

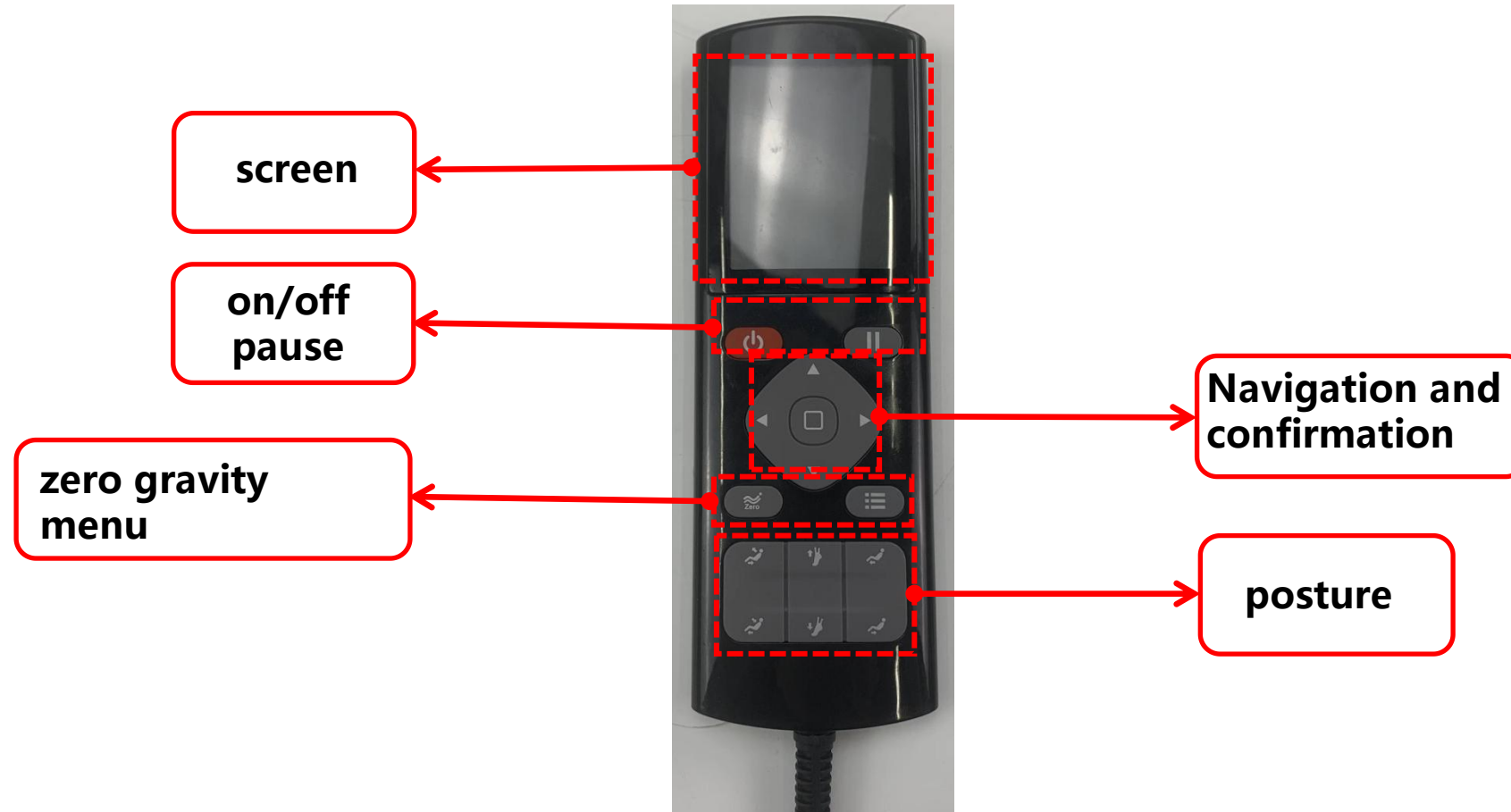


**A550-2 service manual**

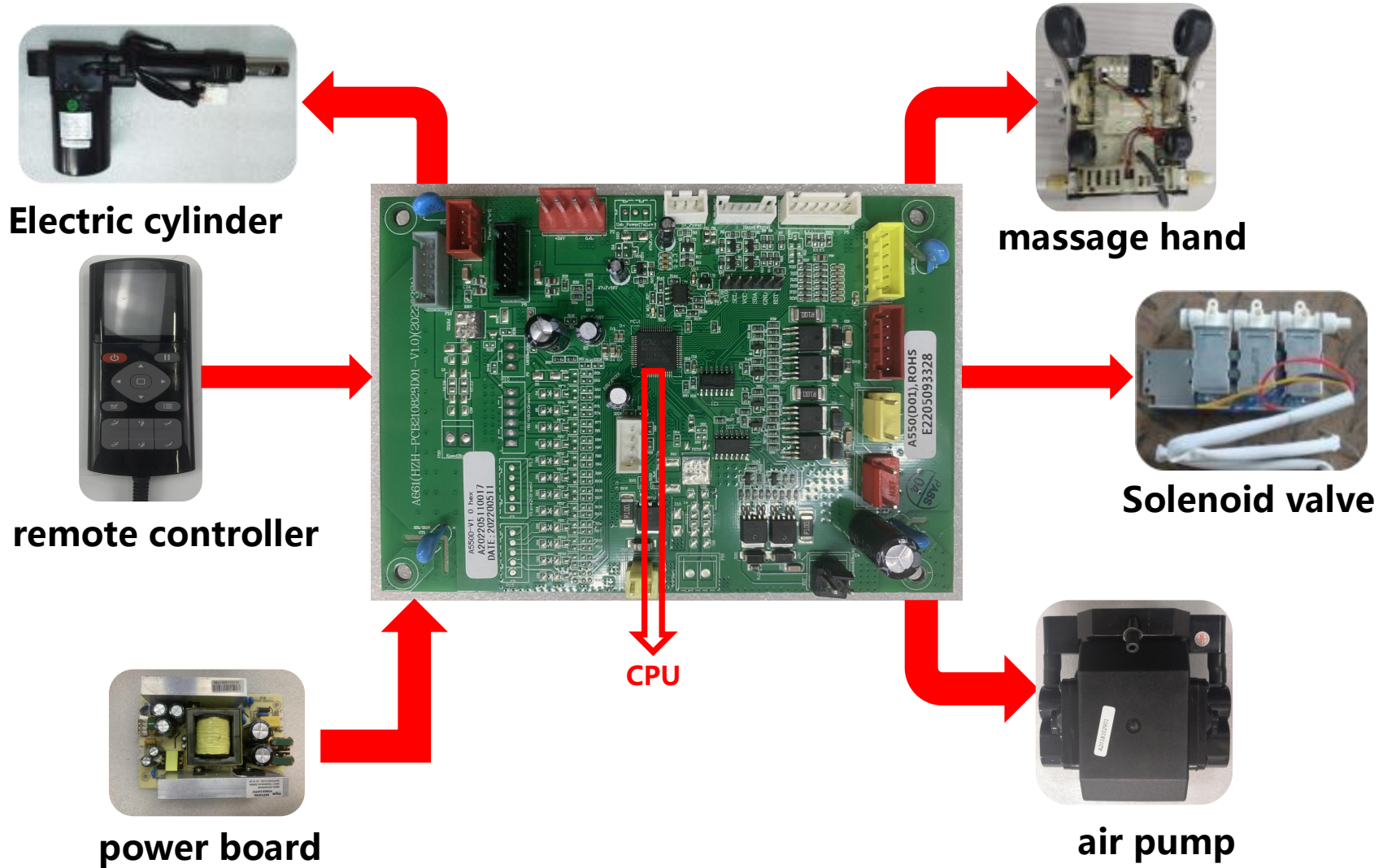
## 1.1、 Part name



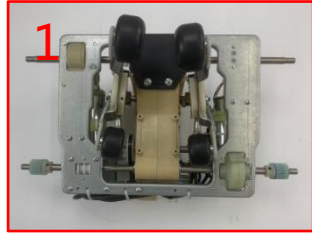
## 1.2、 Remote controller



# Chapter two: Basic control principle



## 3.1、 Internal structure



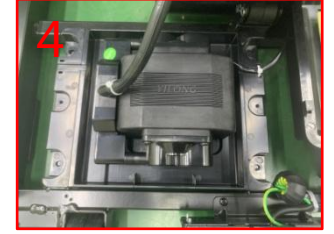
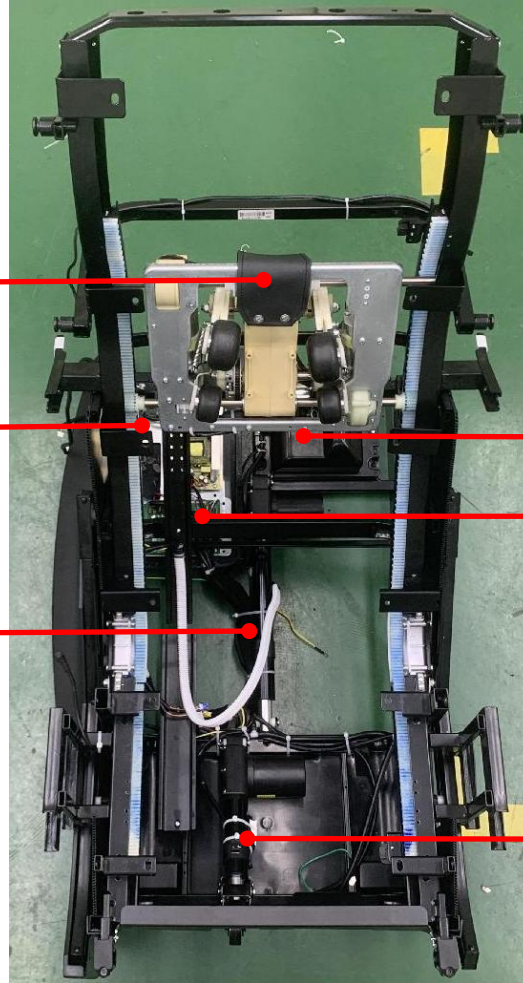
1. massage hand



