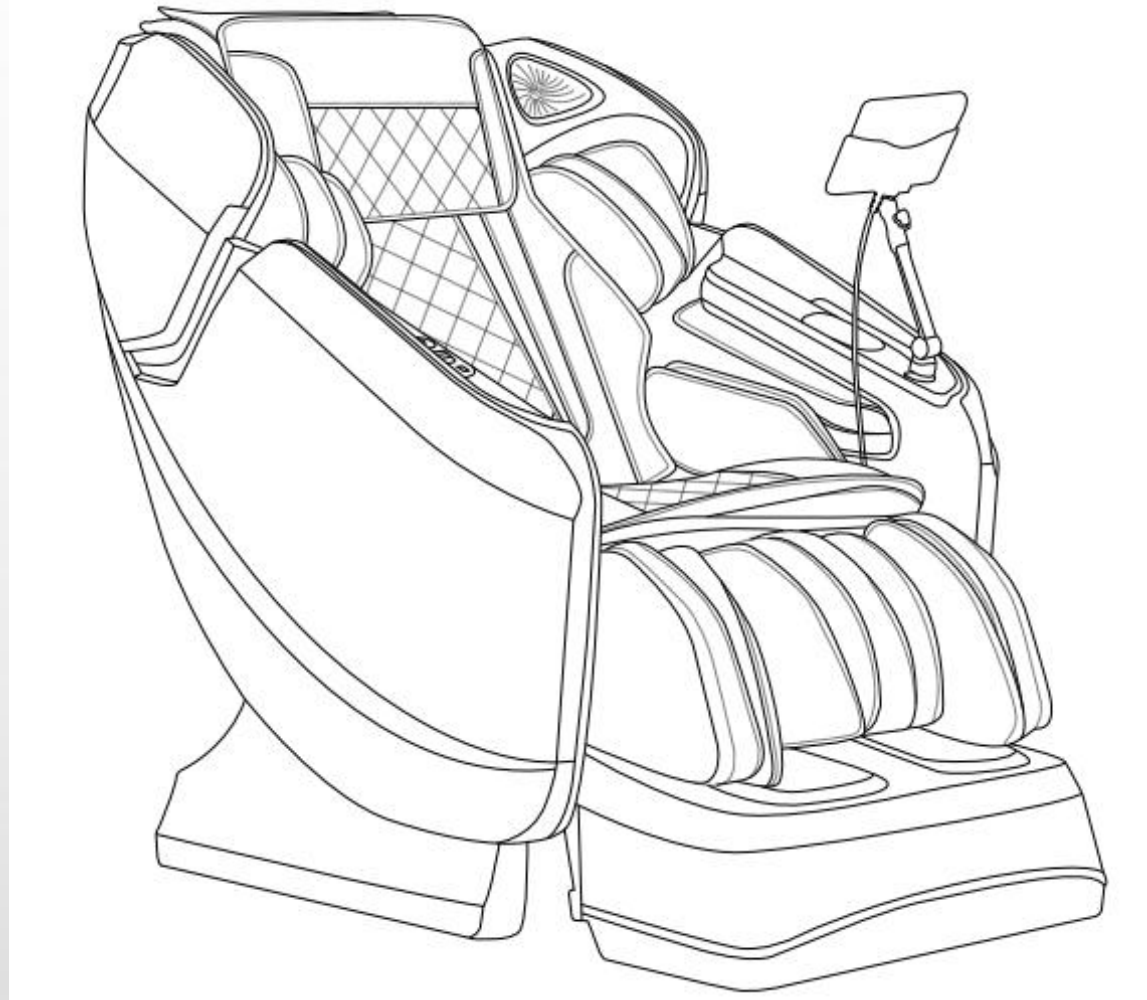




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EC-8610E massage chair service





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一、Product introduction

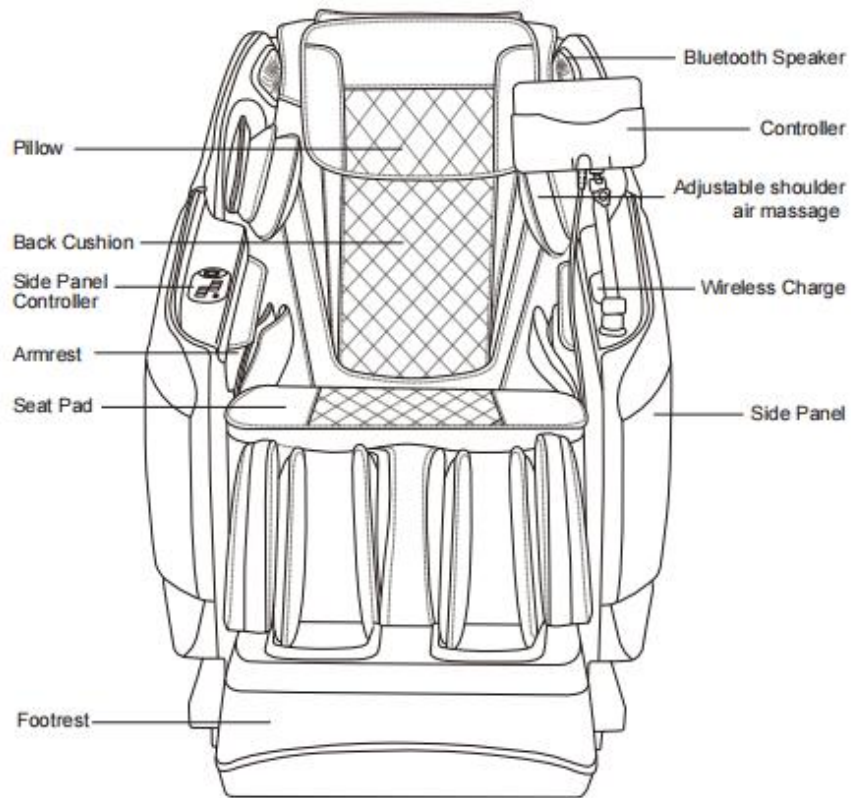
1、Product specification parameters:

Model		Titan Pro - Vigor 4D
Rate Voltage		110 -120V 60Hz
Power		200W
Working time		15min
Guide		L Shape 52.8"
4D Massage Roller	Forward distance	8 level Approx 3.9"
	Strength	5 level
	Speed	5 level
Airbag	Intensity	5 level
Angle Adjustment	Backrest	Approx 128°- 155° (Ground Angle)
	Footrest	Approx 9°- 75° (Wall Angle)
size	Upright	61.4"x30.7"x48"
	Reclined	79.5"x30.7"x45.7"
Extension of Footrest		Approx 7.1"
Dimensions of Packing (L*W*H)		BOX1: 53.7"x33.9"x49.8" BOX2: 23.2"x20.1"x21.7"
N.W./ G.W.		BOX1: 204.1lbs/237lbs BOX2: 48.5lbs/55.1lbs
Weight of Chair		Approx 252.6lbs
Usage Condition		Environment temperature :32°F -95°F Contrasting humidity :20-80RH
Storage Condition		Storage temperature :23°F - 95°F Storage humidity :20-80RH
Maximum body weight of user		260 lbs

