EASEPAL 厦门蒙发利电子有限公司客户服务部

EI-8701C-massage chair service guide

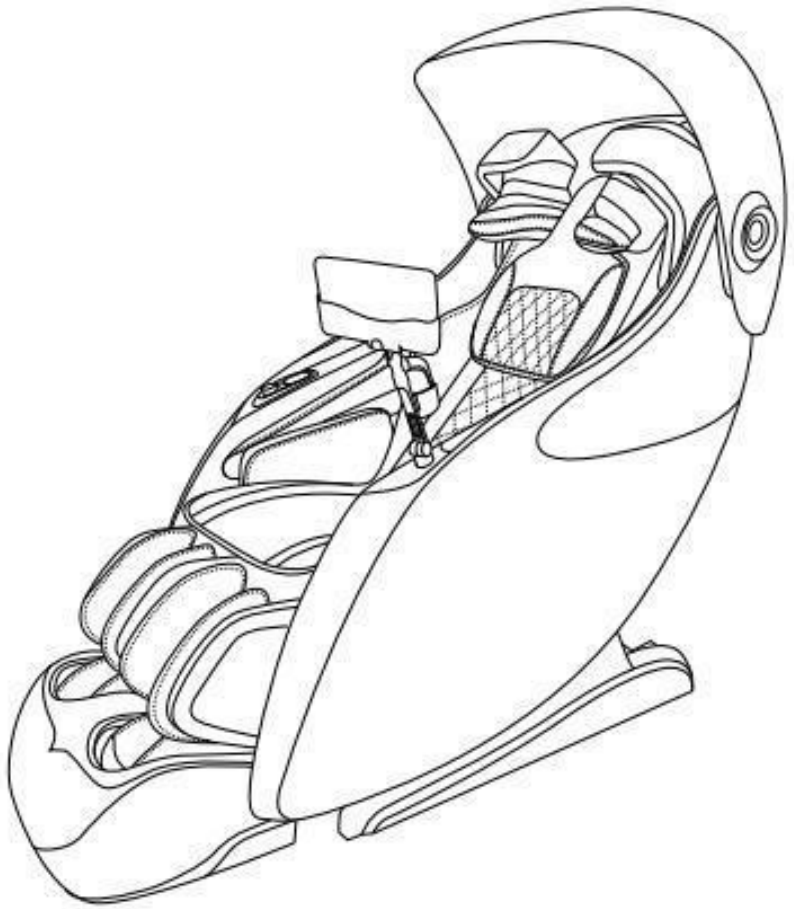
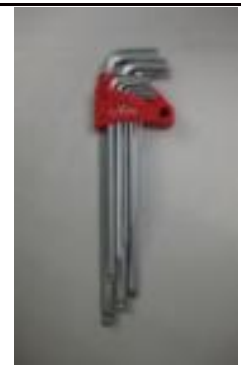


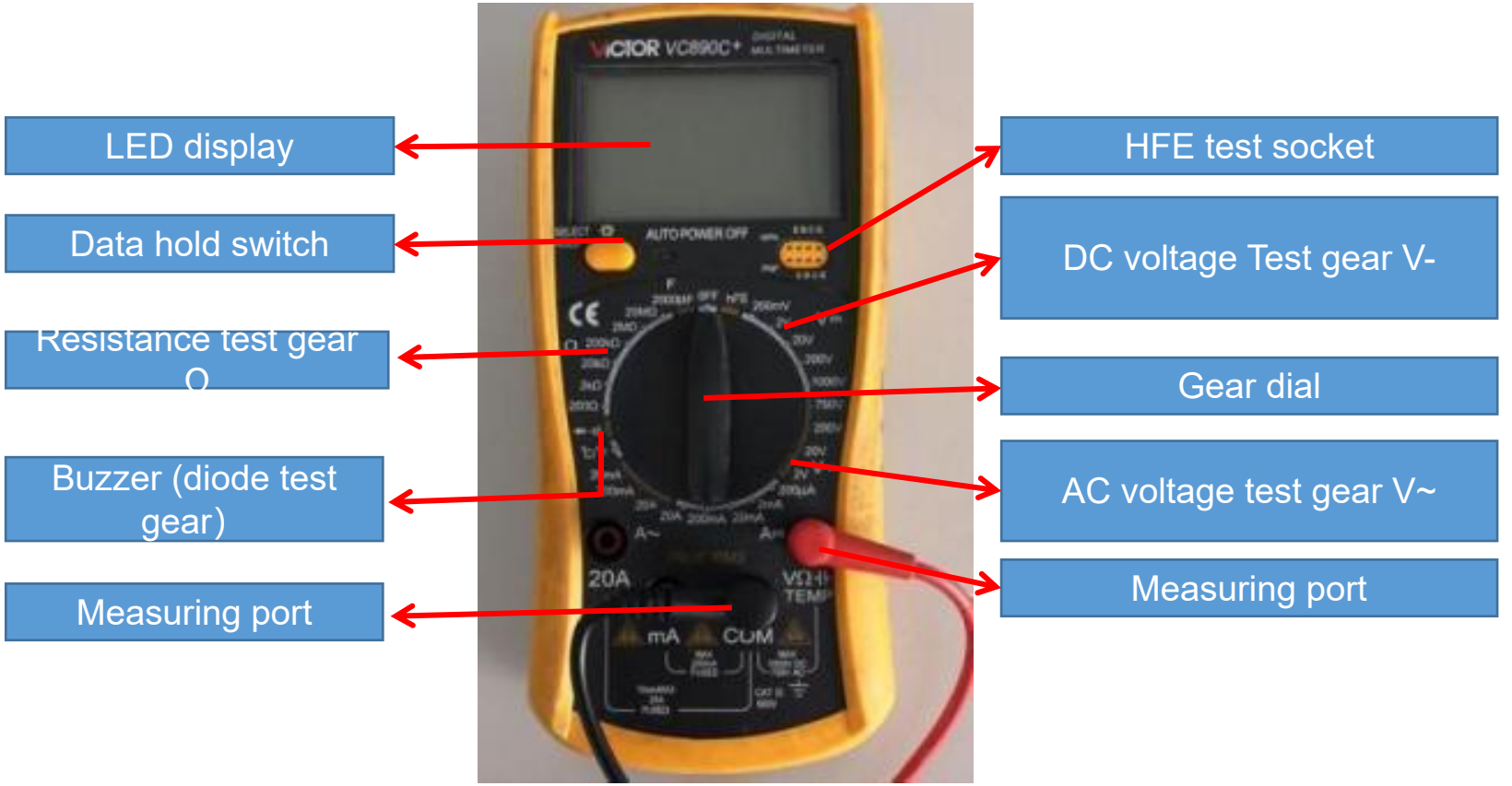
Table of Contents

一、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.Usage of multimeter



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 value 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).

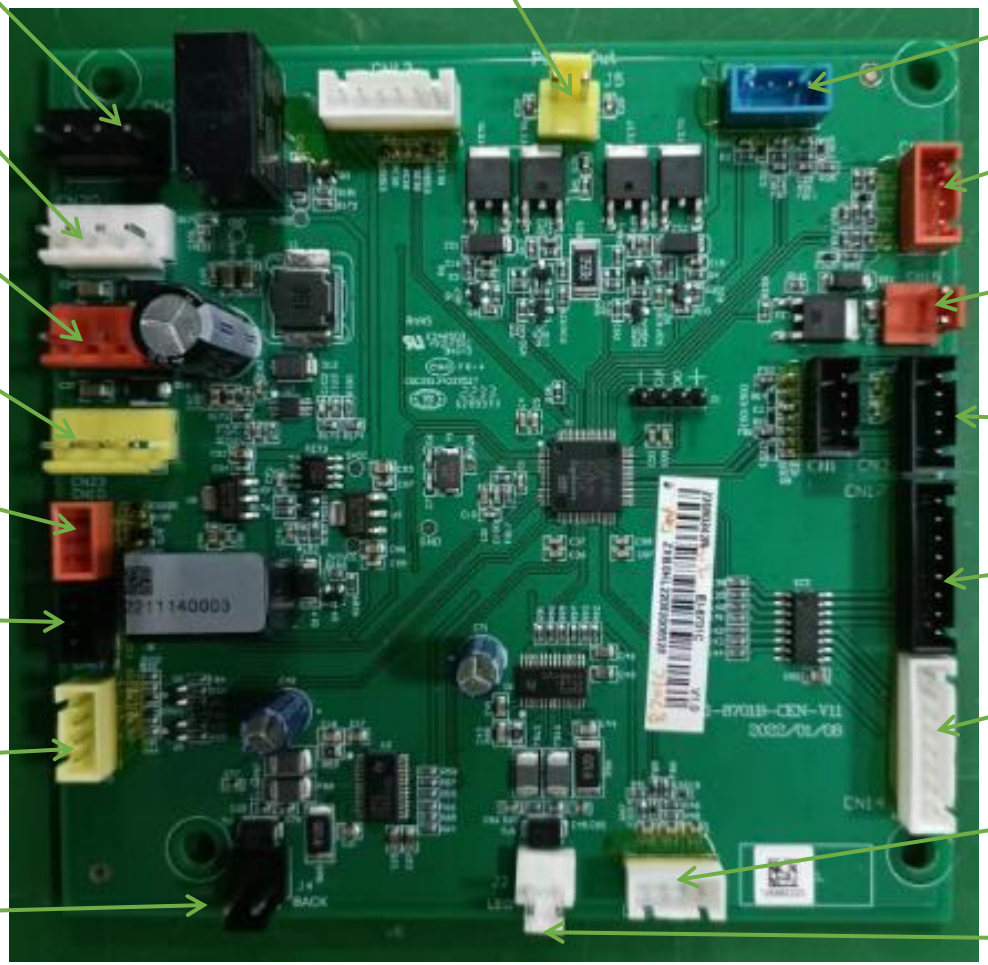
2.4、Measurement of dc voltag


As shown in the figure above: the test result shows "1.58", indicating that the voltage at both ends of the battery has1.58V, and the red watch pen is connected to the battery's "+" pole, while the black pen is connected to the electromagnetic "-" pole.


As shown in the figure above: the test result shows "-1.58", indicating that the voltage at both ends of the battery has1.58V, and the red watch pen is connected to the battery "-" pole, and the black pen is connected to the electromagnetic "+" pole.

二、Circuit working principle

1、main PCB:



Transfer board CON9 under the socket.P6-8 (tablet-like)

Switching power supply CON2

Switching power supply CON2

Connected to under seat PCB P3、4 pins of con12

Connected to under seat PCB P9 pin of con9

Connected to backrest actuator detection

Connected to under seat PCB P4、5 pin of con9

backrest actuator motor

Connected to air pump

Bluetooth / voice communication

WIFI PCB

Connected to under seat PCB P7 pin of con 19

Connected to under seat PCB P6、8 pin of con 9（remote control）

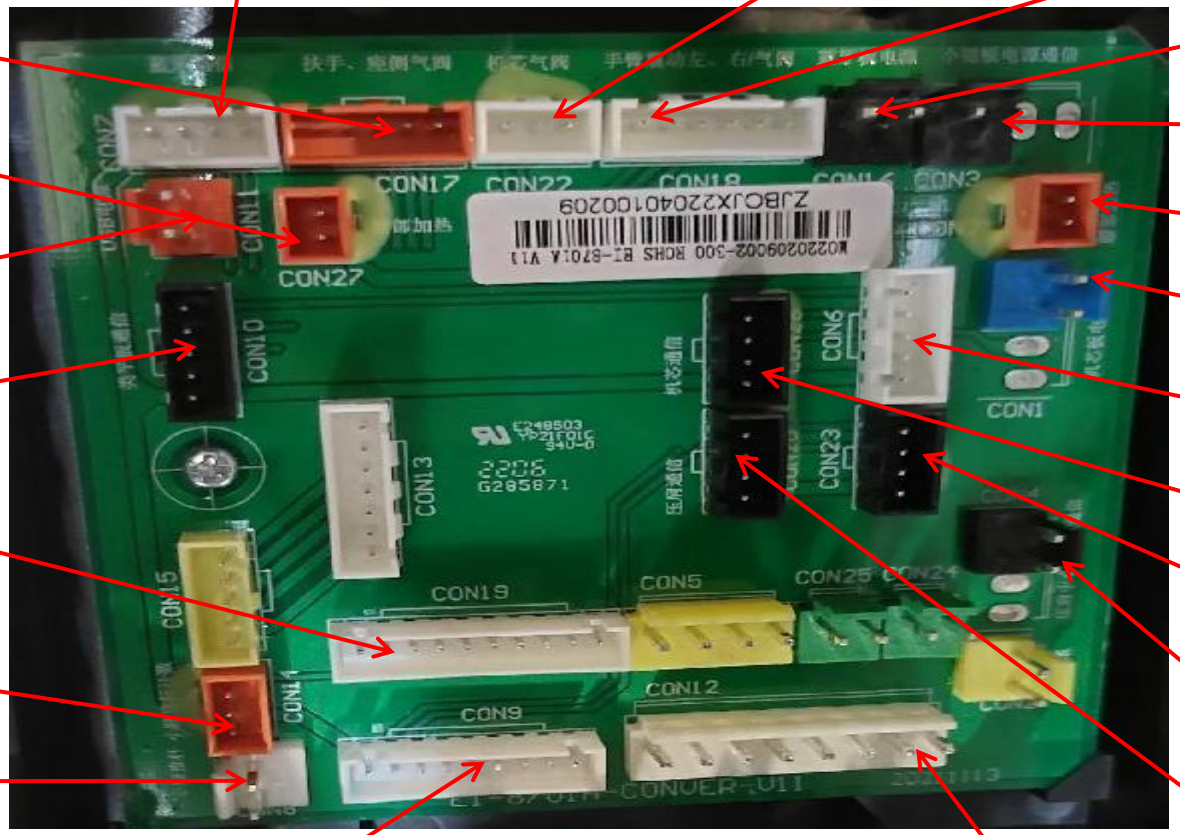
under seat PCB CON19-P1, air bag-side seat，left arm

