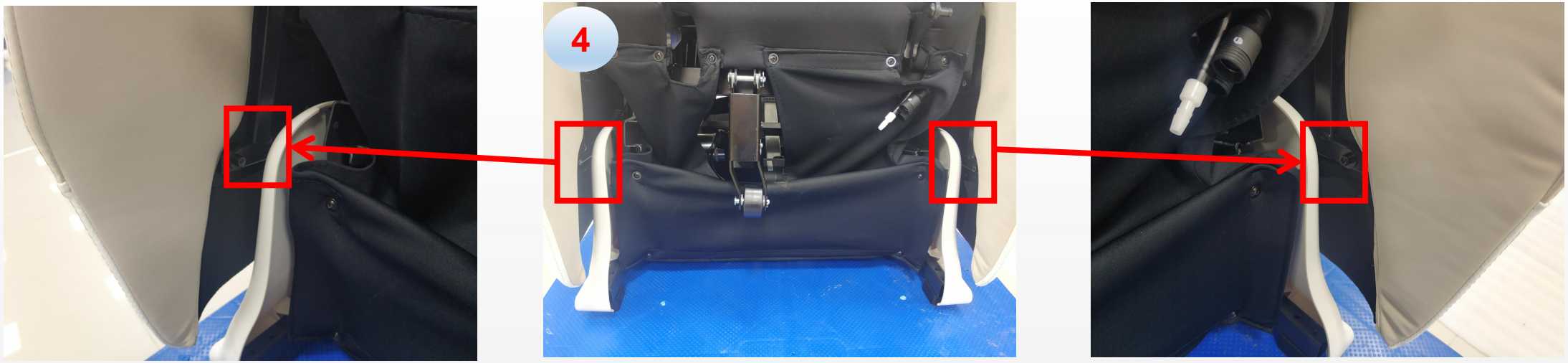
11、disassembly of side panel



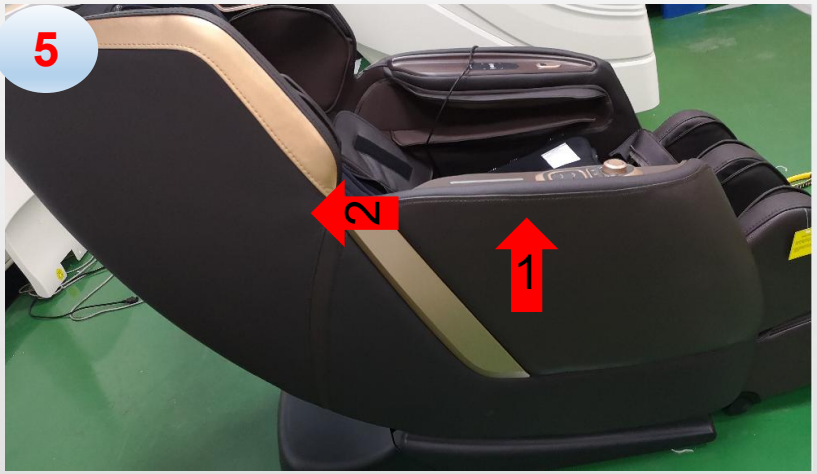
a. unzip the zipper

b. Tear off the sticky buckle

c. Tear off the sticky buckle

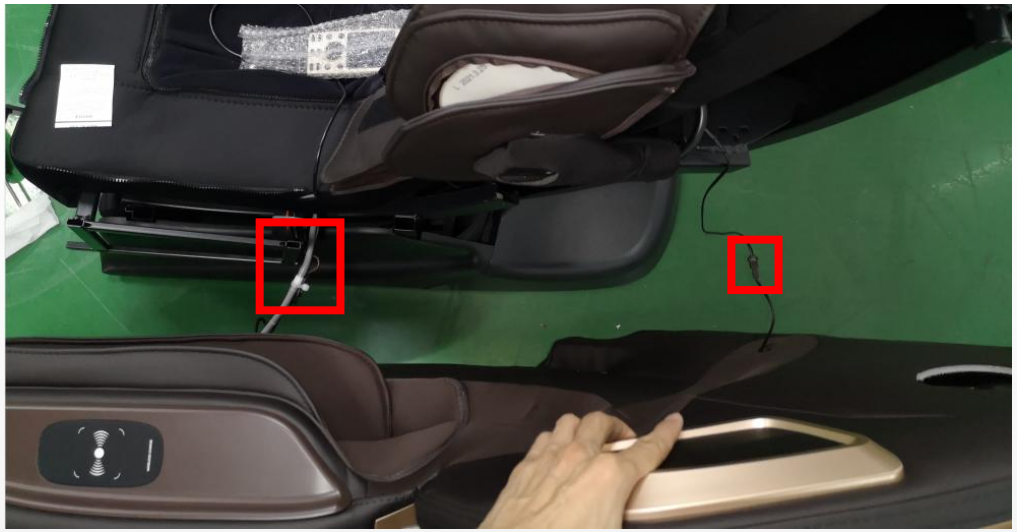


d.Lift the leg and remove the screws fixing the side panel



e.Lift the front of the side panel in the direction of arrow 1, and then lift out the side panel in the direction of arrow 2

6

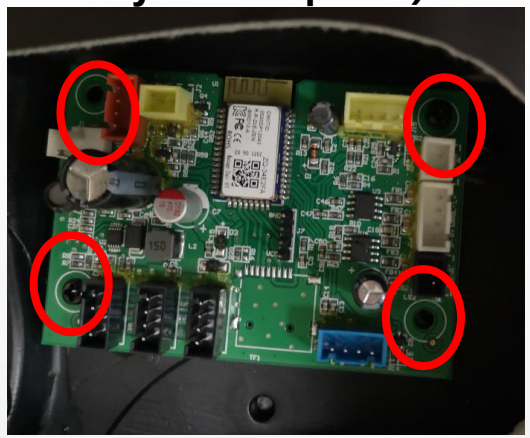


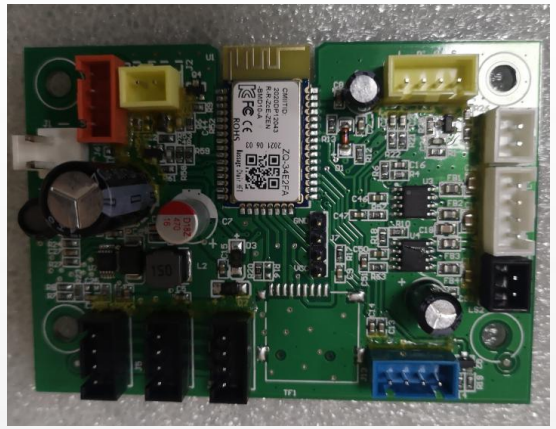
f. disconnected the terminals and air hose, remove left side panel

g. disconnected the terminals and air hose, remove right side panel

12、disassembly of inner right side panel

a. remove righr side panel (refer to 11、**disassembly of side panel)**



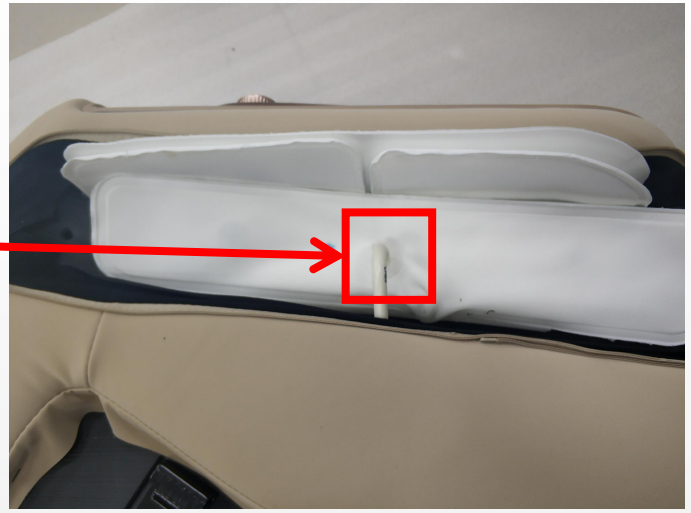


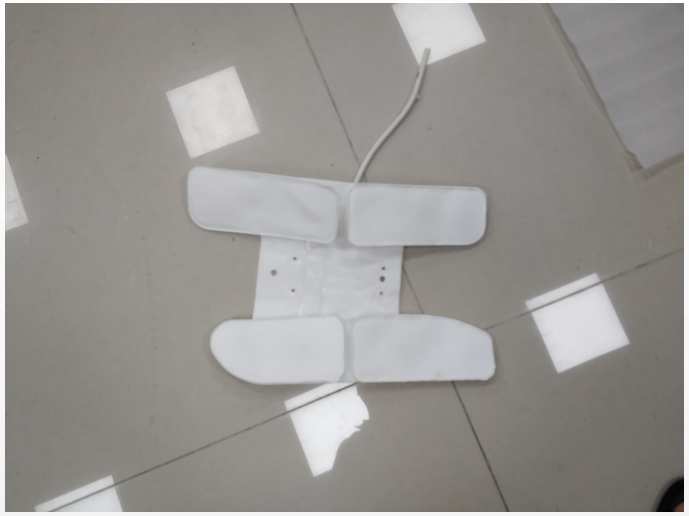
b. remove the screws fixing Bluetooth PCB

remove Bluetooth PCB

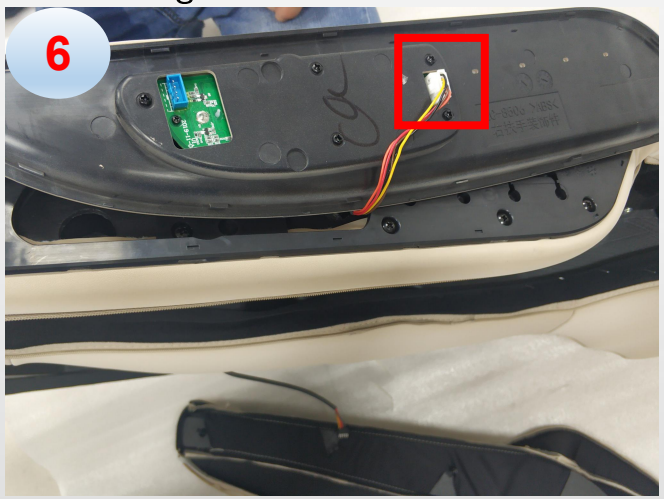
c. unzip the zipper

d. remove the cover



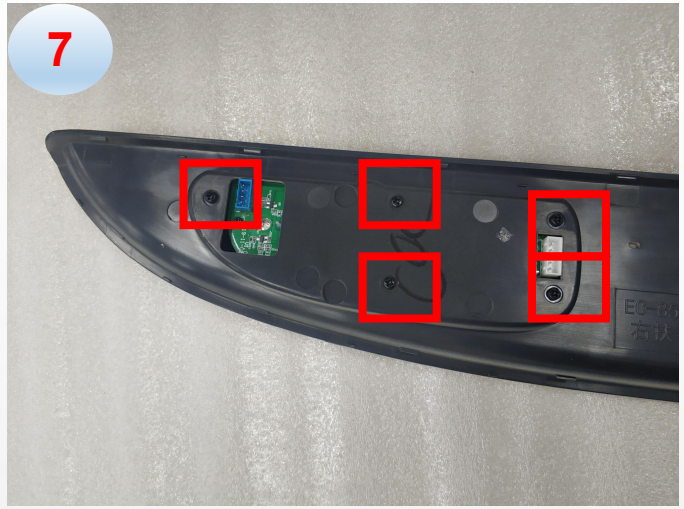


e. remove the screws, disconnected air hose, remove air bag



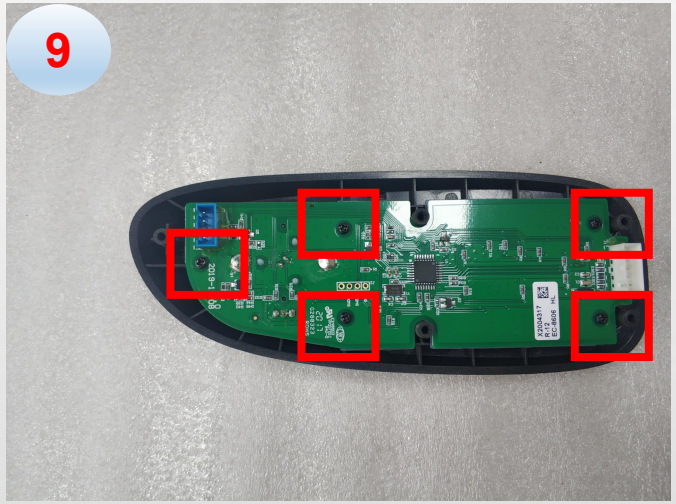
f. Pry off the right armrest cover

g. disconnected the terminals

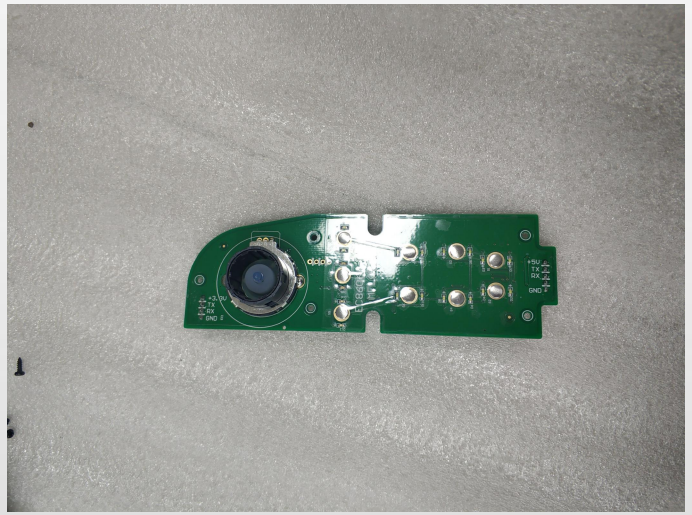


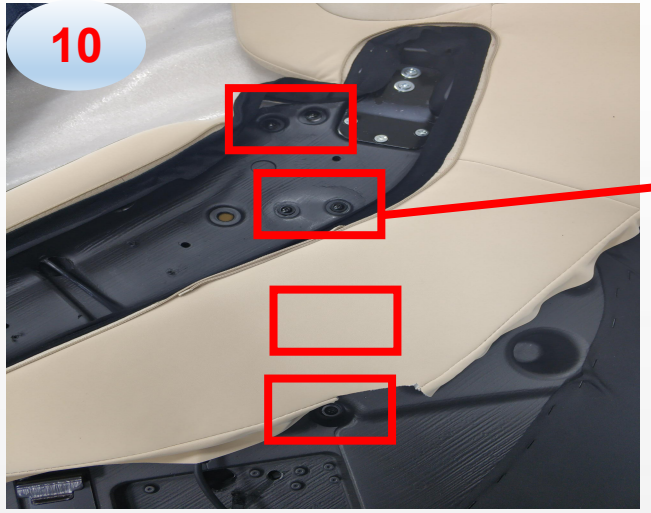
h. remove the screws and remove the side panel control