2. power switch box



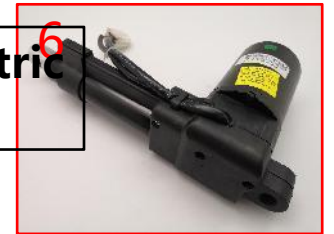
3. Backrest electric cylinder



4. Air pump

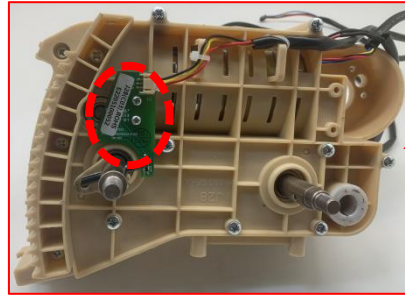


5. Main PCB box component

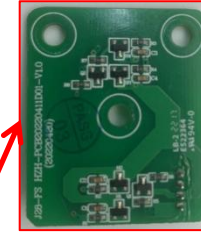


6. Footrest electric cylinder

## 3.2、massage hand structure



1.Kneading width detection board 5V



5. Stretch stroke detection board 5V

2. Walking lap detection board 5V

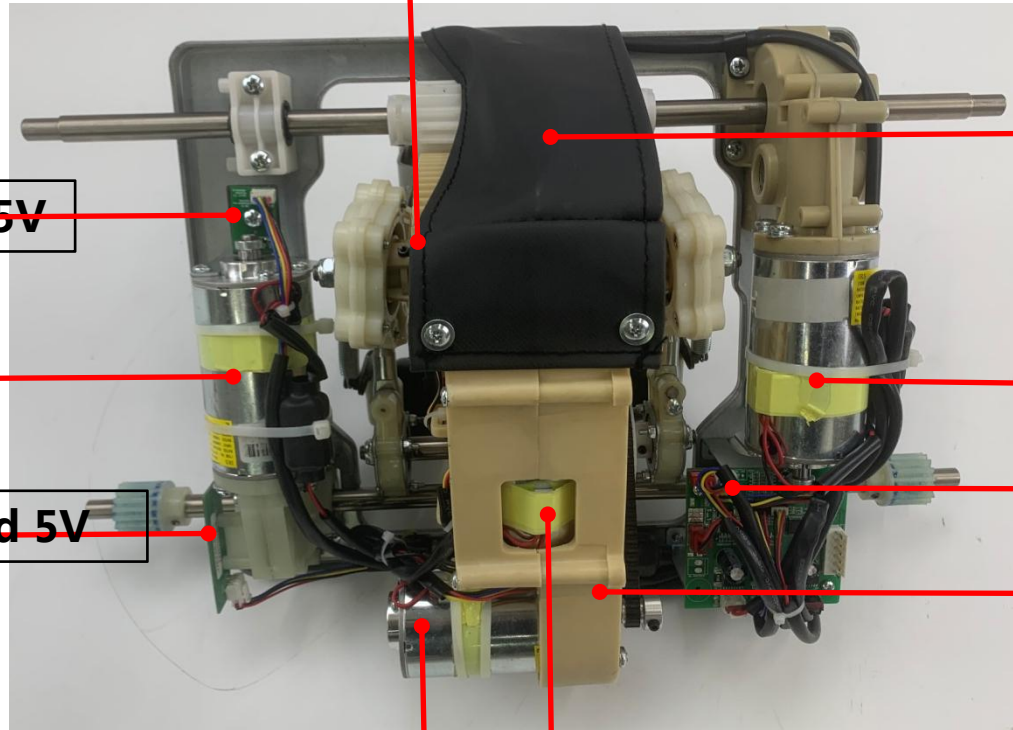
3. Walking motor 24V

6.stretch motor 24V 24V

4.Walking travel detection board 5V

7.massage hand PCB 24/5V

8.Kneading lap detection board 5V

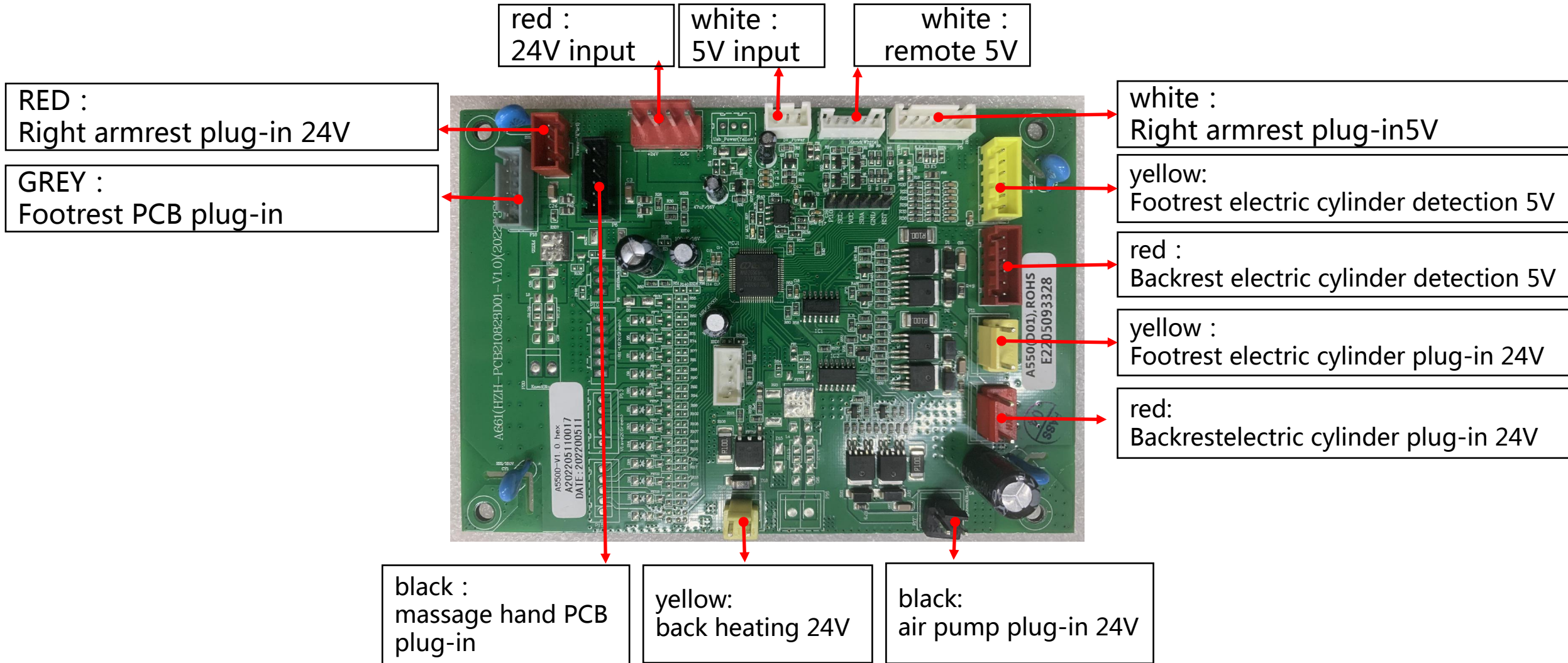


9.tapping motor 24V

10.Kneading motor 24V



## 3.3、 Main PCB plug-in distribution diagram



## 3.4、 power board plug-in distribution diagram



## 3.5、massage hand PCB plug-in distribution diagram

red :  
walking detection 5V

white :  
Walking lap detection 5V

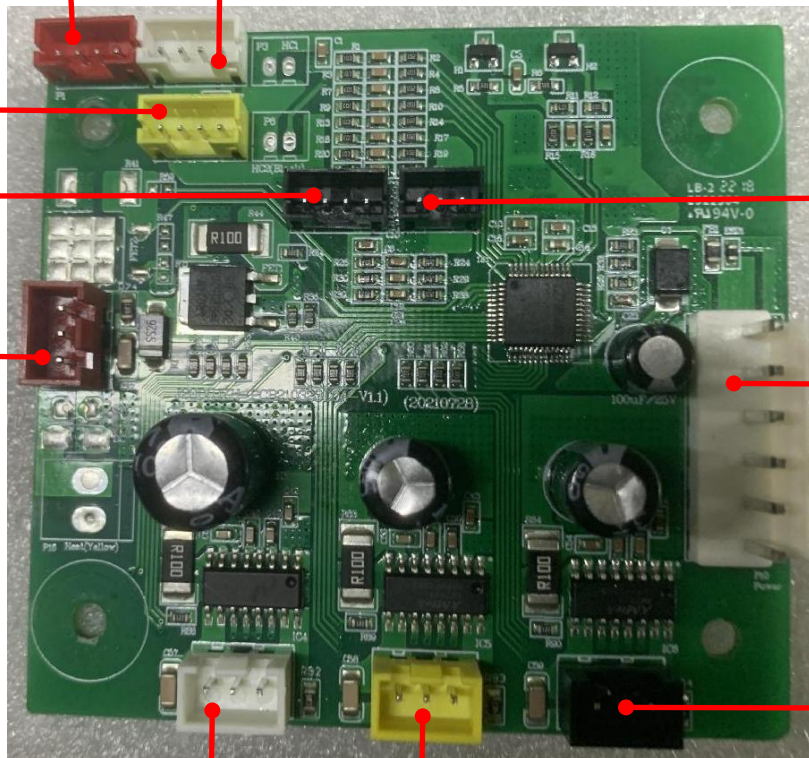
yellow :  
stretch detection 5V

black :  
kneading lap detection 5V

red :  
tapping motor 24V

black :  
kneading width detection 5V

white :  
PCB input 24/5V



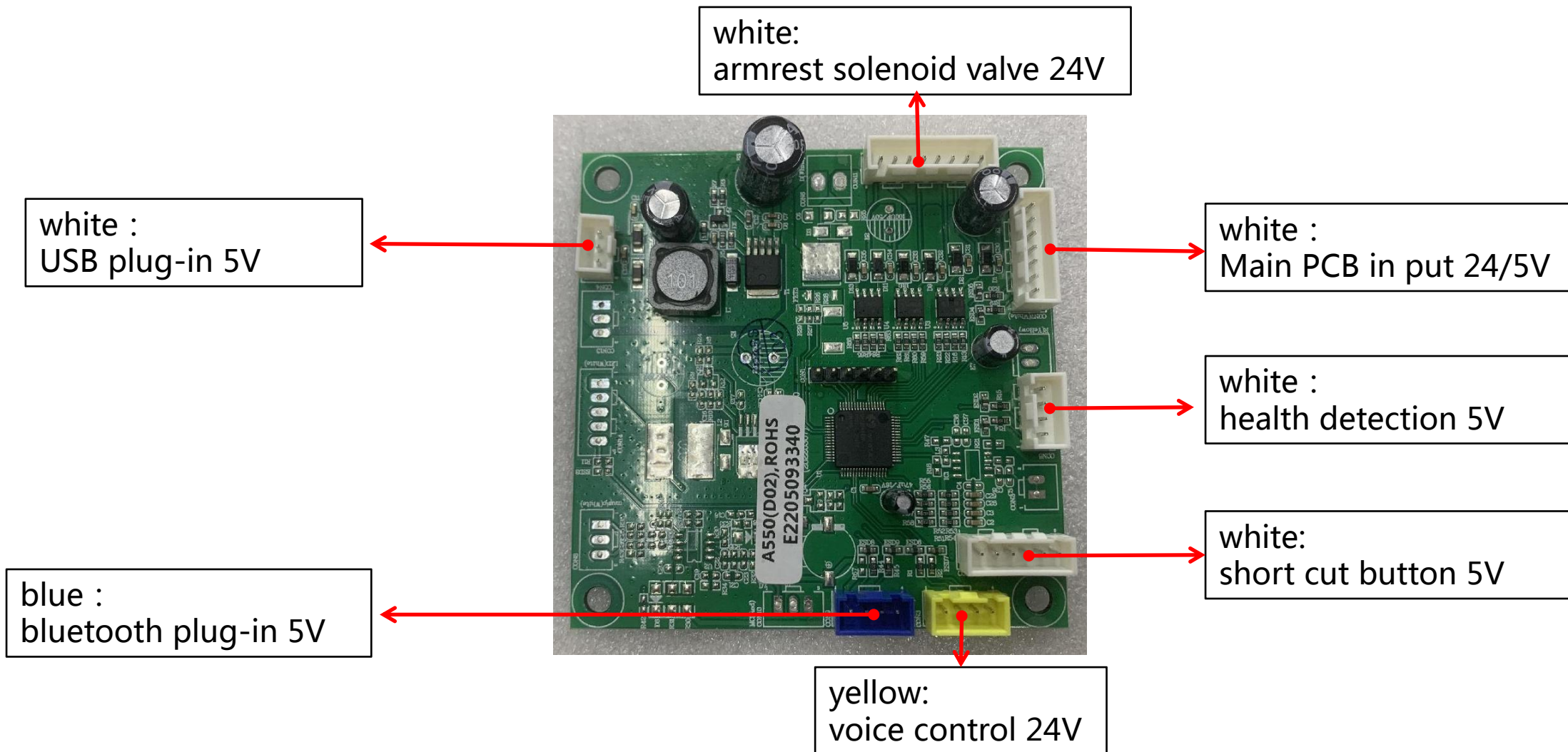
black :  
walking motor 24V

white :  
kneading motor 24V

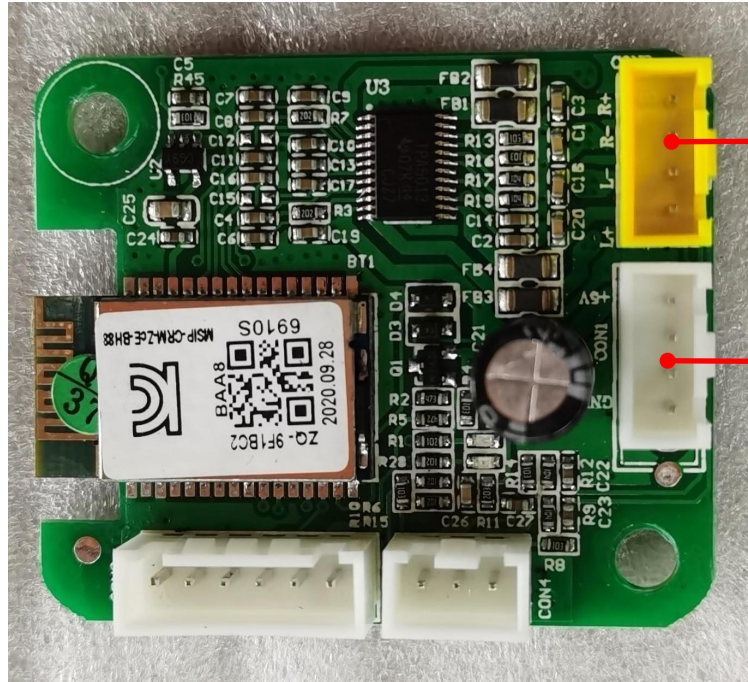
yellow :  
stretch motor 24V



## 3.7、 Right armrest PCB plug-in distribution diagram



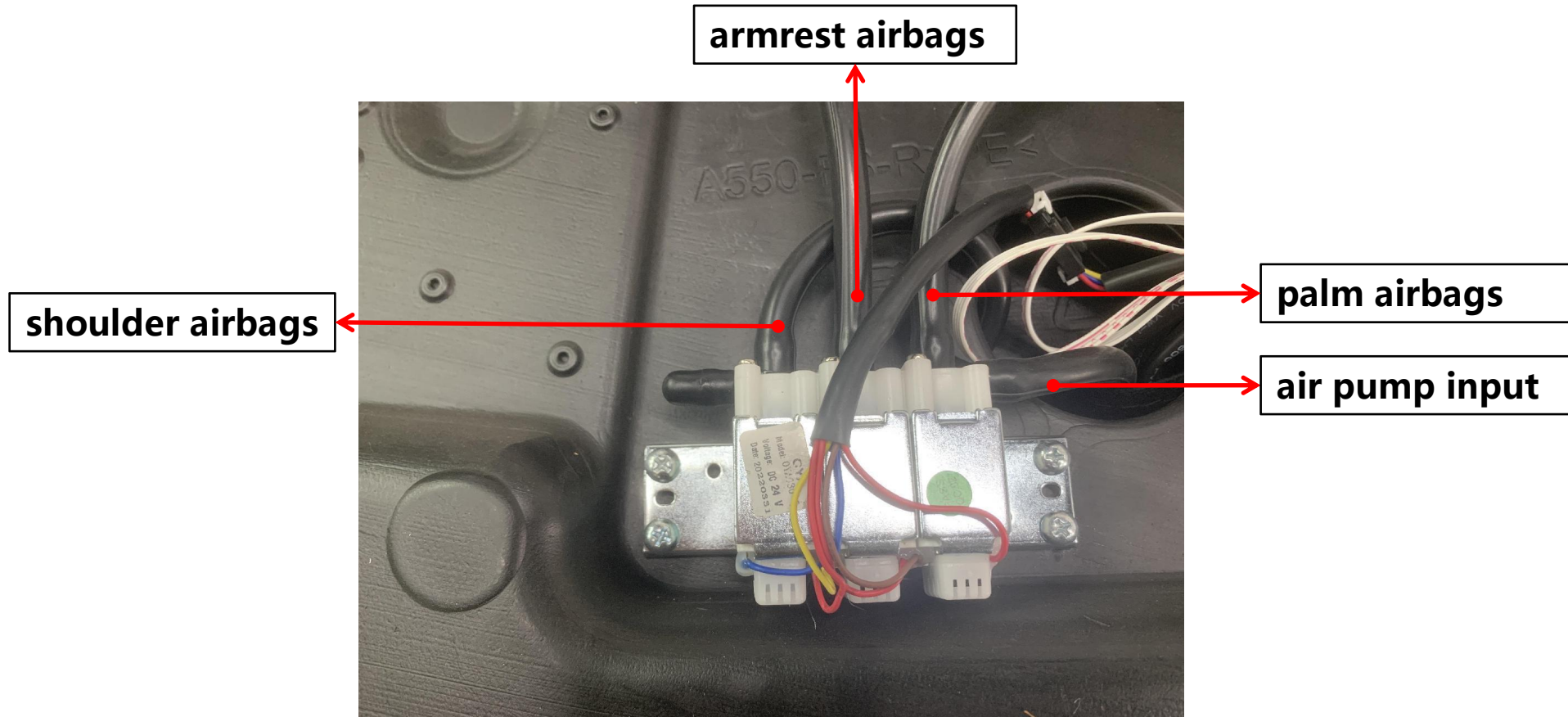
## 3.8、 Bluetooth board plug-in distribution diagram