under seat PCB CON19-P5, 3D air bag，right arm

under seat PCB CON9 -P2、3

Connected to under seat PCB P5、6 pin of con 12

2、under seat PCB：



Pain detection PCB

3D air bag

3D air bag

3D air bag

right&left arm,side seat air bag

right waist heater

USB power in J2

remote control J1

main PCB CN17-P2,

legrest actuator counting

legrest actuator motor

legrest PCB CN1

left waist heater

mechanism PCB CN1

side panell control J1

mechanism PCB CN15

legrest PCB CN15

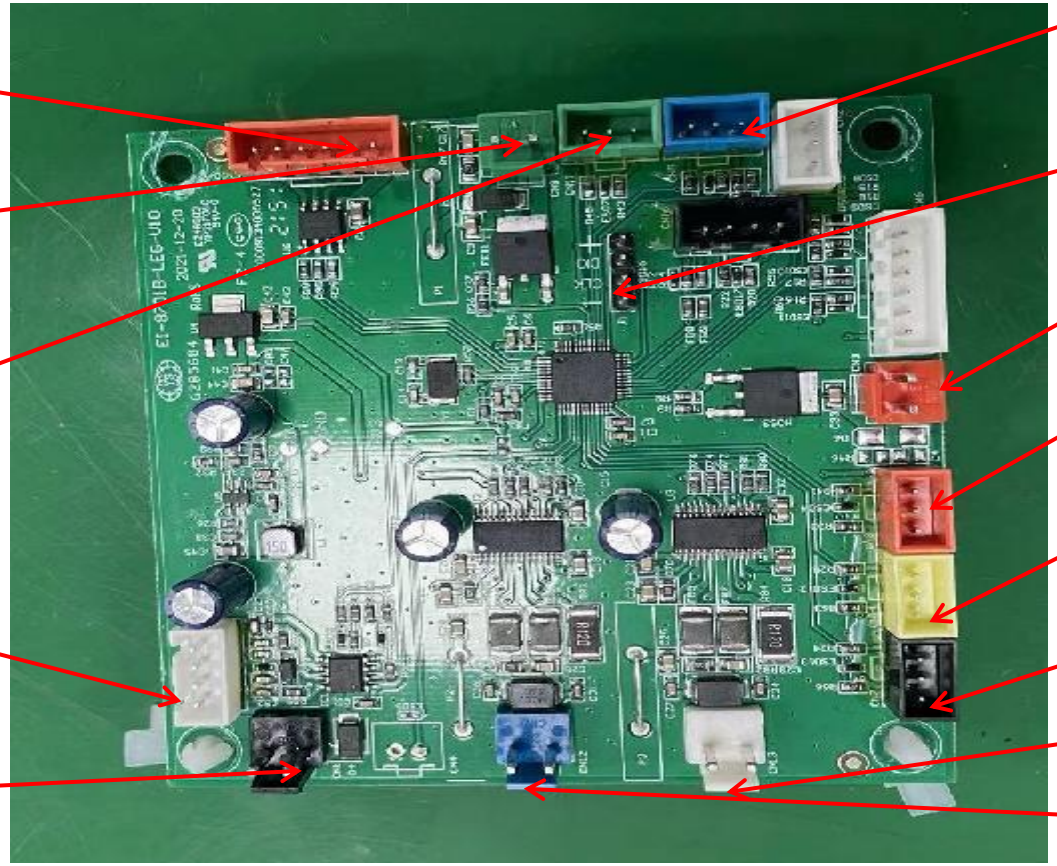
shoulder PCB CN3

shoulder PCB CN7

main PCB CN8, CN6,CN2,CN10

main PCB CN21,CN23,J2

3、legrest PCB：



legrest adapter PCB CN2，air valve for legrest

foot massage

legrest adapter PCB CN1 rise and fall Anti pinch

under seat PCB CON23

under seat PCB CON3

legrest adapter PCB CN1 stretch Anti pinch

Burning program

Connect Pin1, 2 of legrest adapter PCB cn2

legrest stretch count

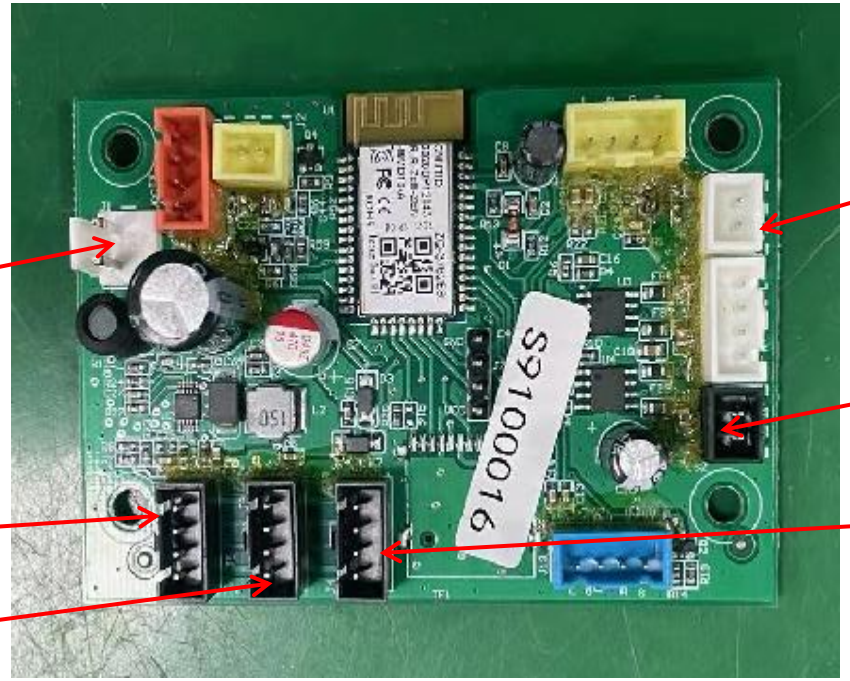
legrest adapter PCB CN1 Touchdown detection

legrest adapter PCB CN1 Plantar inspection

Connected to electric telescopic motor

Connecting the kneading single roller motor

4、Bluetooth PCB：



shoulder PCB CN20

right hood LED

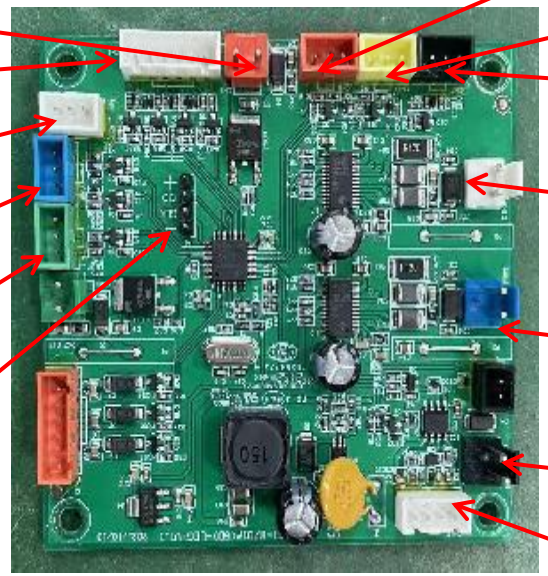
shoulder PCB CN8-1

right horn

left horn

left hood LED

5、mechanism PCB：



connect main PCB CN12

Connected to kneading test PCB CN1

Connected to rolling detection PCB J1

Connected to P3 of airbag gear detection PCB J1

Connected to P4 of airbag gear detection PCB J1

Burning program

Connected to tapping test PCB CN1

up&down limit sensor CN1-P4

up&down limit sensor CN1-P3

rolling motor

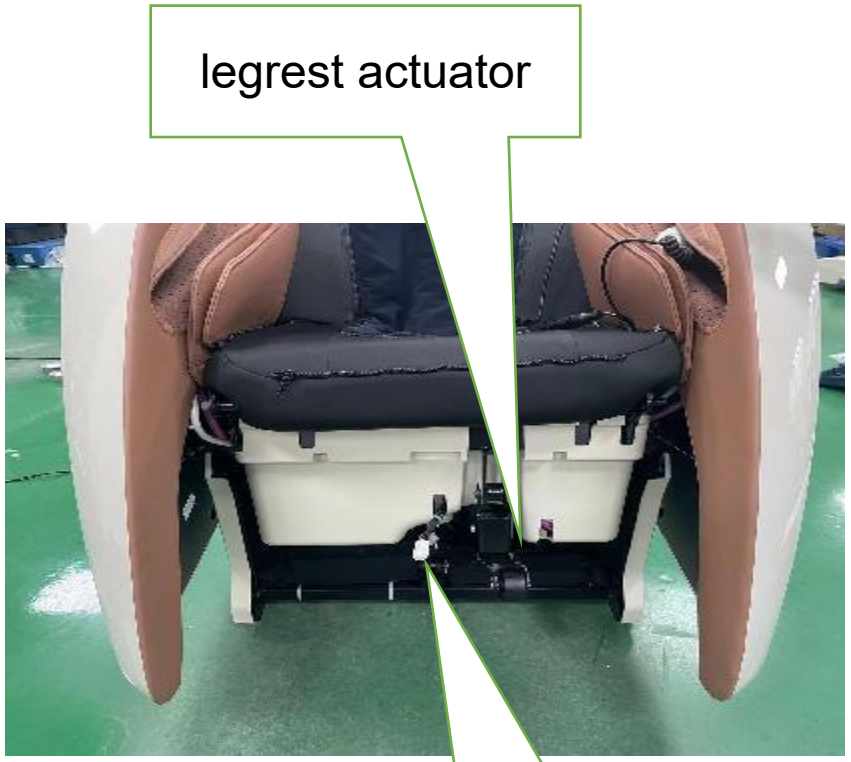
kneading and tapping motor

under seat PCB CON1

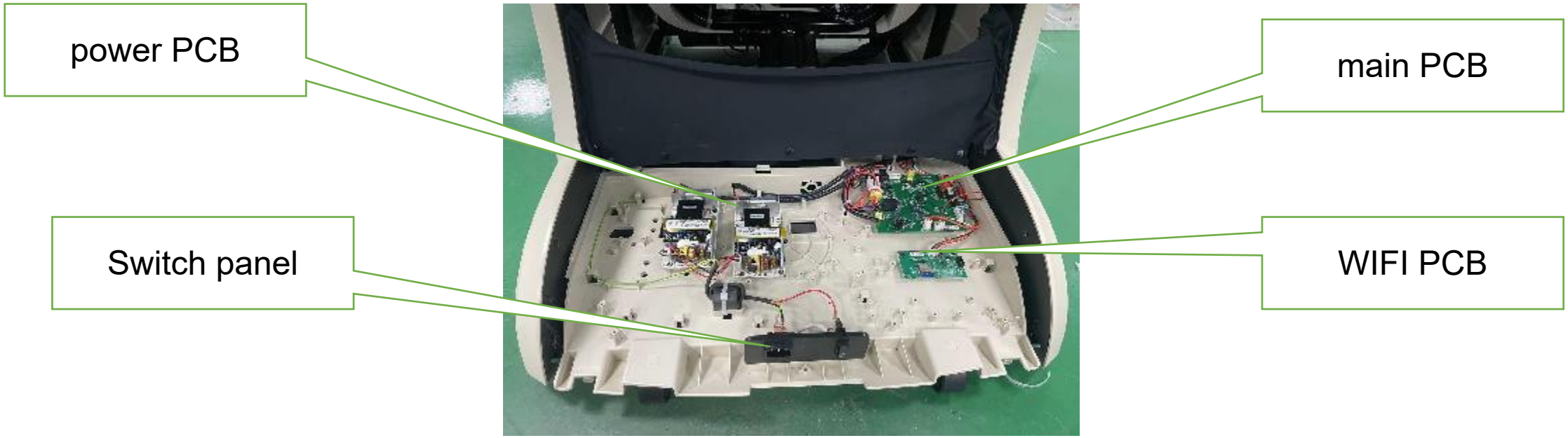
under seat PCB CON26

三、Massage chair removal instructions

1.1、Internal structure diagram (overall):

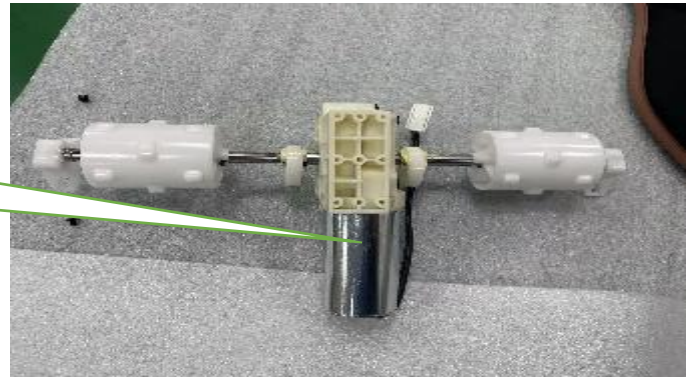


1.2、Internal structure diagram （main PCB box)



1.3、Internal structure diagram（legrest）：

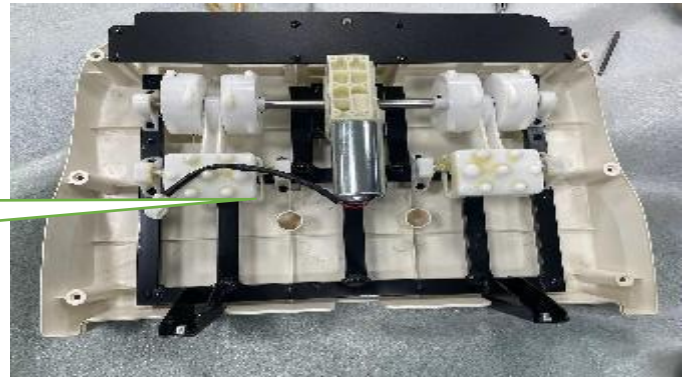
Upper calf kneading assembly

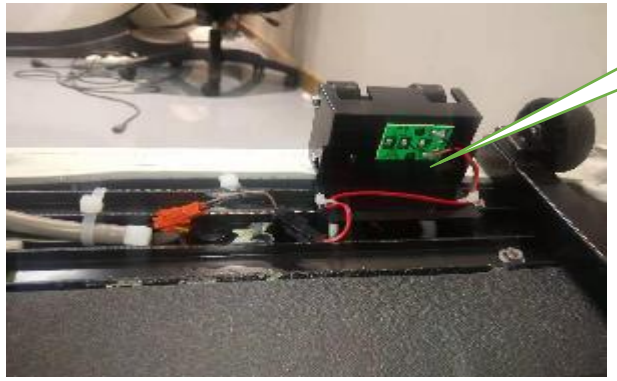


lerest telescopic actuator

Touchdown switch

foot massage





3.1、disassembly of the pillow：

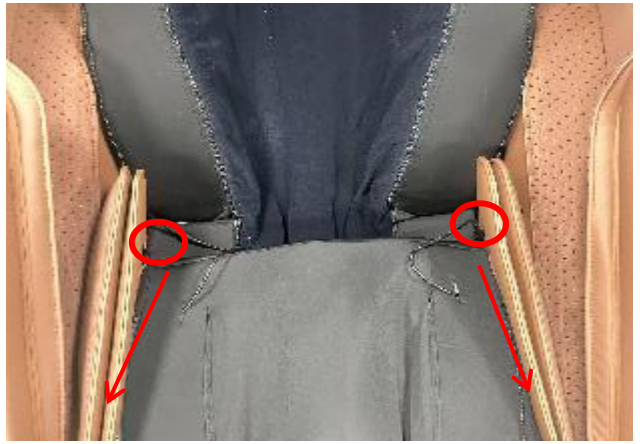
A,Pull the magnet apart
and remove the pillow

B,pillow

3.2、disassembly of backrest pad：

A.unzip the zipper

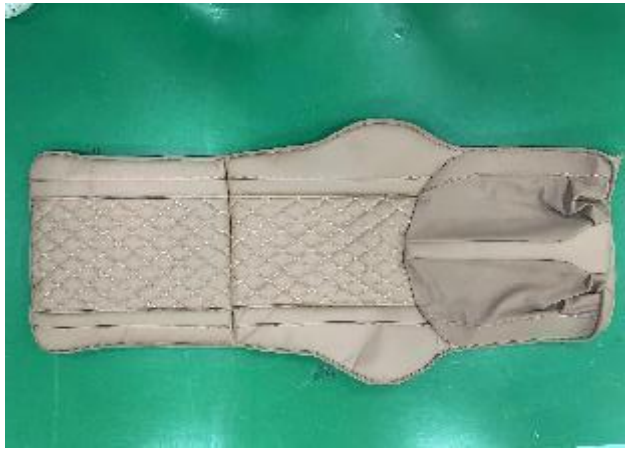
B.Unscrew and unplug 2 heating terminals



C.unzip the zipper

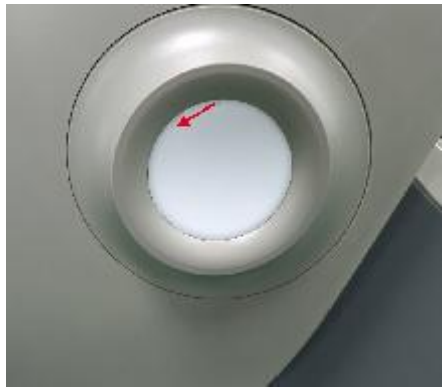
D.unzip the zipper

E.unzip the zipper



F. backrest pad

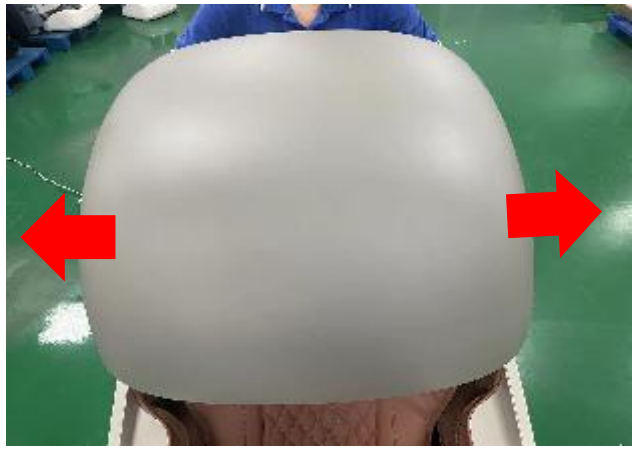
3.3 disassembly of the hood:



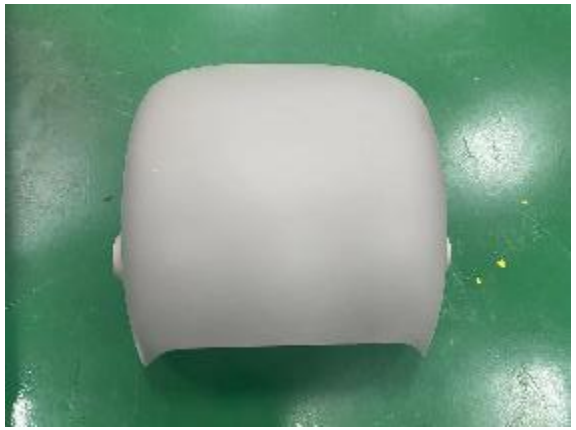
A. Rotate the lampshade counterclockwise and pat it to separate it.