i. force the knob with the hands



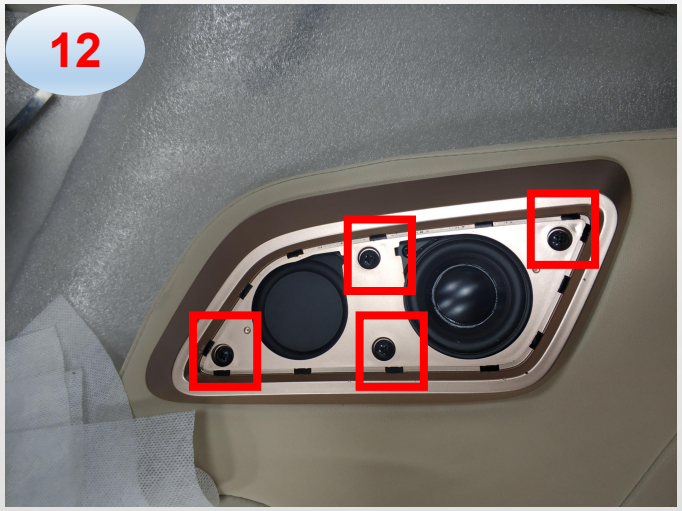
j. remove the screws and remove the PCBA





k. remove the screws and remove the trim

l. Tear off the horn net cover



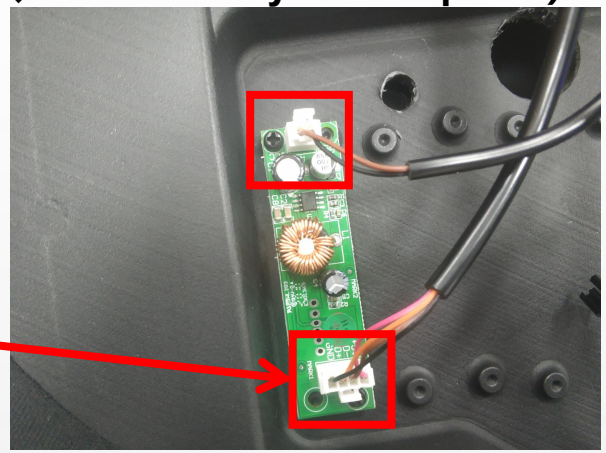
m. remove the screws

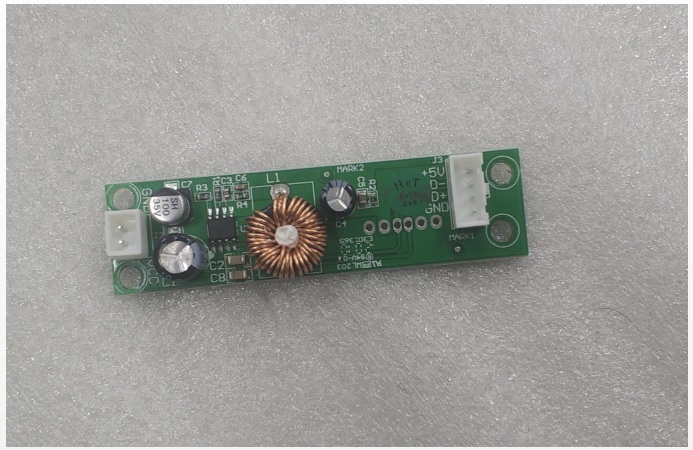
n. remove the screws

horn

13、disassembly of inner left side panel

a. remove left side panel (refer to 11、**disassembly of side panel)**

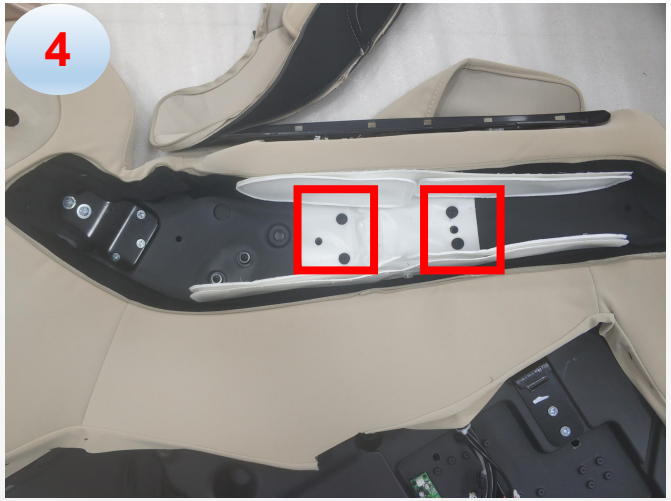




b. disconnected the terminal and remove the screws, remove the USB charging PCB

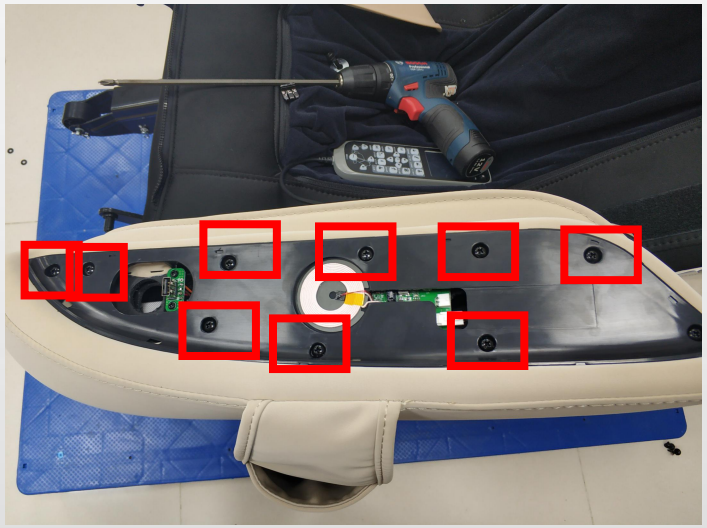
c. unzip the zipper

d. remove the cover

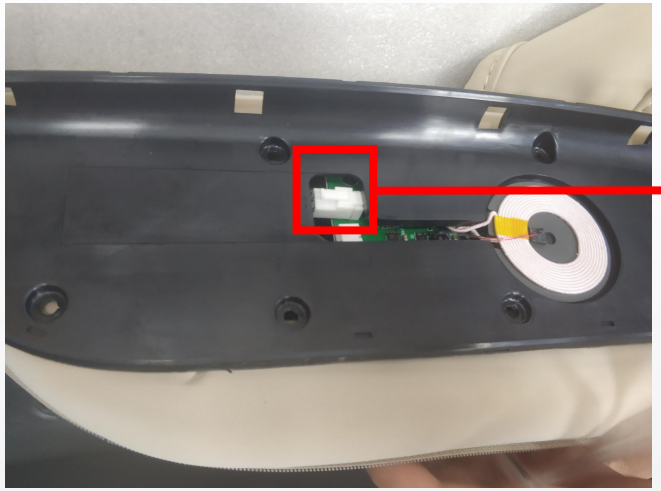


e.remove the screws, disconnected air hose, remove air bag

f.Pry off the right armrest cover

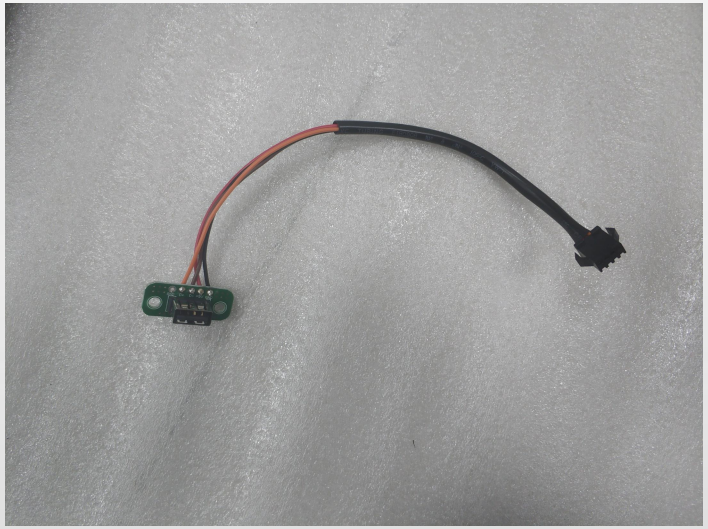


g.remove the screws

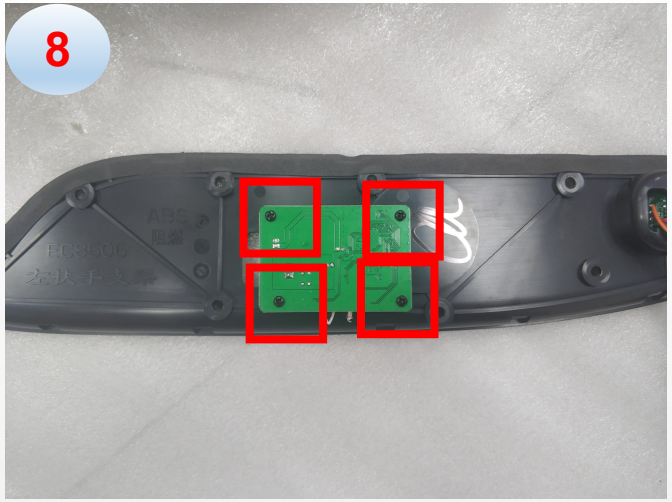


h. disconnected the terminal