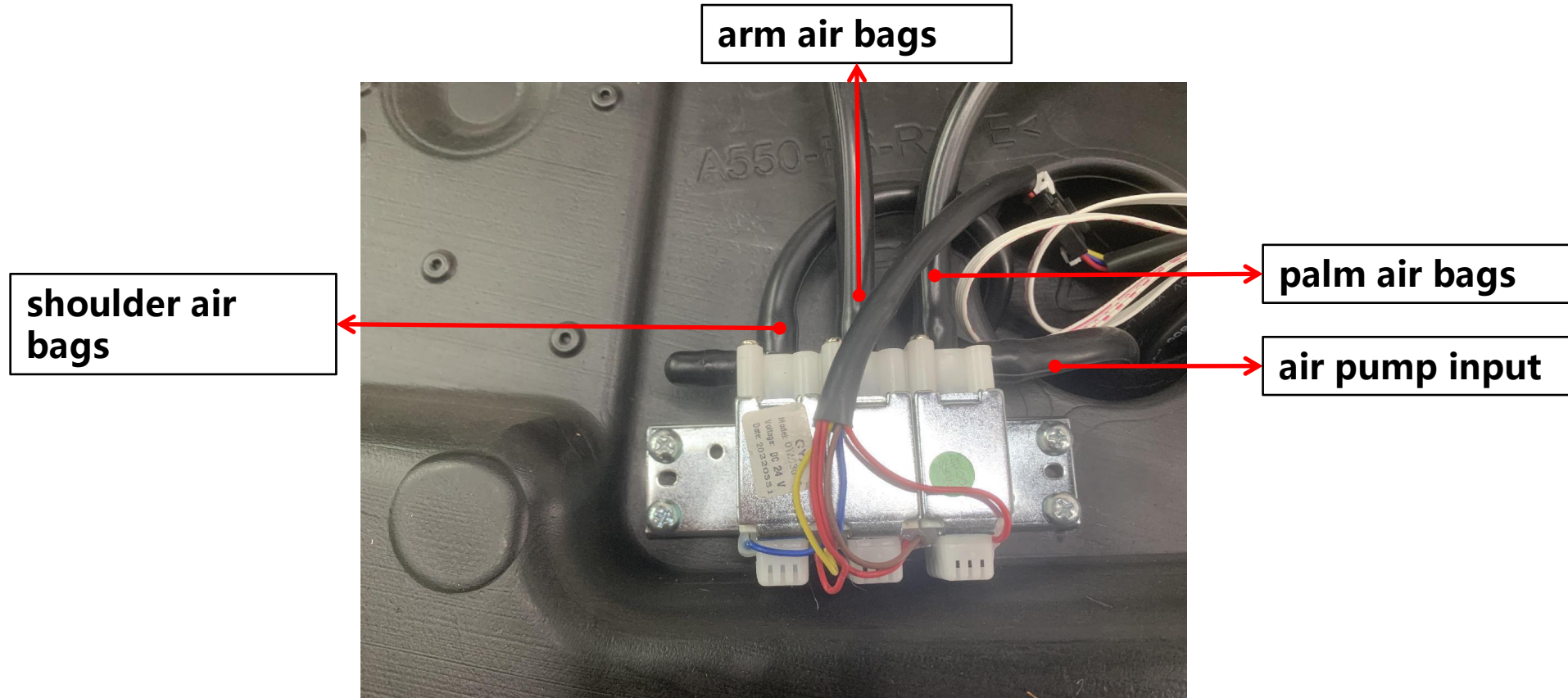
**yellow :**  
**audio output 5V**

**white:**  
**5V input**

## 3.9、Armrest solenoid valve inlet and outlet diagram



## 3.10、 armrest air valve air in and air out

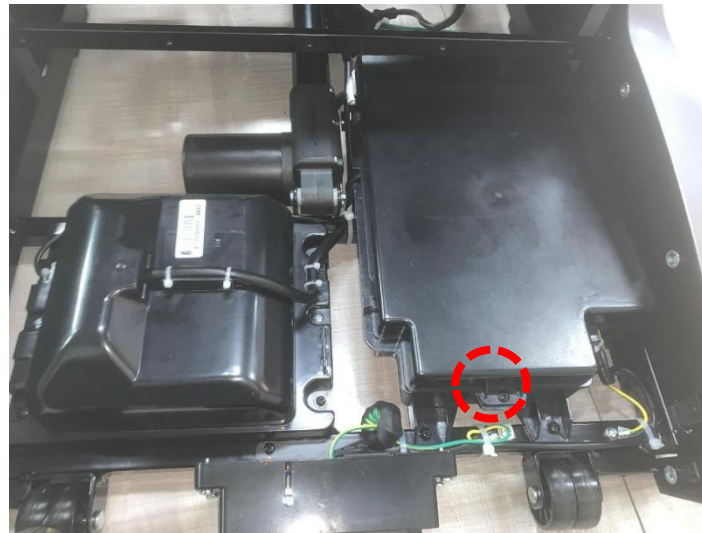


## 4.1、 PCB box cover remove



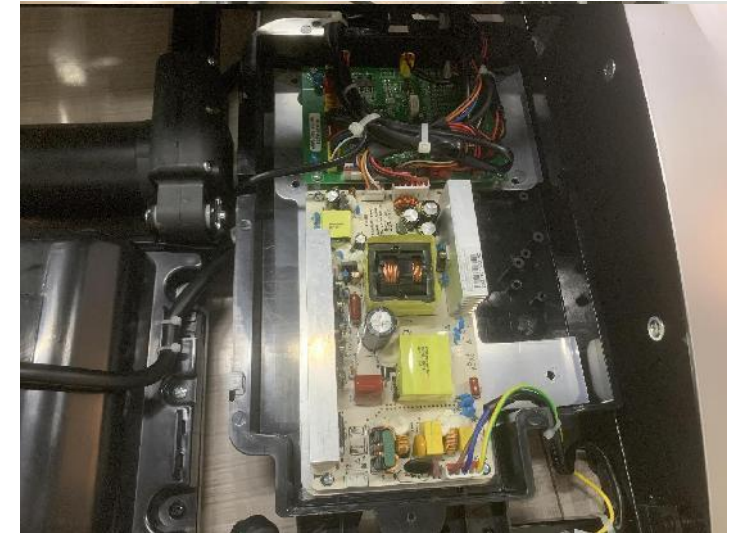
1

1、 remove the 2 screws ( 1 )



2

2、 remove the screw on the PCB box cover ( 2 )



3

3、 remove the PCB box cover ( 3 )

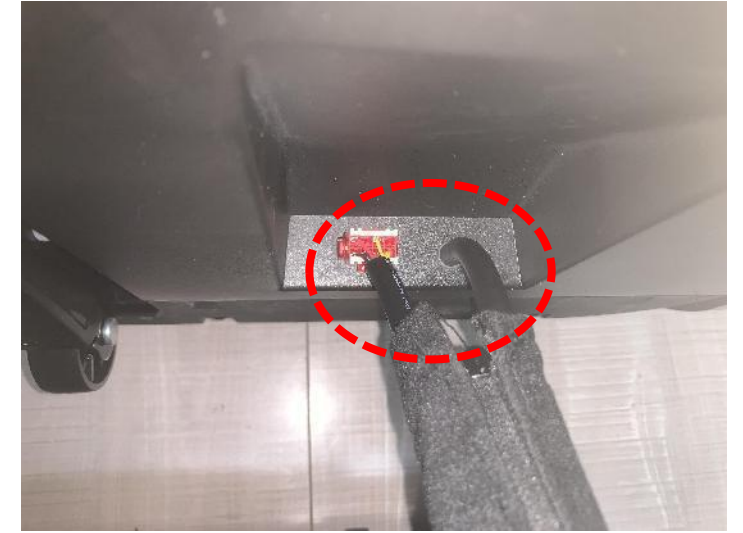
## 4.2、Footrest disassembly diagram



1、 Take of the back cushion and the footrest velcro ( **1** )



2、 Remove the left and right screws and take off the footrest ( **2** )



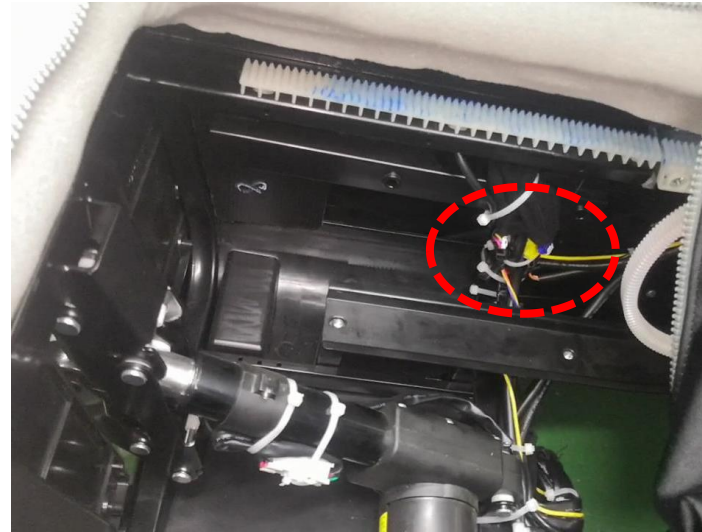
3、 Take off the air hose connect ( **3** )

## 4.3、Armrest disassembly diagram ( 1 ) **Tips : Must disassemble the footrest first**



**1**

**1、Unzip the seat cushion and kneading cloth ( 1 )**



**2**

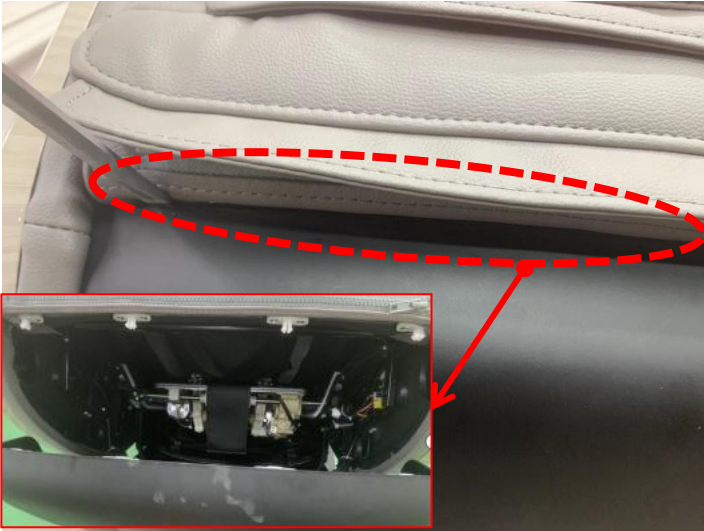
**2、Take out the air hose and plug on the armrest ( 2 )**



**3**

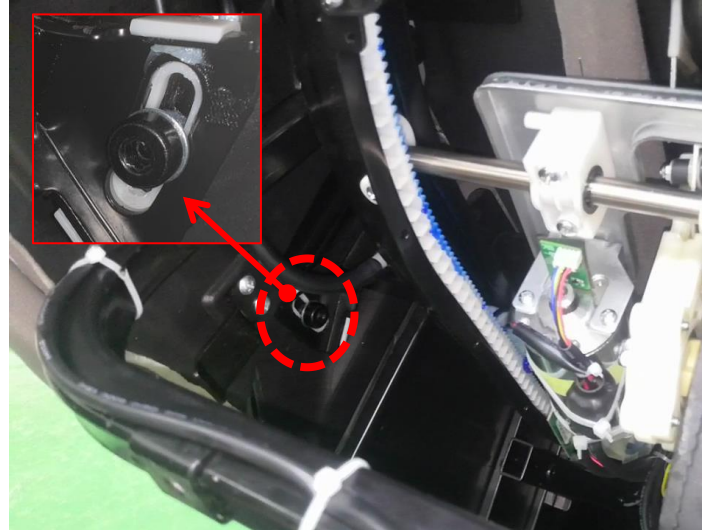
**3、Remove the 2 screws on the back cover ( 3 )**

## 4.3、 Armrest disassembly diagram ( 2 ) **Tips : Must disassemble the footrest first**



1

1、 Remove the back cover clip with straight blade screwdriver ( 1 )



2

2、 Remove the screws securing the rear end of the armrest ( 2 )



3

3、 Remove the armrest ( 3 )

## 4.4、 Left capsule disassemble



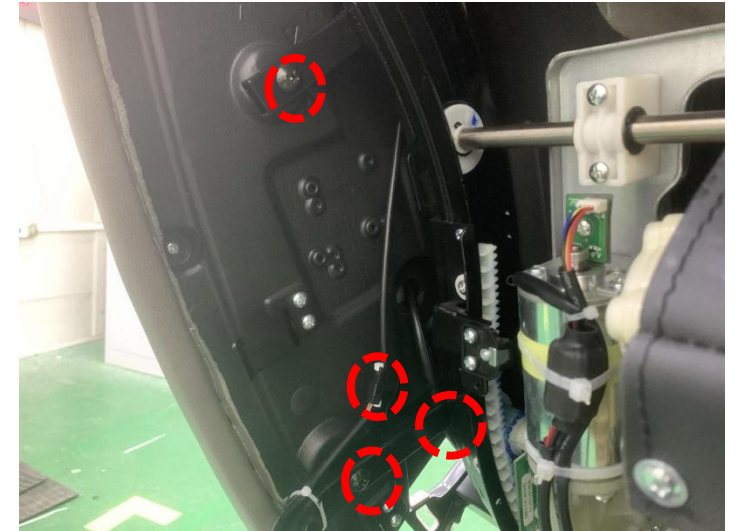
1

1、 Remove the 2 screws on the back cover ( 1 )



2

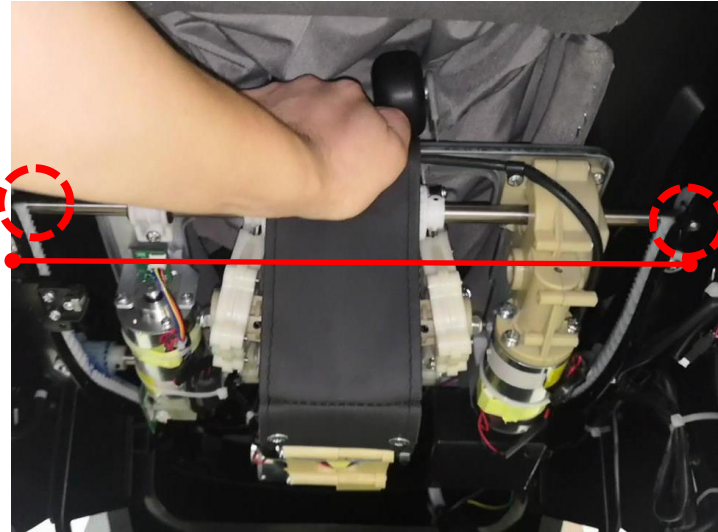
2、 Remove the back cover clip with straight blade screwdriver ( 2 )



3

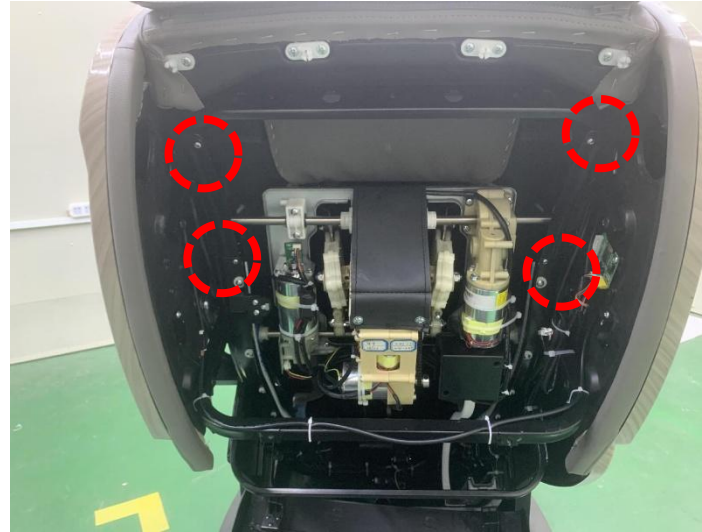
3、 Unplug the air hose and plugs , remove the two screws to remove the capsule ( 3 )

## 4.5、 Massage hand disassemble ( 1 )



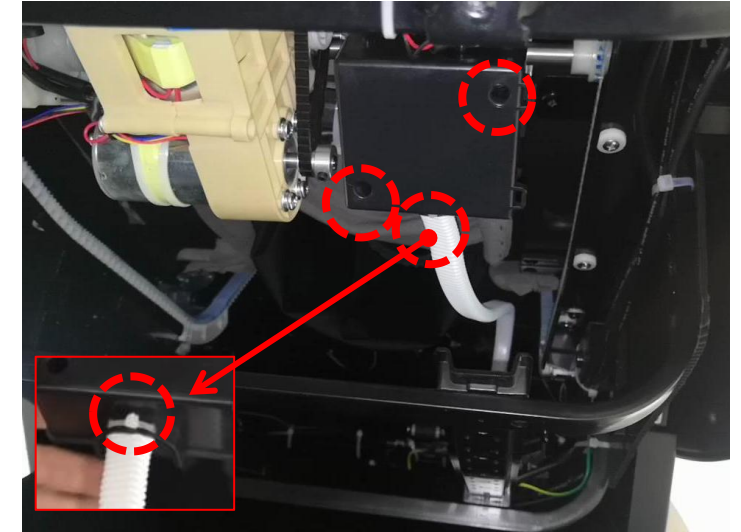
1

1、 Move the massage hand to the bottom of the rail block ( 1 )