B. Disconnect the lamp shade terminal, Remove the lampshade

C. Remove 4 screws on the left and right



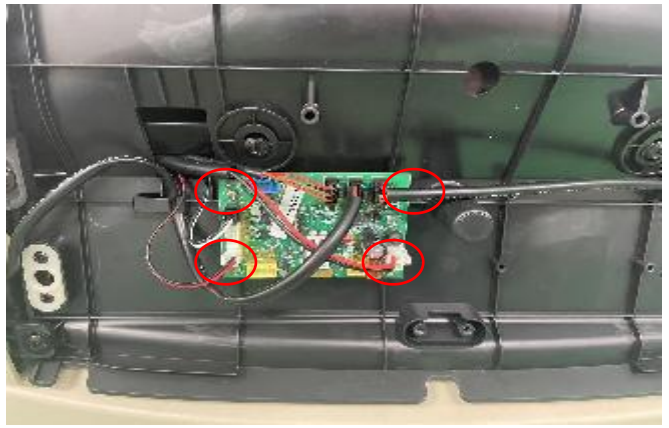
D.Push left and right, take off the hood.



E.hood

3.4 disassembly of the Bluetooth PCB and horn: (remove the hood first refer to 3.3)

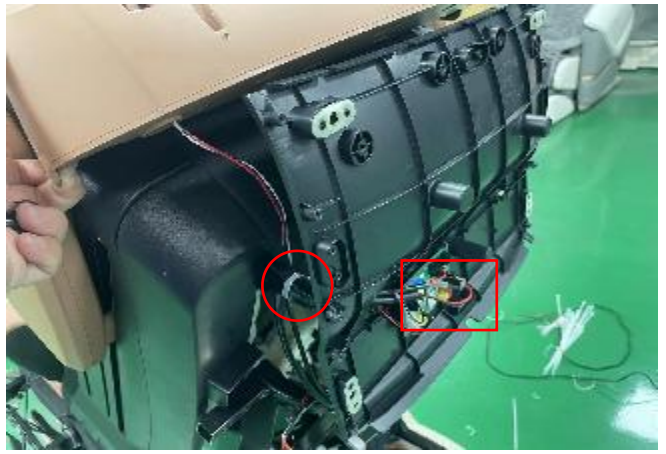
A.open the middle cover



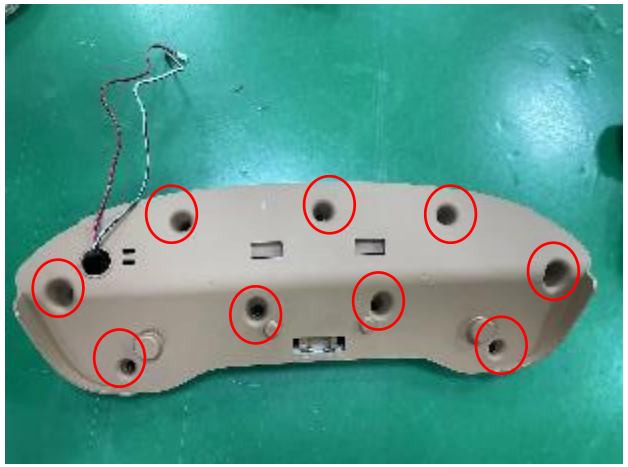
B.discontent all terminals，
remove 4 screws

C.remove Bluetooth PCB

D.remove 4 screws

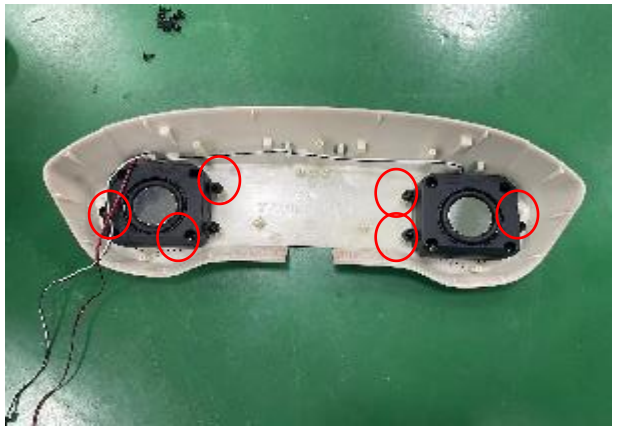


E.cut the cable tie，discontent 2 terminals



F.remove 9 screws

3.4 disassembly of the Bluetooth PCB and horn: (remove the hood first refer to 3.3)

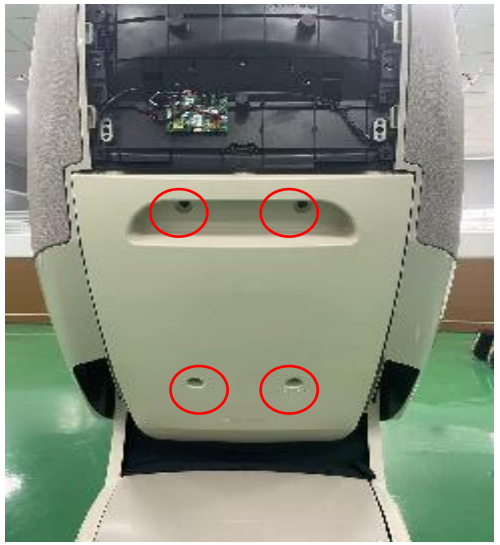


G.remove 6 screws

H.remove left horn

I.remove right horn

3.5 disassembly of rear cover:



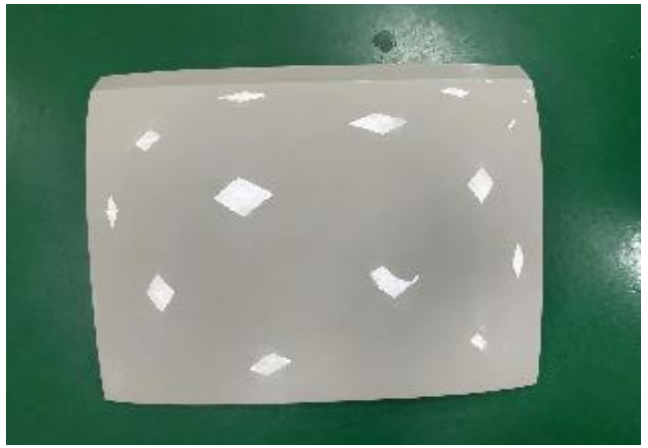
A. remove 4 screws

B. remove 3 plastic screws

C. remove rear cover

3.6、disassembly of side panel： (remove the hood and rear cover refer to 3.3)

A.open the cover of the hood



B.hood cover

C.Disconnect the port and remove 10 screws

D.remove 2 screws

E.remove 2 screws

3.6、disassembly of side panel: (remove the hood and rear cover refer to 3.3)

A. Extract left side panel upwards

B.discontent the terminal and air hose

C.remove left side panel

D. Extract right side panel upwards

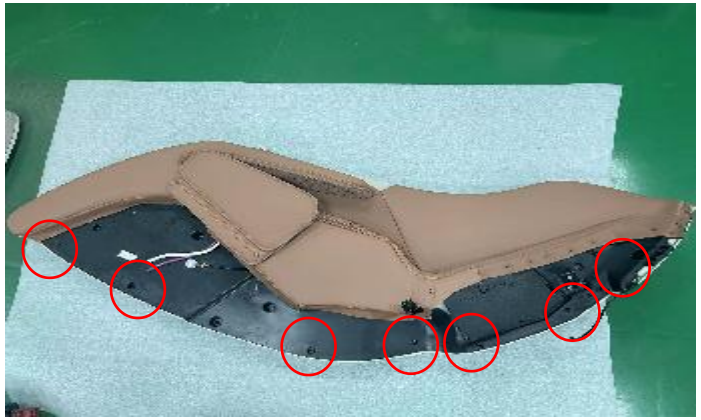
E. discontent the terminal and air hose

F. remove right side panel

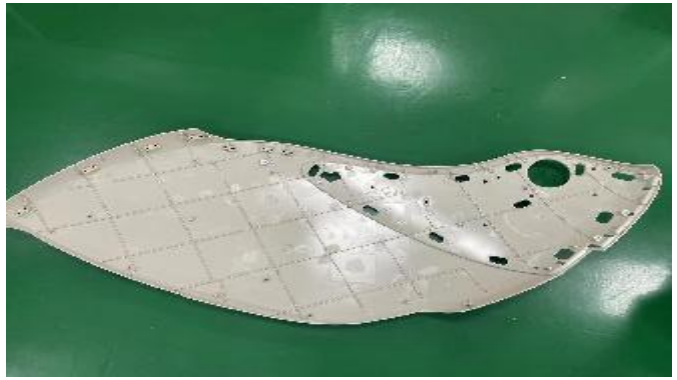
3.7、Right side plate decomposition： (remove the hood、right side panel first)

A. open the cover

B. remove 13 screws



C.remove 7 screws



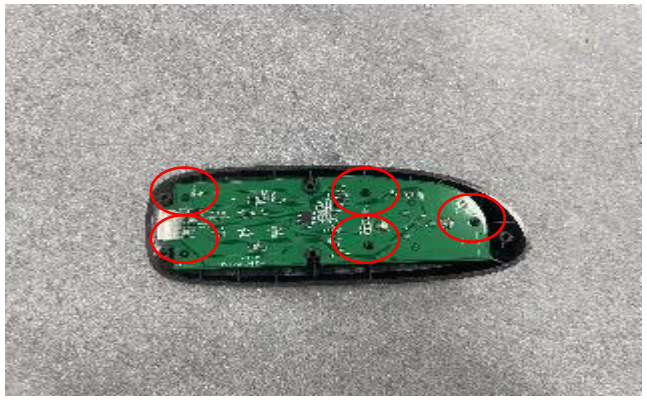
D .open the cover

E.remove 6 screws

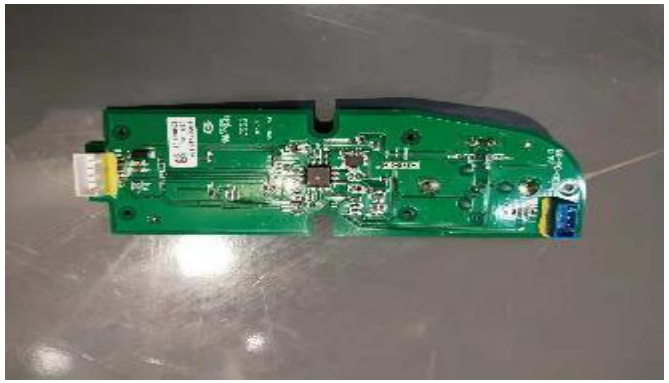
F.remove 5 screws，discontent the tterminal

3.7、disassembly of the side panel control： (remove the hood、rear cover，right side panel first)

G. remove the side panel control



H. remove 5 screws



I. remove the control PCB

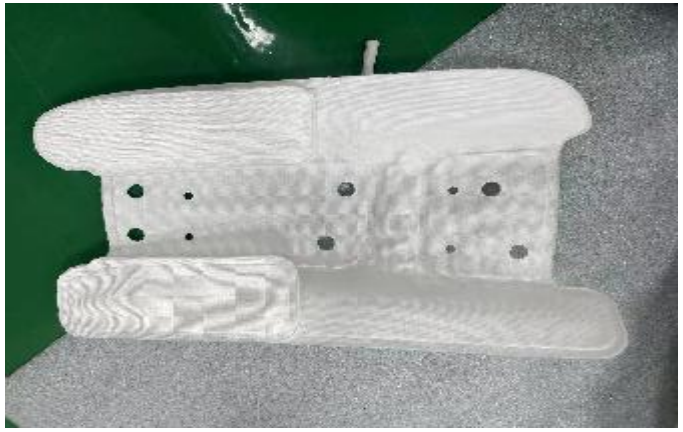
3.8、disassembly of the side seat、arm、shoulder、Shoulder telescopic motor assembly:

(remove the hood、rear cover side panel first)

A. unzip the zipper

B. separate the leather from plastic screw

C. remove 4 screws



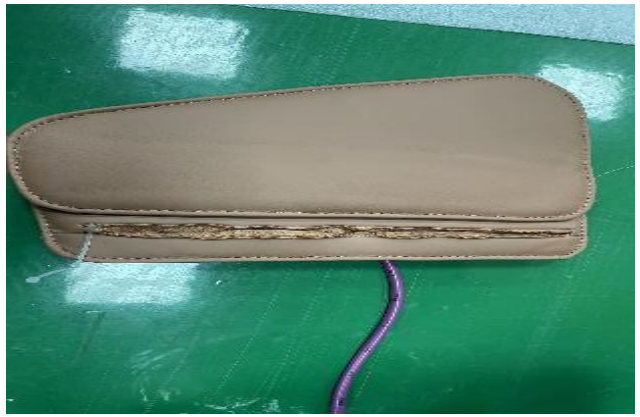
D .remove the arm air bag

E.unzip tje zipper of side seat

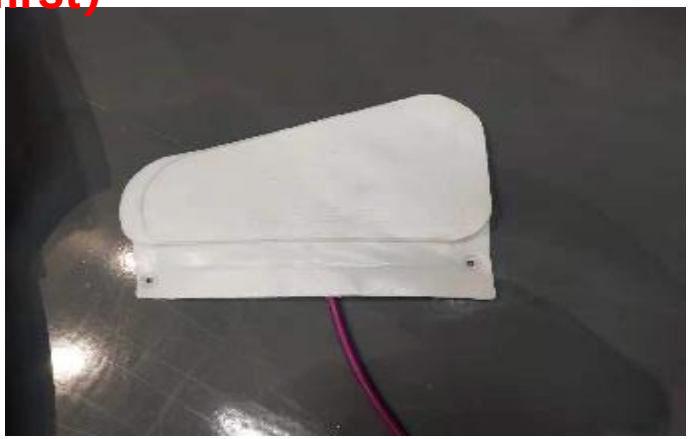
F.remove 2 screws

3.8、disassembly of the side seat、arm、shoulder、Shoulder telescopic motor assembly:

(remove the hood、rear cover side panel first)



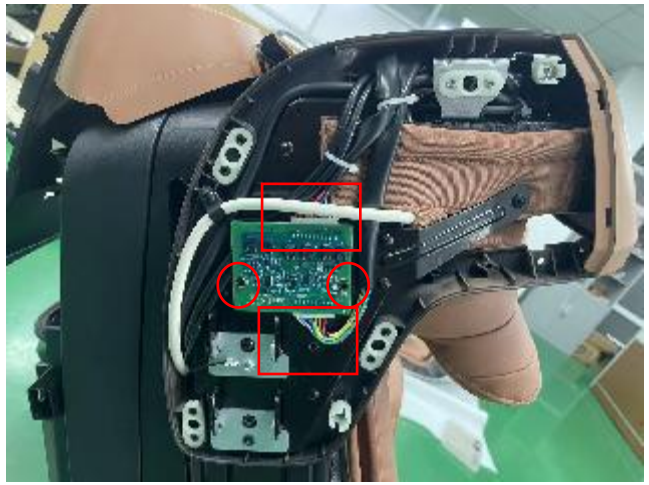
G .remove the side seat



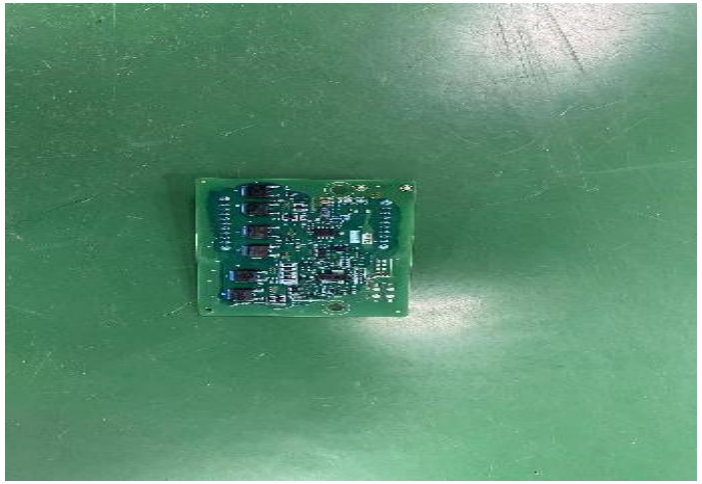
H .remove the air bag

I .remove 2 screws of shoudler

J .open the cover with a “—” screwdriver



K .discontent 2 terminals，remove 2 screws



L .Remove the kneading counter

3.8、disassembly of the side seat、arm、shoulder、Shoulder telescopic motor assembly:

(remove the hood、rear cover side panel first)

M .remove 5 screws，Extract the right shoulder assembly upwards

N .cut the cable tie，discontent the terminal

O .remove right shoulder

P remove 3 screws

Q .remove 8 screws，cut the cable tie and disconnected the terminal

R .Rotate the motor counterclockwise to remove 2 screws

3.8、disassembly of the side seat、arm、shoulder、Shoulder telescopic motor assembly：

(remove the hood、rear cover side panel first)

S .remove the shoulder telescopic motor assembly

3.9、disassembly of remote control and detection handle：note：remove left side panel refer to 3.6

A.remove left side panel

B.cut the cable tie

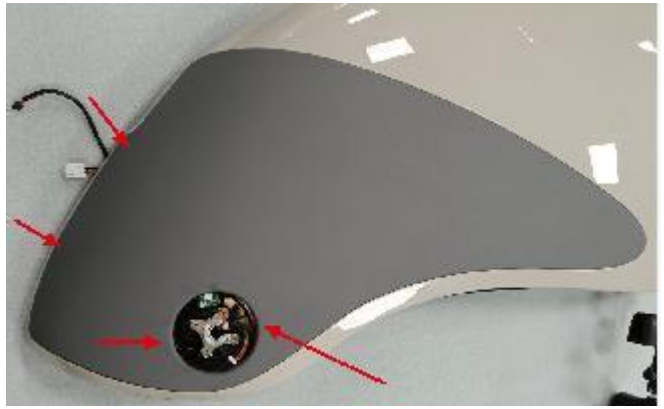
C. disconnected the terminal

D. remove detection handle

E. disconnected the terminal

F. remove the remote control

3.9、Left panel assembly decomposition： (remove the hood、left side panel first)



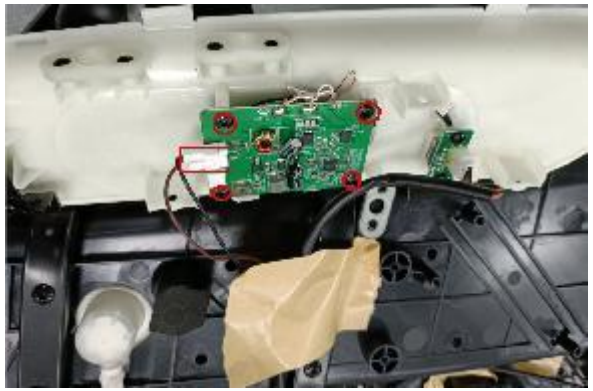
A.Open the decorative cover

B.Remove 13 screws

C. Remove 8 screws

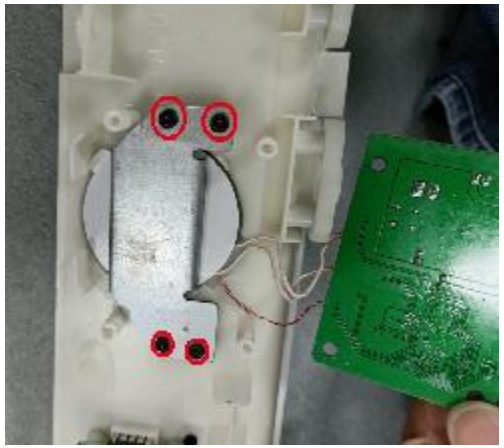
D. remove detection handle

E. Remove 9 screws

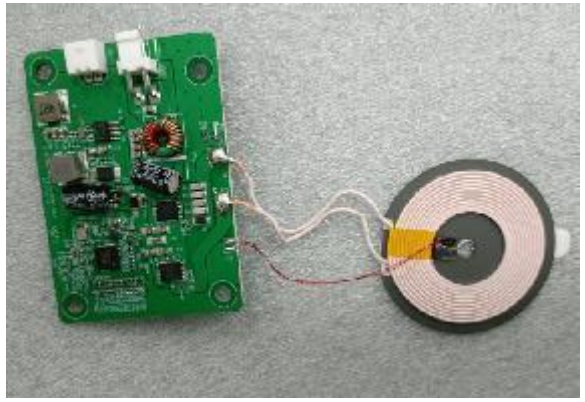


F. Disconnect the port and remove the 4 screws

3.9、Left panel assembly decomposition：



A.Remove 4 screws



B.Wireless charging

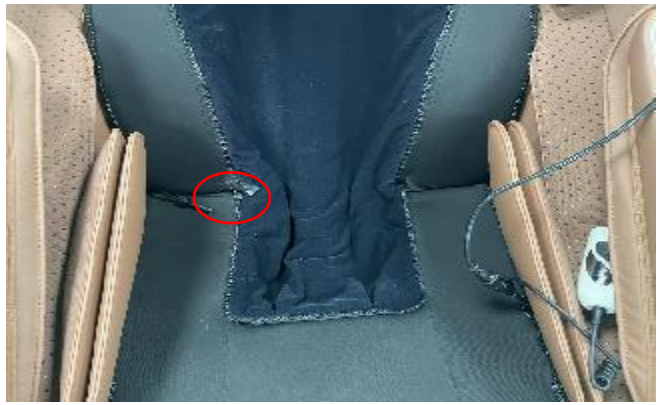
C. Disconnect the port and remove the 2 screws

D. USB charging board

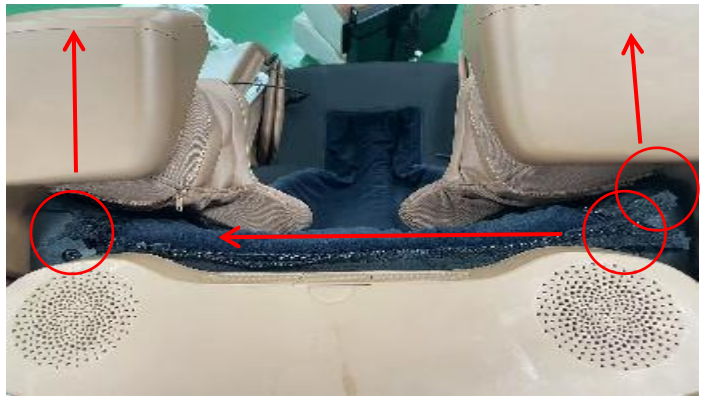
E. Disconnect the port and remove the 2 screws

F. USB adapter board

3.10、disassembly of backrest cable：　(note：remove rear cover and backrest pad refer to 3.2/3.5)



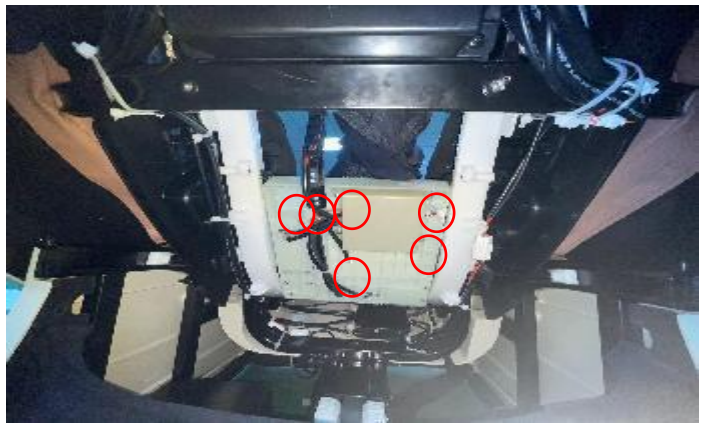
A.unzip the zipper



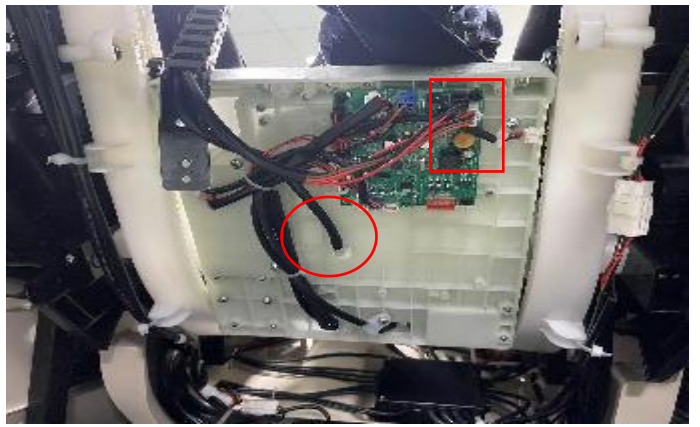
B.unzip the zipper

C.Push the mechanism upward to an appropriate angle by hand

D.remove 2 screws

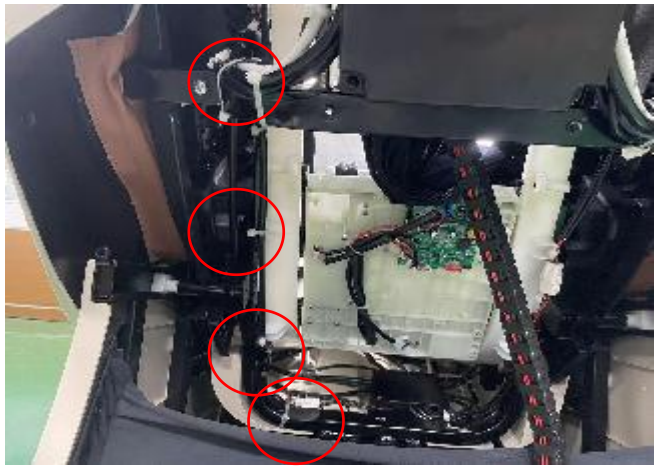


E.remove 6 screws

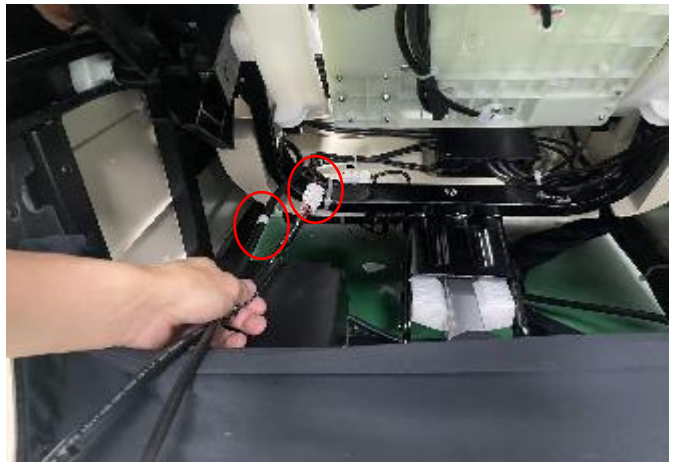


F.discontent the terminal and air hose

3.10、disassembly of backrest cable：　(note：remove rear cover and backrest pad refer to 3.2/3.5)



G.cut the cable tie

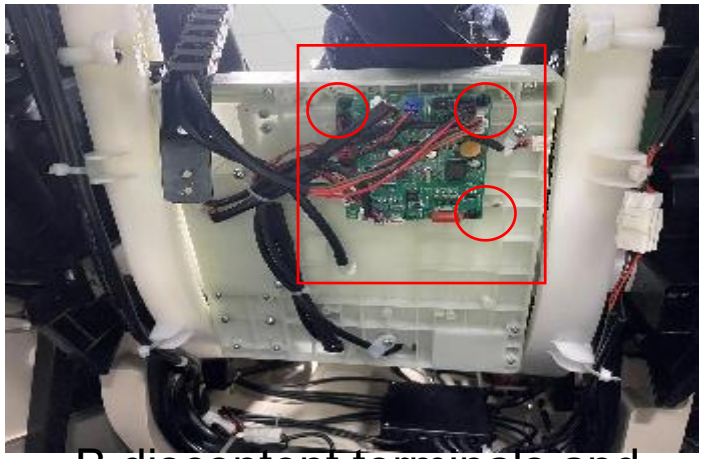


H.discontent the terminal and air hose

I.remove backrest cable

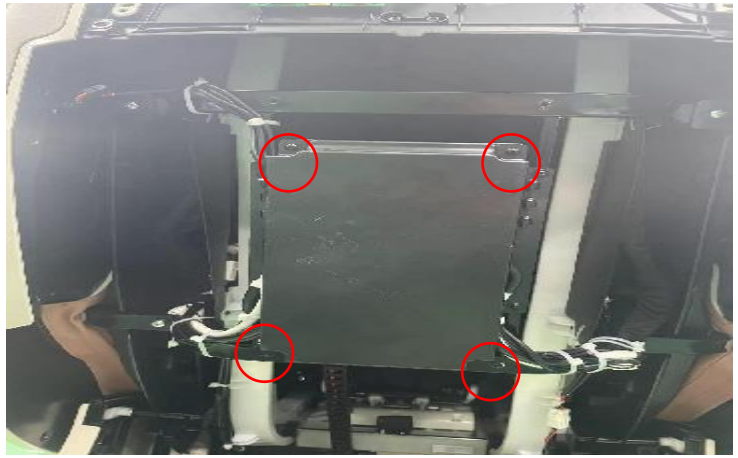
4.1、disassembly of mechanism PCB，shoulder PCB，backrest air valve：（note：remove rear cover first）

A.remove 4 screws

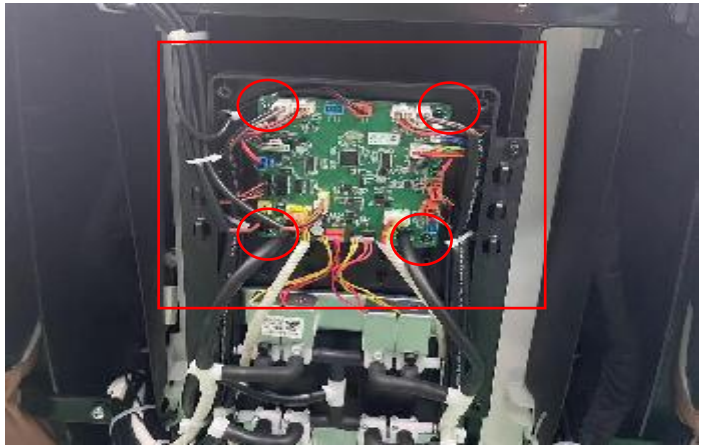


B.discontent terminals and remove 3 screws

C.remove mechanism PCB



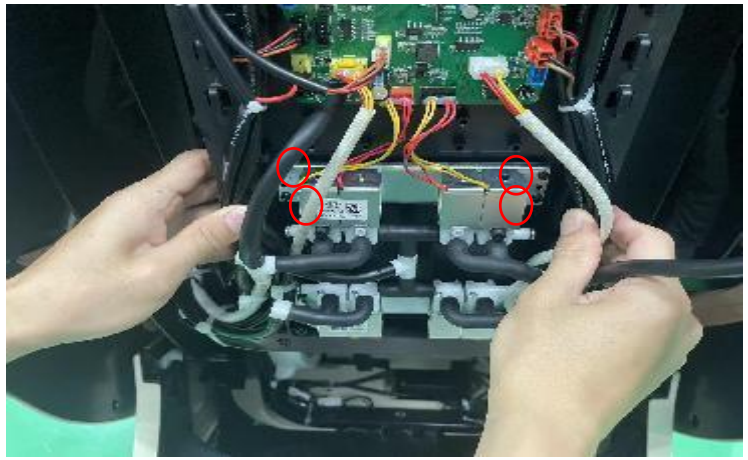
D.remove 4 screws



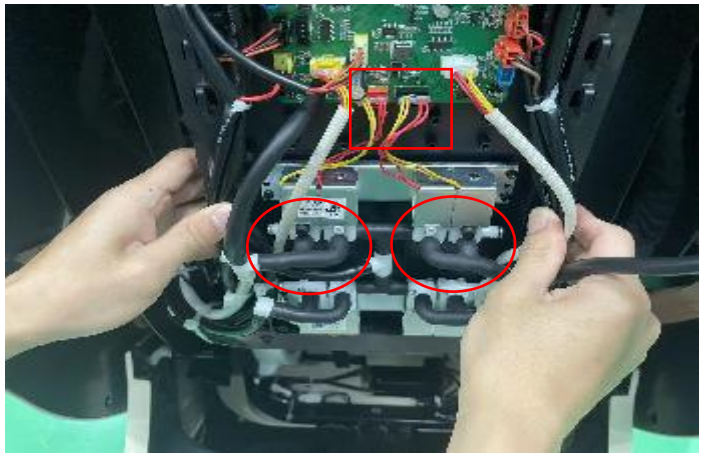
E.discontent terminals and remove 4 screws