i. remove the screws

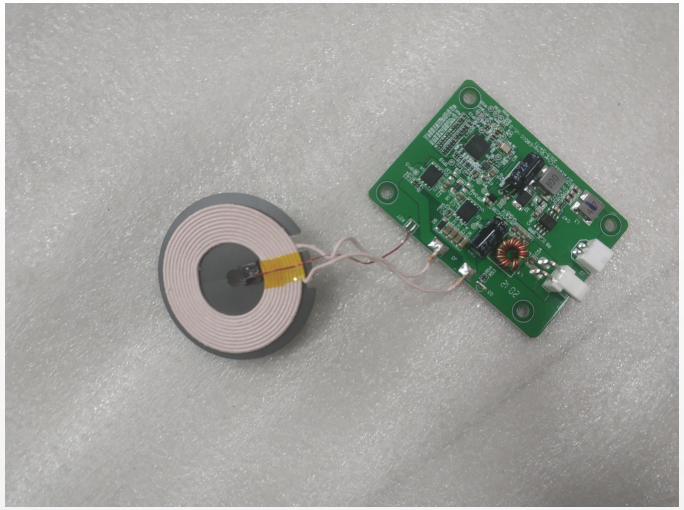


i. remove the USB base PCB



j.remove 4 screws

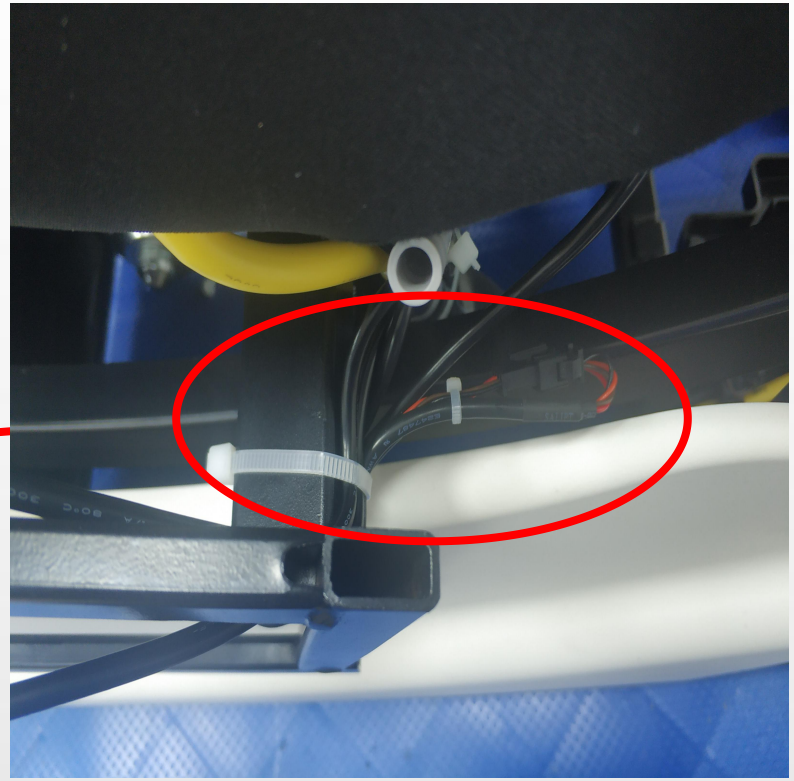
k.Tear off the magnetic ring



k.remove the Wireless charging unit

14、disassembly of remote control

a. remove left side panel (refer to 11、**disassembly of side panel)**

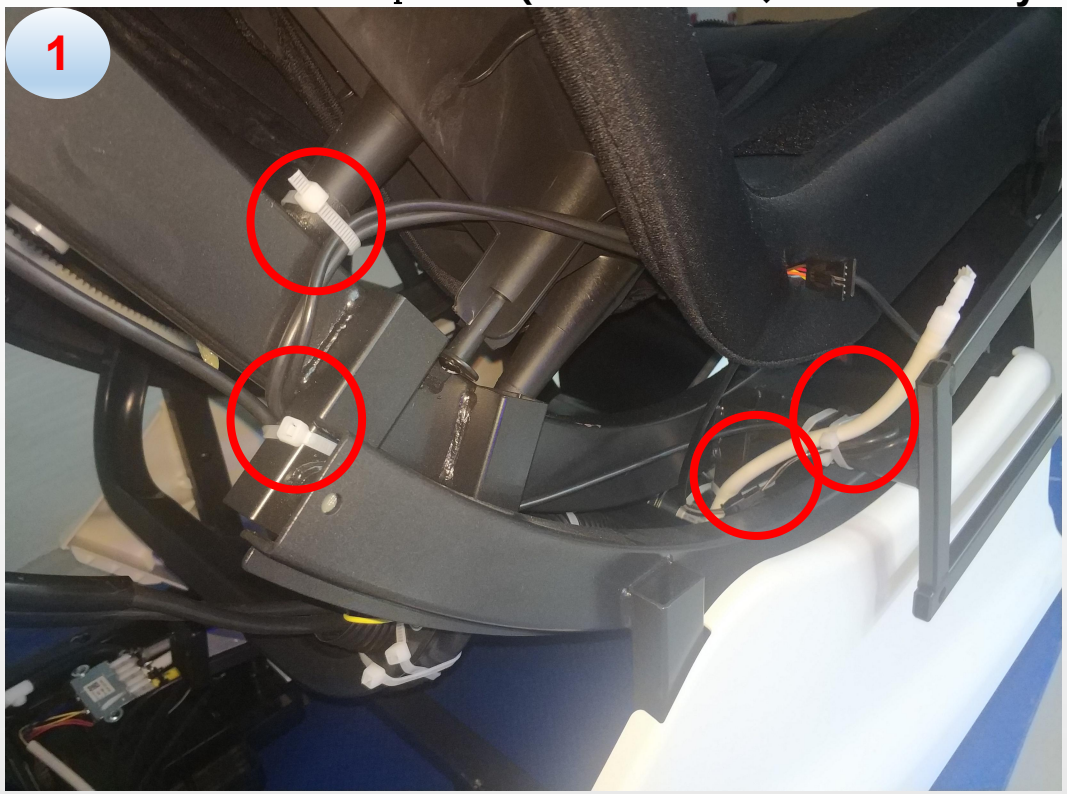


b. cut the cable tie and disconnected the terminal

c. remote control

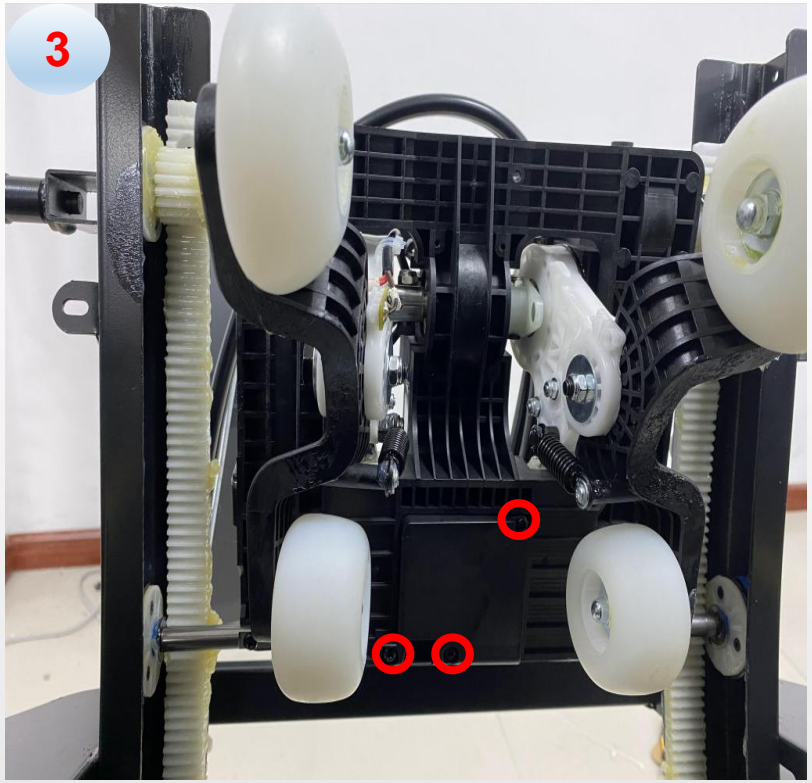
15、disassembly of backrest cable

a. remove left side panel (refer to 11、**disassembly of side panel)**

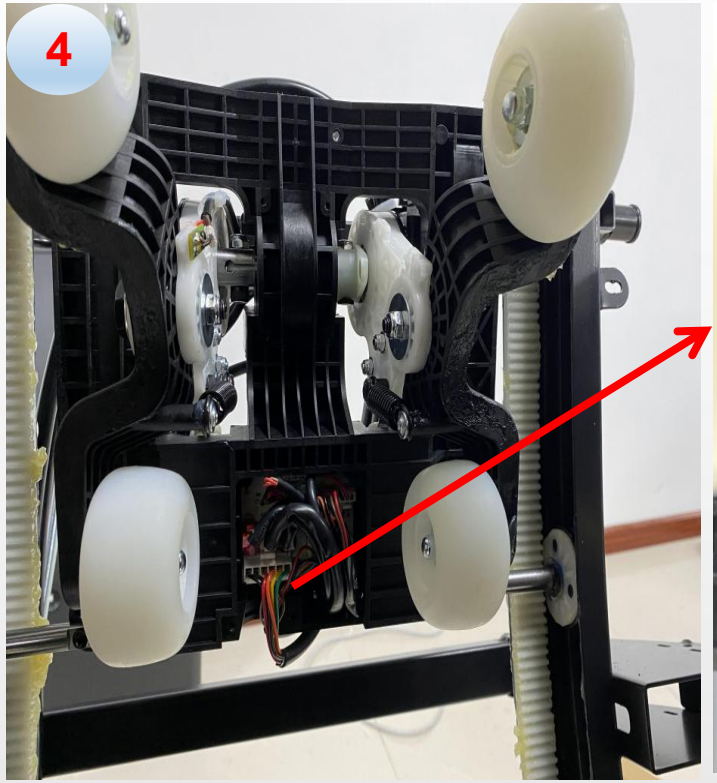


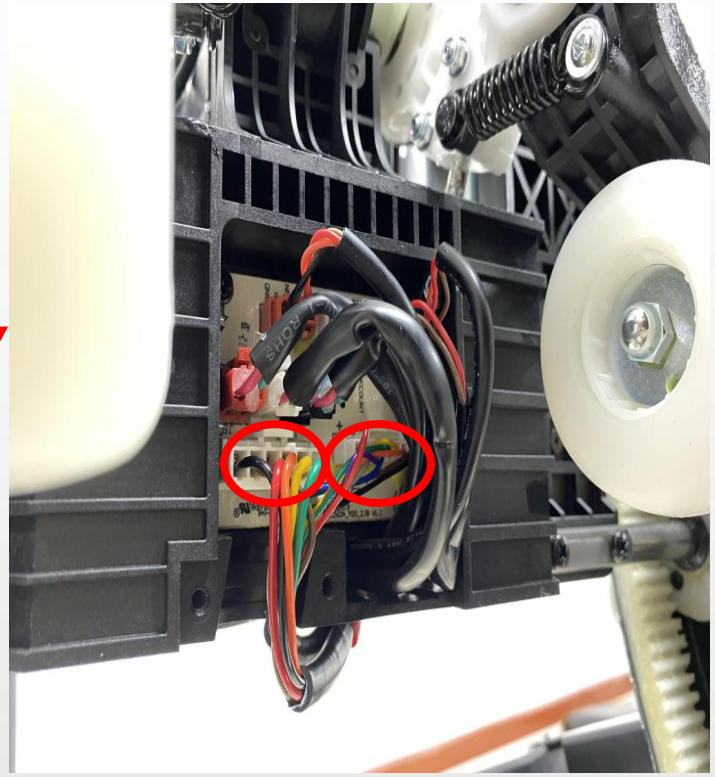
b. cut the cable tie

c. unzip the zipper



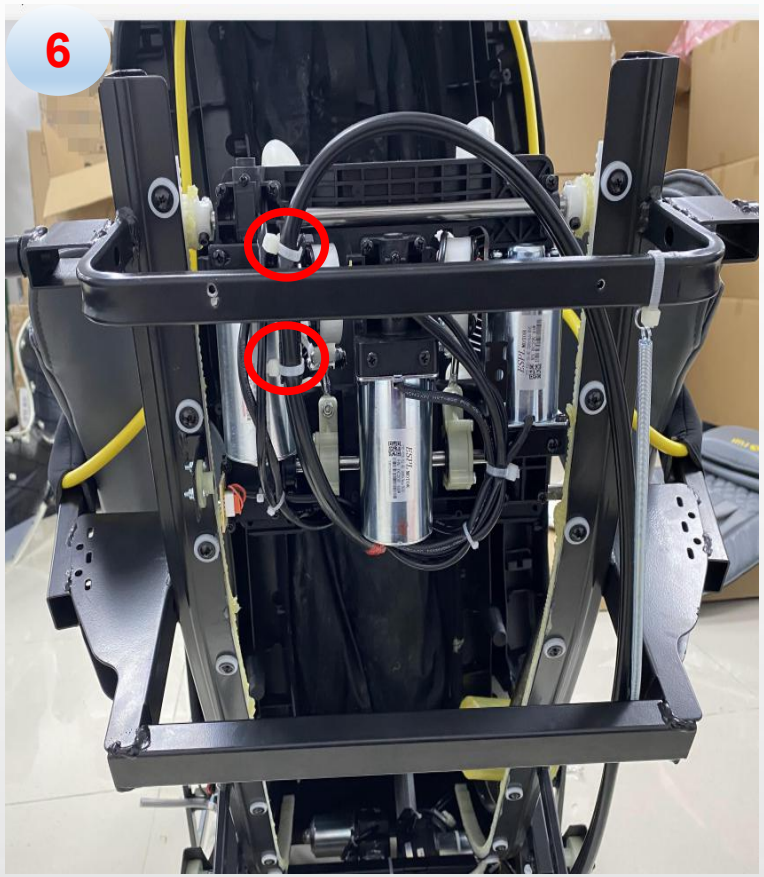
d. remove 3 screws and remove the cover





e. disconnected the terminal

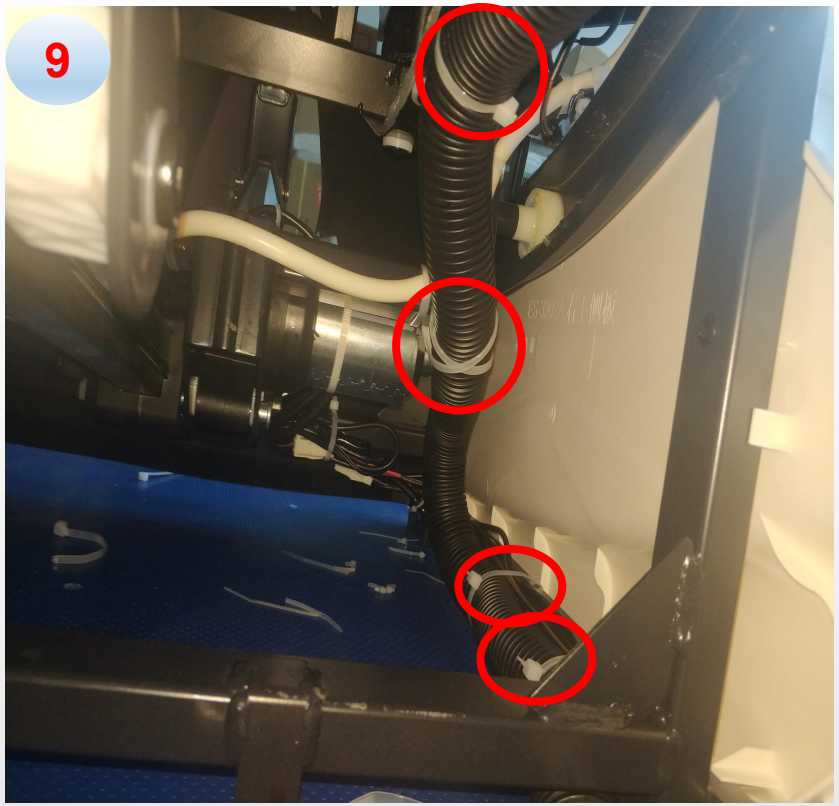
f.remove rear cover



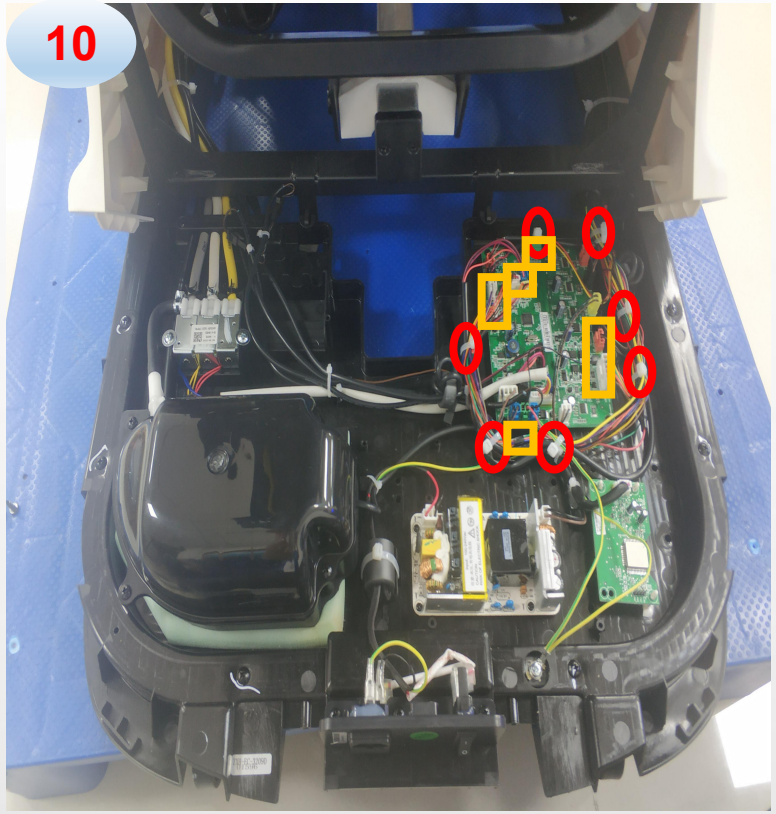