2

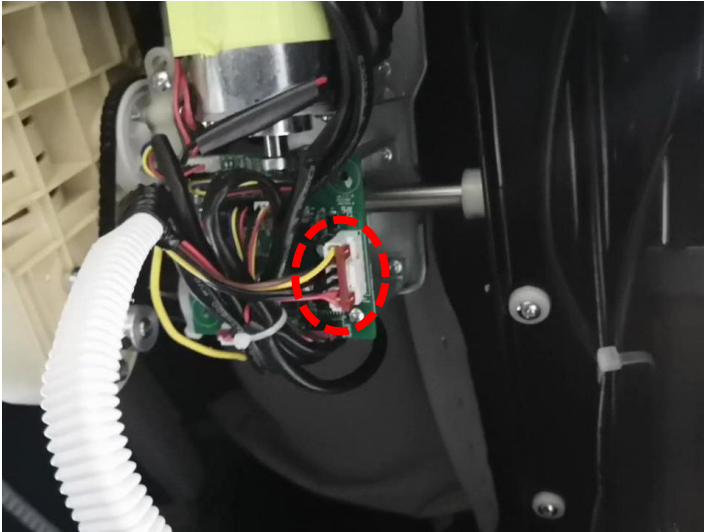
2、 Remove the 2 screws on left and right rail block, take out the block. ( 2 )



3

3、 Remove the 2 fixing screws of the massage hand PCB cover, cut the band

## 4.5、 Massage hand disassemble ( 2 )



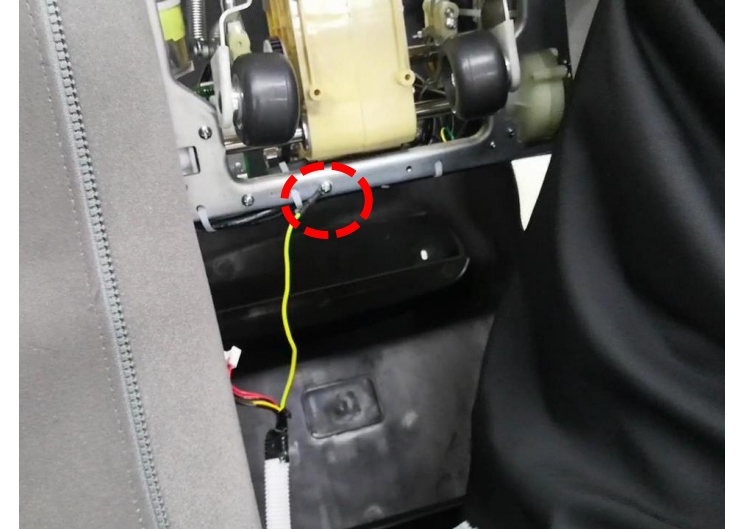
1

1、 Separate PCB plug-in ( 1 )



2

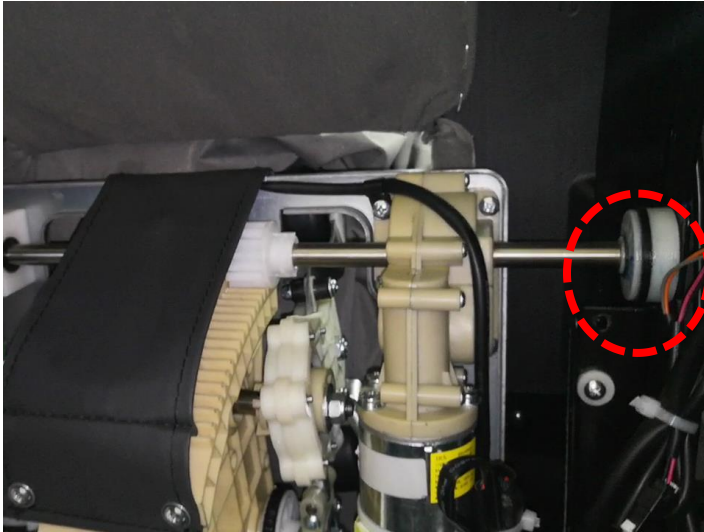
2、 Unzip back cushion, heat plug and knead cloth zipper ( 2 )



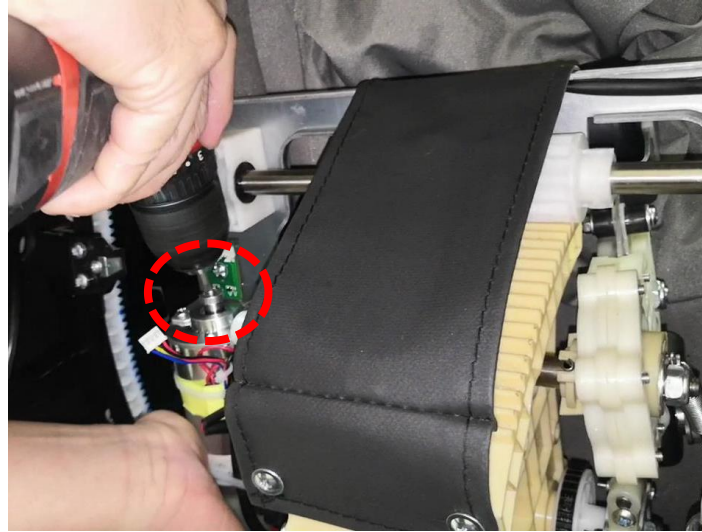
3

3、 Removing ground cable screw ( 3 )

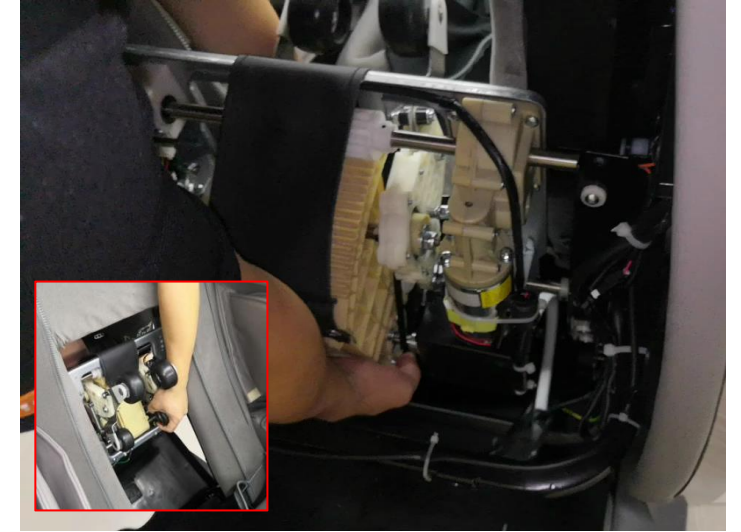
## 4.5、 Massage hand disassemble ( 3 )



**1**



**2**



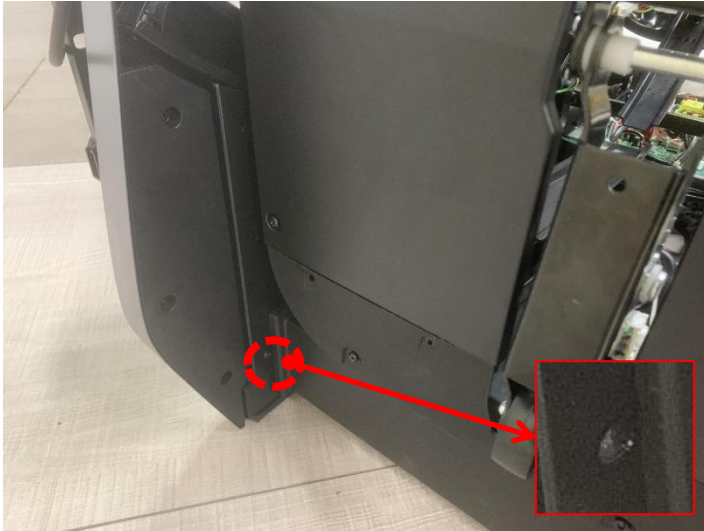
**3**

1、 Take out the massage hand from the gap of the rail block. ( **1** )

2、 with a straight blade screwdriver turning the moving motor to remove the massage hand ( **2** )

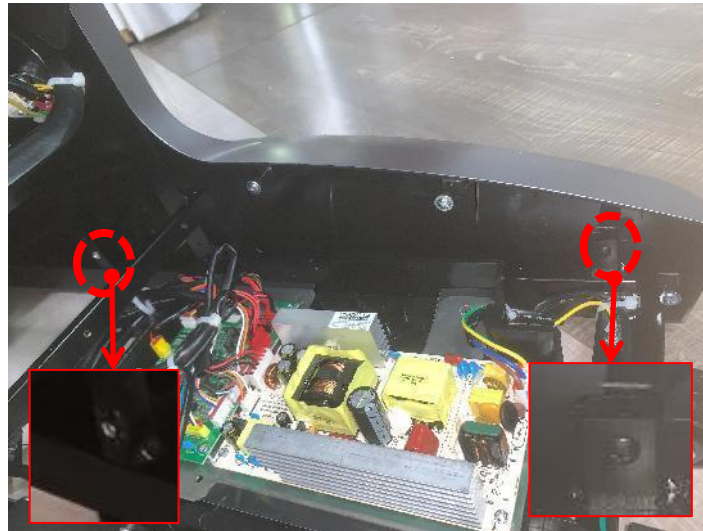
3、 Or pull the massage hand up with your hand to remove it ( **3** )

## 4.6、 Seat side cover disassemble **Tips : must remove the armrest and back cover first**



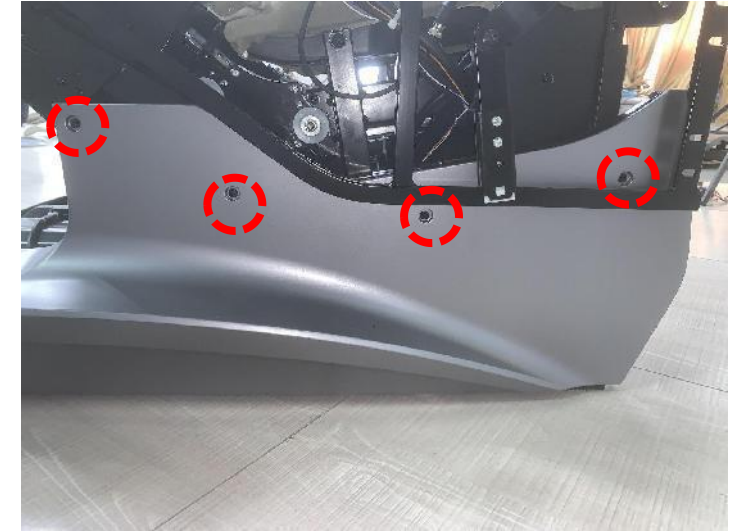
1

1、 Remove one screw from the front end of the side cover ( 1 )



2

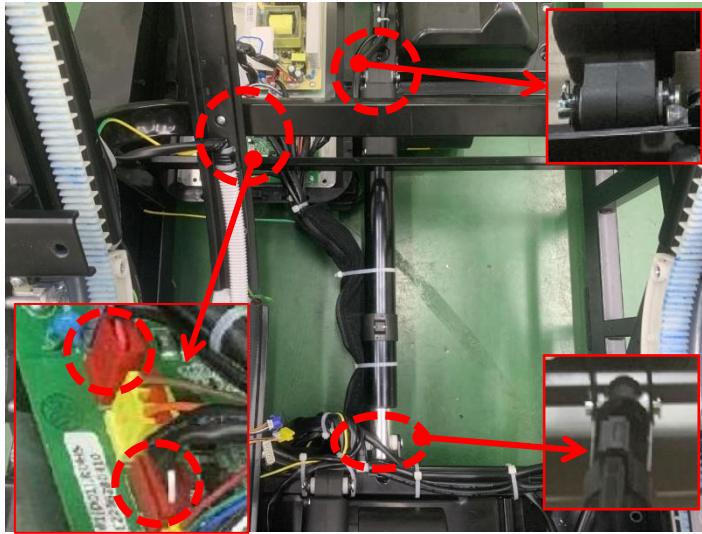
2、 Remove the two screws at the back of the side cover ( 2 )



3

3、 Remove the four fixing screws on the outside of the side cover to remove the side cover ( 3 )

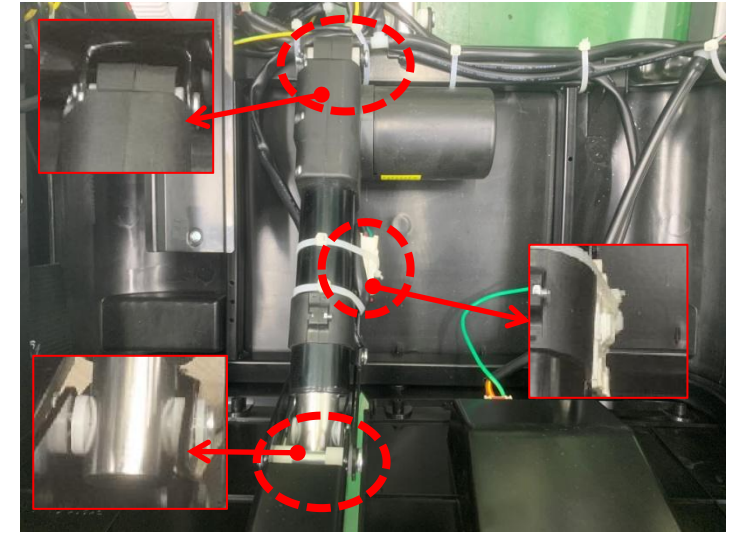
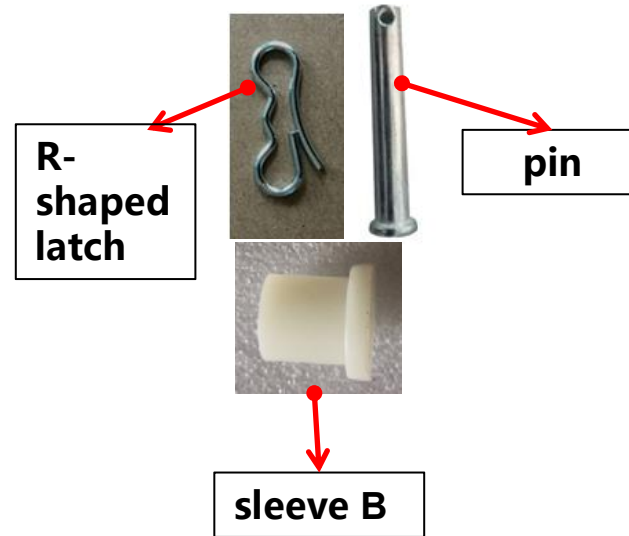
## 4.7、 Backrest lift motor and footrest lift motor disassemble



1

### Backrest lift motor

1、 Remove the R-shaped latch and pin as the red circle marked out and separate the backrest lift motor plug-in (red), remove the backrest lift motor, take note the position of the sleeve.



2

### Footrest lift motor

2、 Remove the R-shaped latch and pin as the red circle marked out and separate the footrest lift motor plug-in (red), remove the footrest lift motor, take note the position of the sleeve.