F.remove shoulder PCB

4.1、disassembly of mechanism PCB，shoulder PCB，backrest air valve：（note：remove rear cover first）

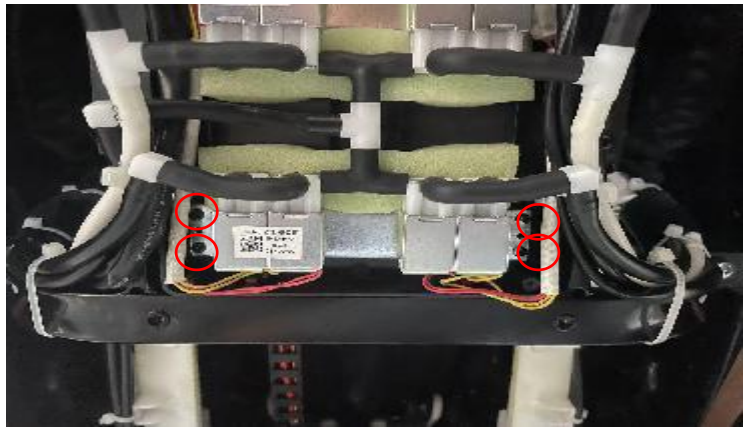


G.remove 4 screws

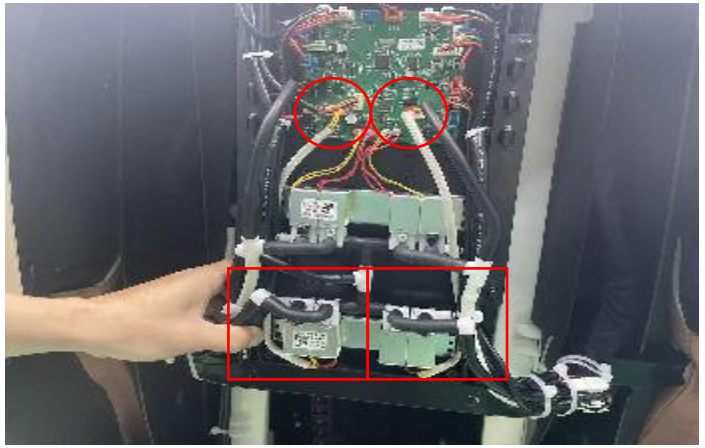


H.discontent terminals and air hose

I.remove air valve



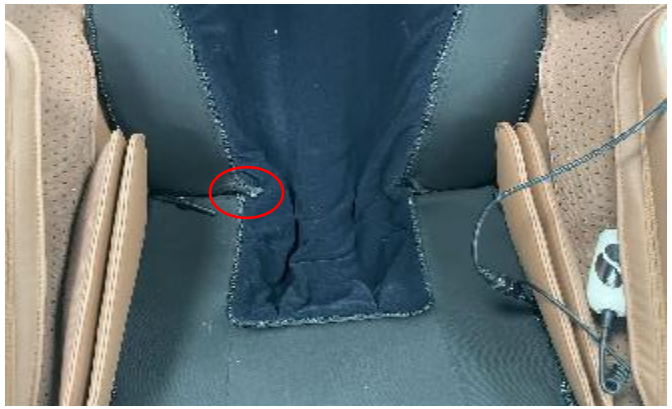
J.remove 4 screws



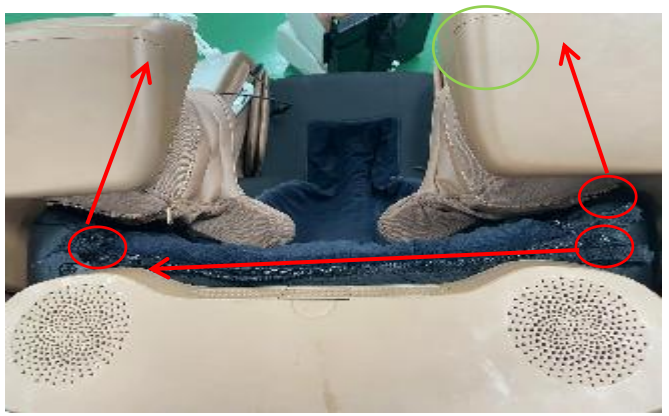
K.discontent terminals and air hose

L.remove the air valve

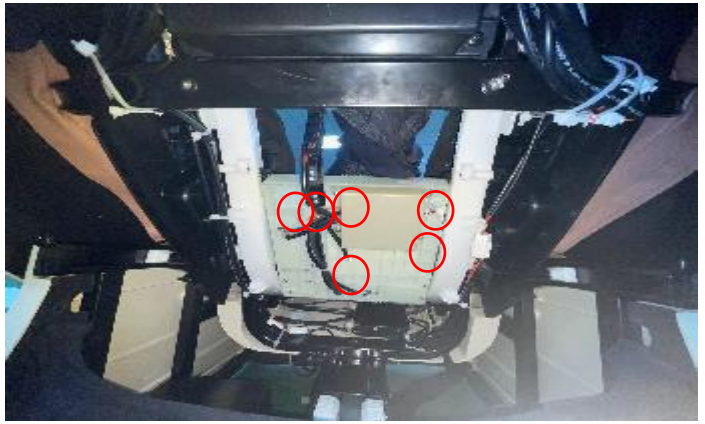
4.2、disassembly of mechanism：（note：remove rear cover and backrest pad，refer to 3.2/3.5）



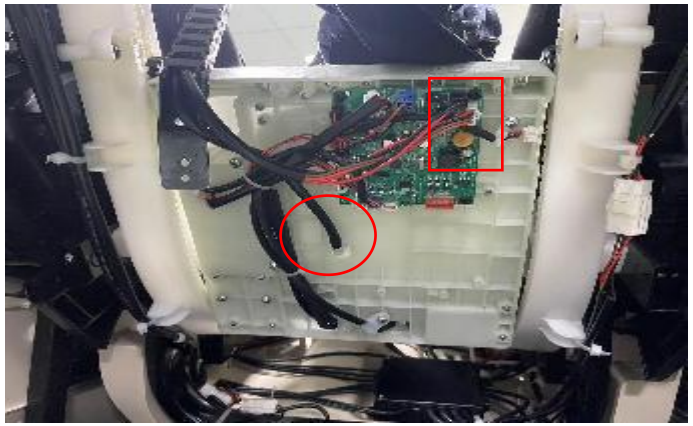
A.unzip tje zipper



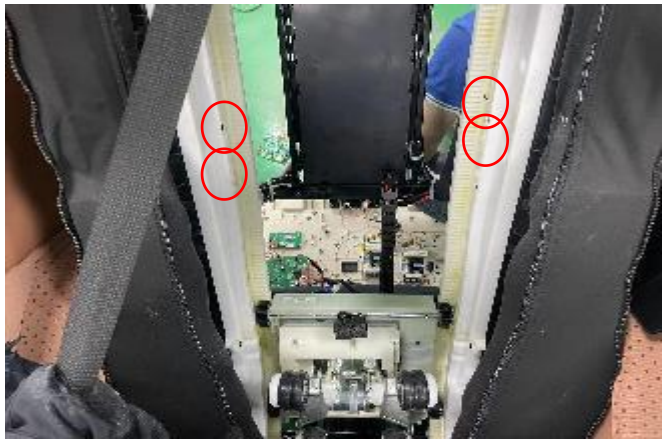
B.unzip the zipper



C.remove 6 screws



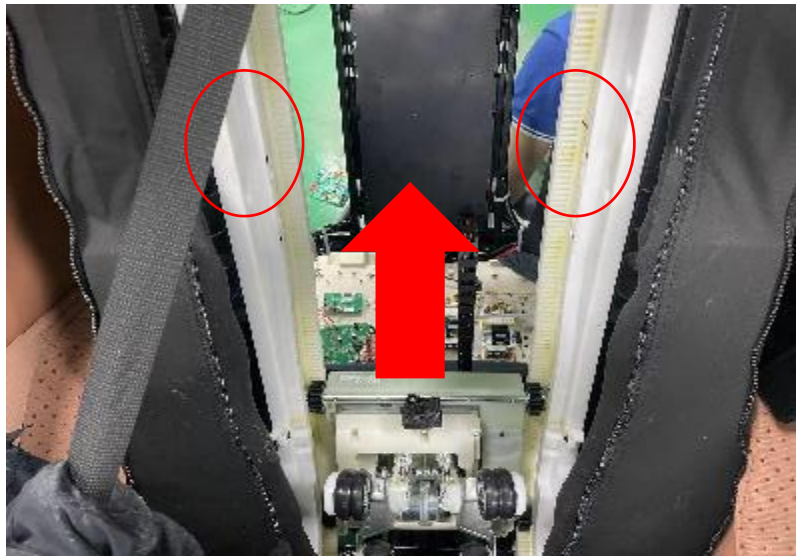
D.discontent 1 air hose，2 terminals



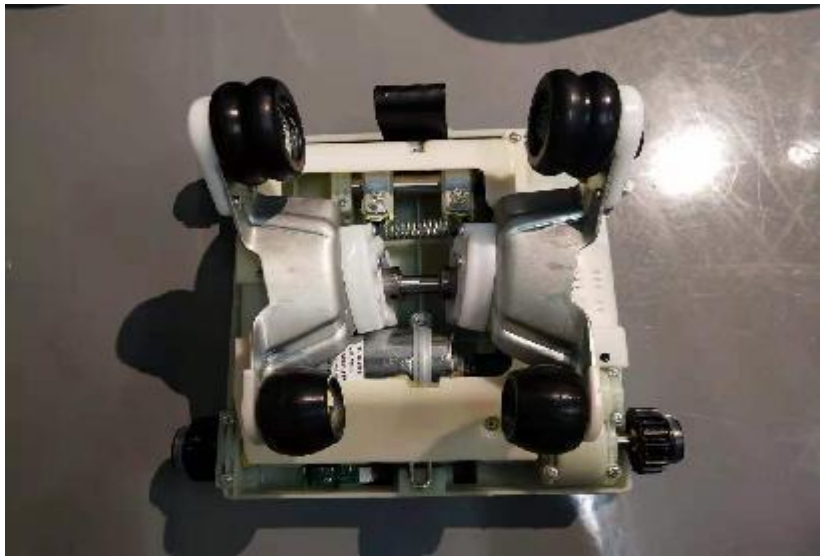
E.remove 4 screws

F.Remove the left and right stops of the guide rail

4.2、disassembly of mechanism： (note：remove rear cover and backrest pad，refer to 3.2/3.5)

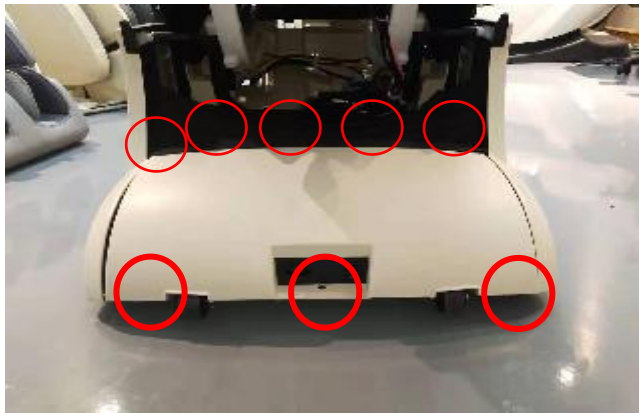


G.Push upward by hand to take out the movement from the removal stop

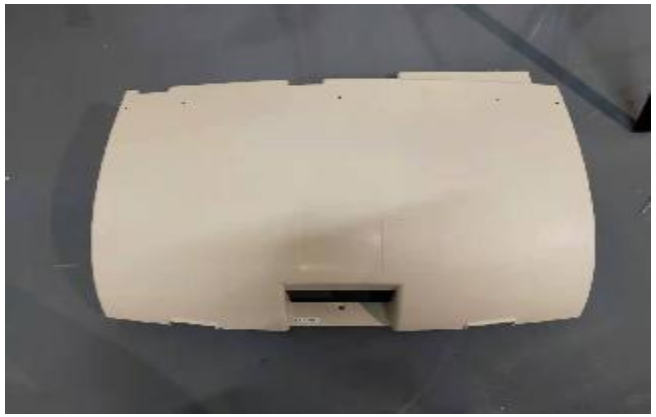


H.mechanism

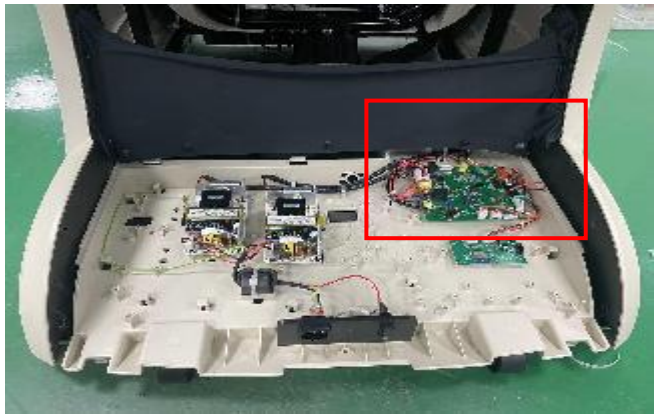
4.3、disassembly of main PCB box:



A.remove 3 screws，5 plastic screws



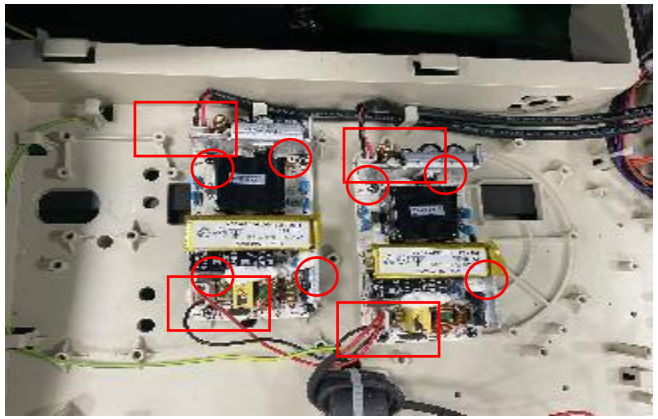
B.remove the cover



C.main PCB

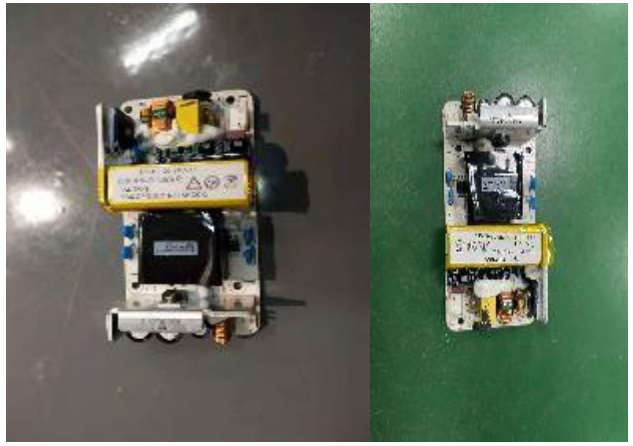
D.discontent the terminals and screws

E.remove main PCB

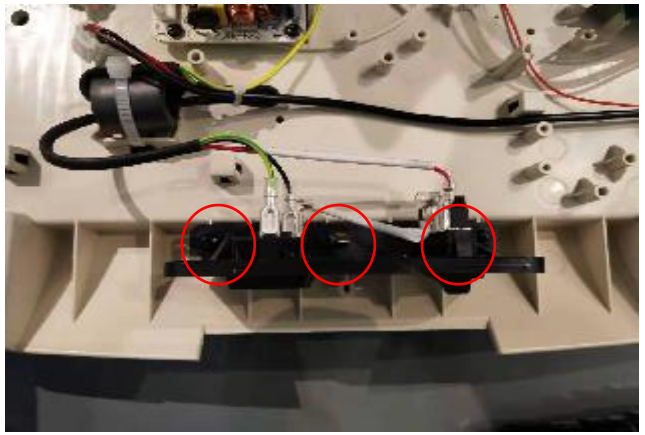


F.remove 7 screws and the terminals

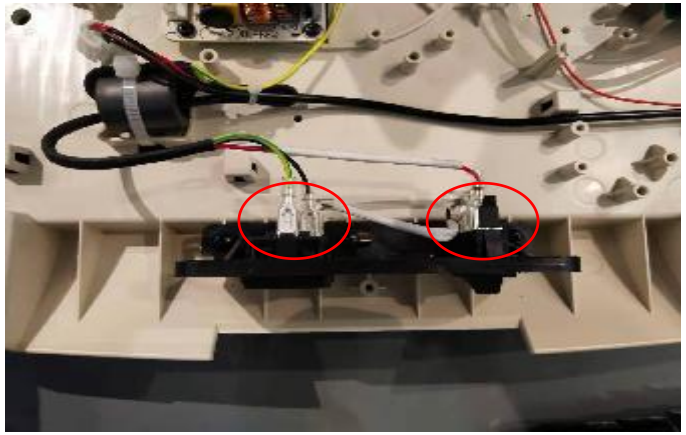
4.3、disassembly of main PCB box:



G.power PCB

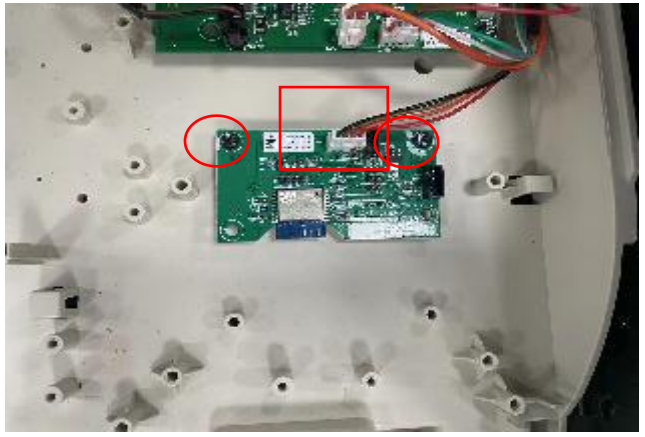


H.remove 3 screws



I.discontent the terminals

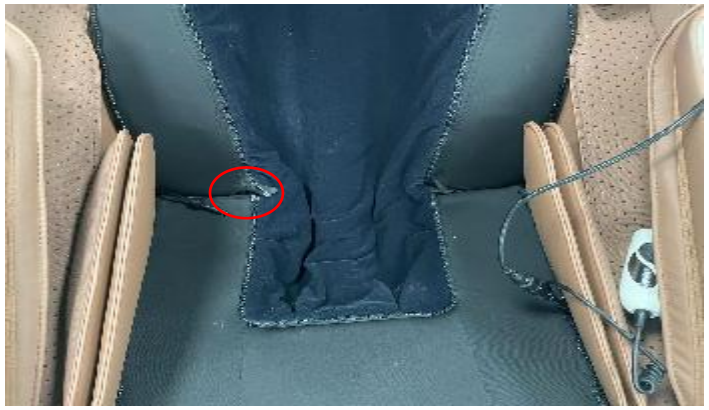
J.Panel as-switch



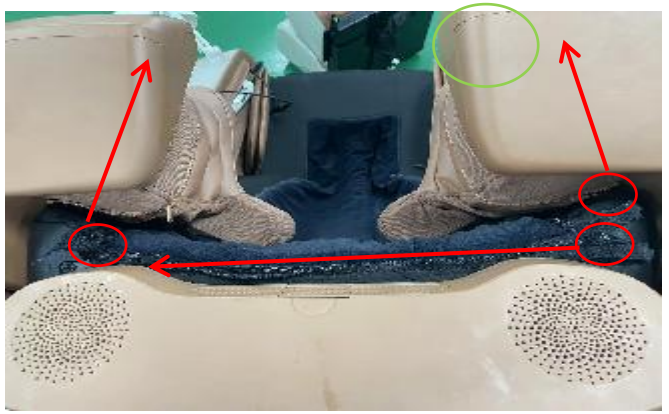
K.remove 2 screws，1 terminal

L.remove WIFI PCB

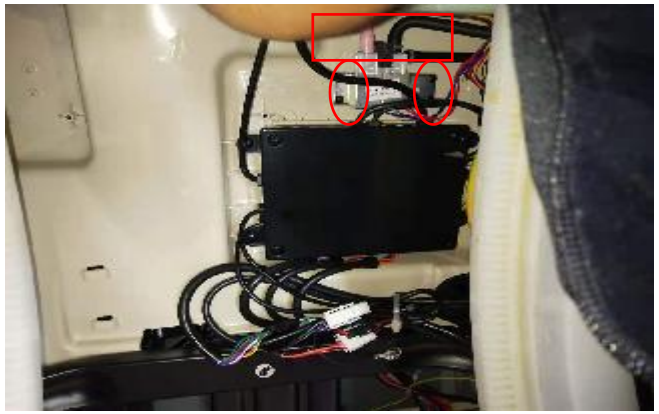
4.4、disassembly of under seat PCB,2-way air valve：



A.unzip the zipper

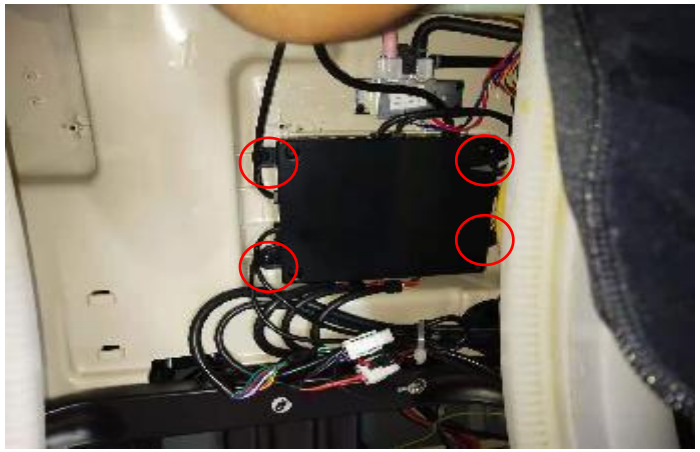


B.unzip the zipper

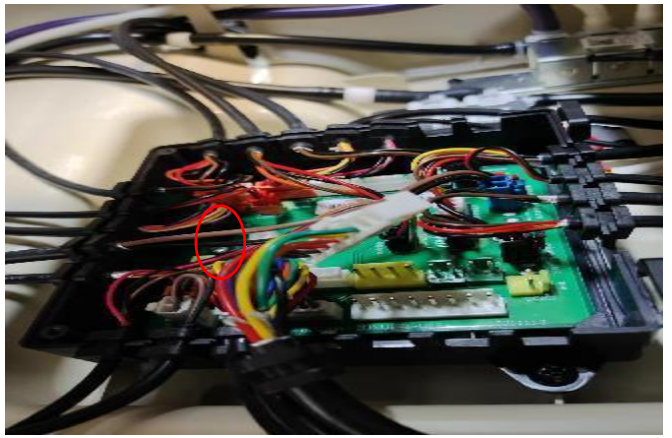


C.remov the screws，discontent the terminals，remove air valve

D.2-way air vavle



E.remove 4 screws

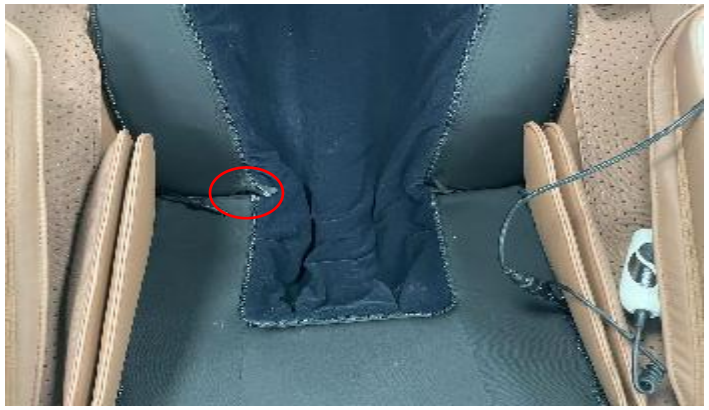


F.discontent the terminals，remove 1 screws

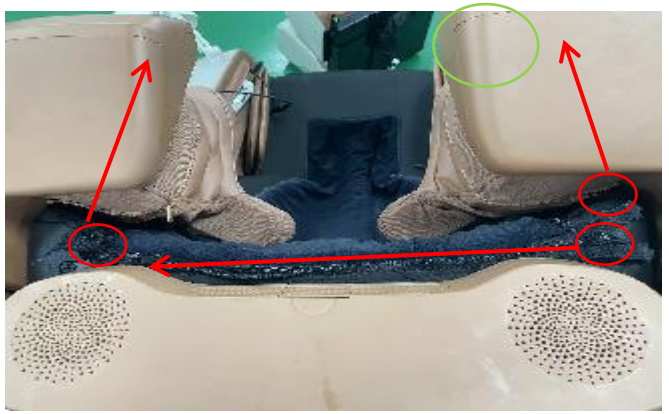
4.4、disassembly of under seat PCB,2-way air valve：

F.remove under seat PCB

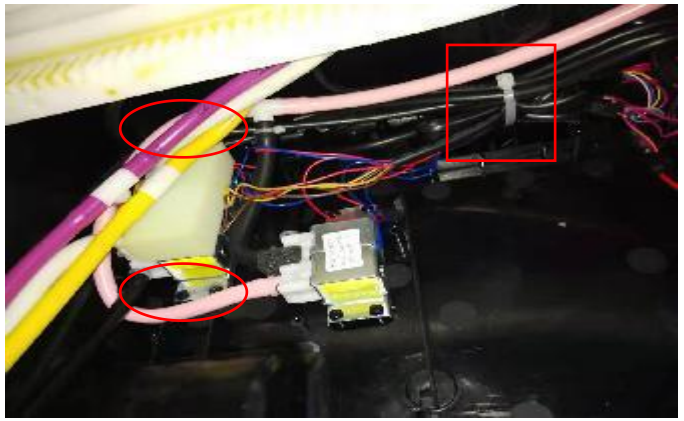
4.5、disassembly of 4-way air valve：



A.unzip the zipper



B.unzip the zipper



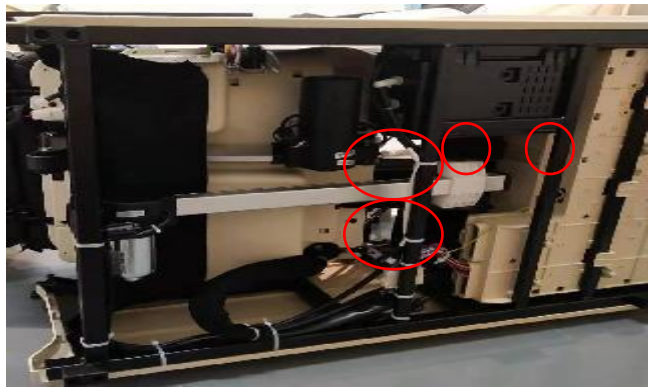
B.remove 4 screws，cut the cable tie

C.discontent the air hose and terminal

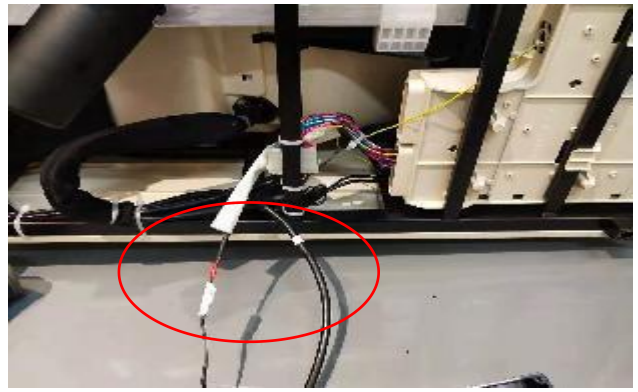
D.remove 4-way air valve

4.6、disassembly of air pump：

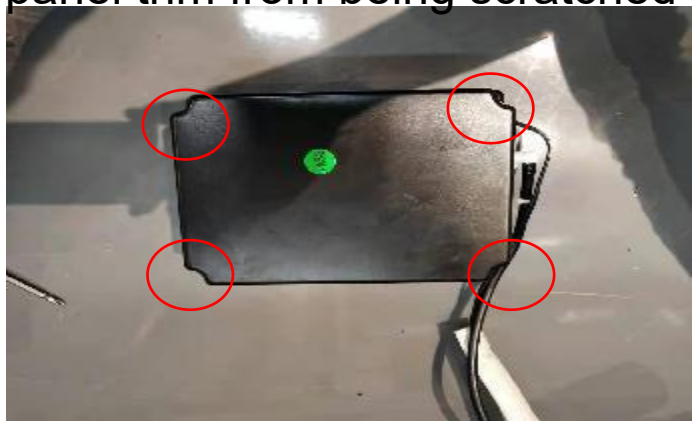
A.The chair should fall to the right. Pay attention to prevent the side panel trim from being scratched