g.cut the cable tie

h.cut the cable tie and remove the screw fixing ground wire

i. remove 2 screws and remove the cover

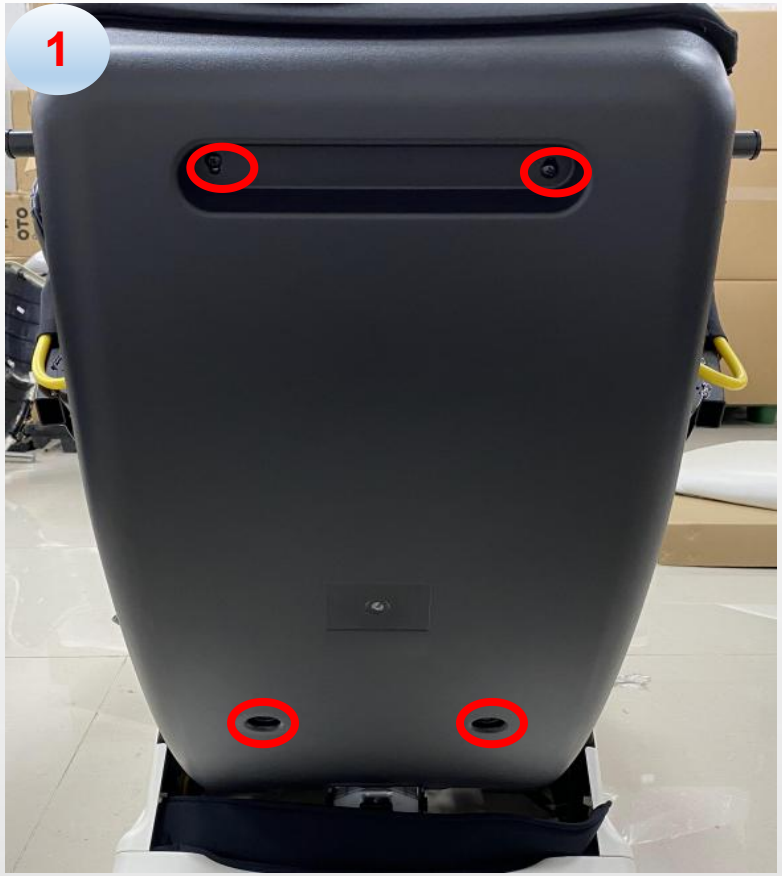


j. cut the cable tie

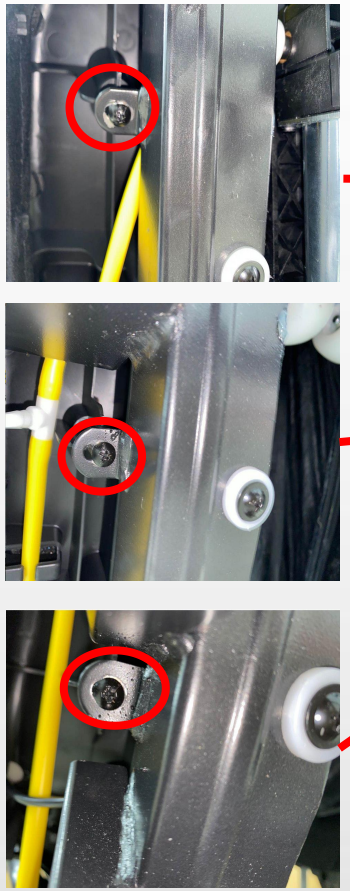


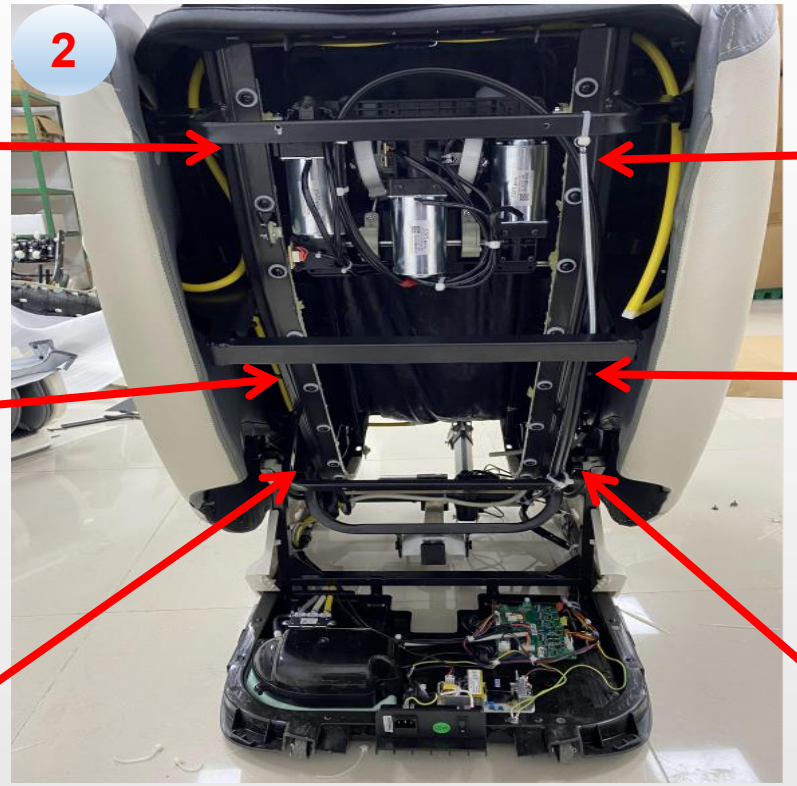
k. disconnected the terminals

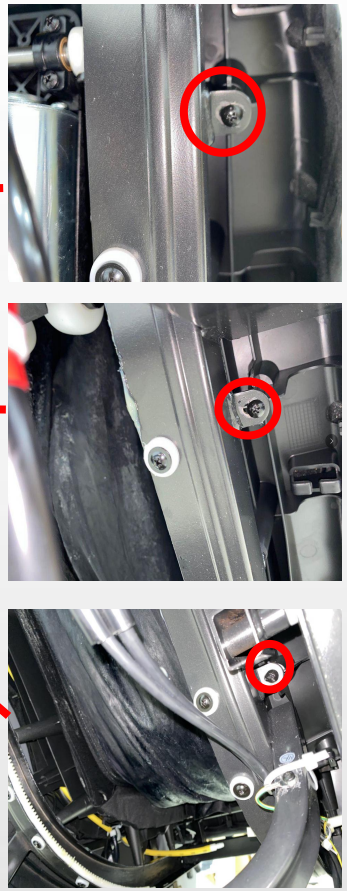
16、disassembly of front backrest cover



a. remove rear cover





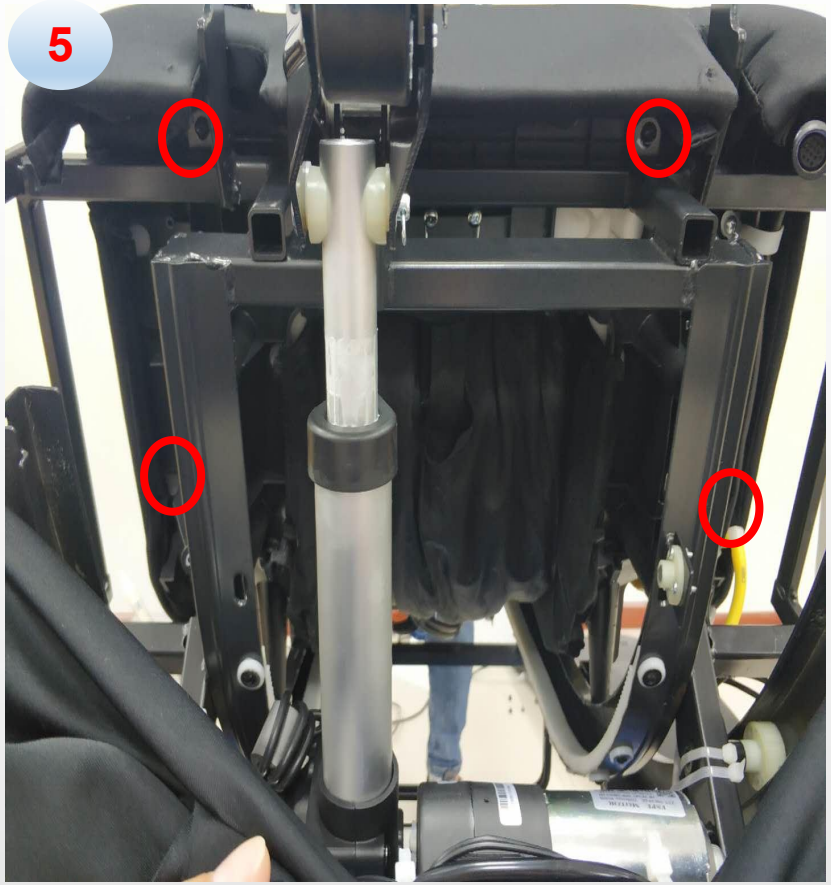


b. remove 6 screw fixing the cover

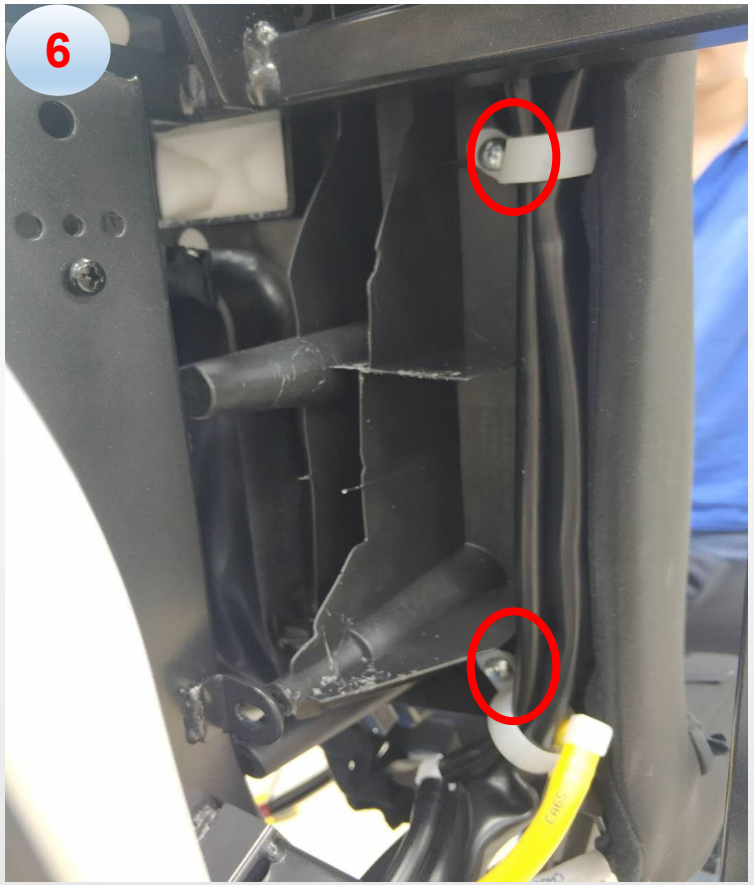
c. remove side panels (refer to 11、**disassembly of side panel)**

d. Raise the massage chair to this state

e. remove 6 screws

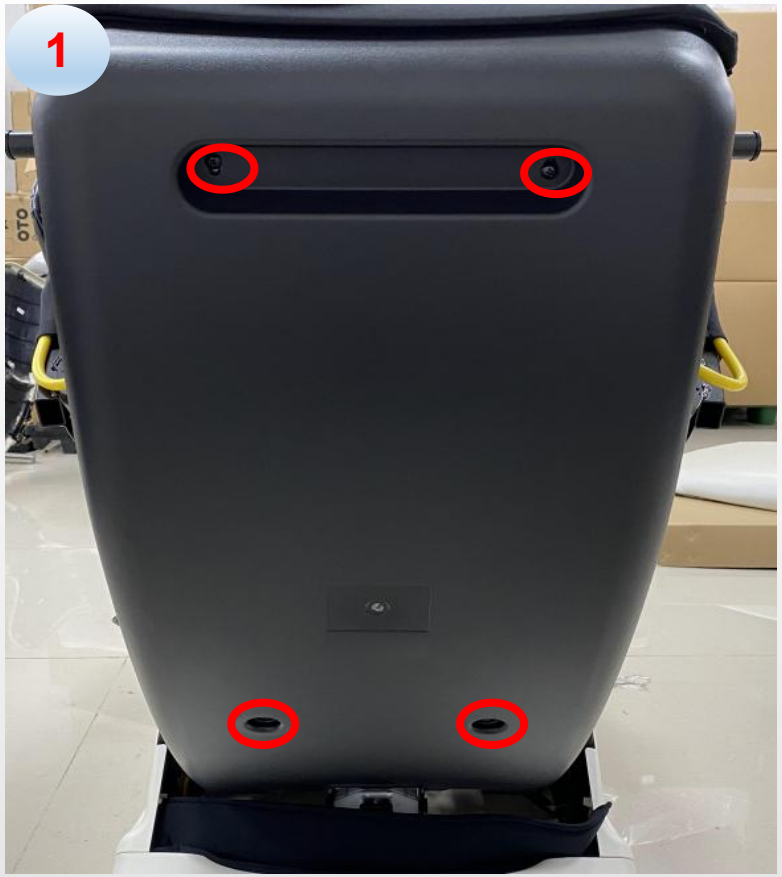


f. remove 4 screws fixing the cover under the seat

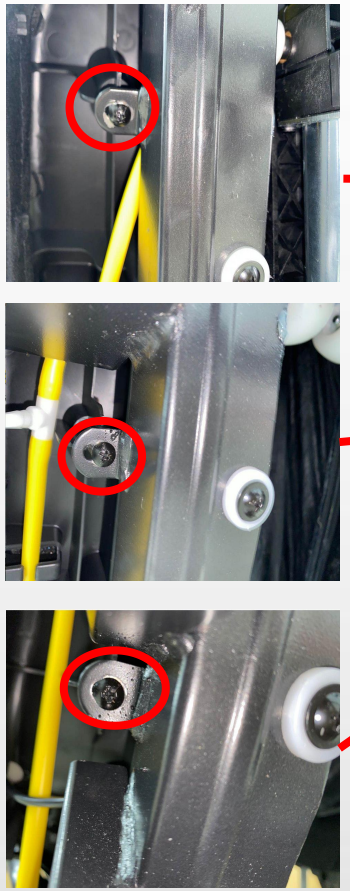


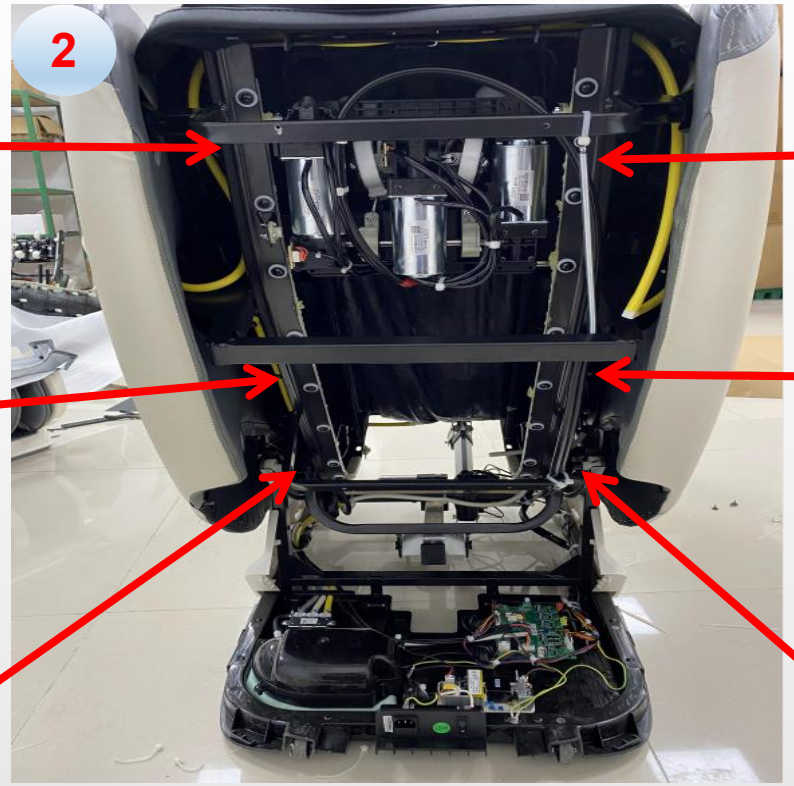
g. disconnected the air hose and terminals, then we can remove the front backrest cover