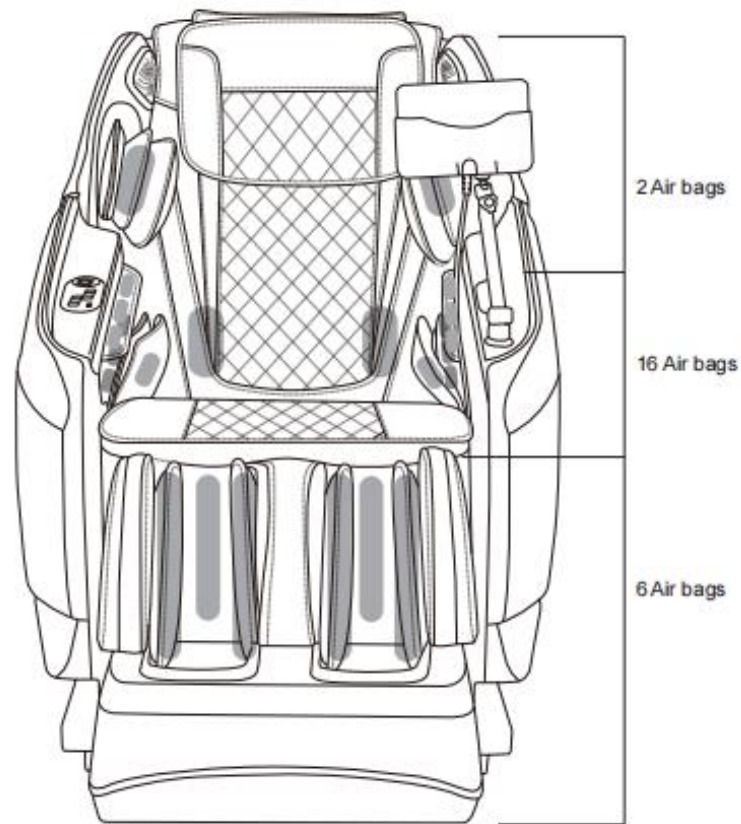


2、Appearance of the whole machine:

Product Parts



Air Bags Massage Position





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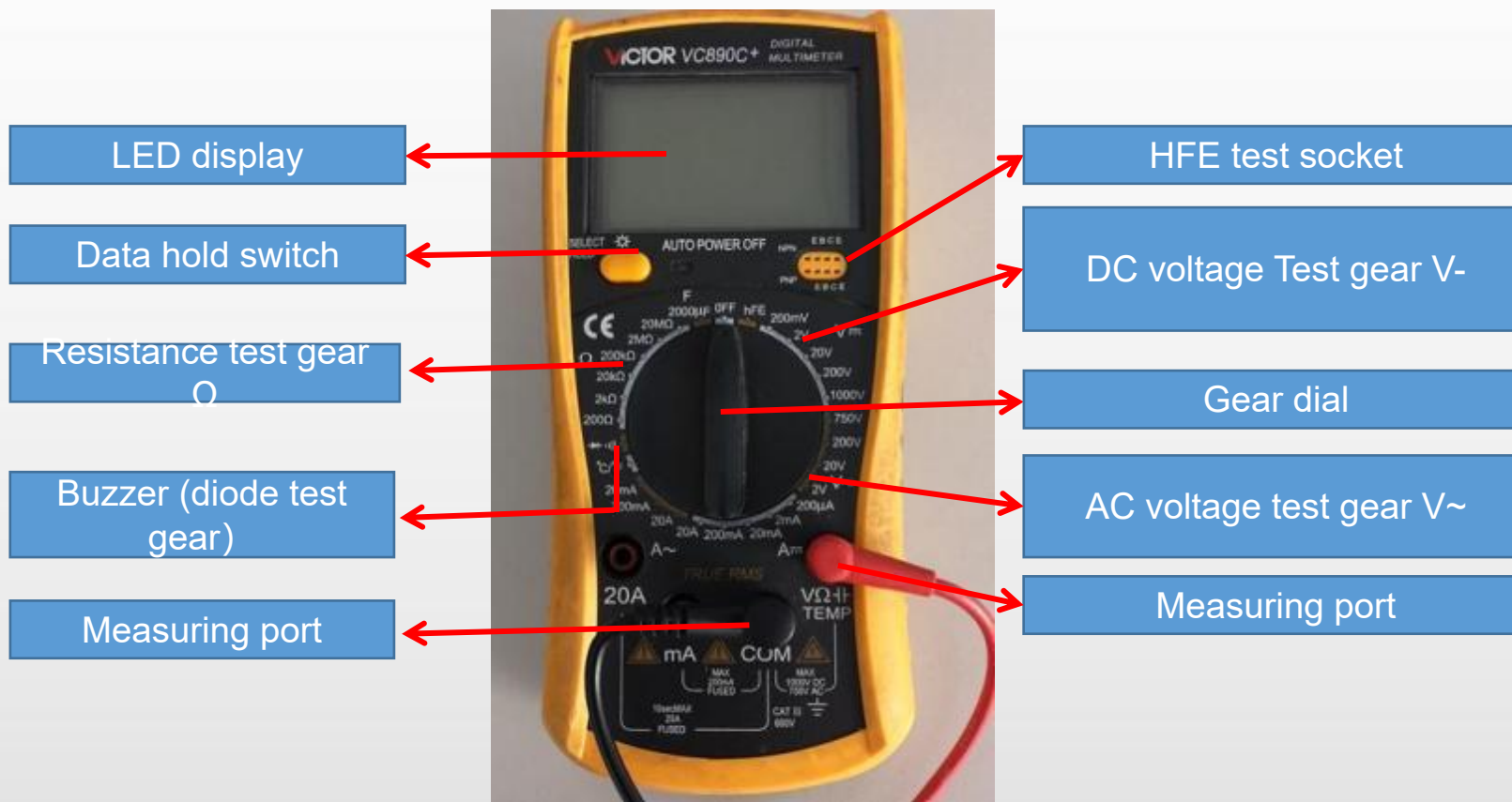
二、 Massage chair tools and use

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.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.



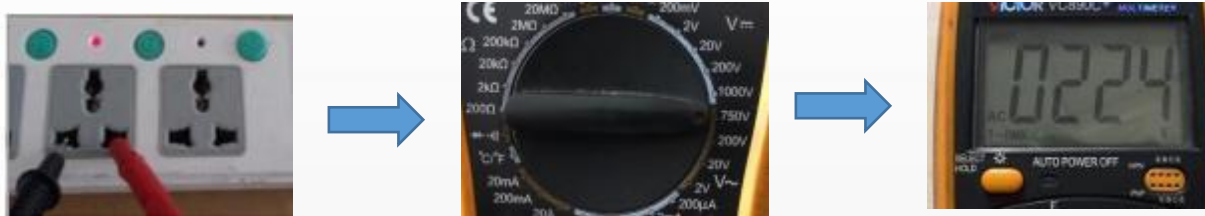
close circuit



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).



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三、Circuit working principle

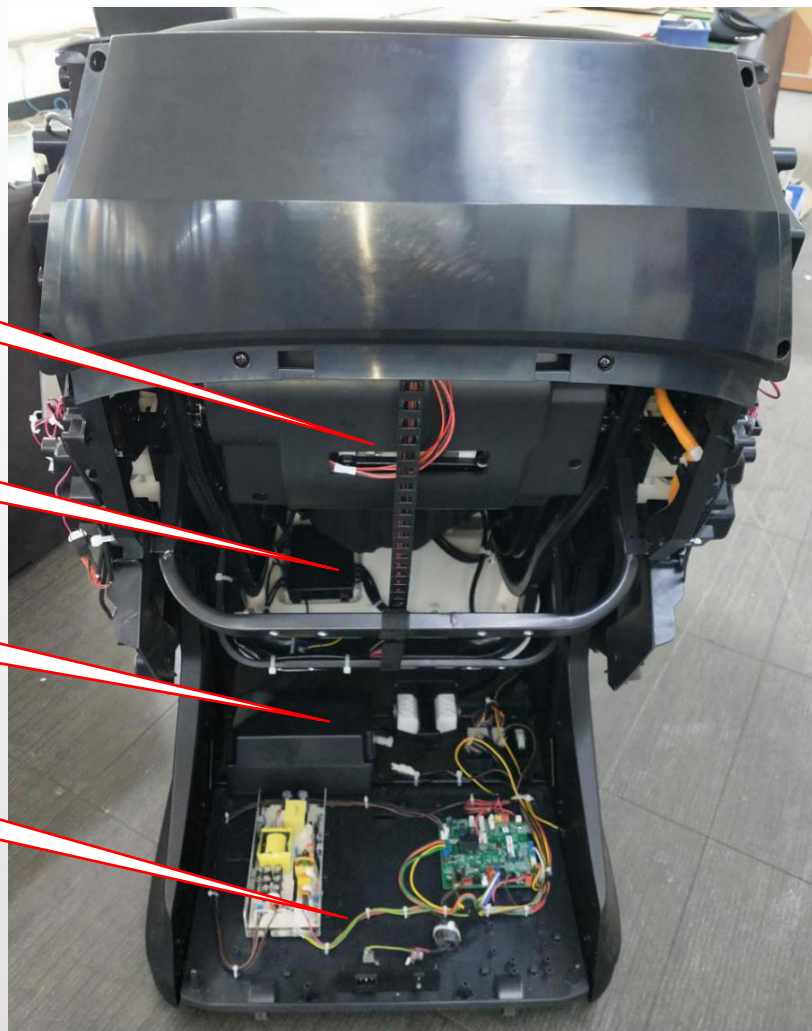
1、Internal structure diagram (overall):