## 4.8、Shoulder airbags disassemble



1

1、Unzip the shoulder airbags zip ( 1 )



2

2、Separate the air hose and airbags joint ( 2 )



3

3、Remove the two fixing screws ( 3 )

## 4.9、 Arm airbags disassemble



1

1、 Unzip the upper and lower side of the armrest ( 1 )



2

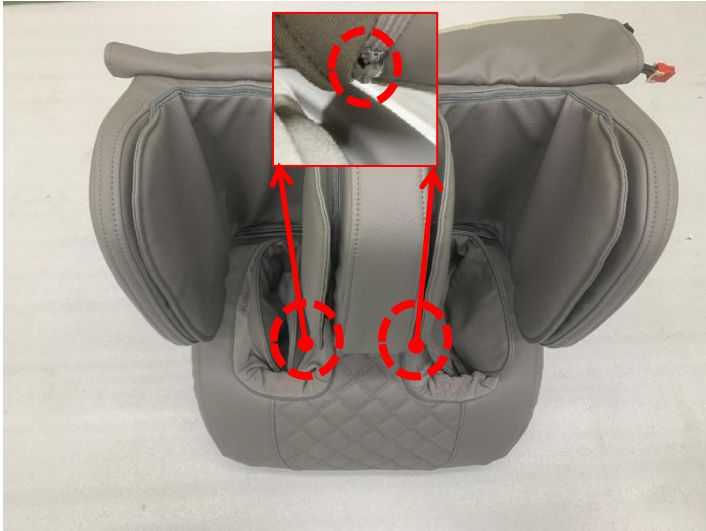
2、 Separate the upper and lower two air hose ( 2 )



3

3、 Remove the 3 fixing screws then can remove the airbags ( 3 )

## 4.10、 Upper leg kneading cloth removal and air bag replacement



1

1、 Unzip the zip and take out the kneading cloth ( 1 )



2

2、 Separating the air hose plug ( 2 )

## 4.11、 Lower leg kneading cloth removal and air bag replacement



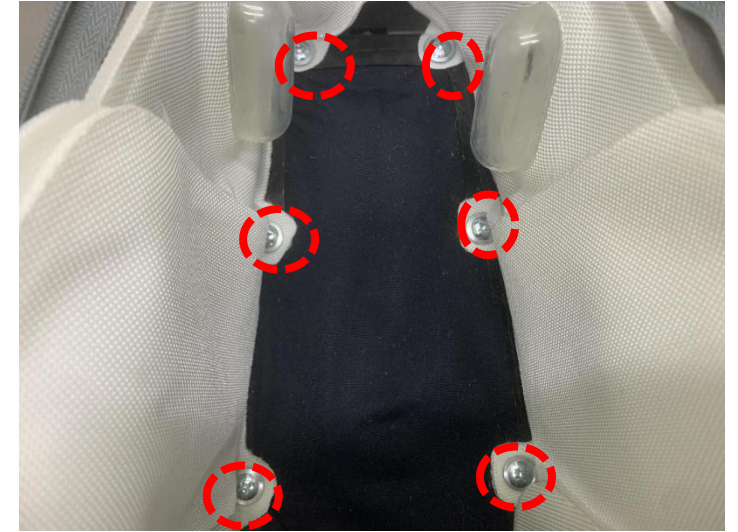
1

1、 Unzip the zip and take out the kneading cloth ( 1 )



2

2、 Separating the air hose plug ( 2 )



3

3、 Remove the screws ( 3 )

## 4.12、 Upper leg disassemble



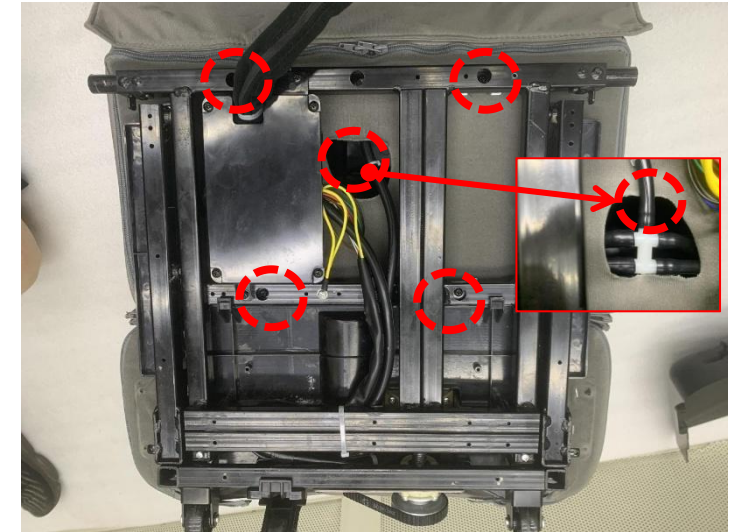
1

1、 Remove the 8 screws on the rear cover of the lower leg, take out the cover. ( 1 )



2

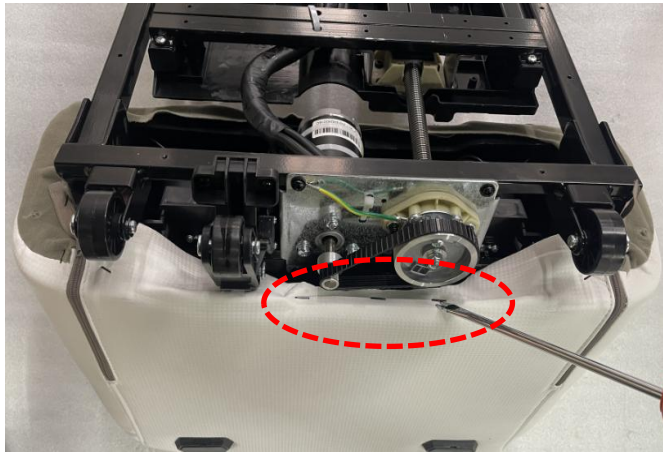
2、 Unzipper the zip to separate upper and lower leg connecting cloth ( 2 )



3

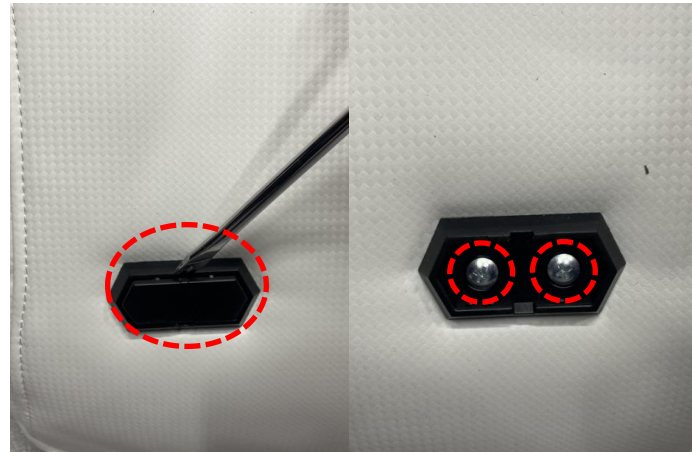
3、 Remove the four fixing screws to remove the upper leg ( 3 )

## 4.13、 Foot rollers motor disassemble ( 1 ) **Tips : must disassemble the upper leg first**



1

1、 Use a straight screwdriver to pry out the holster nails ( 1 )



2

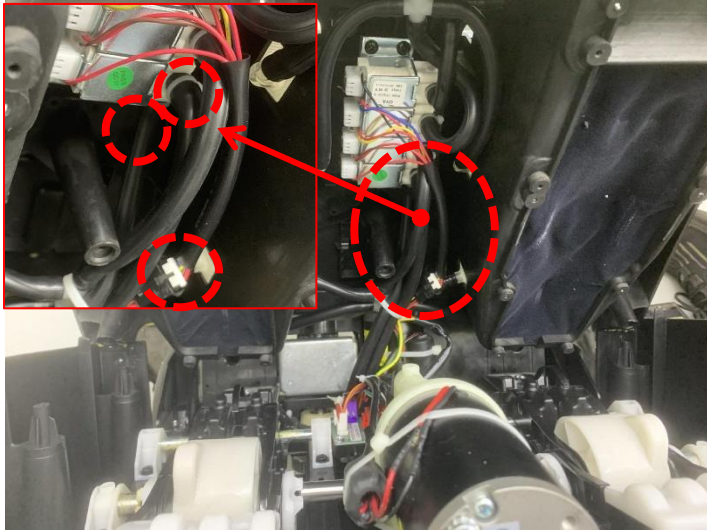
2、 Use a straight screwdriver to pry out the foot pad ( 2 )



3

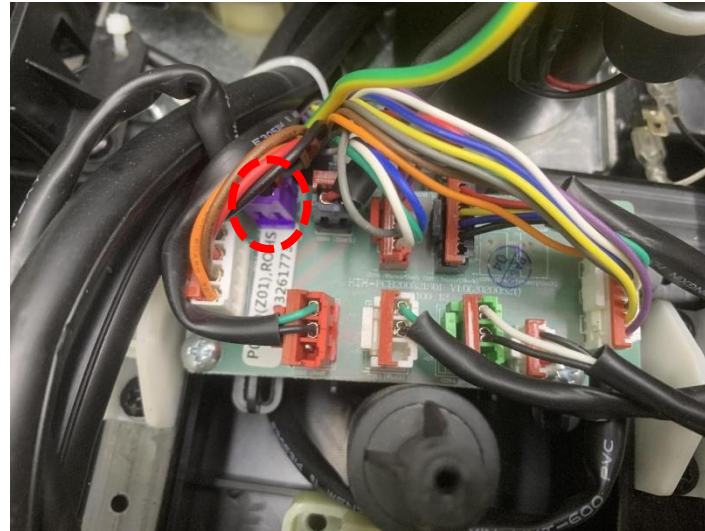
3、 Remove the 11 screws ( 3 )

## 4.13、 Foot rollers motor disassemble ( 2 ) **Tips : must disassemble the upper leg first**



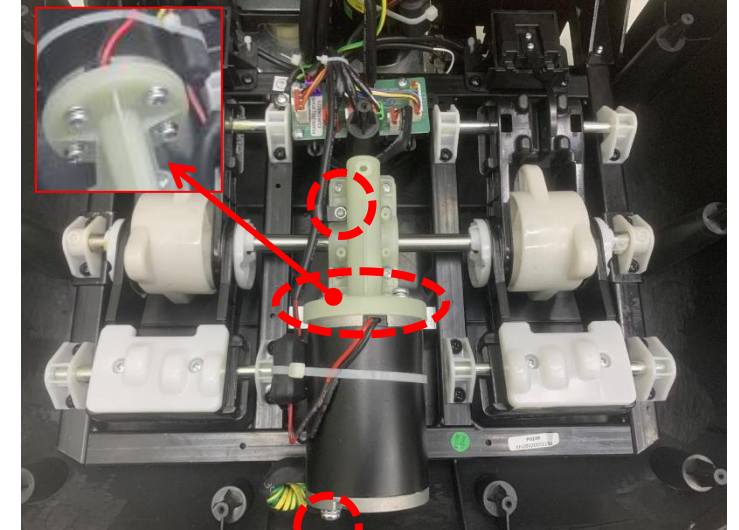
1

1、 Separate the two air hose in the red circle and the black plug-in ( 1 )



2

2、 Separate foot roller motor purple plug-in ( 2 )



3

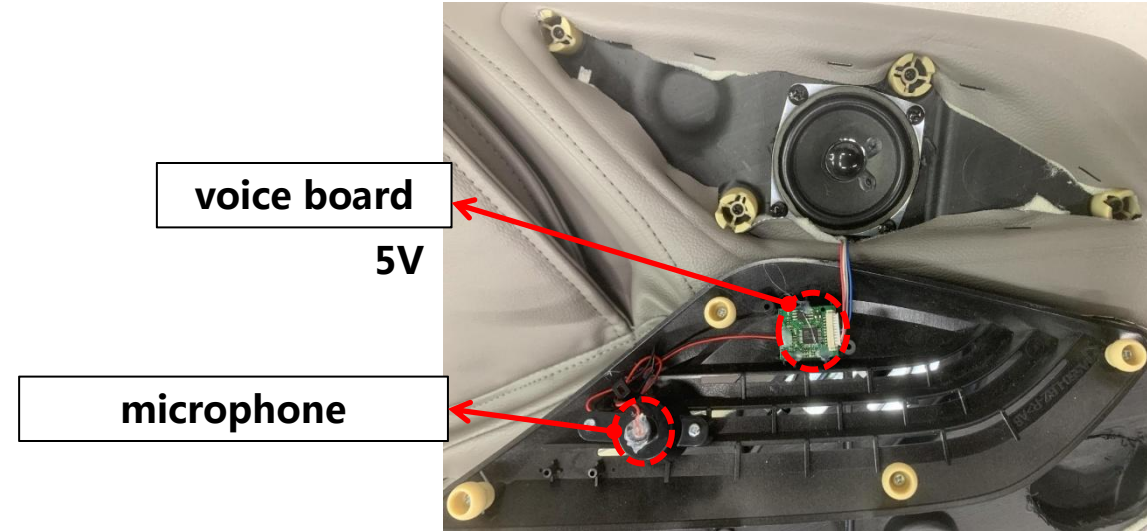
3、 Remove the wiring harness fixing screws, 4 motor fixing screws, ground screws to remove the motor ( 3 )

## 4.14、 voice board disassemble



**1**

1、 Use a straight screwdriver to pry off the horn cover ( **1** )



**2**

2、 Remove the connector and replace the small speaker ( **2** )

- 5.1、 Error code
- 5.2、 No power
- 5.3、 No kneading function on massage hand
- 5.4、 No tapping function on massage hand
- 5.5、 No walking function on massage hand
- 5.6、 No stretching function
- 5.7、 No foot roller function
- 5.8、 No stretching function on footrest
- 5.9、 No backrest lifting function
- 5.10、 No footrest lifting function
- 5.11、 No back heating function
- 5.12、 Part of the airbags don' t work
- 5.13、 Bluetooth don' t work
- 5.14、 No voice function



## 5.1-1、 Error code display (Press the rise key of backrest and the rise key of calfrest at the same time, and immediately press the zero gravity key to enter the test)

	Error code	Fault description	Possible reasons	Trouble shooting
Error code	C1~C5	kneading motor	C1 :Kneading motor circle number is not detected C2 :Kneading motor origin place cannot be detected C3 :Kneading motor blocking, overcurrent C4 :Kneading motor not running, not connected C5 :Kneading motor MOS tube damage can not be controlled	1 : replace a new kneading motor 2 : replace a new massage hand PCB 3 : replace a new width detection board 4 : replace a new kneading circle number detection board refer to (49)
	F1~F6	walking motor	F1 :Walking motor circle number is not detected F2 :Travel limit detection error (travel limit detection board is not connected or damaged) F3 :The walking motor is blocked and overcurrent F4 : Walking motor not running, not connected F5 : Walking motor runs out of time F6 :Walking motor MOS tube damage can not be controlled	1 : replace a new walking motor 2 : replace a new massage hand PCB 3 : replace a new travel circle number detection board 4 : replace a new travel stroke detection board refer to (51)
	E1~E3	tapping motor	E1 :The tapping motor is blocked and overcurrent E2 : tapping motor not running, not connected E3 : tapping motor MOS tube damage can not be controlled	1 : replace a new tapping motor 2 : replace a new massage hand PCB refer to (50)
<b>please make sure the cables and plugs are well when you check above parts</b>				

## 5.1-2、 Error code display (Press the rise key of backrest and the rise key of calfrest at the same time, and immediately press the zero gravity key to enter the test)

	Error code	Fault description	Possible reasons	Trouble shooting
Error code	B7~B9 BA~BC	massage hand stretch not work	B7 :3D stretch motor MOS tube damage can not be controlled B8 :3D stretch motor not running, not connected B9 :3D stretch motor is blocked and overcurrent BA :3D stretch limit detection error (stretch limit detection board is not connected or damaged) BB : the circle number of the 3D stretch motor can't be detected BC :3Dstretch motor runs out of time	1 : replace a new 3D stretch motor 2 : replace a new stretch detection board 3 : replace a new massage hand PCB
	F7	no power	F7 :The 24V switching power supply has problem	1 : replace a new power board 2 : replace a new remote 3 : replace a new PCB 4 : replace a new fuse
	CF	footrest not work	CF : Footrest communication problem	1 : replace a new footrest PCB 3 : replace a new PCB
<b>please make sure the cables and plugs are well when you check above parts</b>				