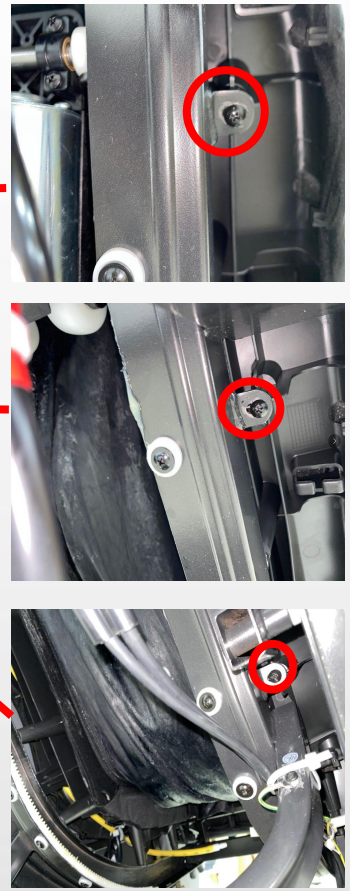
16、disassembly of mechanism



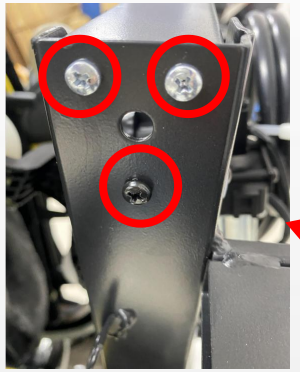
a. remove the cover

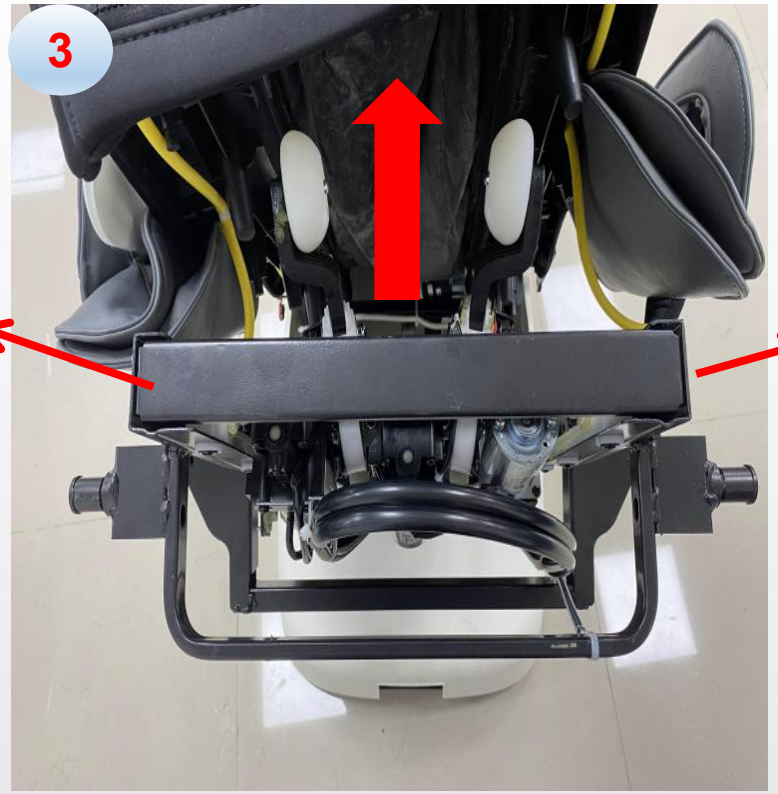




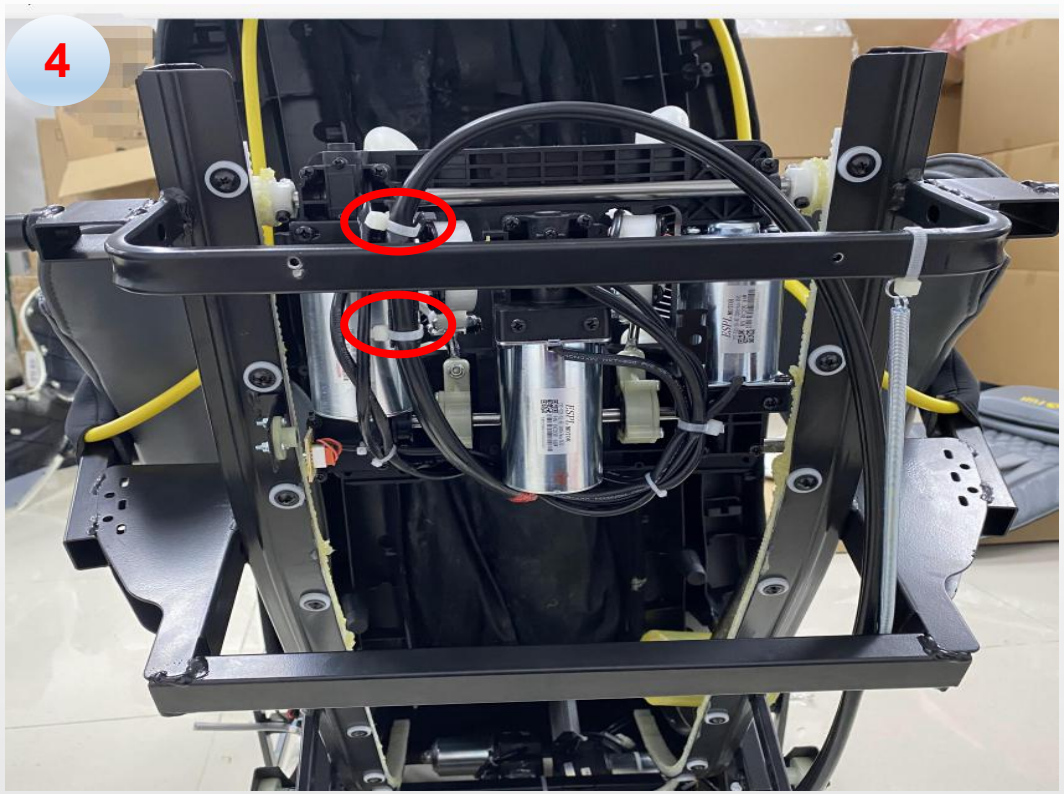


b. remove 6 screws fixing
the front backrest cover

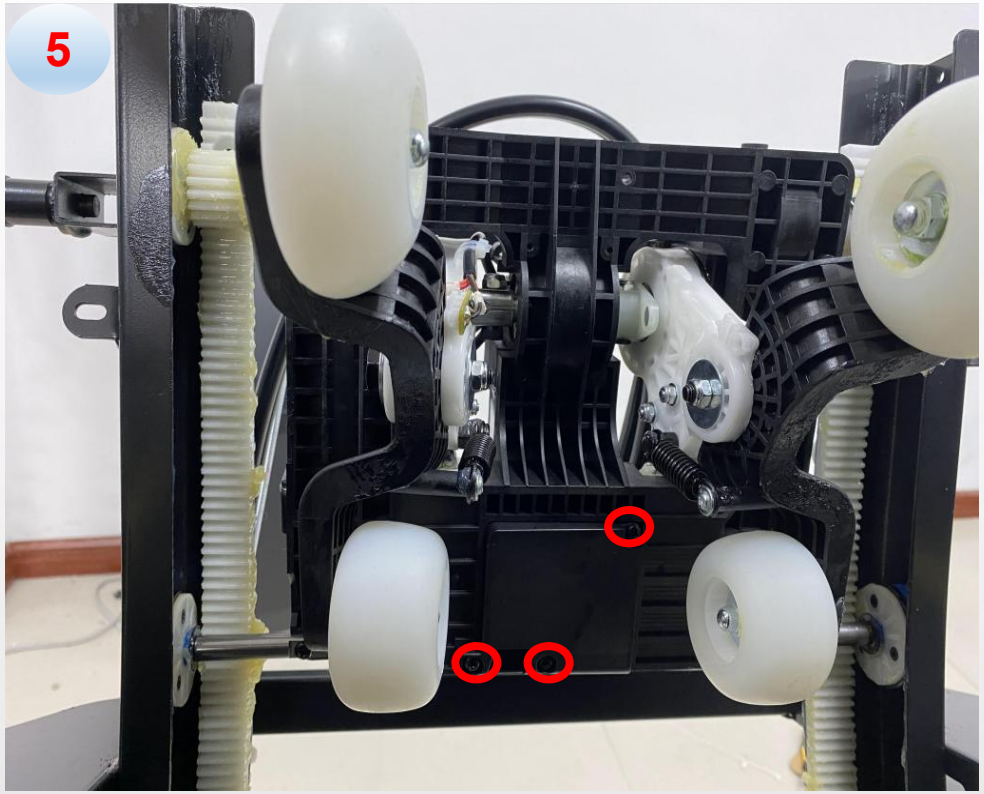




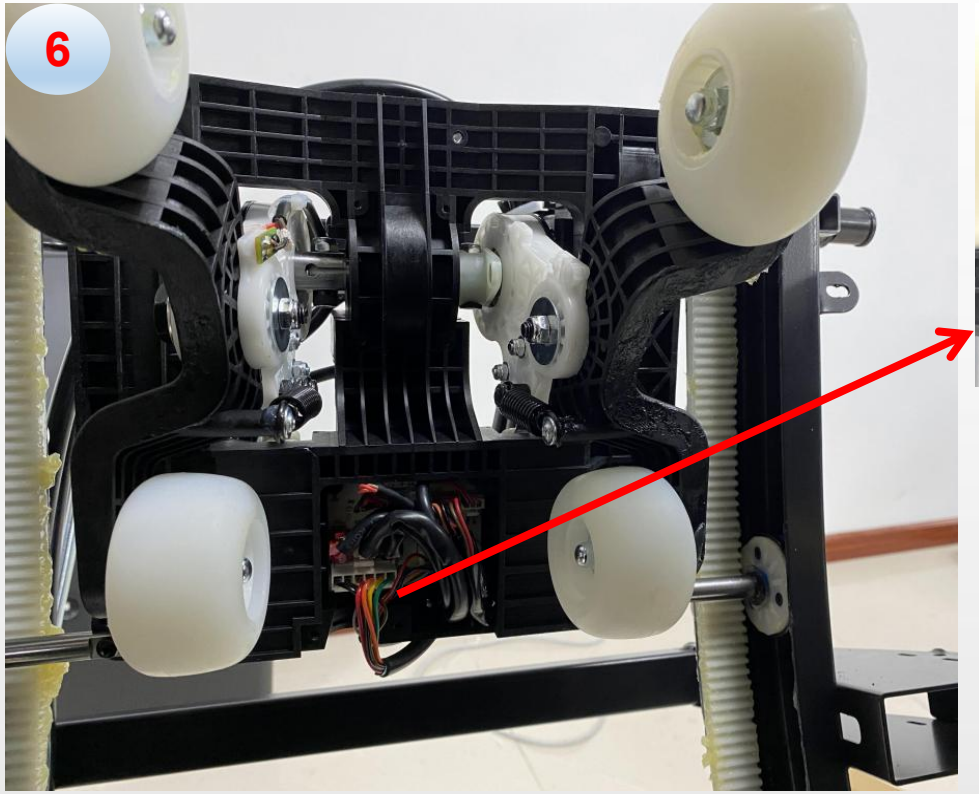
c. Push the front backrest forward to a certain angle to ensure that there is enough space to take out the mechanism. Remove 4 screws and 2 anti-collision screws (6 screws on the left and right) fixing the cross beam

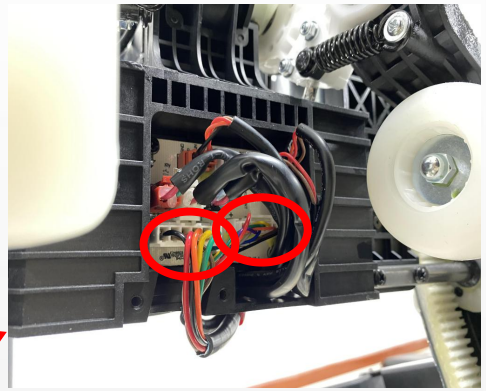


d. cut the cable tie

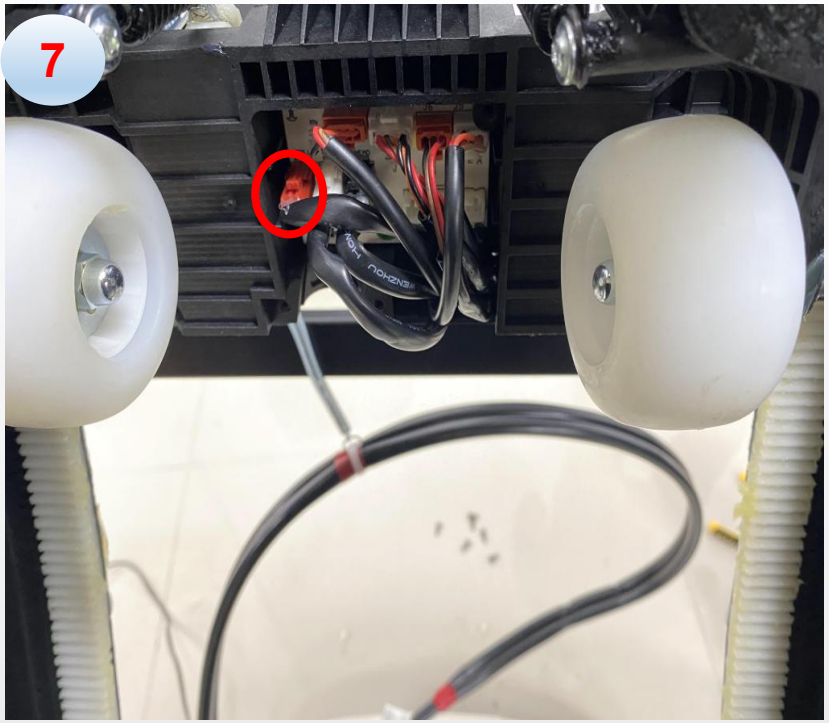


e. remove 3 screws and remove the cover

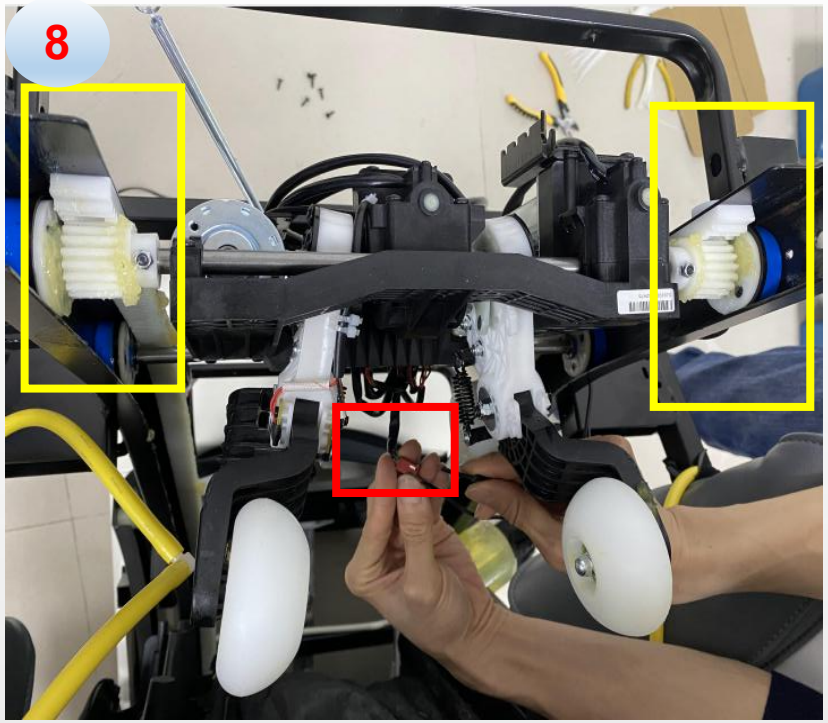




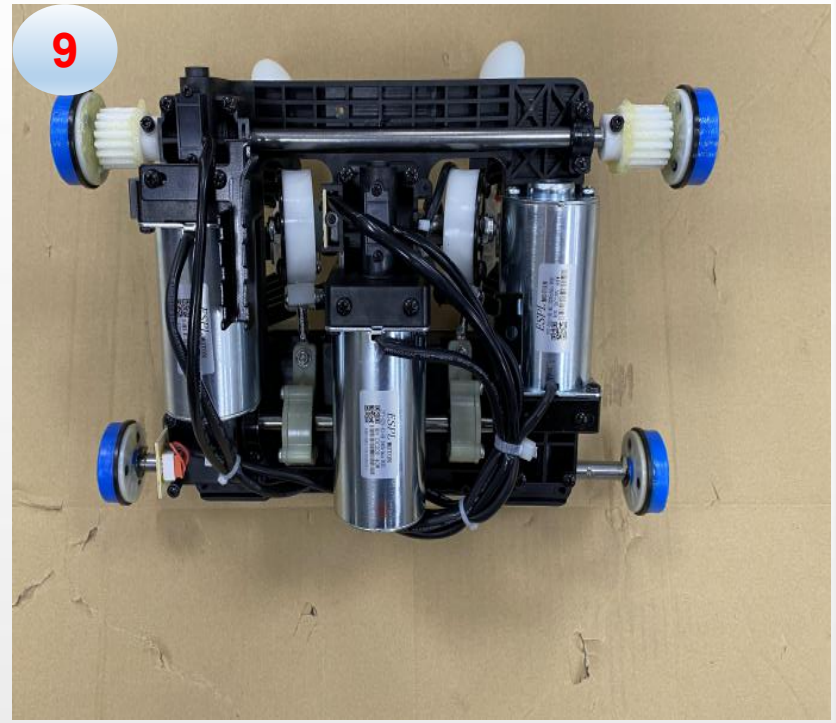
f. disconnected the terminals of backrest cable



g. disconnected the red terminal (rolling motor)



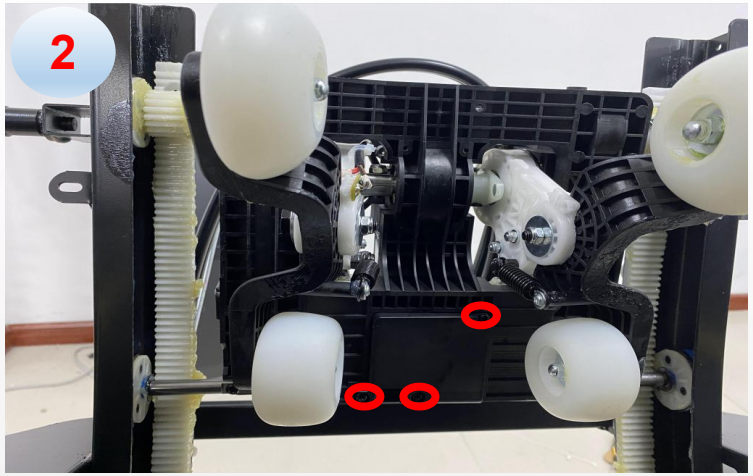
h. Connect the red terminal with 24V power supply to make the mechanism go up, and the mechanism can be removed when the guide wheel on the mechanism goes out of the rack