mechanism

under seat PCB

air pump

main PCB box



legrest actuator



backrest actuator

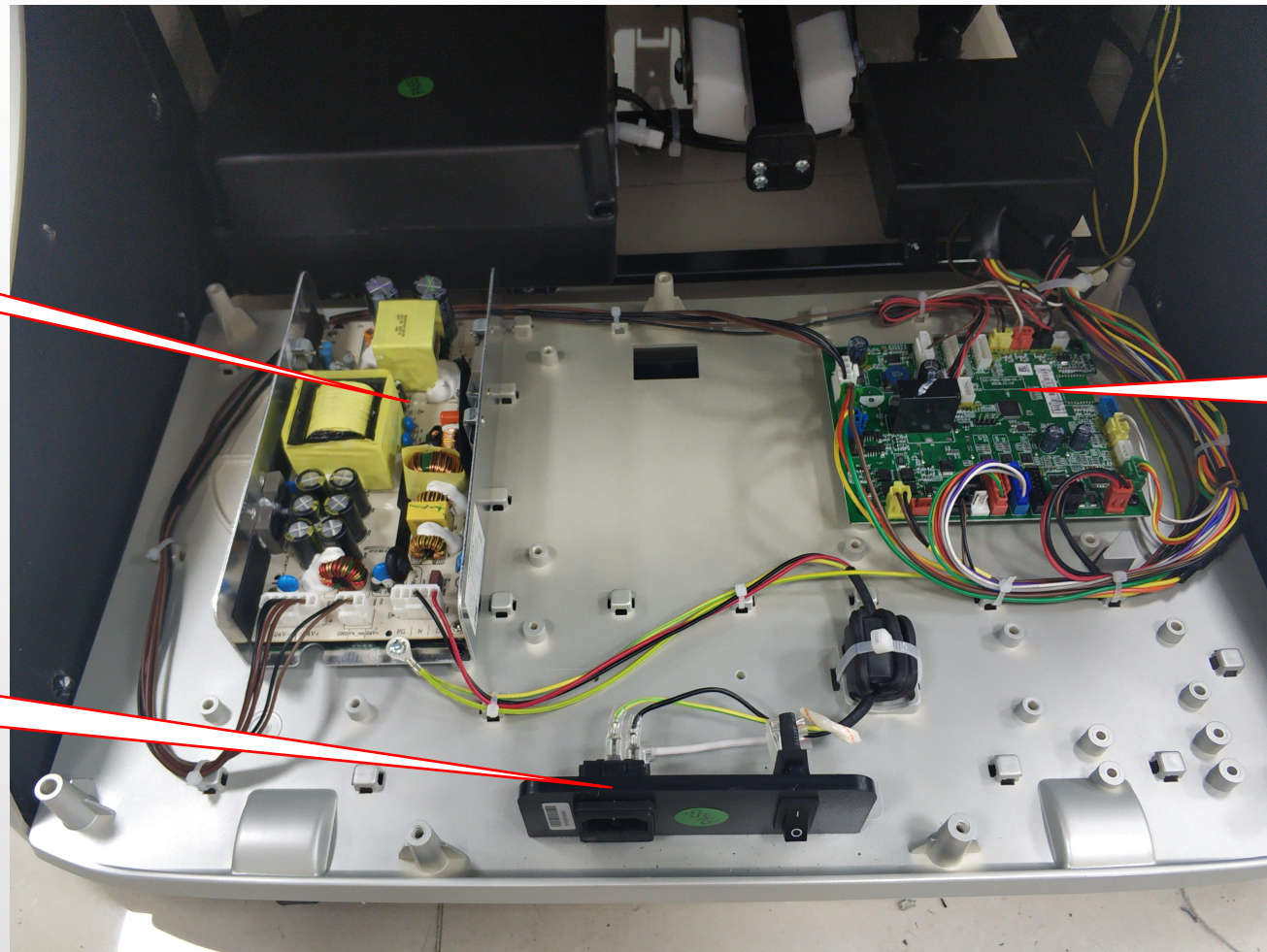


2、 Internal structure diagram (main PCB box) :

power PCB

main PCB

Switch panel





3、main PCB:

J16: side panel power push-button

J23: DC24V power in

J25: 24V out put to under seat PCB

J24: 24V to Bluetooth PCB

J22:air pump

J6: LED

J2: air valve

J3:air valve

J8: remote control

J19:PS-ON signal (DC5V)

J17: backrest actuator Counter

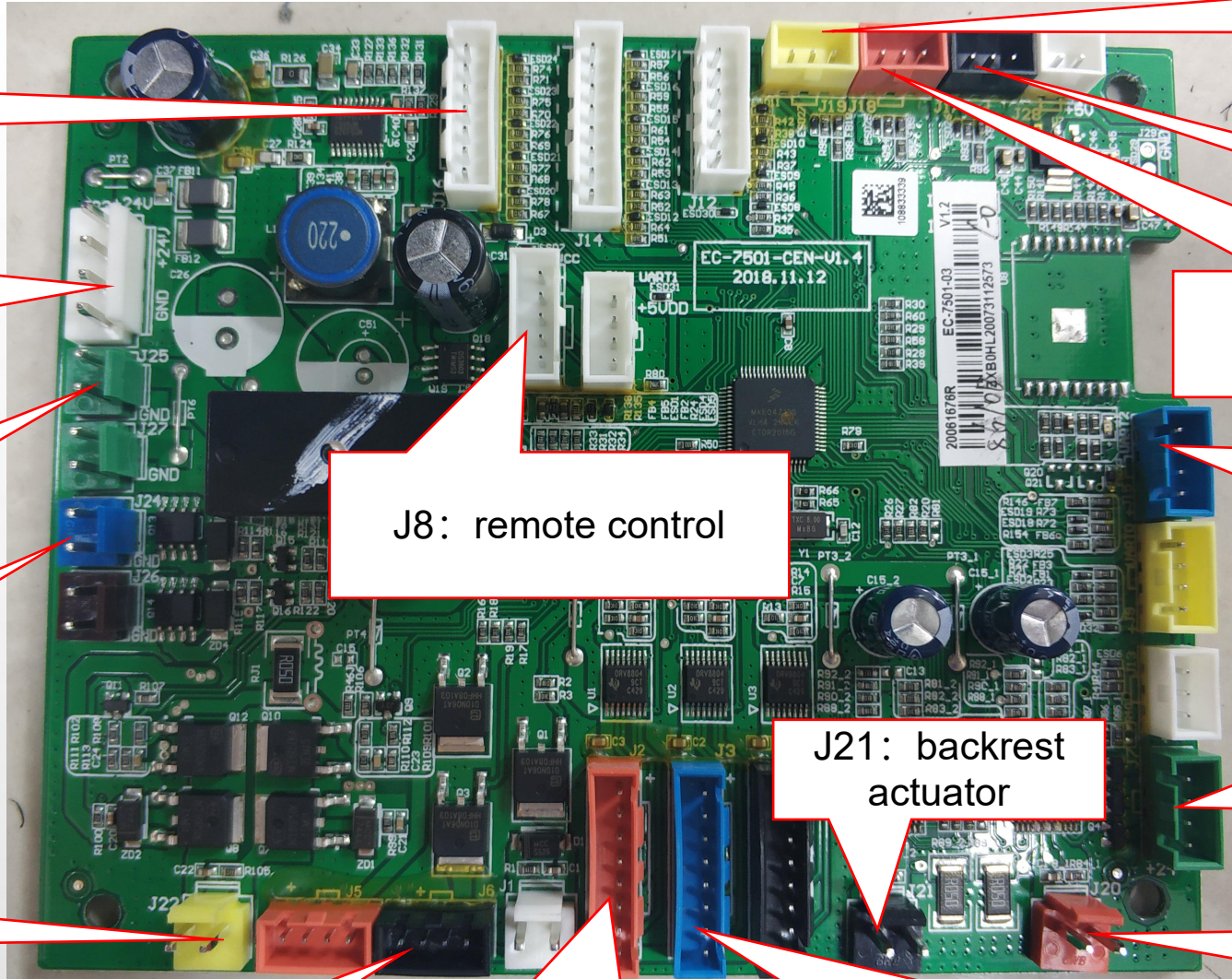
J18: legrest actuator Counter

J15:Bluetooth

J21: backrest actuator

J7:LED

J20: legrest actuator





4、 under seat PCB:

J20: DC24V 2-way air valve (left side panel)

J28: DC12V Bluetooth PCB

J15: DC24V legrest actuator

J13: DC24V output connected to right board adapter board J1

J9: legrest actuator conter

J23: Bluetooth

J16: air valve

J10: air bag

J26: mechanism communication

J21: DC24V to legrest PCB

J14: DC24V to 3D PCB

J11: DC24V, LED

J17: legrest PCB communication

J3: air bag

J8: side panel control

J18: remote control

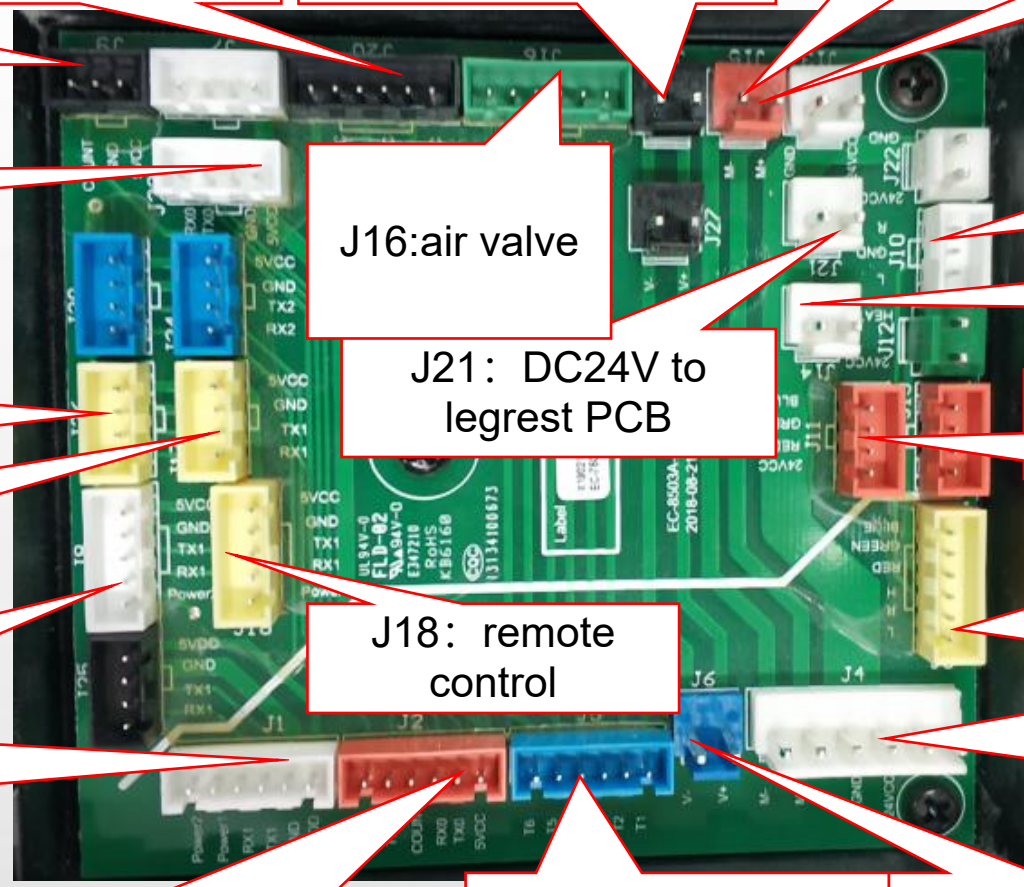
J1: leg, mechanism, side panel control communicatio