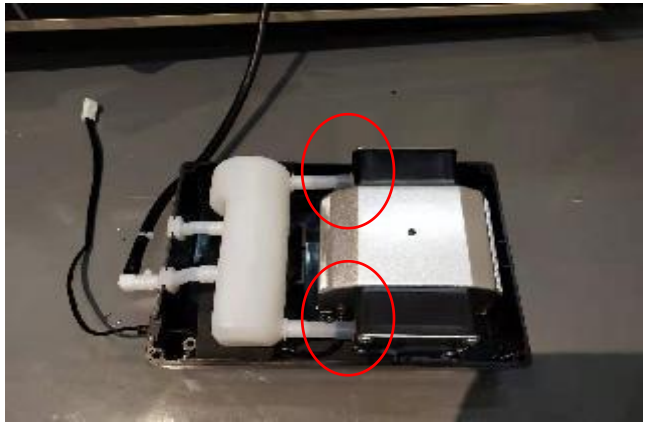
B.cut cable tie，remove 2 screws



C.discontent the air hose and terminal



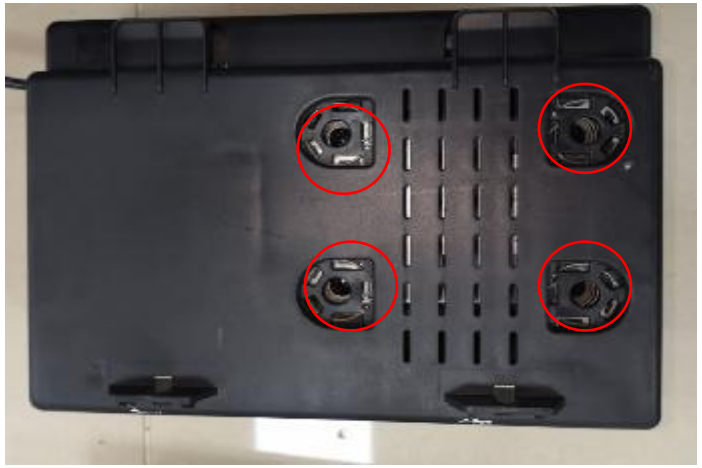
D.remove 4 screws



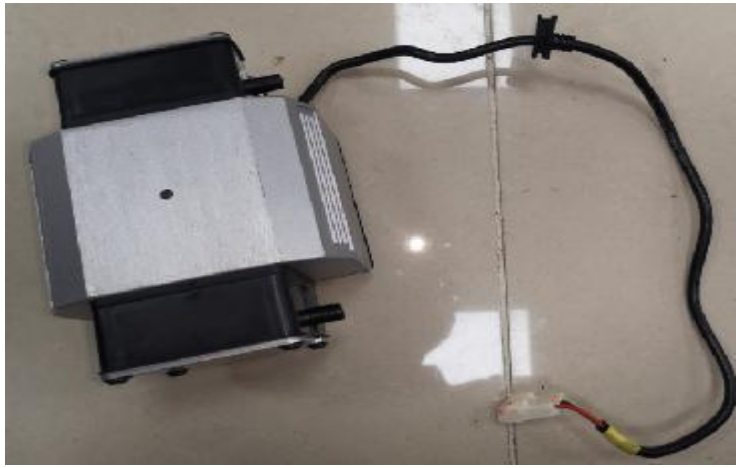
E.discontent the air hose

F.Remove the air receiver

4.6、disassembly of air pump：



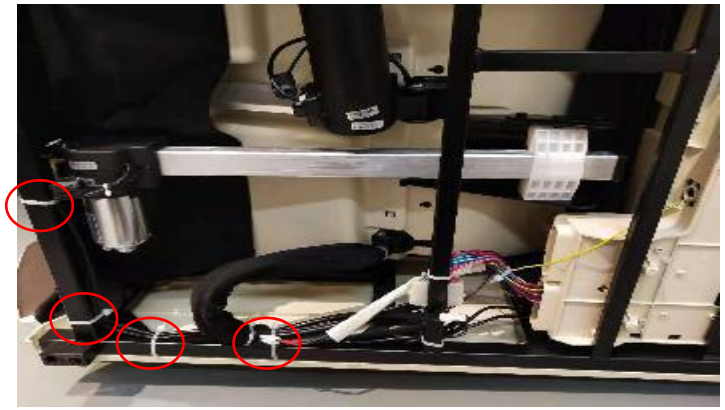
G.remove 4 screws



H.remove air pump

4.7、disassembly of backrest actuator：note：remove air pump refer to 4.6

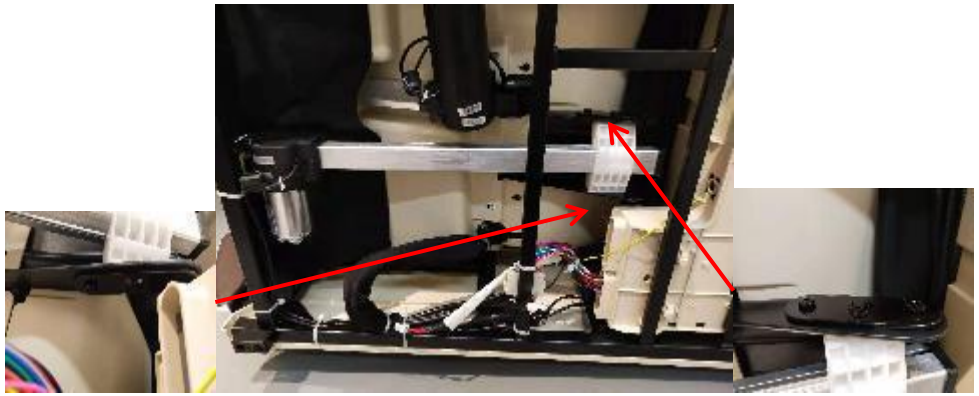
A.The chair should fall to the right. Pay attention to prevent the side panel trim from being scratched



B.cut the cable tie

C.discontent 2 terminals

D.remove the shaft

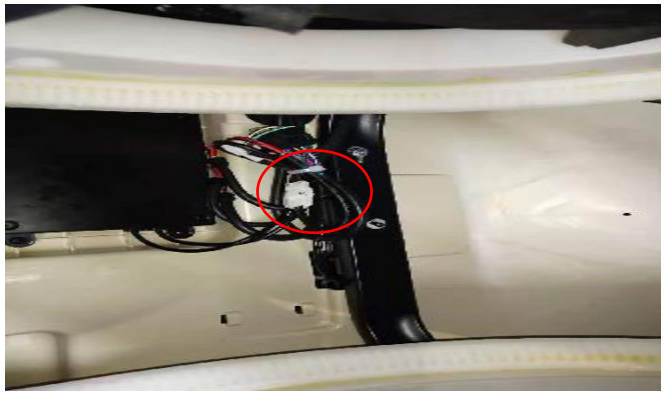


E.remove 4 screws

F.remove backrest actuator

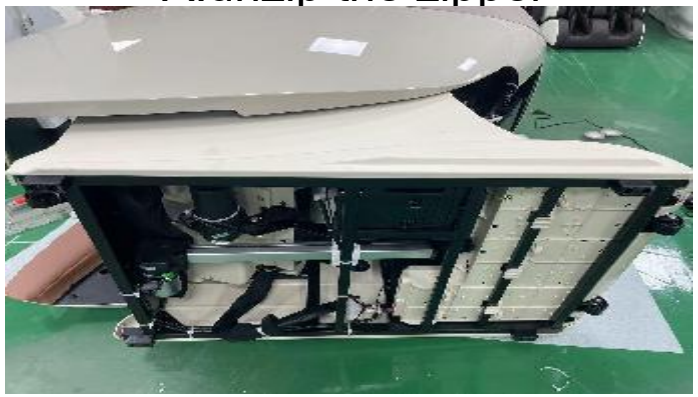
4.8、disassembly of legrest actuator:

A.unzip the zipper



B.cut the cable tie

C.discontent the terminals



D.The chair should fall to the right. Pay attention to prevent the side panel trim from being scratched

E.remove the shaft

F.remove the shaft

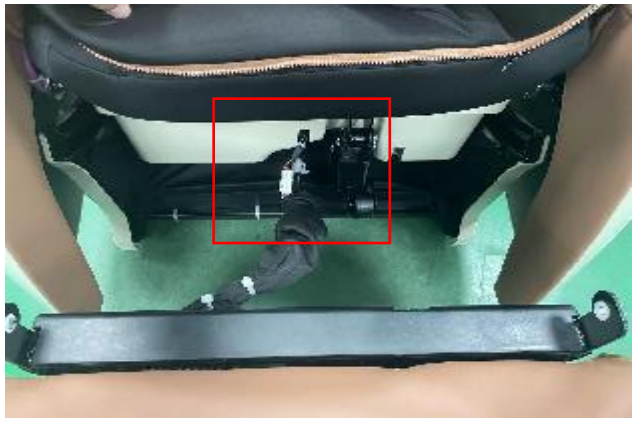
4.8、disassembly of legrest actuator：

G.legrest actuator

4.9、disassembly of legrest:

A.unzip the zipper

B.remove 2 stops

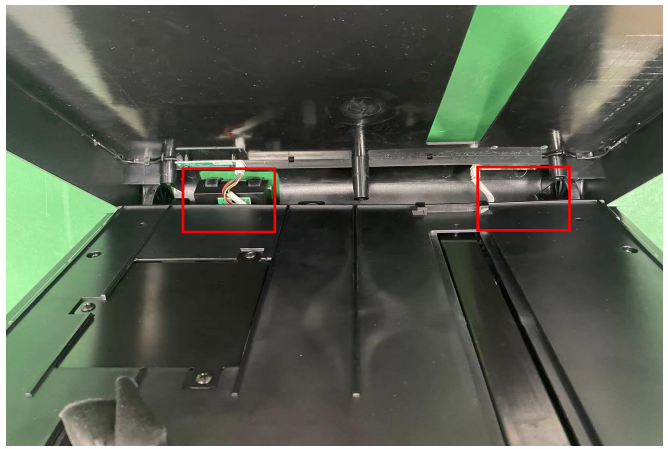


C.discontent the terminal and air hose

D.legrest unit

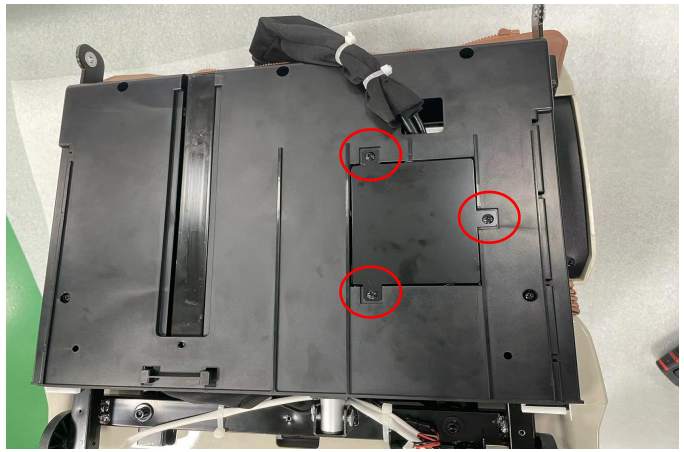
4.10、disassembly of legrest PCB:

A.remove 3 screws

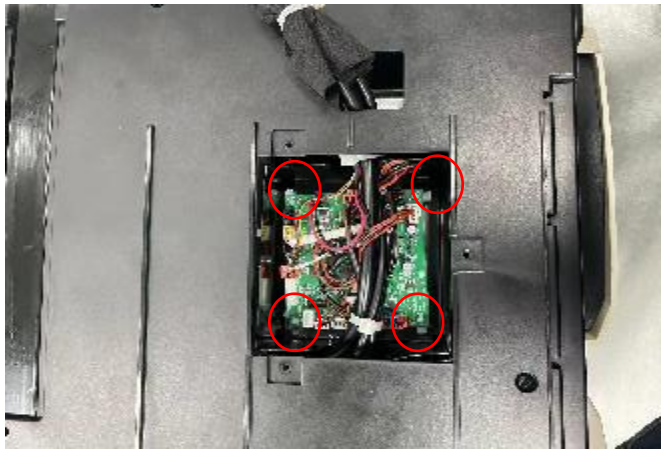


B.discontent the terminals

Cremove the cover



D.remove 3 screws

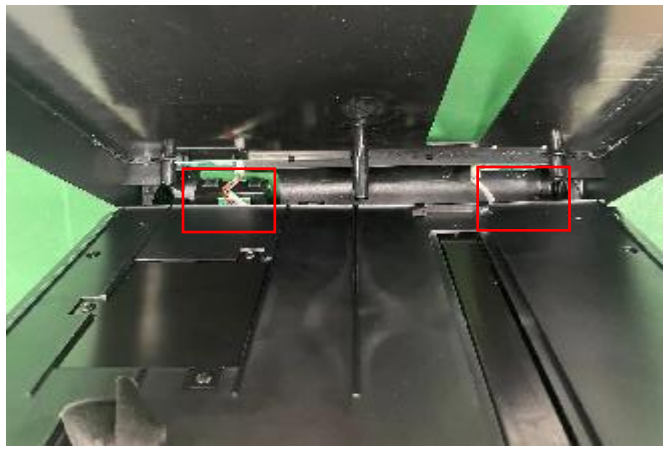


E.discontent the terminal, separate PCB from plastic holder

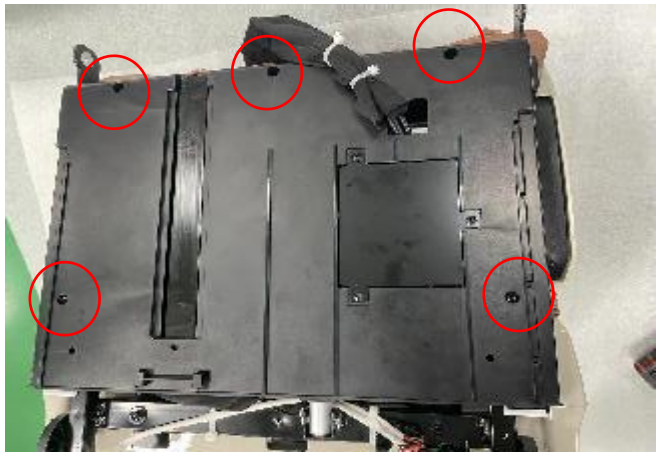
F.legrest PCB

4.11、disassembly of upper legrest:

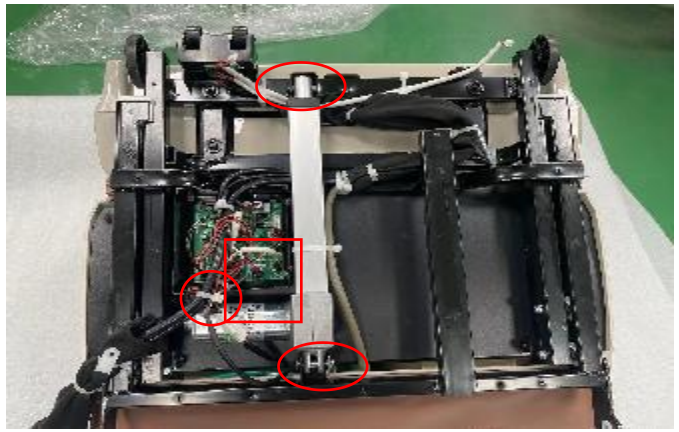
A.remove 3 screws



B.discontent the terminals

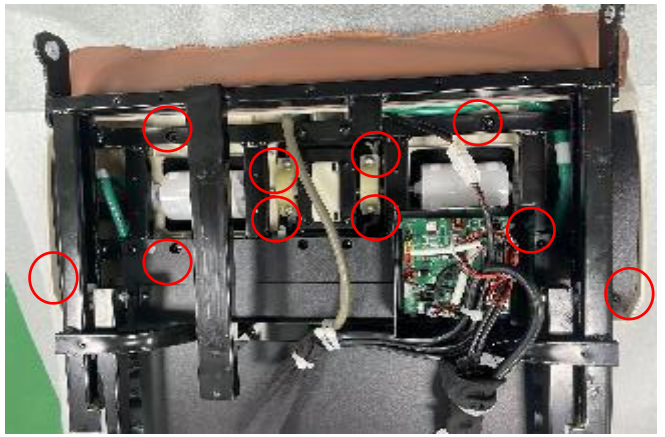


C.remove 5 screws



D.remove 2 shaft，discontent the terminals

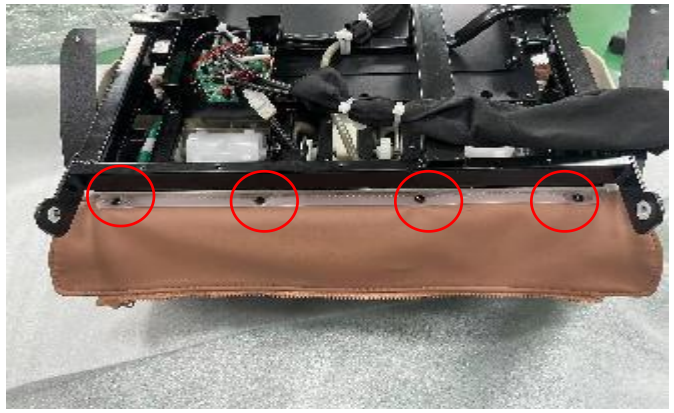
E.legrest actuator



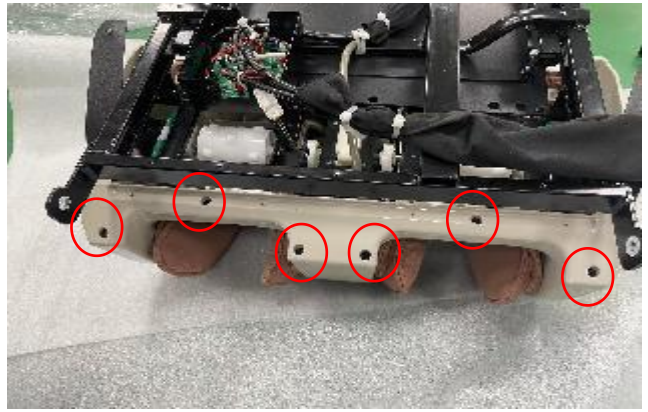
F.remove 10 screws

4.11、disassembly of upper legrest:

G.unzip the zipper

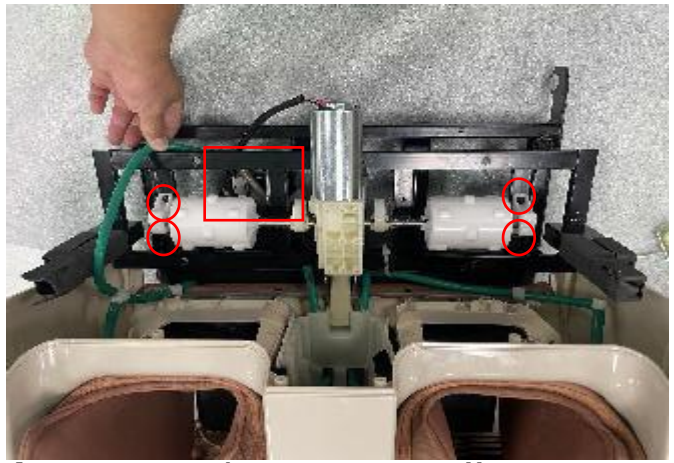


H.remove 4 screws

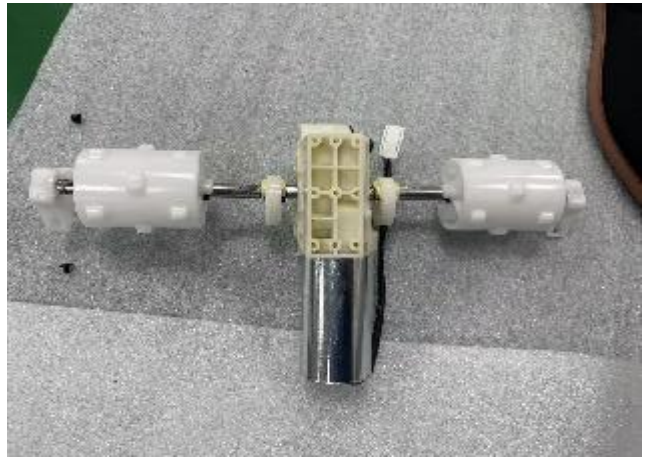


I.remove 6 screws

J.remove the plastic

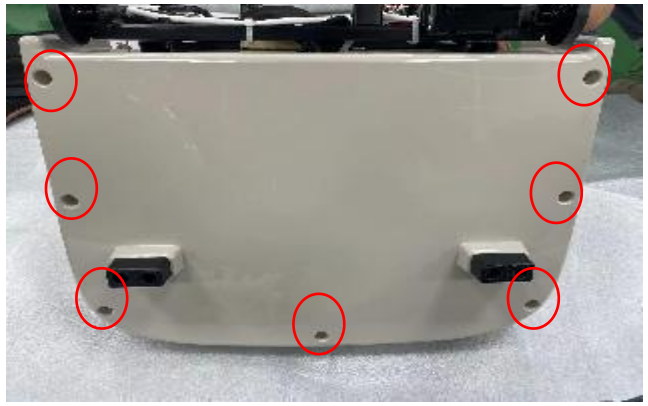


K.remove 4 screws，discontent the terminal

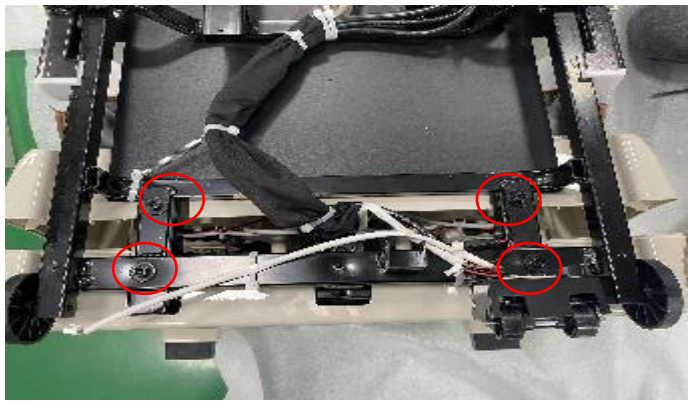


L.remove the kneading unit

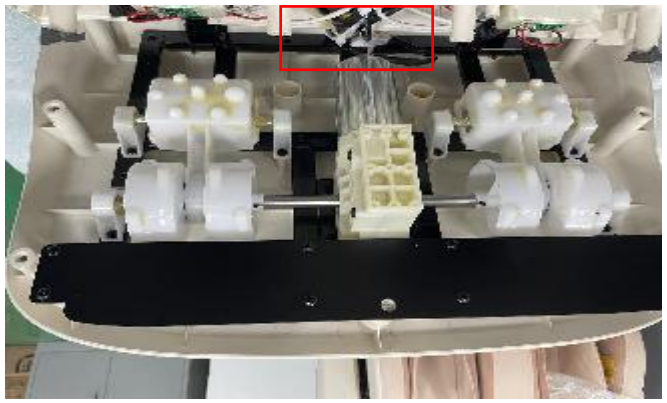
4..12、disassembly of lower legrest:



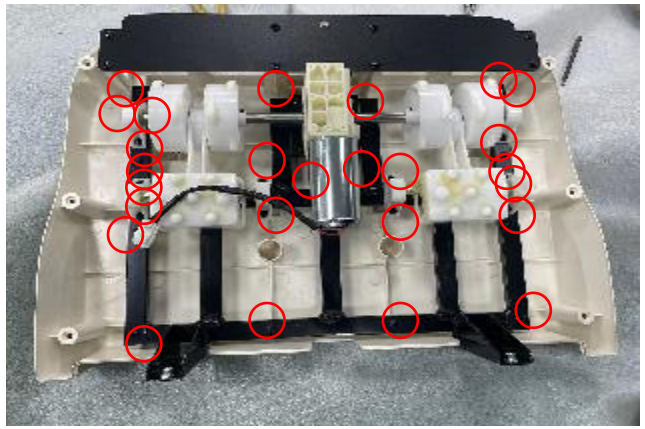
A.remove 7 screws



B.remove 4 screws



C.cut cable tie，discontent the terminal

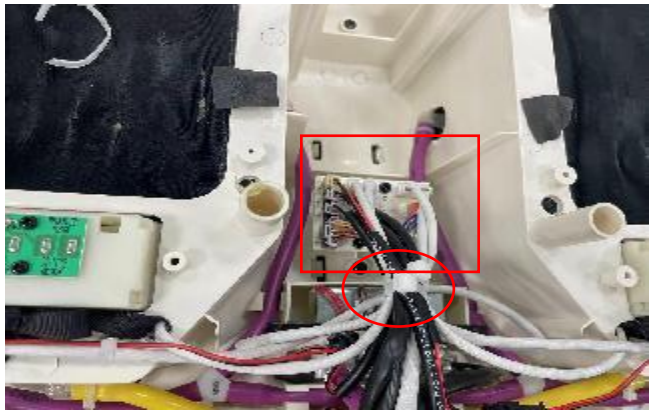


D.remove 25 screws

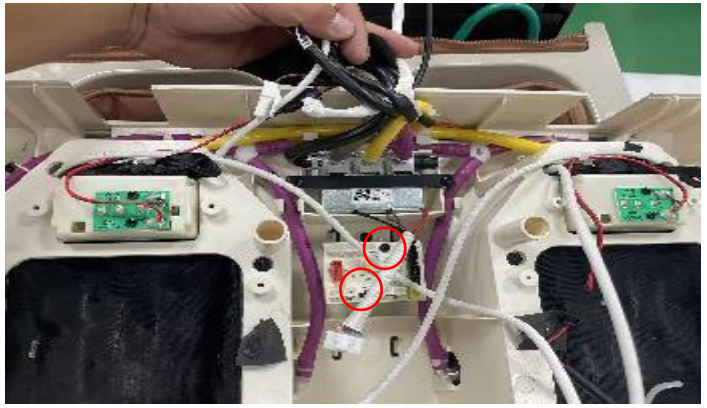
E.remove 4 screws

F.remove foot massage

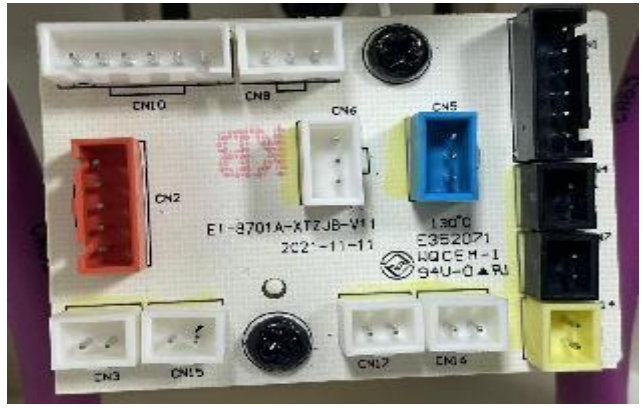
4..12、disassembly of lower legrest：



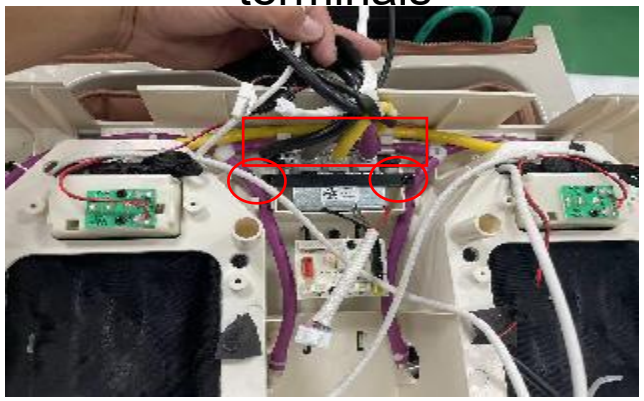
G.cut cable tie，discontent the terminals



H.remove 2 screws



I.remove the adapter PCB



J.remove 2 screws，discontent the air hose

K.remove the 3-way air valve

四、Massage chair fault judgment

massage chairauto-check list

No.	phenomenon	problem description	steps of shooting the trouble	remark
1	power button stuck	Button not rebounding correctly Abnormal cause causing button short circuit	Check button status Replace the switch button	turn the power
2	No communication between the remote controll and the main PCB for more than 4S	Poor contact or fracture of wire Circuit PCB damage	Check or replace the wire Check or replace the main PCB and remote controll	turn the power
3	mechanism PCB and main PCB have not communicated for more than 4S	Poor contact or fracture of backrest cable Circuit PCB damage	Check or replace backrest cable Check or replace main PCB and mechanism PCB	turn the power
4	no communication between shoulder PCB and main PCB for more than 4S	Poor contact or fracture of wire Circuit PCB damage	Check or replace the wire Check or replace main PCB or shoulder PCB	turn the power
5	Side panel key stuck	Key does not spring back correctly Key short circuit due to abnormal causes	Check key status Replace the side panel key	turn the power

6	No communication between legrest PCB and main PCB for more than 4S	Poor contact or fracture of wire Circuit PCB damage	Check or replace the wire Check or replace main PCB or legrest PCB	turn the power
7	Left shoulder and shoulder pressing PCB failed to communicate successfully for more than 4S (left shoulder after sitting)	Poor contact or fracture of wire Circuit PCB damage	Check or replace the wire Check or replace shoulder PCB or Shoulder PCB	turn the power
8	right shoulder and shoulder pressing PCB failed to communicate successfully for more than 4S (right shoulder after sitting)	Poor contact or fracture of wire Circuit PCB damage	Check or replace the wire Check or replace shoulder PCB or Shoulder PCB	turn the power
11	Abnormal position signal sensor of left shoulder kneading motor	1.position sensor borken 2.Abnormal connection between shoulder drive PCB and signal PCB 3.motor broken 4.Circuit PCB damage	1.replace the sensor 2.check the wire 3.check or replace the motor 4.replace Shoulder pressure PCB	turn the power
12	Abnormal rotation speed signal sensor of left shoulder kneading motor	1. speed sensor is broken 2. the connection between the shoulder drive PCB and the motor is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1.check the wire 2.check or replace the motor 3.replace Shoulder pressure PCB	turn the power

14	Abnormal position signal sensor of right shoulder kneading motor	1.position sensor borken 2.Abnormal connection between shoulder drive PCB and signal PCB 3.motor broken 4.Circuit PCB damage	1.replace the sensor 2.check the wire 3.check or replace the motor 4.replace Shoulder pressure PCB	turn the power
15	Abnormal rotation speed signal sensor of right shoulder kneading motor	1. speed sensor is broken 2. the connection between the shoulder drive PCB and the motor is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1.check the wire 2.check or replace the motor 3.replace Shoulder pressure PCB	turn the power
17	Abnormal position signal sensor of left shoulder rolling motor	1. position sensor is broken 2. the initial position of code disk is incorrect 3. shoulder overshoot 4. shoulder PCB damaged	1.replace the sensor 2.Move the pressure shoulder to the initial height position, and then turn the code disk to the correct initial position. 3.replace Shoulder PCB	turn the power
18	Left shoulder rolling motor speed signal sensor abnormal	1. speed sensor is broken 2. the connection between the shoulder PCB and the motor is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1.check the wire 2.check or replace the motor 3.replace Shoulder PCB	turn the power

20	Abnormal position signal sensor of right shoulder rolling motor	1. position sensor is broken 2. the initial position of code disk is incorrect 3. shoulder overshoot 4. shoulder PCB damaged	1.replace the sensor 2.Move the pressure shoulder to the initial height position, and then turn the code disk to the correct initial position. 3.replace Shoulder PCB	turn the power
21	right shoulder rolling motor speed signal sensor abnormal	1. speed sensor is broken 2. the connection between the shoulder PCB and the motor is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1.check the wire 2.check or replace the motor 3.replace Shoulder PCB	turn the power
23	Left shoulder air pressure sensor IIC communication abnormal	1. the sensor is broken 2. the connection between the shoulder PCB and the air pressure sensor is abnormal 3. the circuit components of the shoulder PCB are damaged	1.Replace the air pressure sensor 2.check the wire 3.replace shoulder PCB	turn the power
24	right shoulder air pressure sensor IIC communication abnormal	1. the sensor is broken 2. the connection between the shoulder PCB and the air pressure sensor is abnormal 3. the circuit components of the shoulder PCB are damaged	1.Replace the air pressure sensor 2.check the wire 3.replace shoulder PCB	turn the power

32	No communication between the side panel key and the main PCB for more than 4S	Poor contact or fracture of wire Circuit PCB damage	check or replace the wire check or replace main PCB or side panel control	turn the power
34	No communication between the pressure detection module and the main PCB for more than 6 seconds	Poor contact or fracture of wire Pressure detection module damaged	check or replace the wire Check or replace the main PCB and pressure detection module	turn the power
37	Abnormal communication between WiFi PCB and main PCB	Poor contact or fracture of wire WiFi PCB damaged	check or replace the wire Check or replace the main PCB and WIFI PCB	turn the power
38	Abnormal communication between Bluetooth board and central board	Poor or broken contact with the wire or terminal Bluetooth PCB broken	Check or replace the wire Check or replace the main PCB and Bluetooth PCB	turn the power

41	The position code of the mechanism rolling motor is abnormal, that is, the code disk is in an incorrect position.	1. position sensor is broken 2. the initial position of code disk is incorrect 3. mechanism overshoot 4. mechanism PCB damaged	1. replace the sensor 2. move the mechanism to the initial height position, and then turn the code disc to the correct initial position. 3. replace the mechanism	turn the power
42	The rolling motor speed sensor of the mechanism is abnormal, i.e. no change of the speed code disk is detected after more than 6S.	1. position sensor is broken 2. the connection between the main PCB and the mechanism PCB is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the mechanism PCB	turn the power
44	The position sensor of the movement kneading motor is abnormal, that is, no change of the position code disk is detected for more than 10s.	1. position sensor is broken 2. the connection between the main PCB and the main PCB is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the mechanism PCB	turn the power

46	The rotation speed sensor of the mechanism kneading motor is abnormal, that is, the change of the rotation speed code disk is not detected for more than 6S.	1. position sensor is broken 2. the connection between the main PCB and the mechanism PCB is abnormal 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the mechanism PCB	turn the power
59	The backrest actuator count is abnormal.	1. the counting sensor is broken 2. abnormal connection 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the main PCB	turn the power
63	The legrest actuator count is abnormal.	1. the counting sensor is broken 2. abnormal connection 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the main PCB	turn the power
68	The Telescopic actuator count is abnormal.	1. the counting sensor is broken 2. abnormal connection 3. motor is broken or locked 4. drive circuit components are damaged	1. replace the sensor 2. check the wiring 3. check or replace the motor 4. replace the main PCB	turn the power