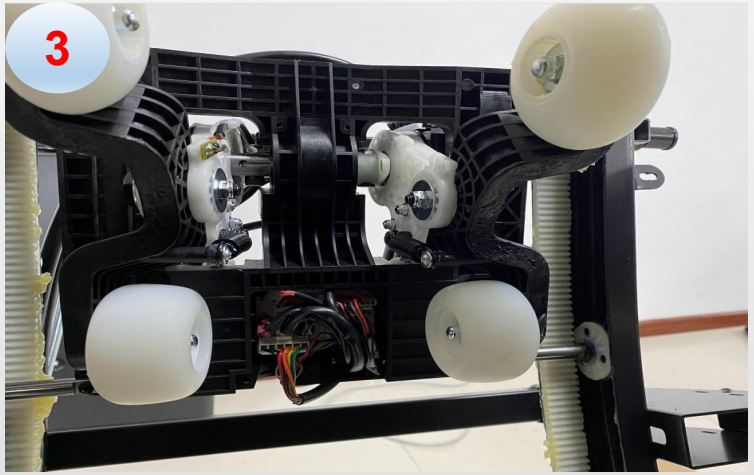
i. mechanism

17、disassembly of mechanism Interposer PCB

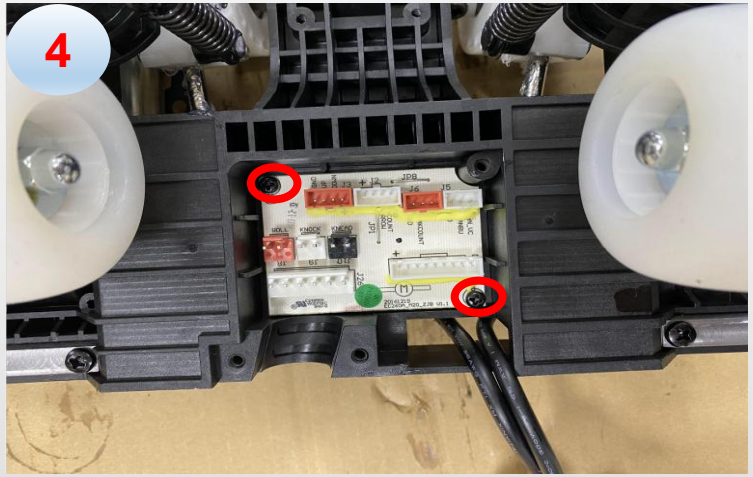
a. unzip the zipper



b. remove the cover



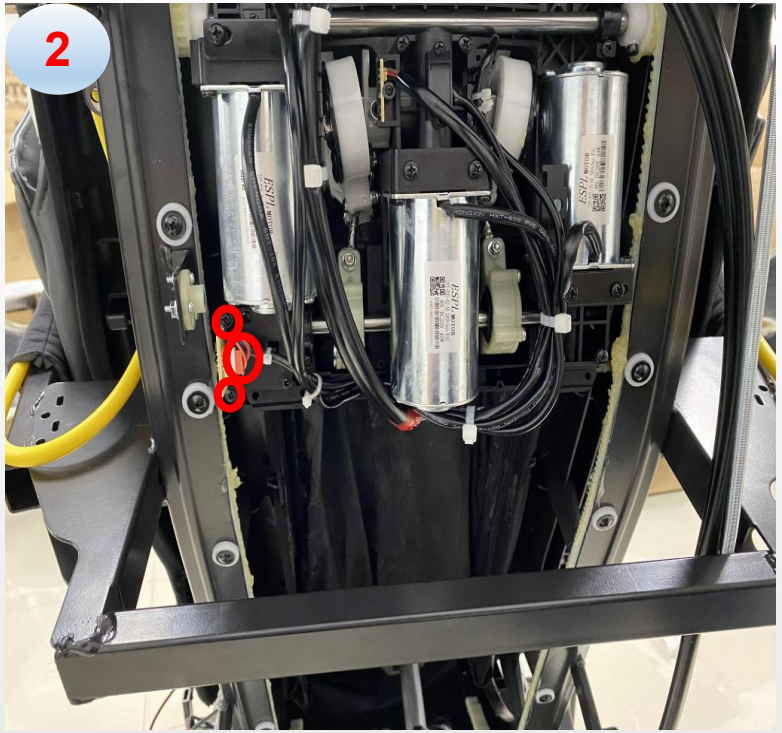
c. disconnected the terminals



d. remove 2 screws and remove the **mechanism Interposer PCB**

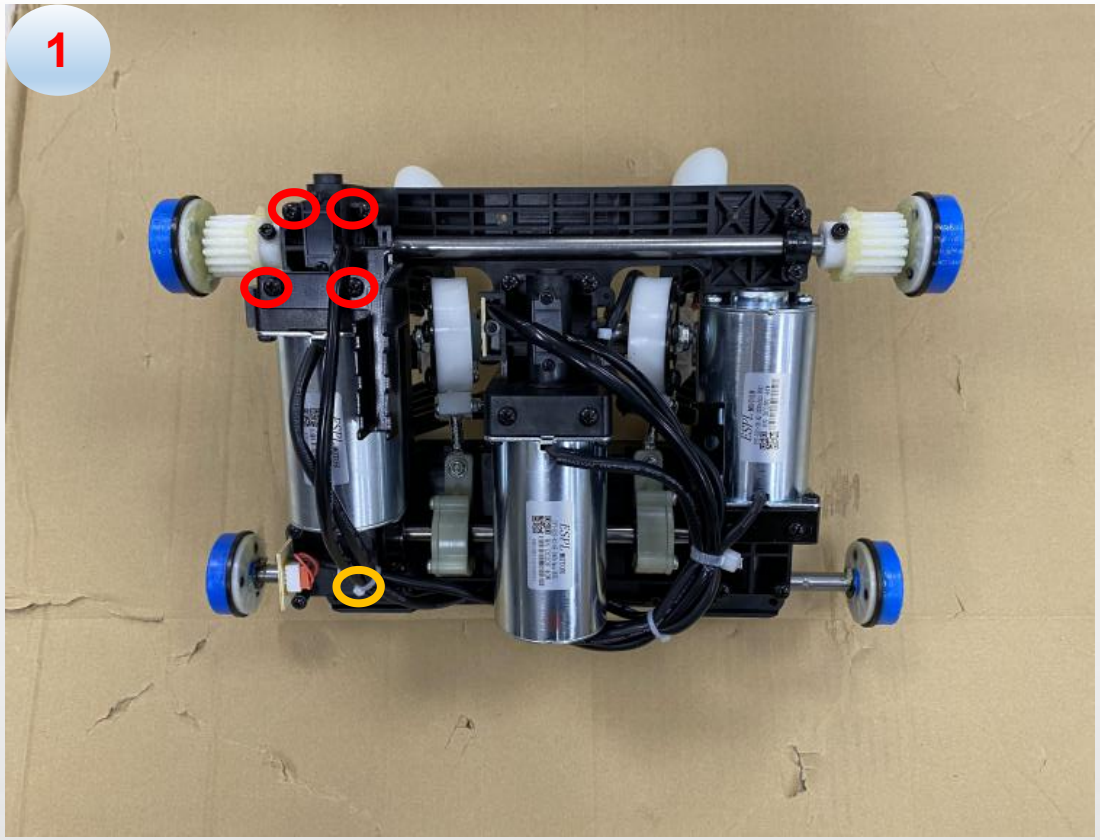
18、disassembly of up&down limit sensor

a. remove rear cover

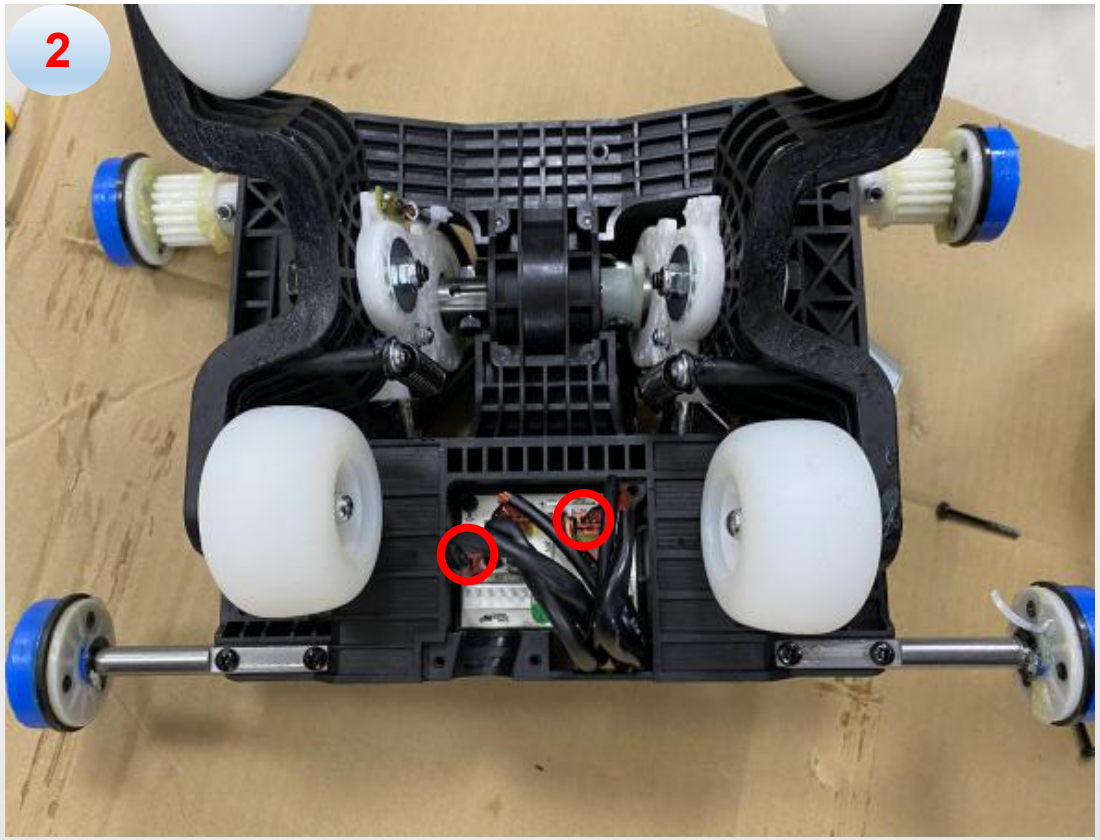


b. remove 2 screws and disconnected the terminal, remove the sensor

19、disassembly of rolling motor

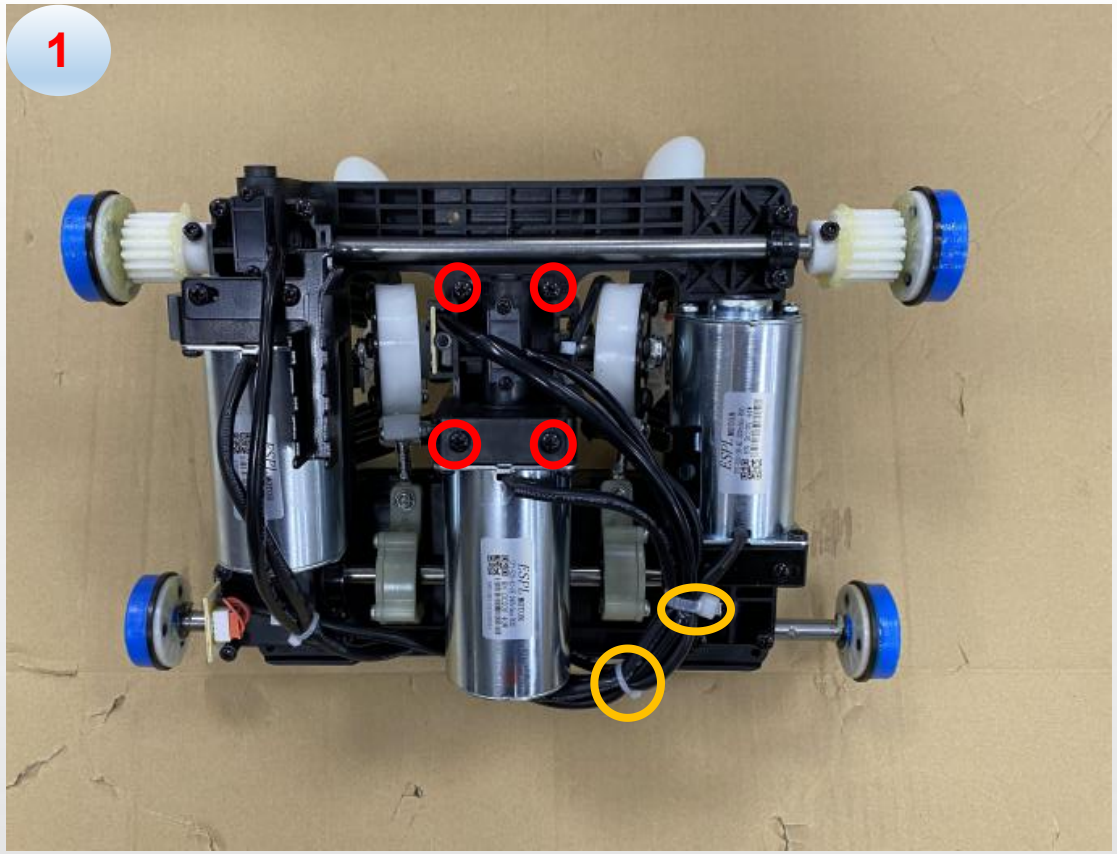


a. remove 4 screws, cut the cable tie

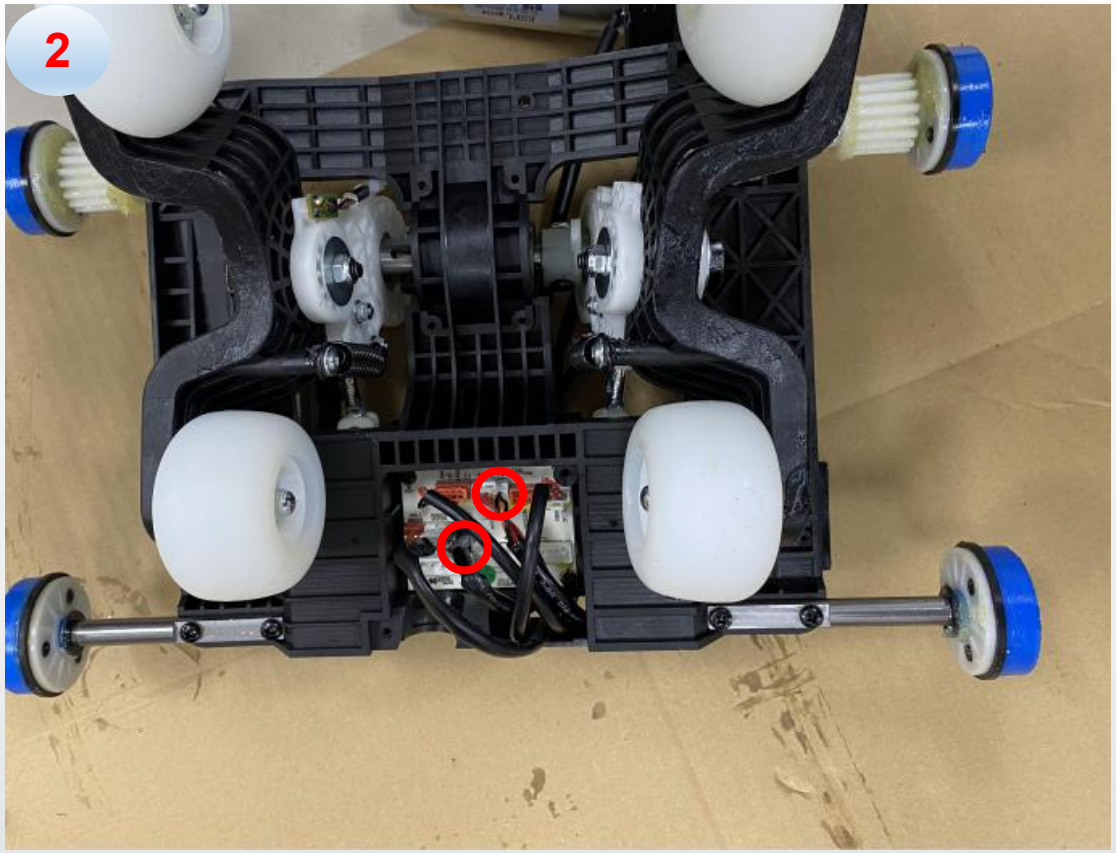


b. disconnected 2 terminals of the motor

20、disassembly of kneading motor