J4: 24V to mechanism

J2: 5V legrest actuator counter

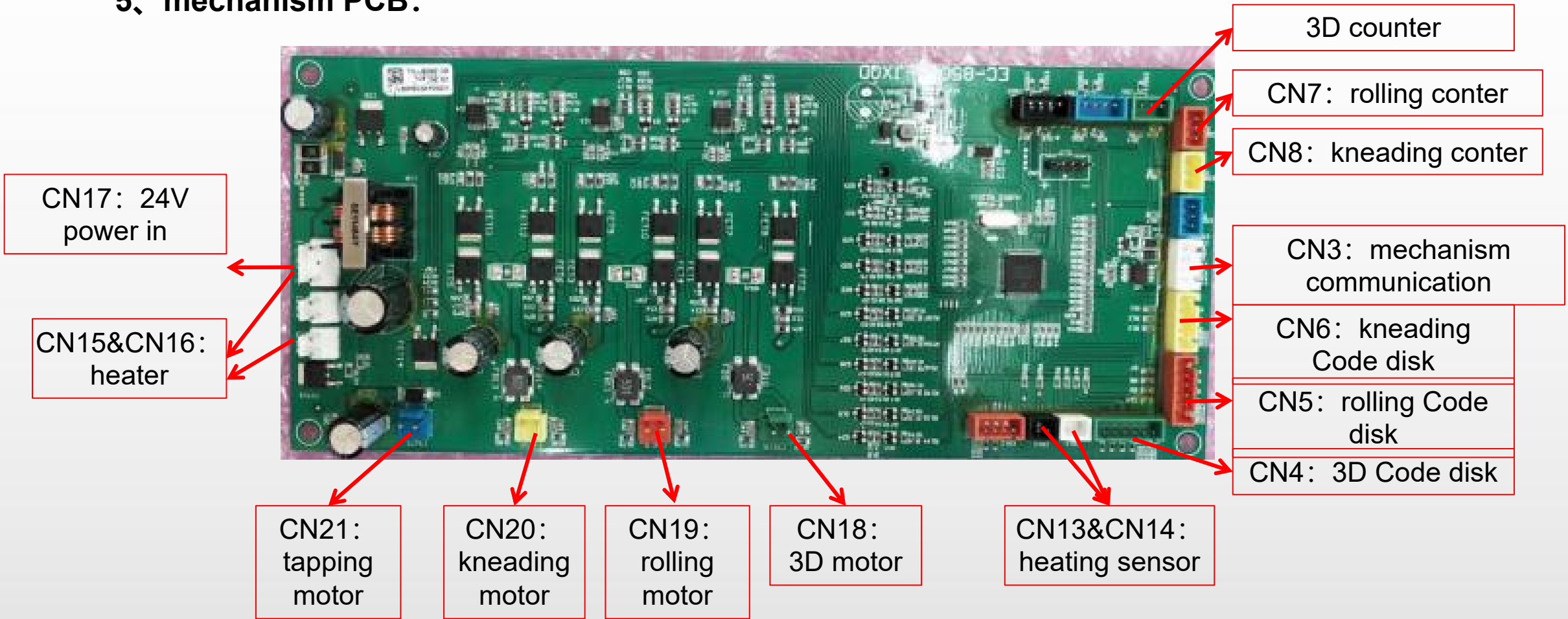
J5: air valve

J6: Bluetooth



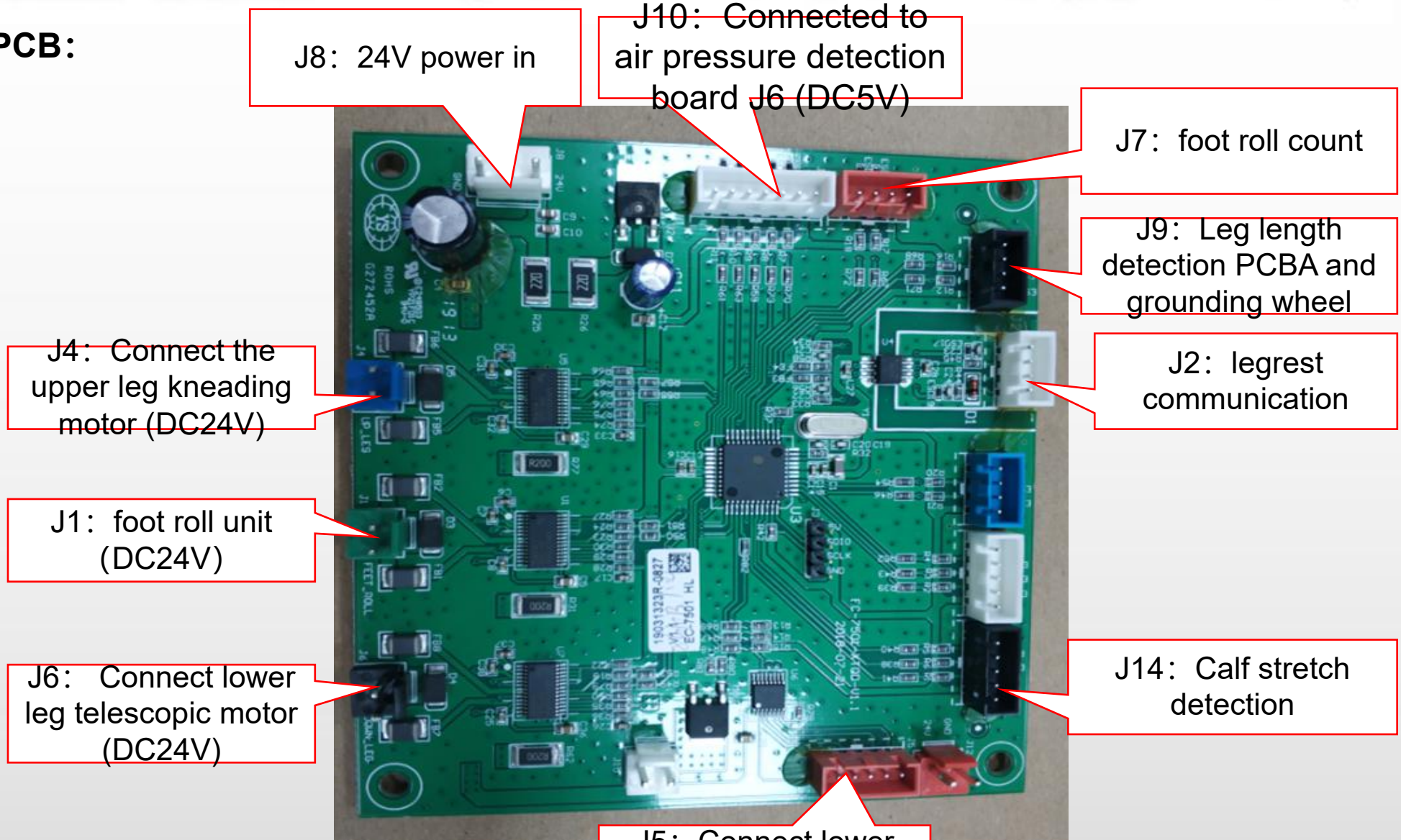


5、mechanism PCB:





6、legrest PCB:



J8: 24V power in

J10: Connected to air pressure detection board J6 (DC5V)

J7: foot roll count

J9: Leg length detection PCBA and grounding wheel

J2: legrest communication

J4: Connect the upper leg kneading motor (DC24V)

J1: foot roll unit (DC24V)

J6: Connect lower leg telescopic motor (DC24V)

J14: Calf stretch detection

J5: Connect lower leg inflation connector



四、Massage chair removal instructions

1、disassembly of the pillow:



unzip the zipper



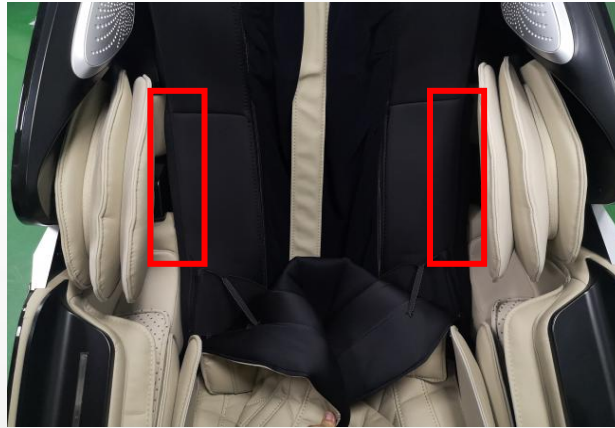
pillow



2、disassembly of the backrest pad:



unzip the zipper



unzip tthe zipper



unzip the zipper



unzip the zipper



unzip the zipper



backrest pad



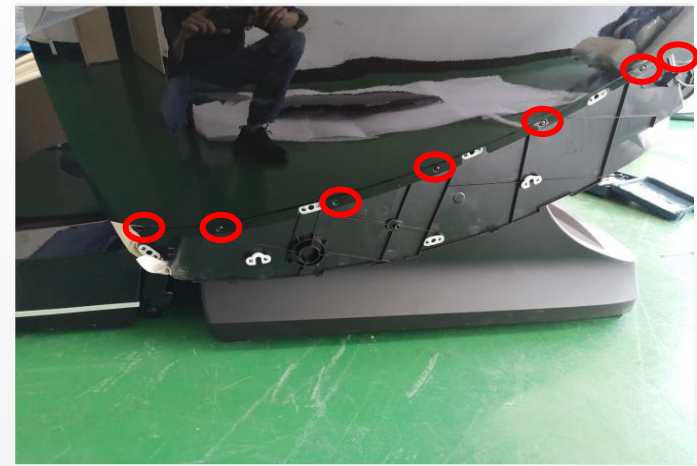
3、disassembly of side panel:



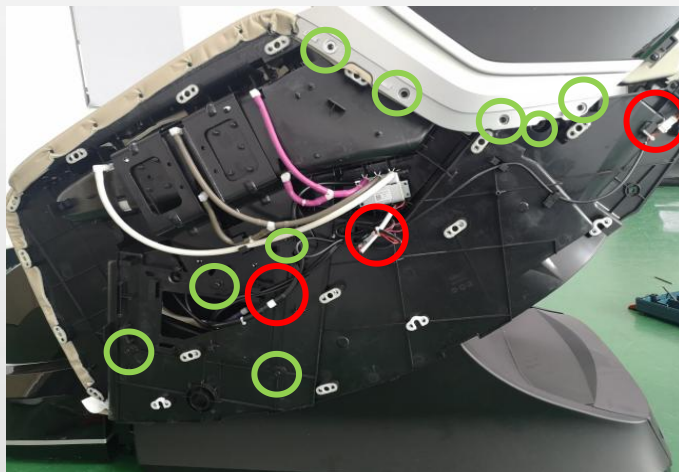
remove 1 screws



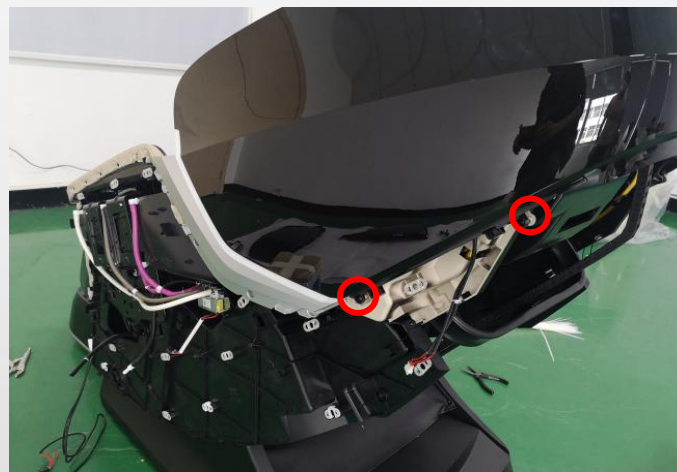
open the lower cover



remove 7 screws and remove upper cover



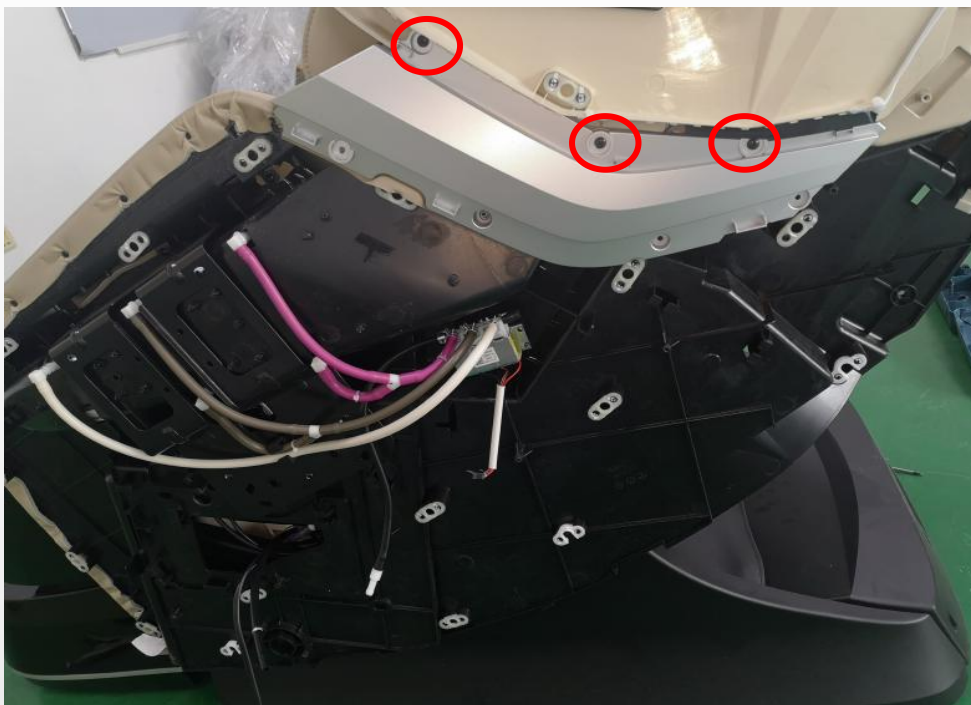
remove the screws and discontnet the air hose and terminal



remove 2 screws



remove 3 screws and remove hood cover



remove 3 screws and
remove the trim



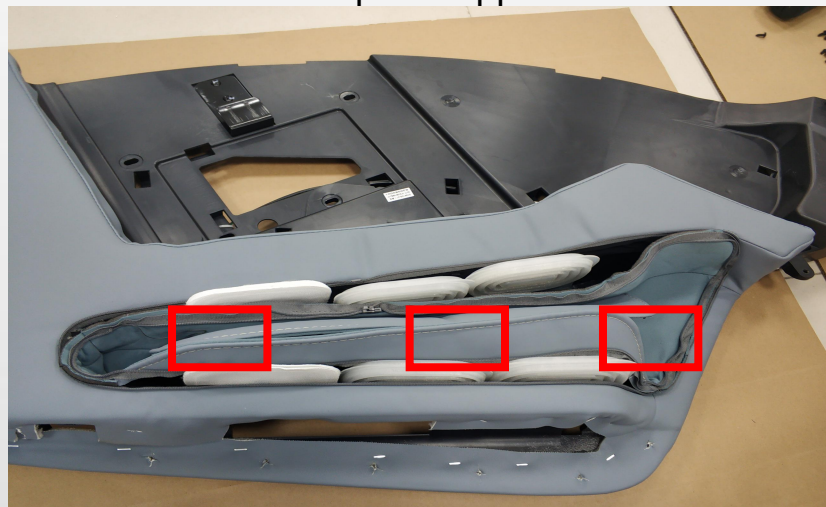
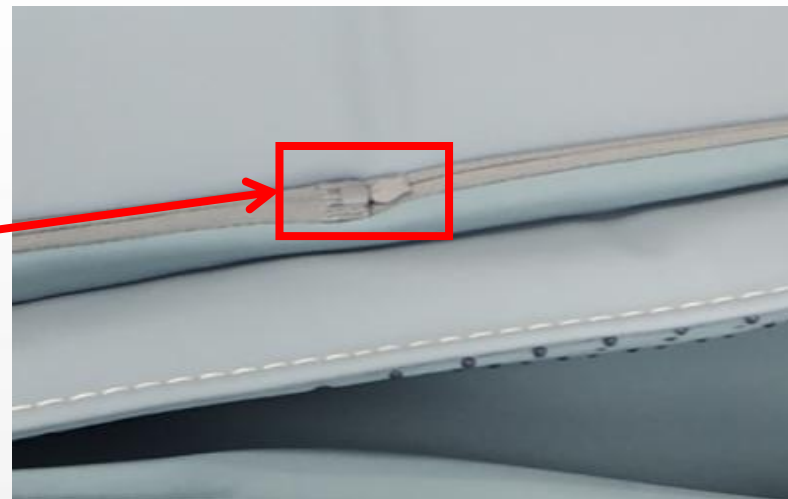
remove 2 screw, then remove
left side panel