## 5.1-3、 Error code display (Press the rise key of backrest and the rise key of calfrest at the same time, and immediately press the zero gravity key to enter the test)

	Error code	Fault description	Possible reasons	Trouble shooting
Error code	E4~E9	No footrest lifting function	E4 : footrest lifting motor MOS tube damage can not be controlled E5 : footrest lifting motor not running, not connected E6 :footrest lifting motor is blocked and overcurrent E7 :footrest lifting motor limit detection error (travel limit detection board is not connected or damaged) E8 :the circle number of the footrest lifting motor can't be detected E9 :footrest lifting motor runs out of time	1 : replace a new footrest lifting motor 2 : replace a new PCB
	FA~FC	No back heating function	FA : back heating MOS tube damage can not be controlled FB :not running, not connected or thermal protection FC back heating overcurrent protection	1 : replace a new heating part 2 : back heating
	FD~FF	No foot roller function	FD :foot roller motor MOS tube damage can not be controlled FE :foot roller motor not running, not connected FF :foot roller motor is blocked and overcurrent	1 : replace a new foot roller motor 2 : replace a new footrest PCB
<b>please make sure the cables and plugs are well when you check above parts</b>				

## 5.1-4、 Error code display (Press the rise key of backrest and the rise key of calfrest at the same time, and immediately press the zero gravity key to enter the test)

	Error code	Fault description	Possible reasons	Trouble shooting
<b>Error code</b>	EA~EF	No backrest lifting function	EA :backrest lifting motor MOS tube damage can not be controlled EB : backrest lifting motor not running, not connected EC : backrest lifting motor is blocked and overcurrent ED :backrest lifting motor limit detection error (travel limit detection board is not connected or damaged) EE :the circle number of the backrest lifting motor can't be detected EF : backrest lifting motor runs out of time	1 : replace a new backrest lifting motor 2 : replace a new PCB
	C6~C8	Part of the airbags don't work	C6 : air pump MOS tube damage can not be controlled C7 :air pump not running, not connected C8 :air pump is blocked and overcurrent	1 : replace a new PCB 2 : replace a new air pump 3 : replace a PCB on the right armrest
	F9	massage hand don't work	F9 : massage hand communication failure	1 : replace a new massage hand PCB 2 : replace a new PCB
<b>please make sure the cables and plugs are well when you check above parts</b>				

## 5.1-5、 Error code display (Press the rise key of backrest and the rise key of calrest at the same time, and immediately press the zero gravity key to enter the test)

	Error code	Fault description	Possible reasons	Trouble shooting
Error code	B1~B6	No stretching function	<p>B1 : footrest stretch motor MOS tube damage can not be controlled</p> <p>B2 : footrest stretch motor not running, not connected</p> <p>B3 : footrest stretch motor not running, not connected</p> <p>B4 : footrest stretch motor limit detection error (stretch limit detection board is not connected or damaged)</p> <p>B5 :the circle number of the footrest stretch motor can't be detected</p> <p>B6 : footrest stretch motor runs out of time</p>	<p>1 : replace a new footrest stretch motor</p> <p>2 : replace a new footrest PCB</p> <p>3 : replace a footrest travel stroke detection board</p> <p>4 : replace a new footrest circle number detection board.</p>
<p><b>please make sure the cables and plugs are well when you check above parts</b></p>				

## 5.2、 No power



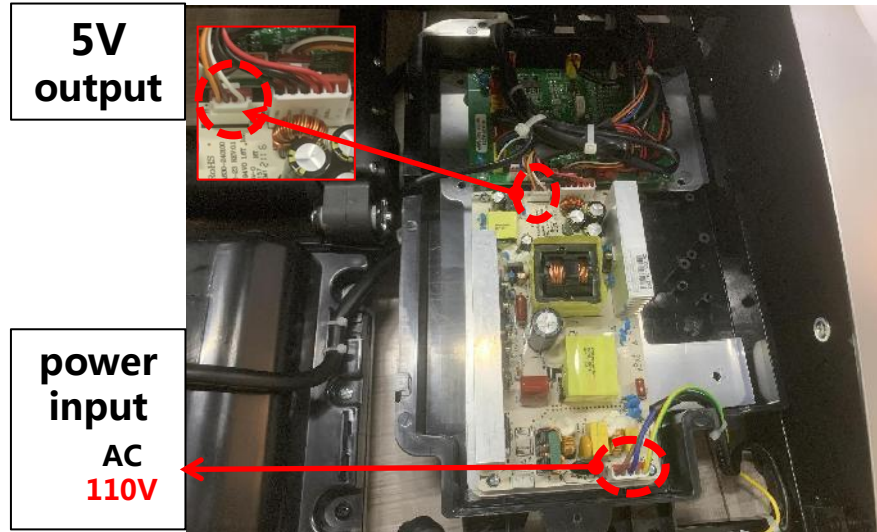
1

Fault diagnosis and repair:

- 1、 First of all, eliminate external factors, such as the power cord and power socket, or the power switch of the massage chair is turned off. ( 1 )
- 2、 Generally, the load current is high and the external voltage is too high, causing the fuse or the switching power supply to be damaged.

Replace switching power supply (2) or fuse (1)

- 3、 Check is there 5 v voltage input to PCB, if the switch power supply has 5 v voltage output, change the switching power board, if it has 5 v voltage output to the drive plate (2), prove that the PCB has problem, replace the PCB.
- 4、 If the power supply is ok, and the remote broken cause the chair can' t power on, you can replace a new remote controller. ( 3 )



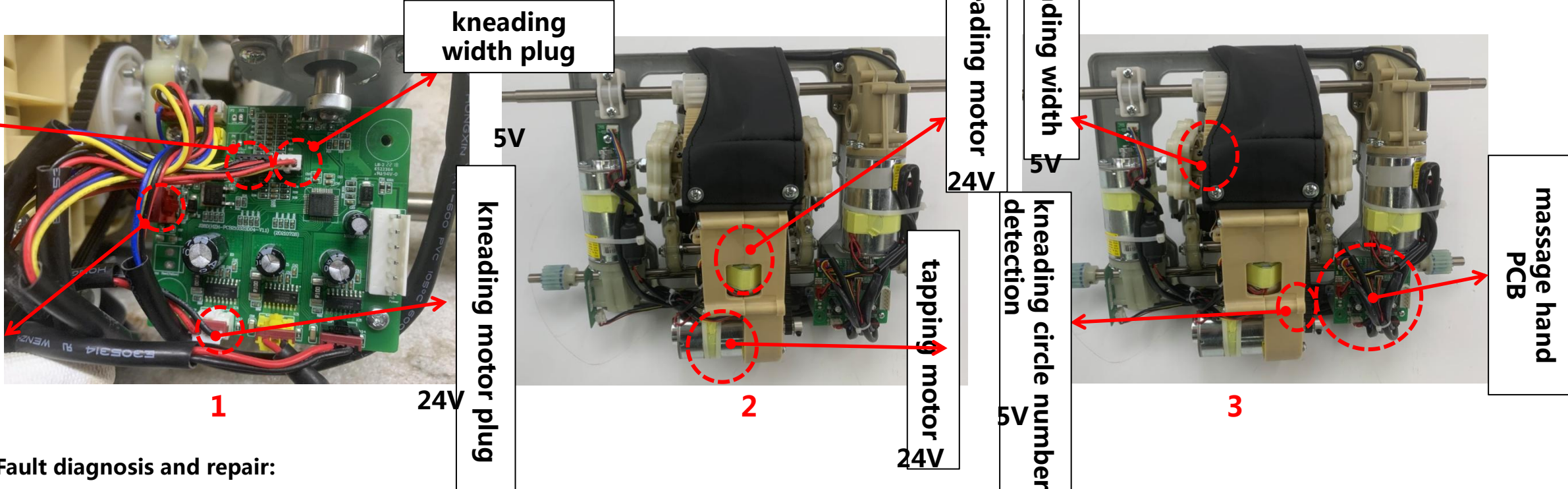
2



3

Main causes: external power supply, remote controller, power board, PCB, fuse

## 5.3、kneading motor not work

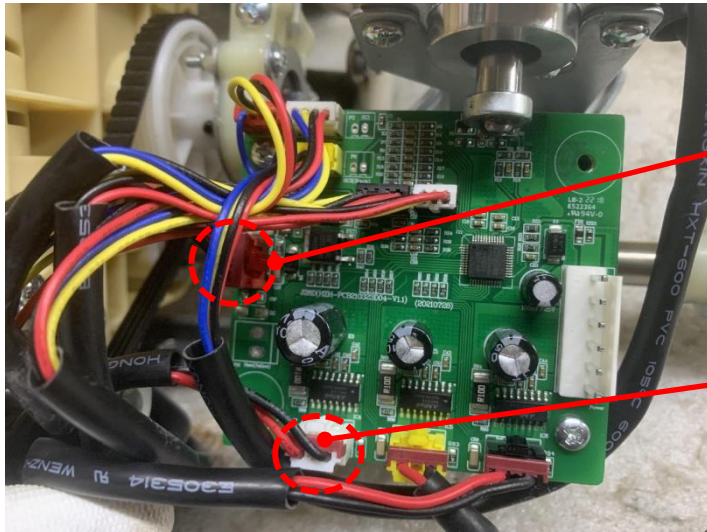


Fault diagnosis and repair:

- 1、. First check whether the wiring harness of the massage hand PCB has poor contact or the program is falling off ( 1 ) ;
- 2、 To determine whether the motor is damaged, the power supply of the tapping motor can be used to judge the quality of the kneading motor ( 1 ) , **if the kneading motor is broken, advise you change a new massage hand ( 2 ) ;**
- 3、 Check whether the width detection board and the circle number detection board are damaged ( 3 ) ;
- 4、 With replacement way to judge if the massage hand PCB is broken ( 3 ) ;

**Main causes: massage hand PCB, kneading width detection board, circle number detection board, kneading motor**

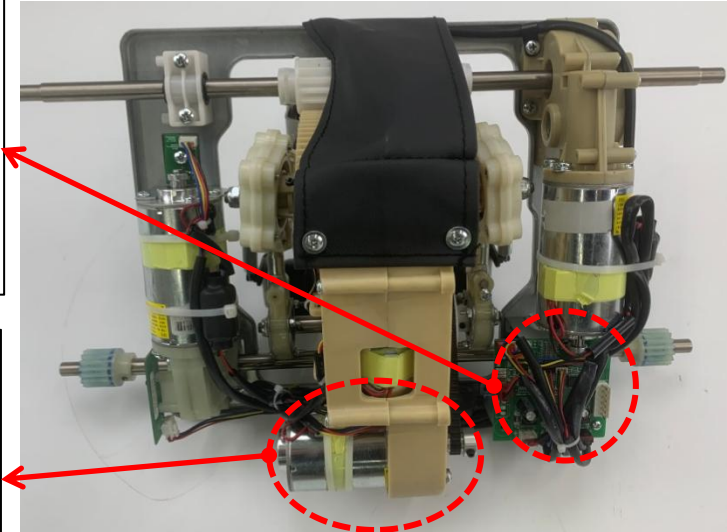
## 5.4、Tapping motor not work



tapping motor plug  
24V

kneading motor plug  
24V

1



massage handn PCB

tapping motor

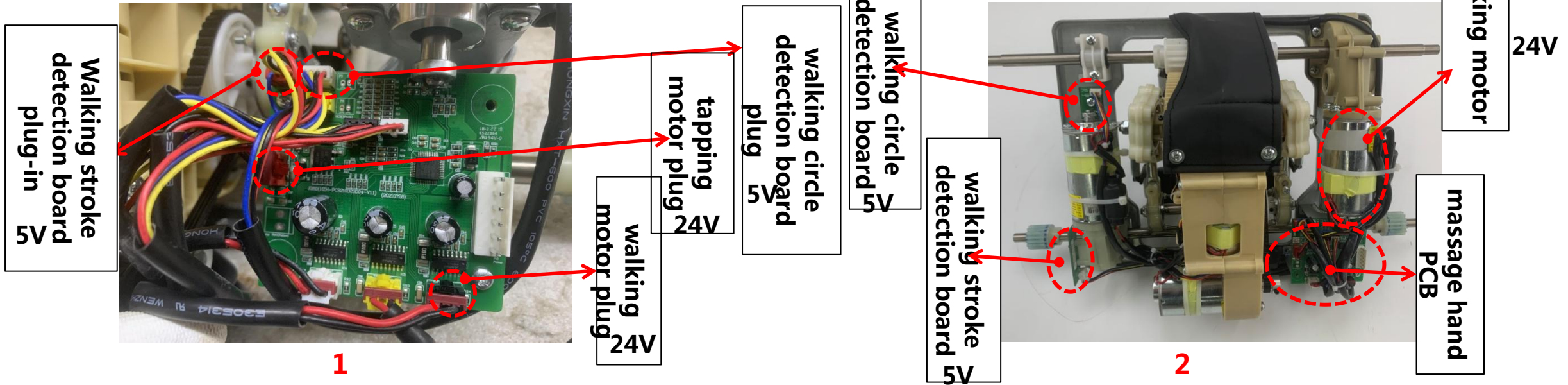
2

Fault diagnosis and repair:

- 1、 First check whether the wiring harness of the massage hand PCB has poor contact or the plug-in is falling off ( 1 ) ;
- 2、 To determine whether the motor is damaged, the power supply of the kneading motor can be used to judge the quality of the tapping motor ;
- 3、 With replacement way to judge if the massage hand PCB is broken ;

**Main causes: Massage hand PCB, tapping motor**

## 5.5、 Massage hand can't move up and down

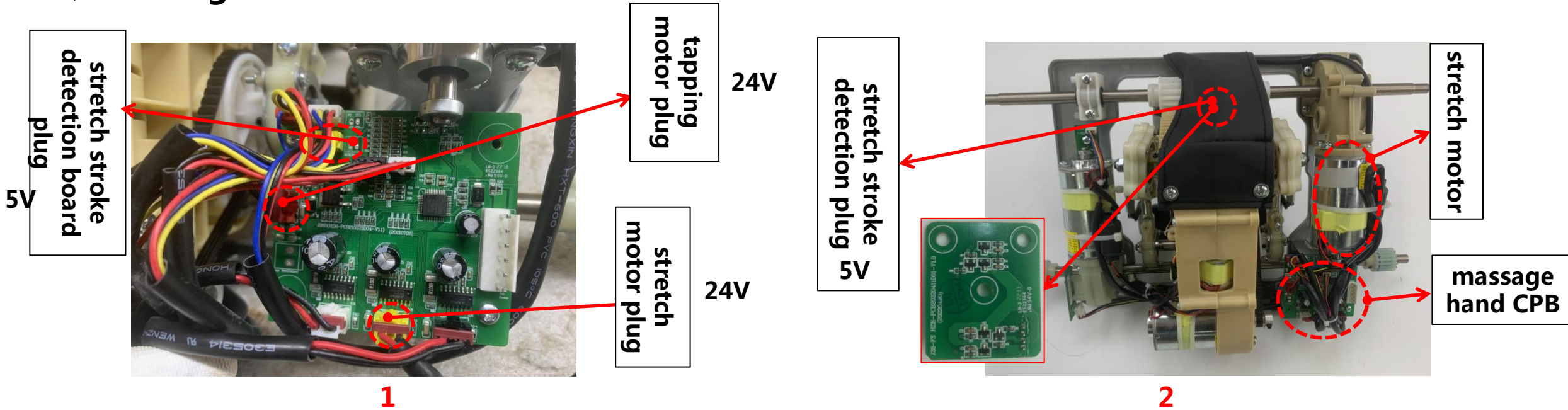


Fault diagnosis and repair:

- 1、 First check whether the wiring harness of the massage hand PCB has poor contact or the plug-in is falling off ( 1 ) ;
- 2、 To determine whether the motor is damaged, the power supply of the tapping motor can be used to judge the quality of the walking motor ; ( 1 )
- 3、 Check if the walking circle detection board broken ( 2 ) ;
- 4、 Check if the walking stroke detection board broken ( 2 ) ;
- 5、 With replacement way to judge if the massage hand PCB is broken ( 2 ) ;

**Main causes: massage hand PCB, walking circle detection board, walking motor, walking stroke detection board**

## 5.6、 Massage hand can't stretch

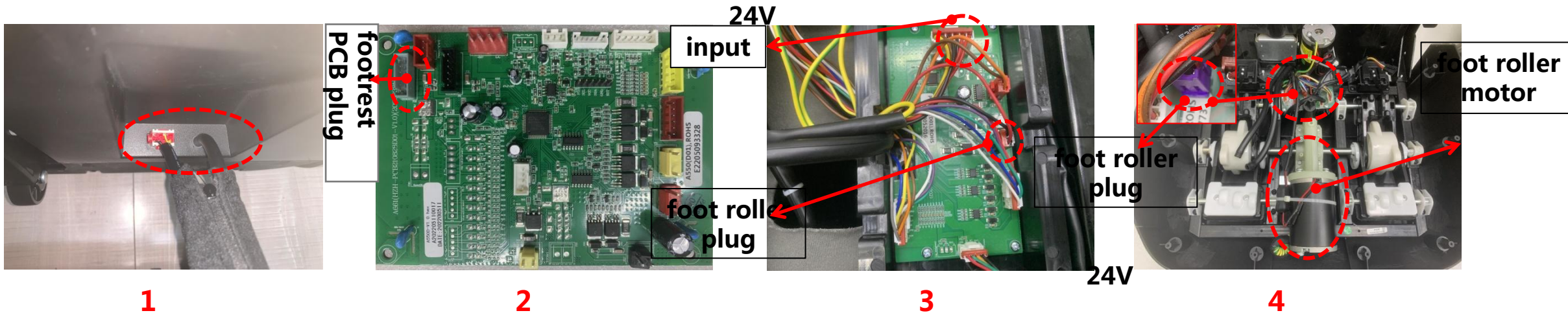


**Fault diagnosis and repair:**

- 1、 First check whether the wiring harness of the massage hand PCB has poor contact or the plug-in is falling off ( **1** ) ;
- 2、 To determine whether the motor is damaged, the power supply of the tapping motor can be used to judge the quality of the stretch motor ; ( **1** )
- 3、 Check if the stretch stroke detection board broken ( **2** )
- 4、 With replacement way to judge if the massage hand PCB is broken ( **2** )

**Main causes: massage hand PCB, stretch stroke detection board, stretch motor**

## 5.7、Foot roller can't work

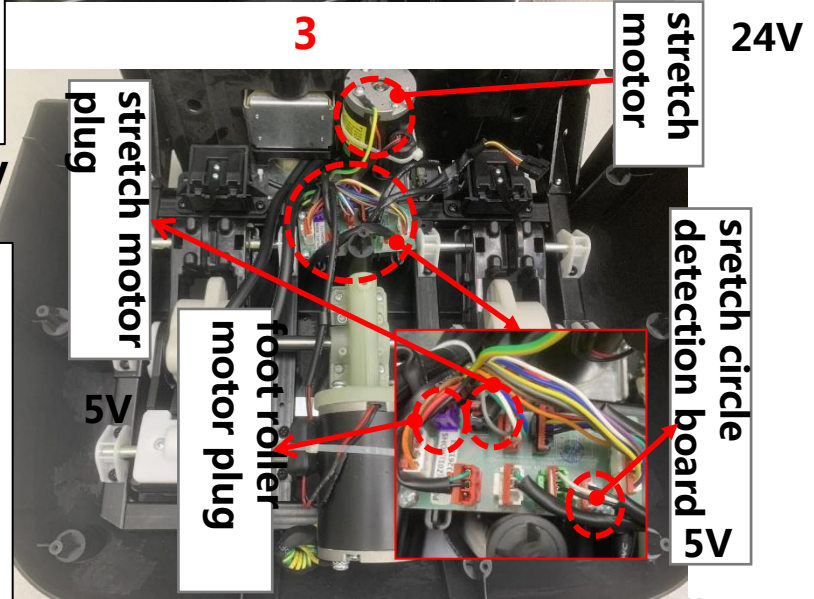
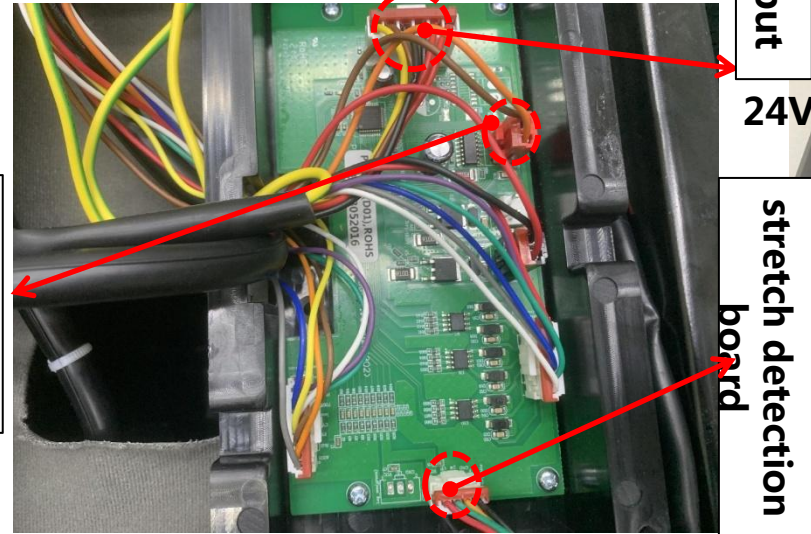
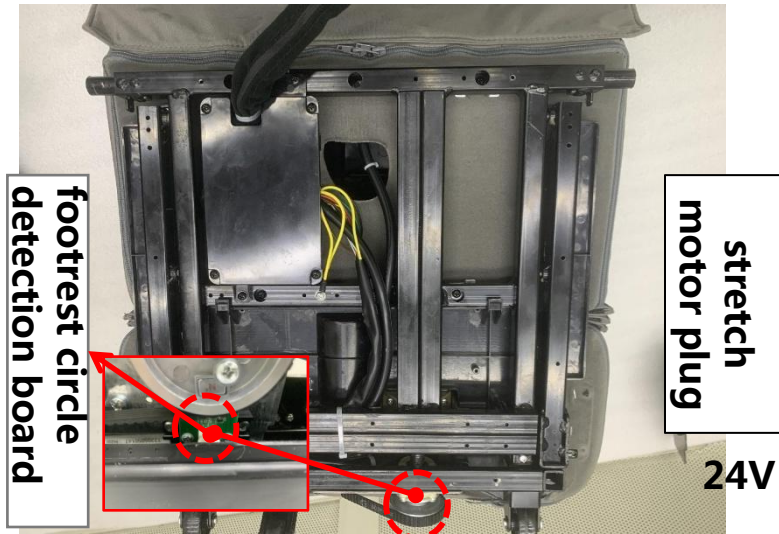
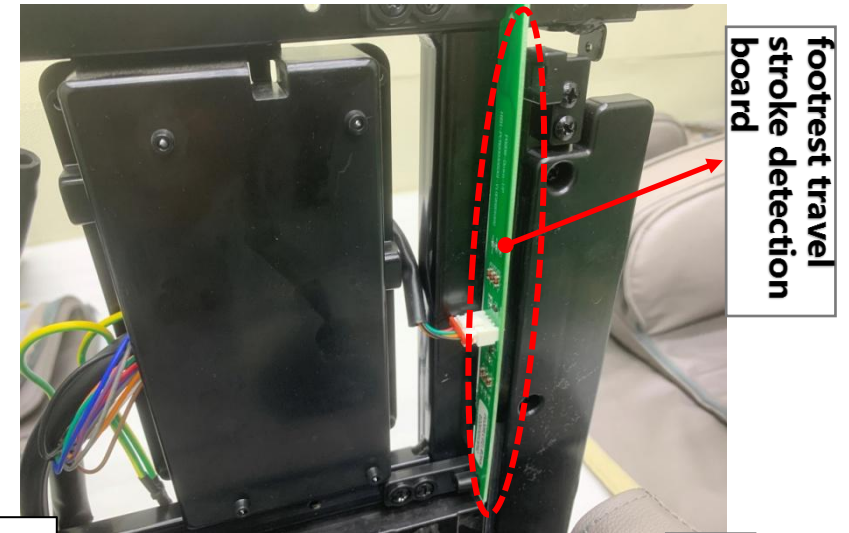
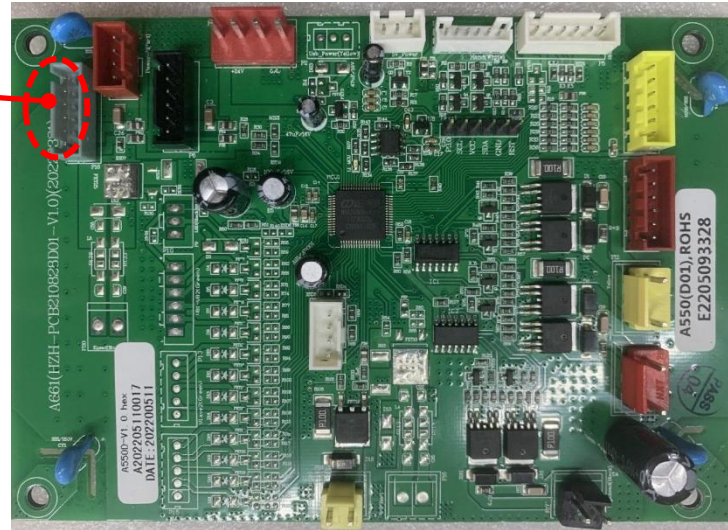


Fault diagnosis and repair:

- 1、 Check whether there is bad contact between the calfrest and the main machine harness, and whether there is DC24V output ( 1 )
- 2、 If there is no voltage output, check the gray plug-in on the PCB again ( 2 ) Whether it is loose or there is a voltage output, if not, consider replacing a new PCB
- 3、 If the above is normal, then check whether the calfrest motor connection plug-in is abnormal (3) black and white plug-in
- 4、 If the above is normal, then check whether the purple plug on the calfrest transfer board is ok ( 4 )
- 4、 If the above is normal, and the wiring harness is no problem, you should consider to replacing the foot roller motor ( 4 )

**Main causes : PCB, calfrest PCB, foot roller, plugs**

## 5.8、Footrest can't stretch ( 1 )

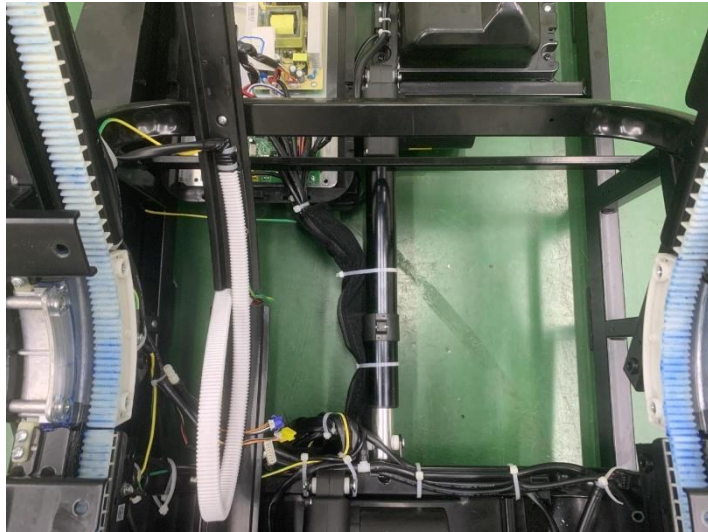


## Fault diagnosis and repair:

- 1、 First check if only the footrest can' t stretch, other functions are normal, if not, check main PCB, footrest PCB are they ok. If the wire harness has 24V/5V volotage, with replacement way to check. ( **1** ) ( **2** ) ( **5** )
- 2、 If other functions are ok, only the footrest can' t stretch, check if the stretch motor is ok, replace the stretch motor plug and foot roller motor plug to check if the motor is good. ( **6** )
- 3、 If the above all are normal, check the foot circle detection board and the travel stroke detection board, then replace it.

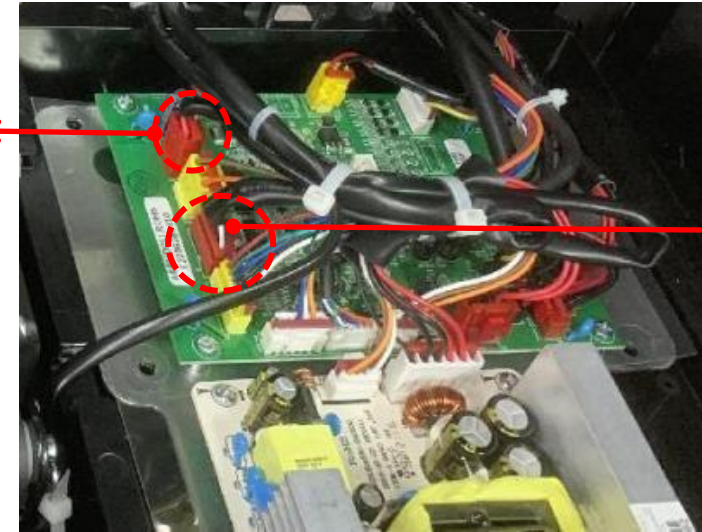
**Main causes: Main PCB, footrest PCB, stretch motor, foot circle detection board and the travel stroke detection board**