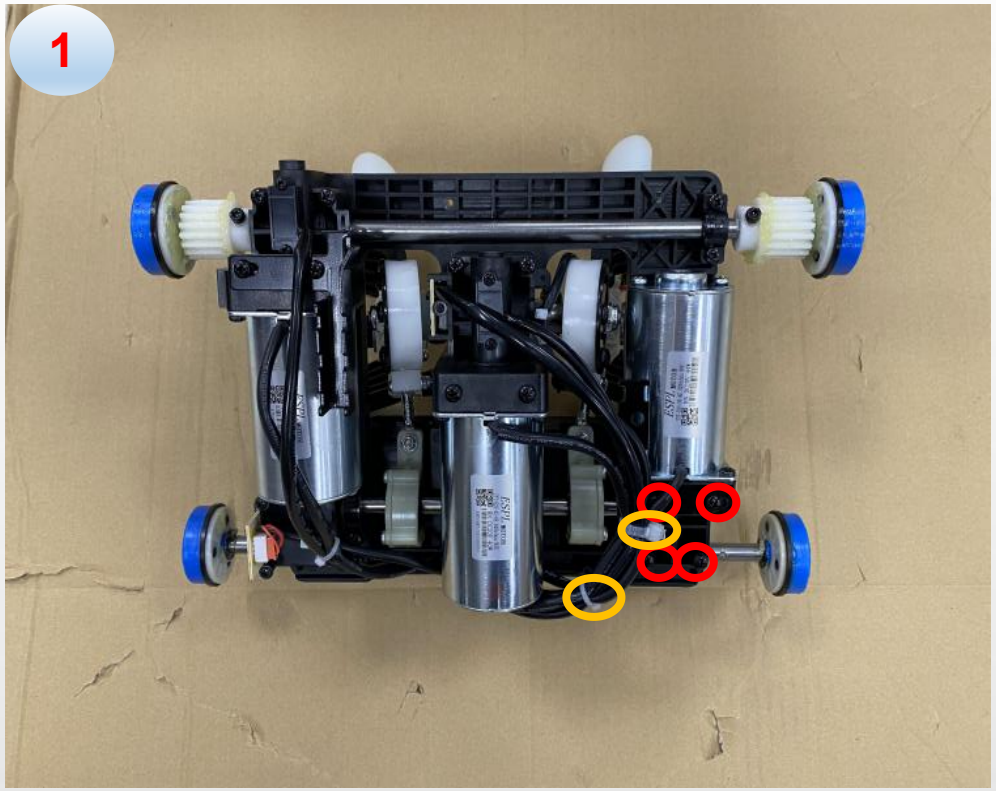


a. remove 4 screws, cut the cable tie

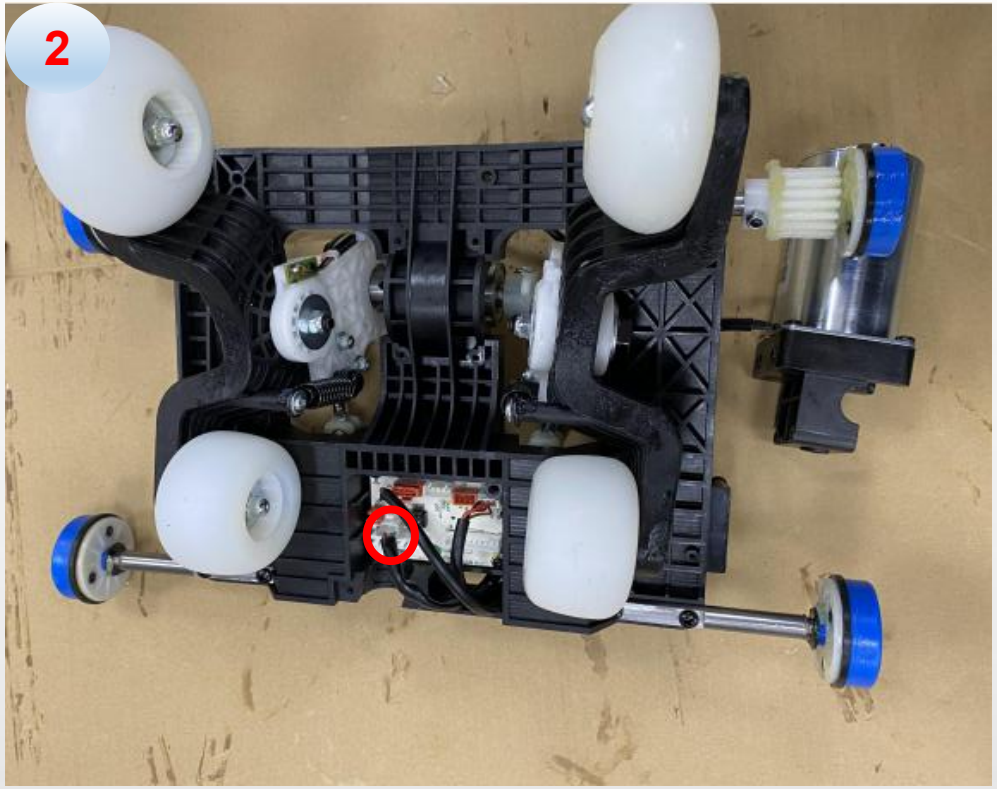


b. disconnected 2 terminals of the motor

21、disassembly of tapping motor



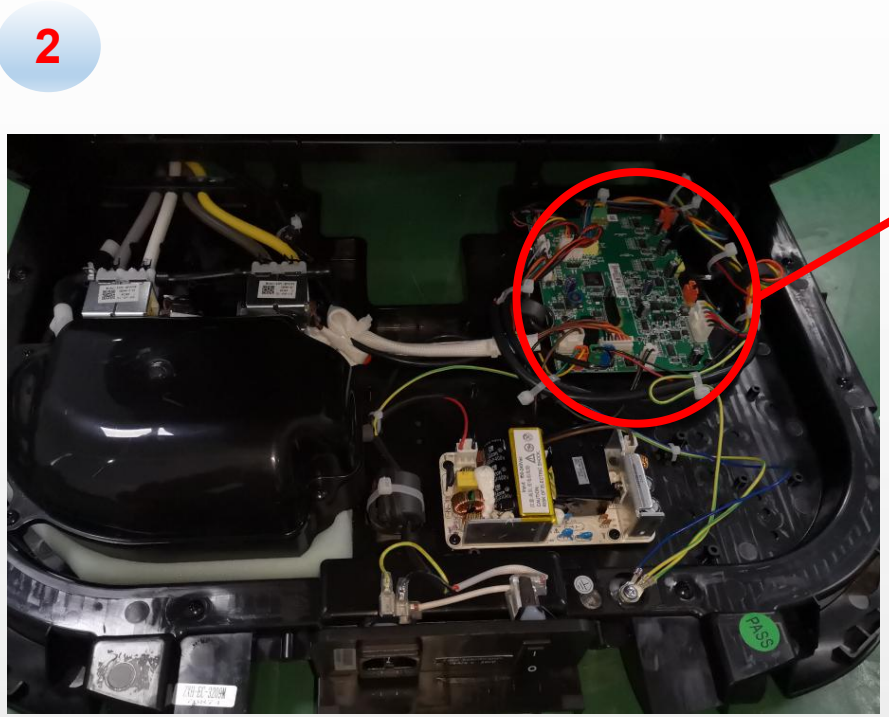
a. remove 4 screws, cut the cable tie

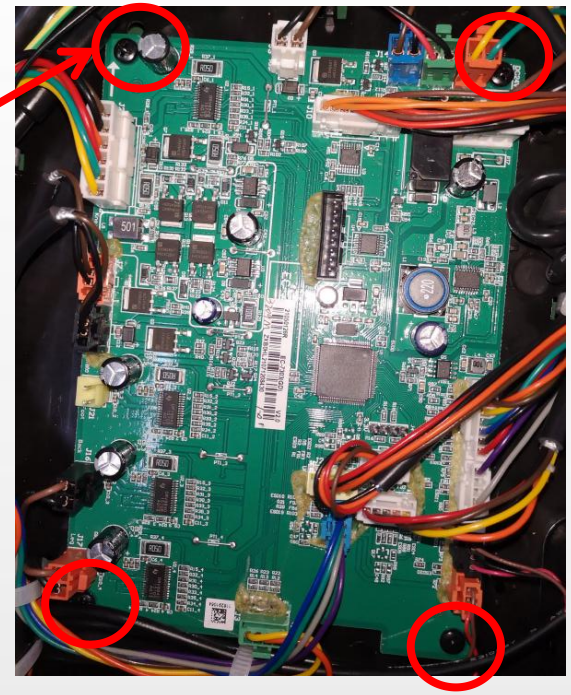


b. disconnected 2 terminals of the motor

22、disassembly of main PCB

a. remove 2 screws and remove the cover

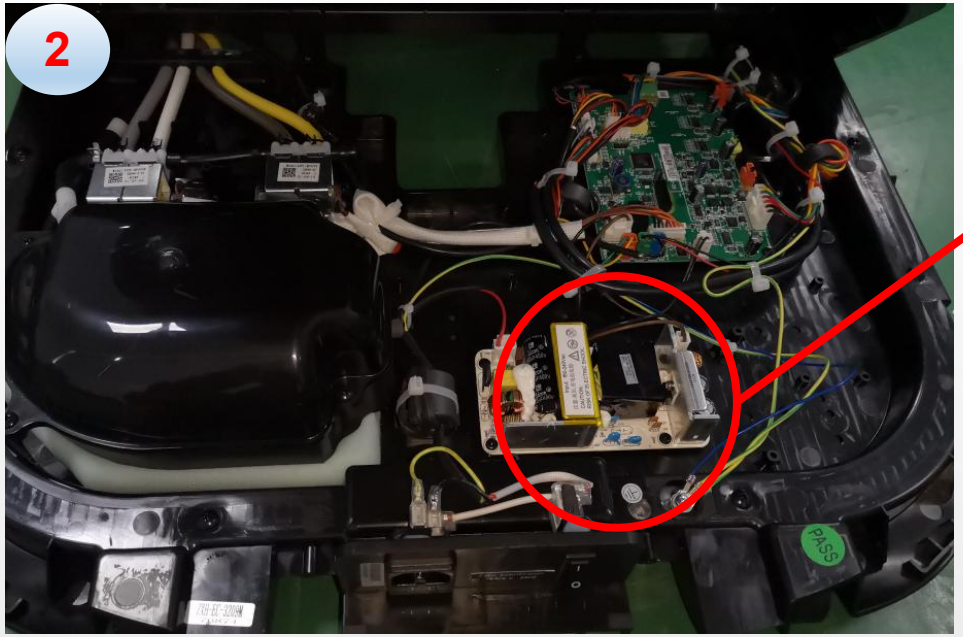




b. disconnected the terminals and remove 4 screws, remove main PCB

23、disassembly of power PCB

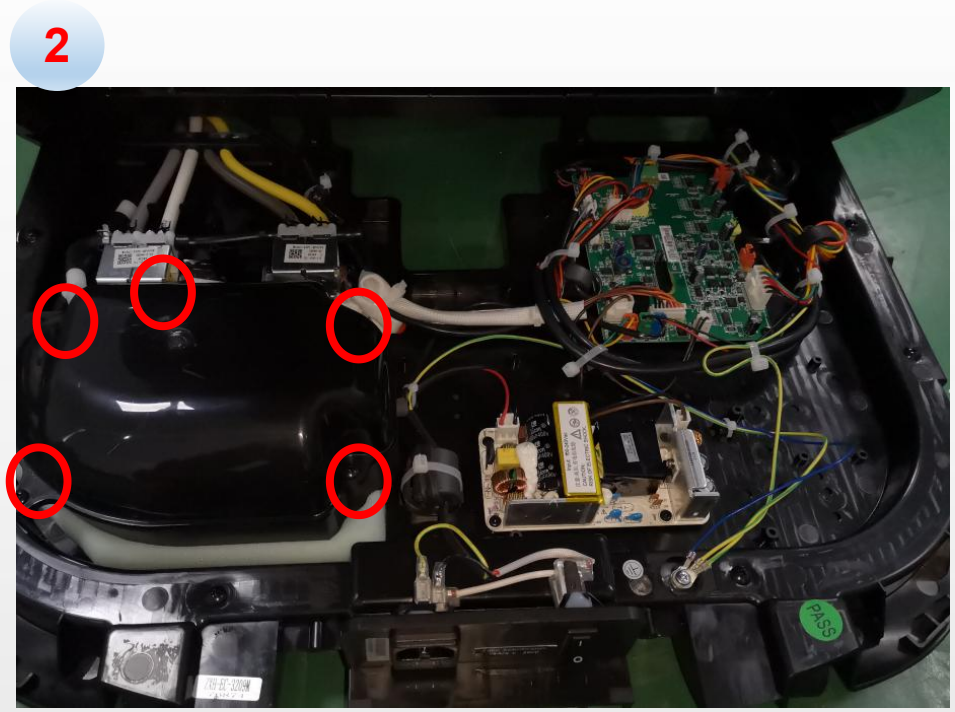
a. remove 2 screws and remove the cover



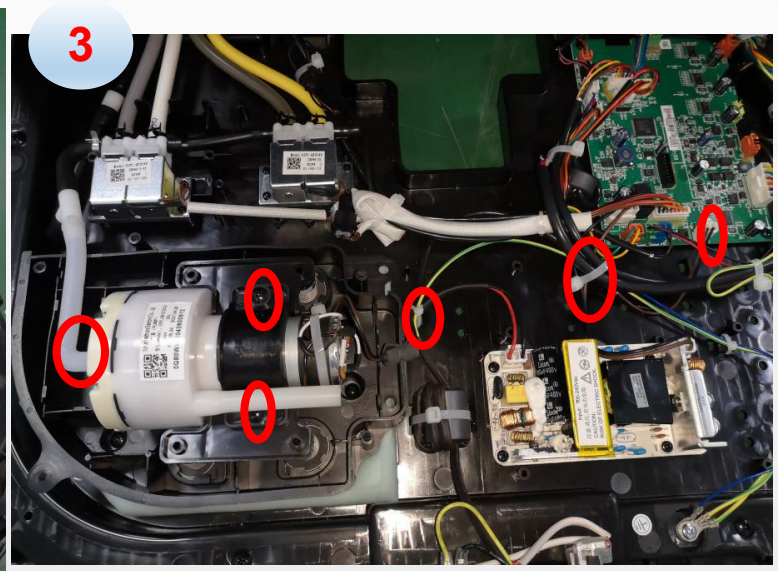
b. disconnected the terminals and remove 4 screws, remove power PCB

24、disassembly of air pump

a. remove the cover



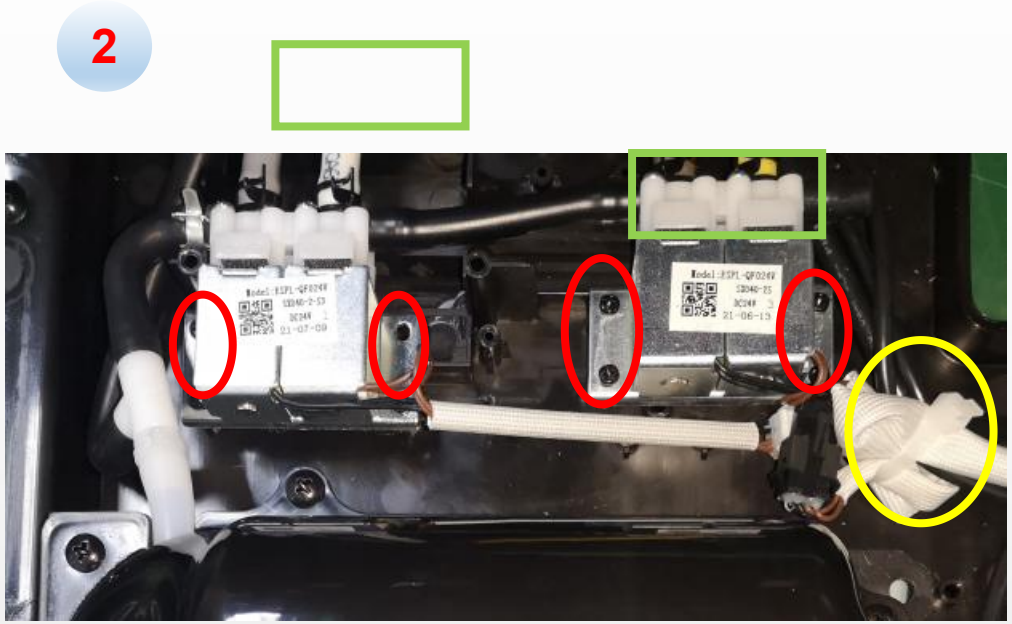
b. remove 5 screws and remove the cover



c. remove 2 screws, disconnected the air hose, cut the cable tie and disconnected the terminal, remove air pump

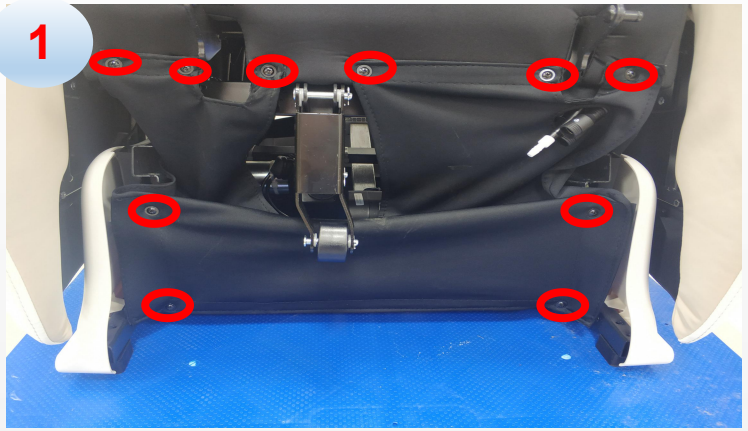
25、disassembly of air valves

a. remove the cover

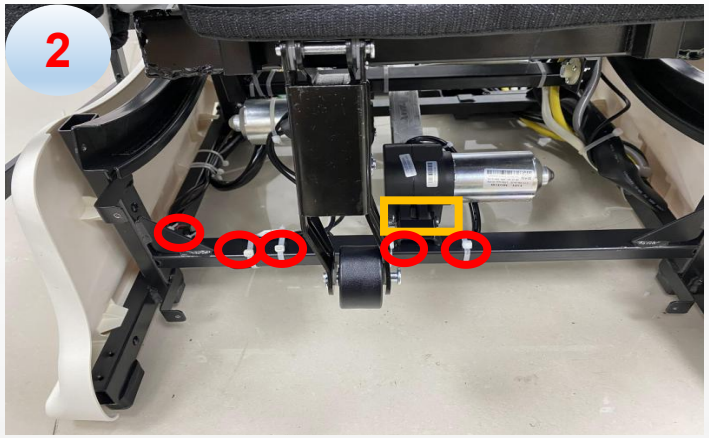


b. remove the screws fixing the air valve, disconnected the air hose, disconnected the terminal, then remove the air valve

26、**disassembly of backrest actuator：** **One person is required to lift the backrest at the rear to prevent injury when removing theactuator**

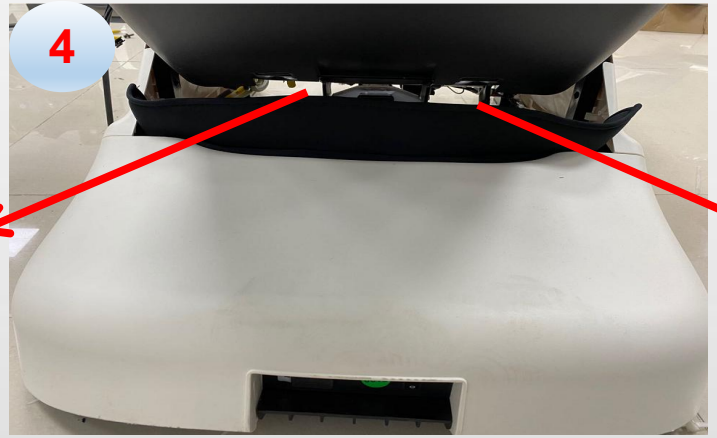


b. remove the screws



c. remove the pin and shaft, cut the cable tie

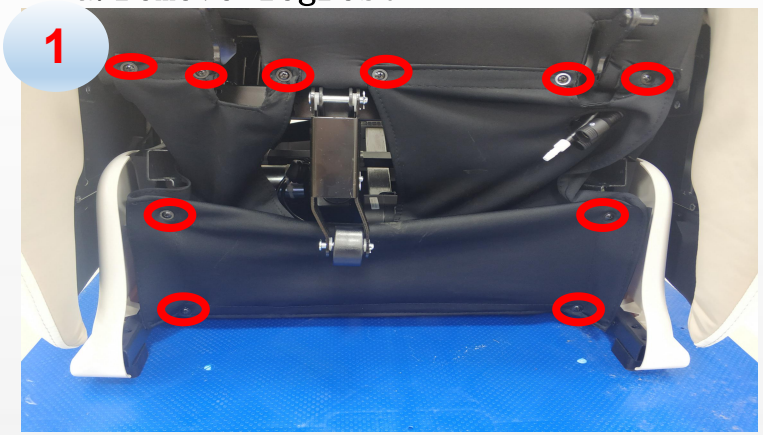
d. disconnected the terminals



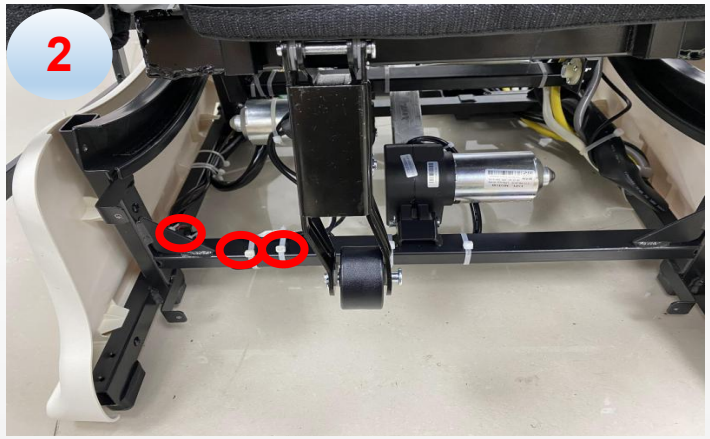
e. remove 2 screws, then remove the actuator

27、disassembly of legrest actuator:

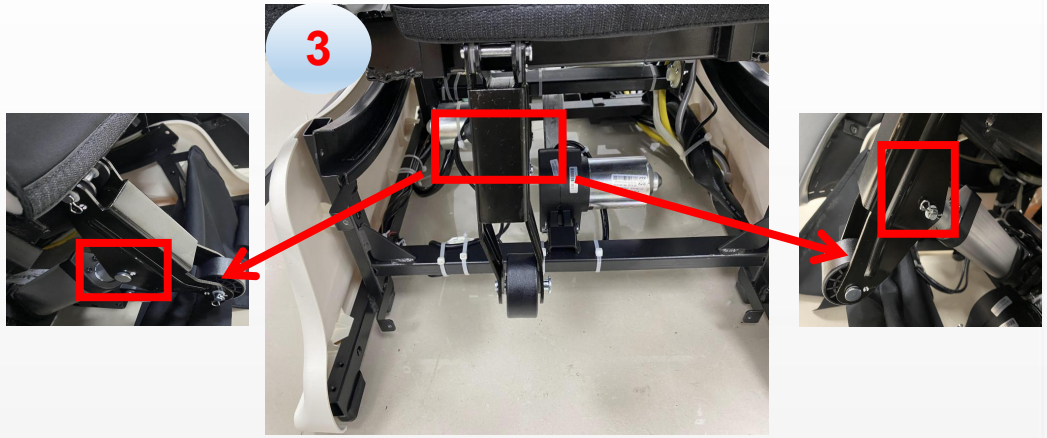
a. remove legrest



b. remove the screws



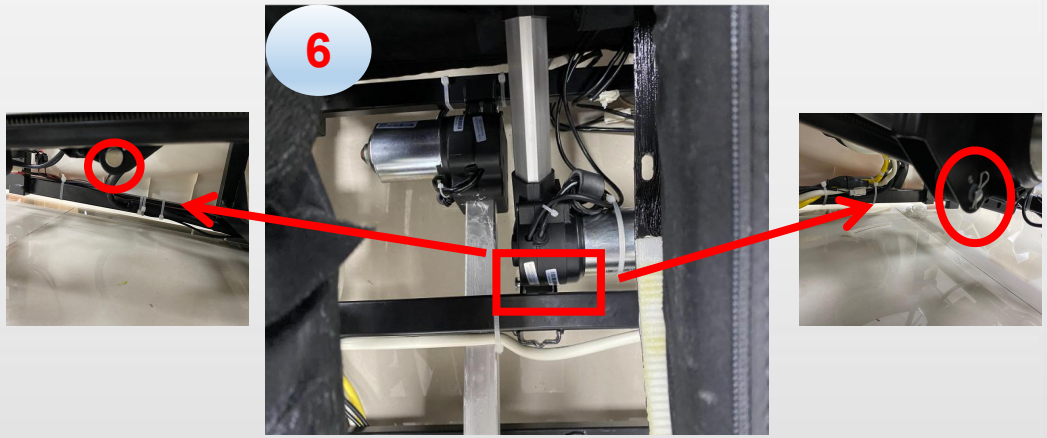
c. cut the cable tie



d. remove the pin and shaft

e. disconnected the terminals

f. unzip the zipper



g. remove the other pin and shaft, remove legrest actuator

五、Massage chair fault judgment

No.	display	phenomenon	problem description	steps of shooting the trouble	remark
01		remote control tested any key pressed more than 40 seconds	1.one of the KEY has been blocked.	1.check the key of the remote control	turn on the chair
02		remote control did not connected more than 4s.	1.1.remote control wire is broken or the remote control is disconnected 2.Before power on, the upper and down limit sensors are valid at the same time	1.1.reconnecte the remote control or change the remote control wire. 3.Check the upper and down limit sensors and wiring	turn on the chair
03		power on, the upper and down limit sensors are valid at the same time	1.The connector of the backrest wire is not well connected 2.up or down limit sensor is broken 3.rolling motor or wire is broken	1.check whether the backrest wire is well connected 2.change the up & down limit sensor	turn on the chair
04		rolling counting sensor is abnormal	1.backrest wire is not well connected. 2.the counting sensor of the rolling motor is broken	1.check whether the backrest wire is well connected 2.change the counting sensor of the rolling	turn on the chair

05		Press and hold the side panel key (except power) for more than 40s	1.one of the KEY has been blocked.	1.check the key of the remote controland side panel	turn on the chair
06		leg rest tested more than 4 seconds	1.connector of leg rest wire not well 2.wire of leg rest broken	1.check the connector of leg rest wire 2.change the wire of leg rest	turn the power
09		more than 5 seconds did not tested the middle signal	1.wideth inspection board is broken 2.the wire connect to the wideth inspection board is disconnected 3.kneading motor is broken or kneading belt is lost	1.change wideth inspection board 2.change backrest wires.(black and gray) 3.change kneading motor	turn the power
10		more than 5 seconds did not tested the narrow signal	1.wideth inspection board is broken 2.the wire connect to the wideth inspection board is disconnected 3.kneading motor is broken or kneading belt is lost	1.change wideth inspection board 2.change backrest wire 3.change kneading motor	turn the power
13		tested signals from up & down limit sensor at the same time.	1.up & down limit sensor are broken 2.backrest wire is disconnected.	1.Change up & down limit sensor 2.check whether the backrest wire is well connected	turn the power

14		more than 40s didn't tested the signal from the up limit sensor	1.upper limit sensor is broken. 2.backrest wires are disconnected 3.rolling motor is broken or rolling motor wire disconnected	1.change upper limit sensor 2.check whether the backrest wire is well connected. 3.change rolling motor or rolling motor wire.	turn the power
15		height counting signal error	1.the counting sensor of the rolling motor is broken 2.backrest wire is disconnected	1.change the counting sensor of the rolling motor. 2.check whether the backrest wire is well connected.	turn the power
16		after tested signal from up limit sensor then tested signal from down limit sensor in 2 seconds.	1.down limit sensor is broken	1.change down limit sensor 2.check whether the backrest wire(black) is well connected. 3.change rolling motor	turn the power
17		more than 40s didn't tested the signal from the down limit sensor	1.down limit sensor is broken 2.the backrest wire is disconnected. 3.rolling motor is broken or disconnected	1.change down limit sensor 2.check whether the backrest wire(black) is well connected. 3.change rolling motor	turn the power
18		after tested signal from down limit sensor then tested signal from up limit sensor in 2 seconds.	1.upper limit sensor is broken.	1.change upper limit sensor	turn the power

19		can't test signal from foot rest recline actuator	1.foot rest recline actuator is broken 2.foot rest actuator motor wire is disconnected 3.the signal wire of foot rest actuator is disconnected.	1.change foot rest recline actuator 2.check whether the foot rest recline actuator motor wire is well connected. 3.check whether the signal wire of foot rest actuator is well connected	turn the power
25		when start the zero-G actuator, there is no counting signal for more than 2.5 seconds （or 40 seconds did not test the actuator Reset signal）	1.zero-G actuator broken 2.zero-G actuator wire broken	1.change zero-G actuator 2.check the wire of the zero-G actuator	turn the power
28		The communication between the main PCB and the side panel was not successful for more than 4S	1. side panel wire did not connect well 2. The side panel wire is broken	1. Check whether the side panel wire is properly plugged 2. Replace the side panel wire	turn the power