## 5.9、Backrest can't up and down



1

backrest lifting motor  
power supply plug  
24V



2

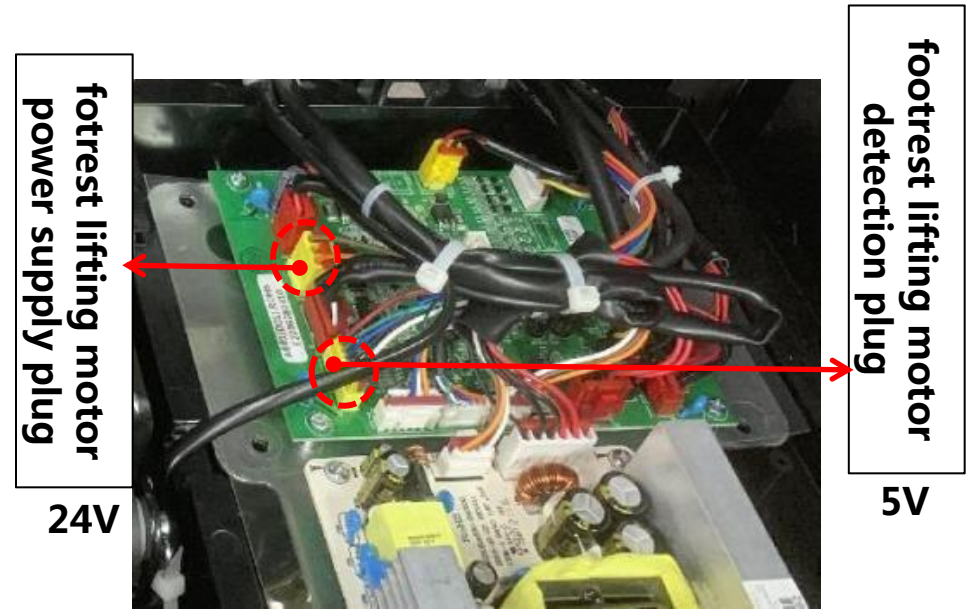
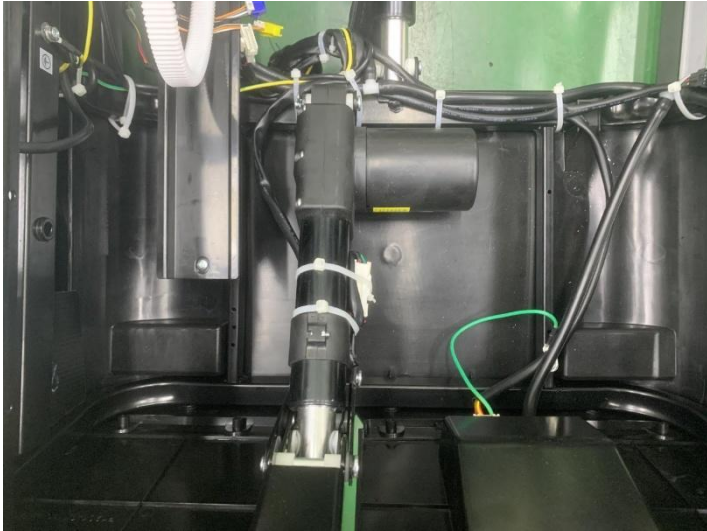
backrest lifting motor  
detection plug  
5V

Fault diagnosis and repair:

- 1、 First press and hold the lying button on the remote controller, listen to the buzzer sound "beep, beep, beep", release then with two "beep" sound, check if the backrest lifting motor signal is detected, the backrest lifting motor may be damaged or the main PCB damaged, replace it.
- 2、 You can also measure the resistance value of the backrest lifting motor (about 5 Ohm) or the voltage of the backrest lifting motor plug on the main PCB, to check if it is the backrest lifting motor's problem or the main PCB's problem. ( 2 )

**main causes: backrest lifting motor, main PCB, wire harness**

## 5.10、Footrest can't up and down



Fault diagnosis and repair: **1**

1、 First press and hold the lift button on the remote controller, listen to the buzzer sound "beep, beep, beep", release then with two "beep" sound, check if the footrest lifting motor signal is detected, the footrest lifting motor may be damaged or the main PCB damaged, replace it.

(1)

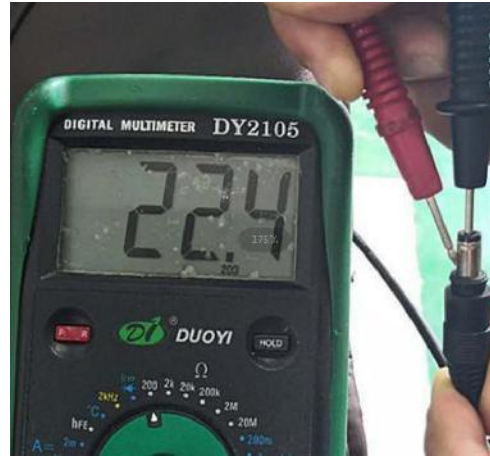
2、 You can also measure the resistance value of the backrest lifting motor (about 5 Ohm) or the voltage of the footrest lifting motor plug on the main PCB, to check if it is the footrest lifting motor's problem or the main PCB's problem. ( 2 )

**main causes: footrest lifting motor, main PCB, wire harness**

## 5.11、 Back heating can' t work



1



2

Backrest heating plug  
24V



3



4

**Fault diagnosis and repair:**

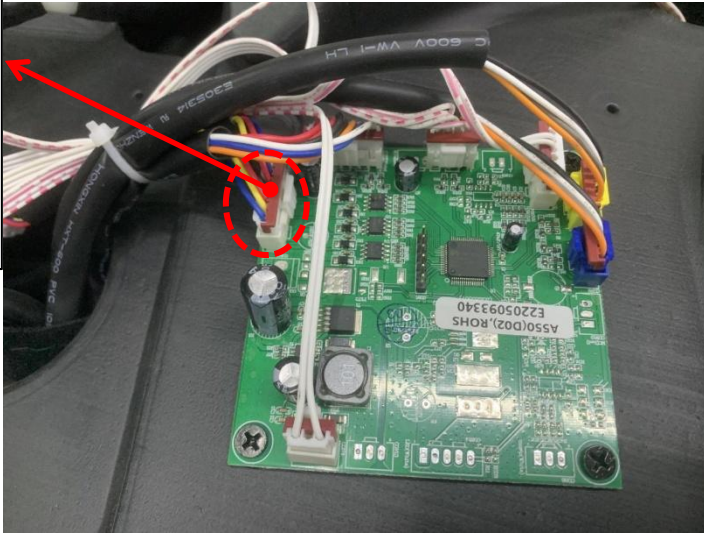
- 1、 Check if the backrest heat wires plug poor contact or fall off ( 1 ) ;
- 2、 You can also measure the resistance value of the backrest heating wire (2), if it has resistance, it main the drive line' s problem, if no resistance, replace the backrest heating pad ( 4 )
- 3、 Use a multimeter to measure whether the main PCB plug (3) and the backrest heating wires plug (1) have DC24V voltage, If no, the main PCB is damaged, replace it (3)

**Main causes: back heating wires, main PCB, wire harness**

## 5.12、 part of the airbags can' t work

solenoid valve  
plug

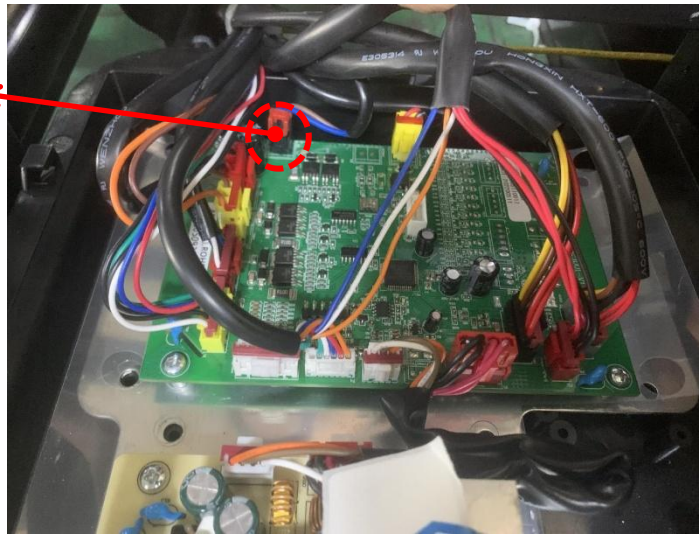
24V



1

air pum

24V



2



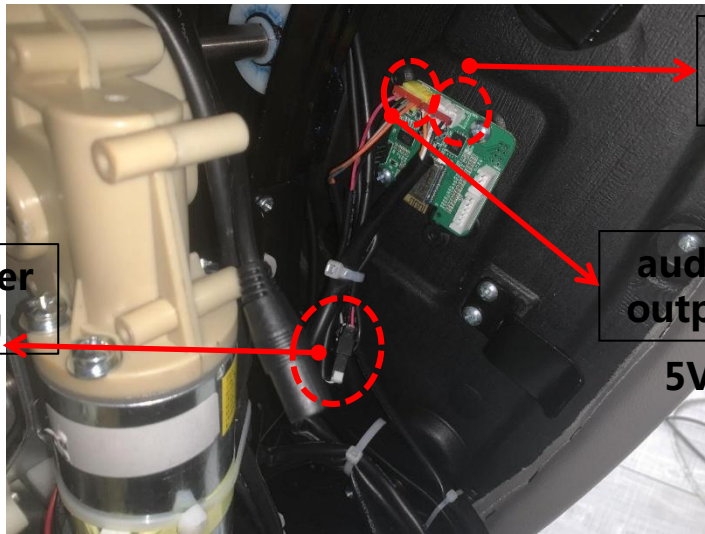
3

Fault diagnosis and repair:

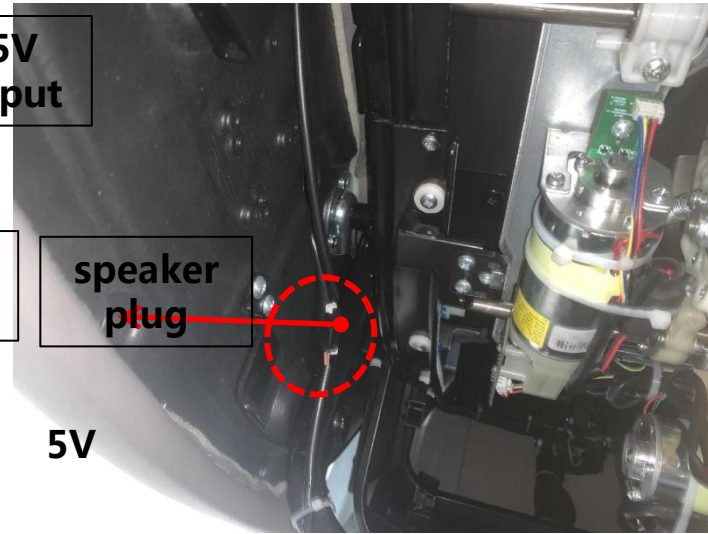
- 1、 Check if the airbags broken ( 3 ) , air hose is bended
- 2、 **The solenoid valve that controls the air pressure of the circuit is damaged; Low probability**
- 3、 The peripheral circuit which control the air pressure is not normal, replace the main PCB ( 2 )
- 4、 Check if the solenoid valve plug is ok on the right armrest PCB , if the plug is ok, then replace the armrest PCB ( 1 )

**Main causes: airbags broken, air hose bended, solenoid valve, main PCB**

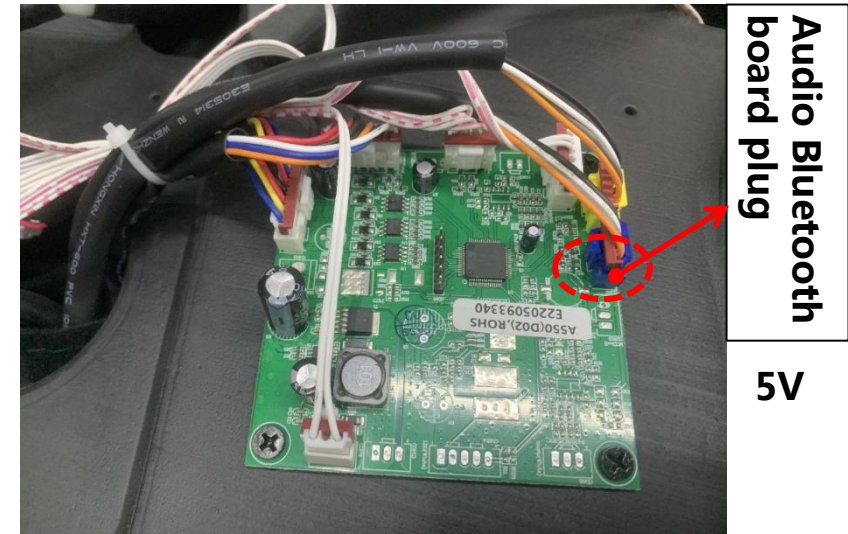
## 5.13、Bluetooth can't work



1



2



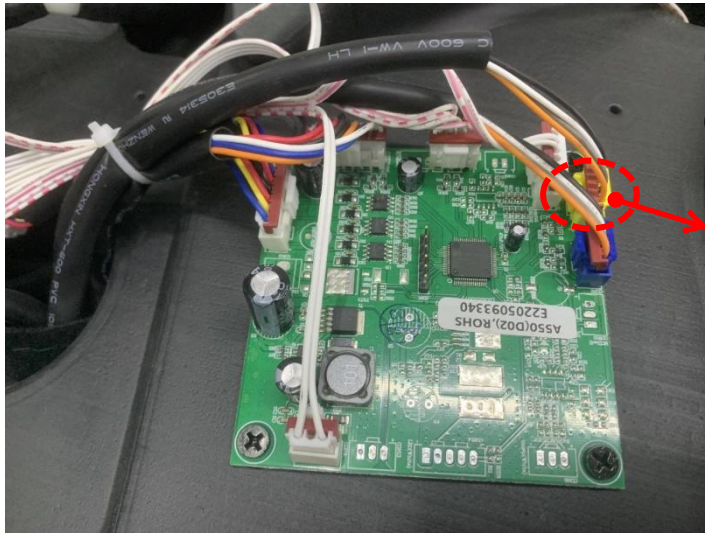
3

**Fault diagnosis and repair:**

- 1、 ( After the phone is successfully paired with Bluetooth ) Check whether the wiring harness of the audio Bluetooth board is in poor contact, or the Bluetooth MP3 board is broken, and replace it ; ( 1、 3 )
- 2、 Check whether the contactation between the audio armrest board and bluetooth board to the speaker connection cable is good ( 1、 2、 3 )
- 3、 If only one side speaker can't work, check the wire harness and replace a new speaker

**Main causes: bluetooth board, wire harness, right armrest board, speaker**

## 5.14、 Voice command can' t work



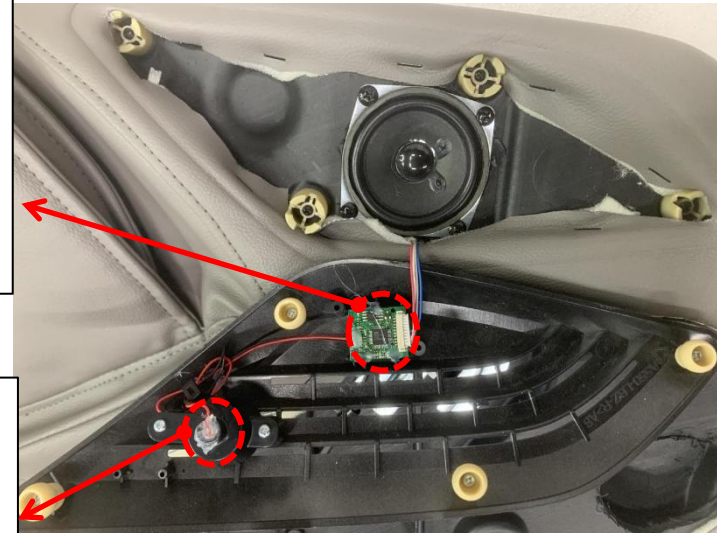
1

voice-activated  
plug

5V

5V

voice control  
board



2

microphone

**Fault diagnosis and repair:**

- 1、 Start the massage chair function through the voice command entry and listen to whether there is a response to the voice command.
- 2、 Check if the smart voice control plug is plugged in well ( 1 , 2 )
- 3、 Voice command can' t work, the microphone receiving harness and signal has problem, or the voice control board is damaged. ( 2 )

**Main causes: microphone fall off, plug, voice control board, right armrest board**



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