4、disassembly of inner left side panel



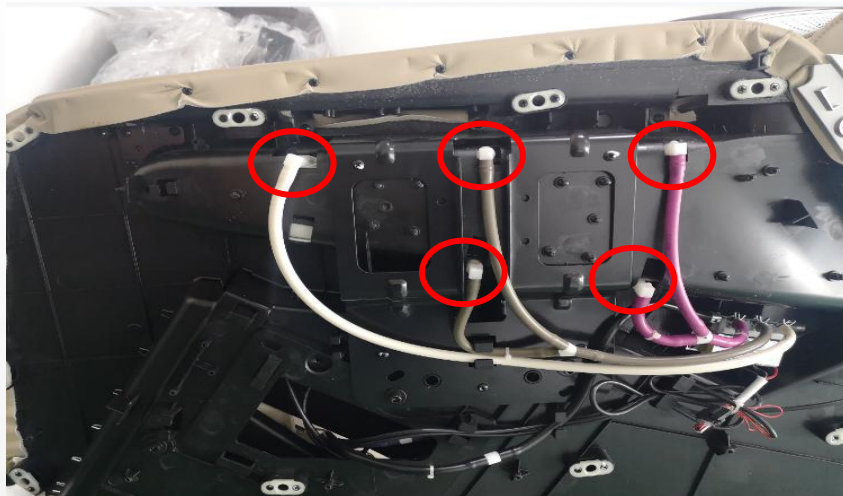
unzip the zipper



open the arm cover



left arm cover



discontent the air hose



remove the air bag



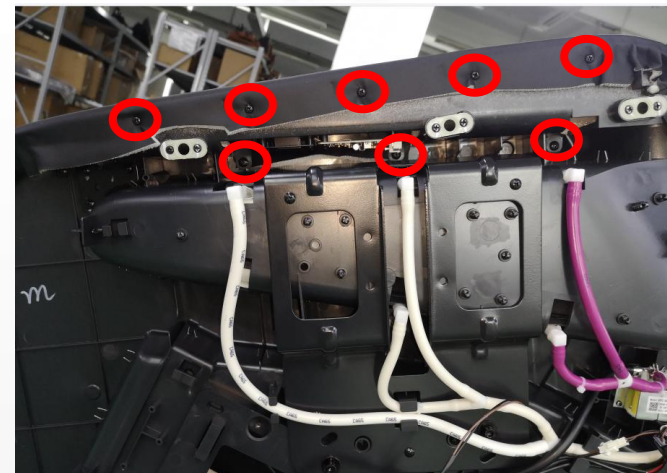
air bag



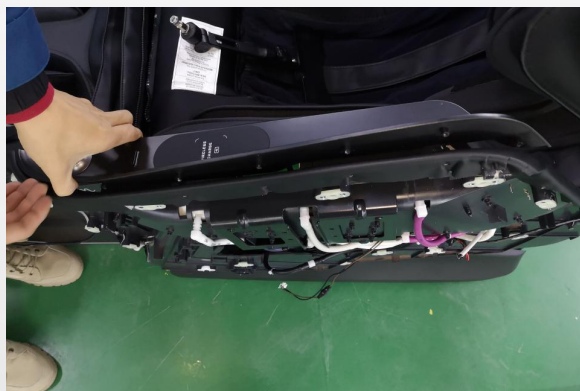
air bag



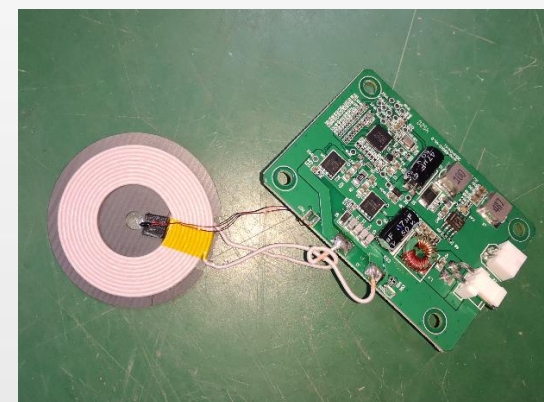
remove the nut and remove the remote control holder



remove the screws



open the cover and discontent the terminals



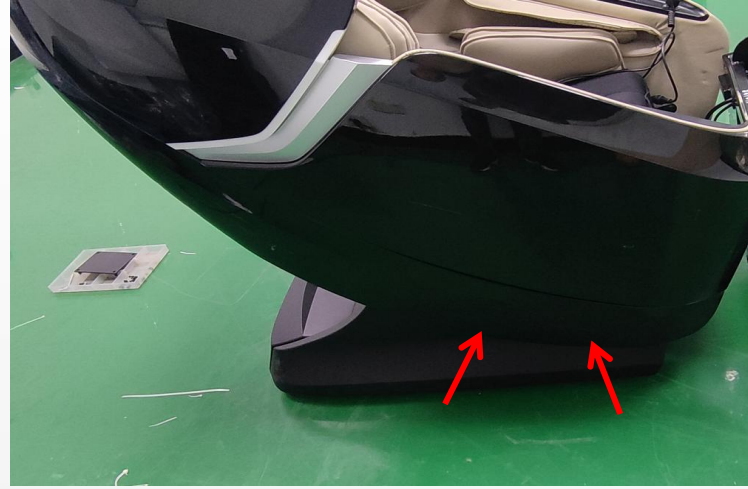
remove the screws and remove the Wireless charging module



5、disassembly of right side panel:



remove a screws



open the lower cover



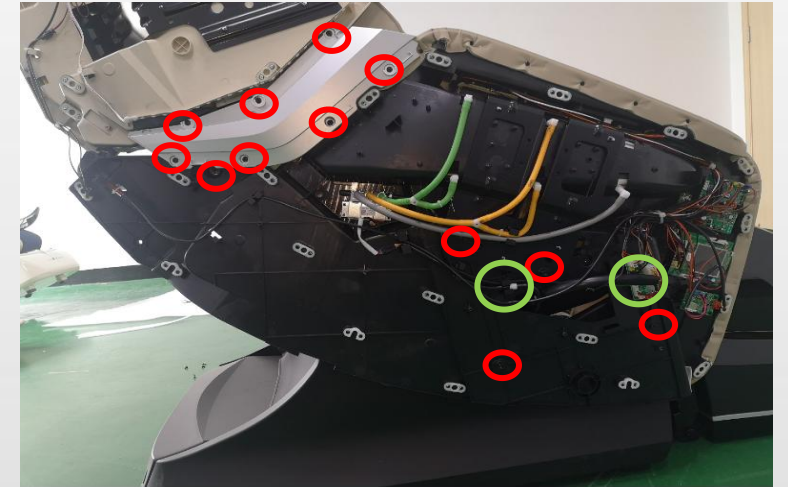
remove 7 screws and remove upper cover



remove 2 screws and discontent the terminal



remove 3 screws and remove the hood cover



remove the screws and remove the trim, discontent the air hose and terminals



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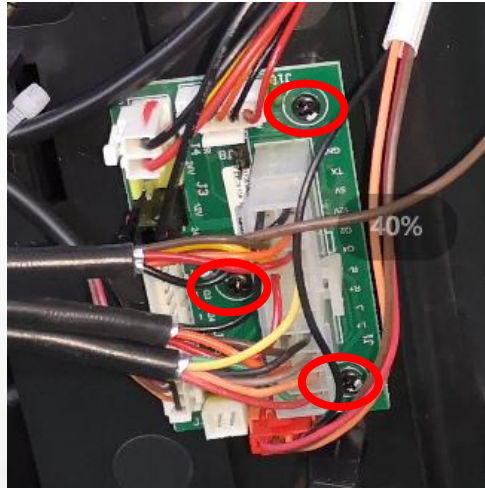
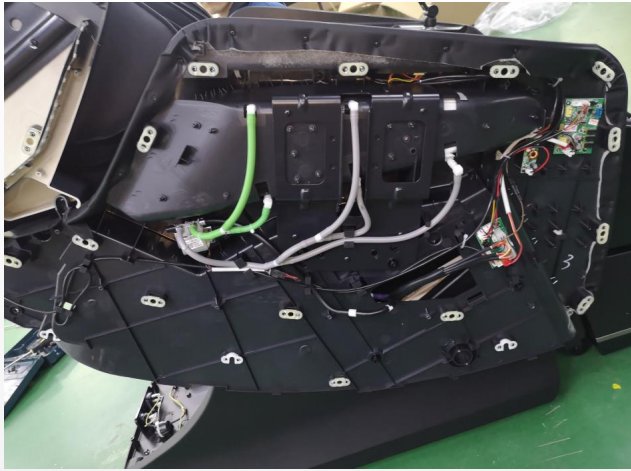
remove 2 screws



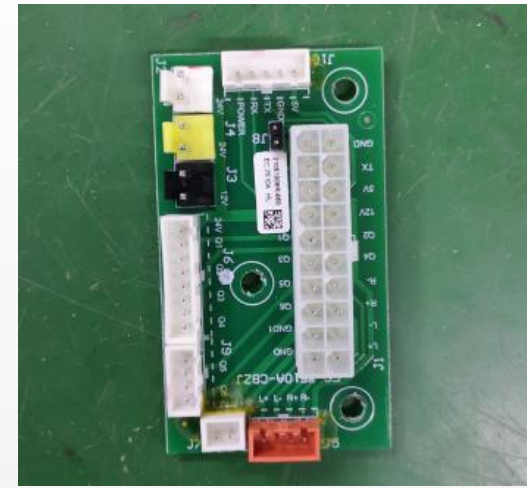
remove right side panel



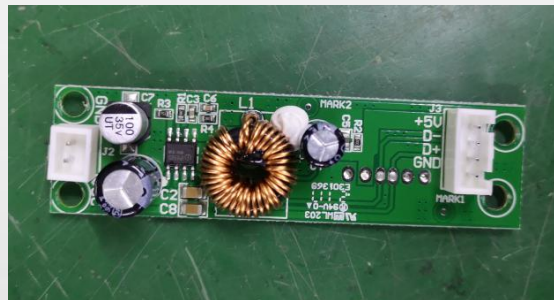
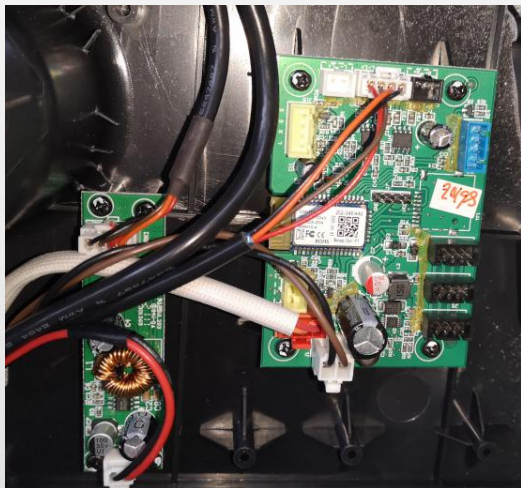
6、disassembly of inner right side panel:



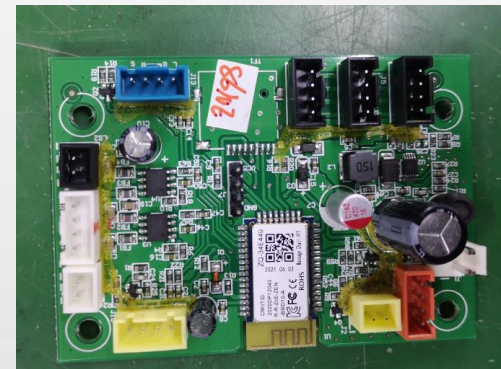
remove 3 screws and discontent the terminals



remove the adapter PCBA



USB charging PCB



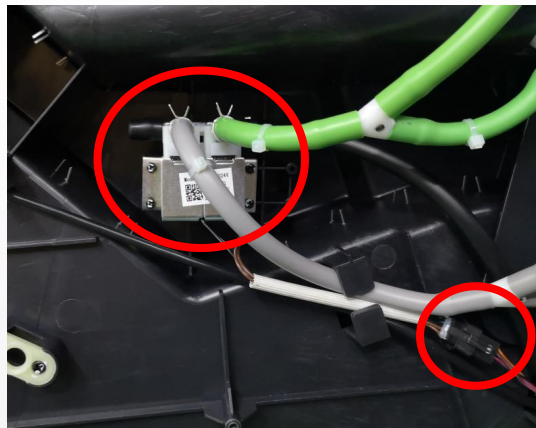
Bluetooth PCB

remove the screws and discontent the terminals

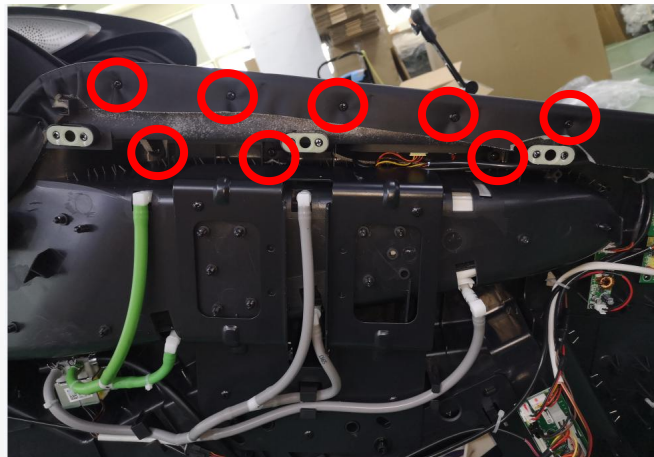


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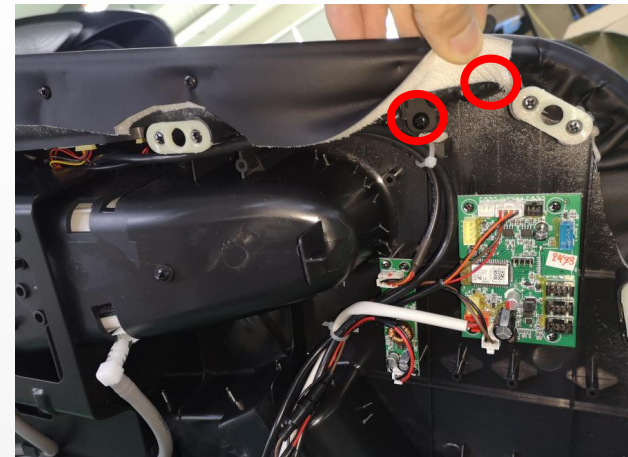
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remove 4 screws, discontent the air hose and terminal, remove air valve



remove the screws, discontent the terminal





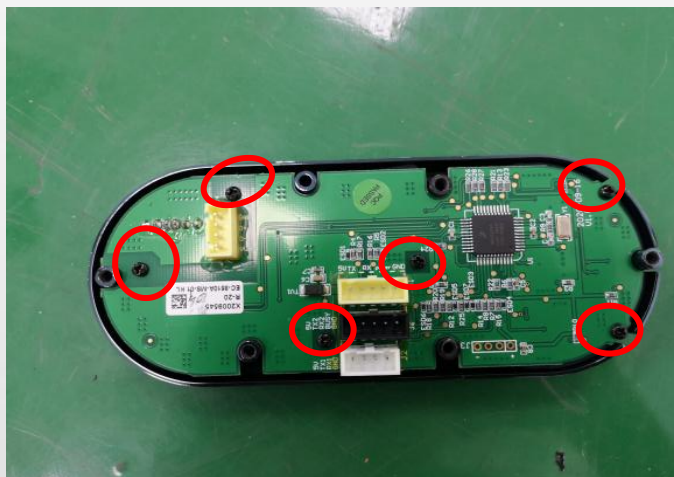
open the cover with a “—” screwdriver



discontent the terminal and remove the cover



remove 5 screws, remove the control



remove 6 screws, remove the PCB



7、disassembly of the remote control:



disconnect the terminal

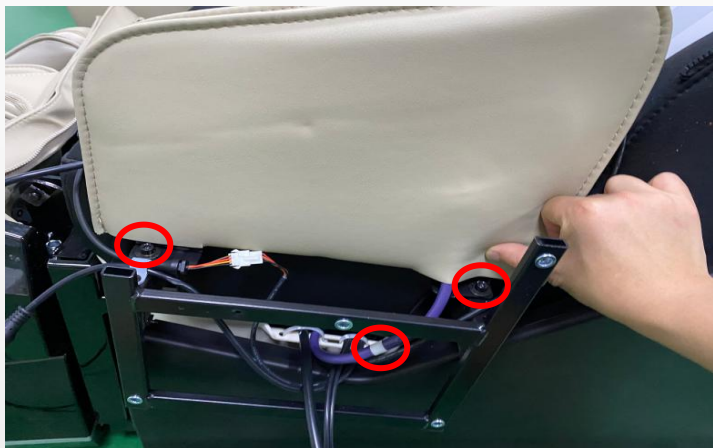


remove the remote control

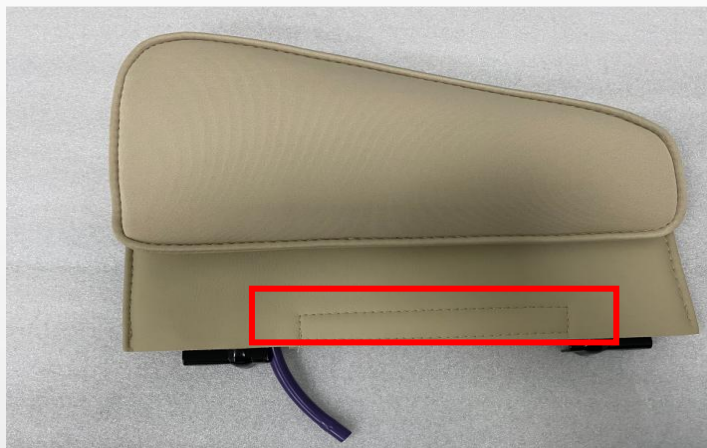


8、disassembly of the side seat massage:

A. remove the side panel



remove 2 screws and discontnet the air hose



open the cover



remove 2 screws and remove
air bag



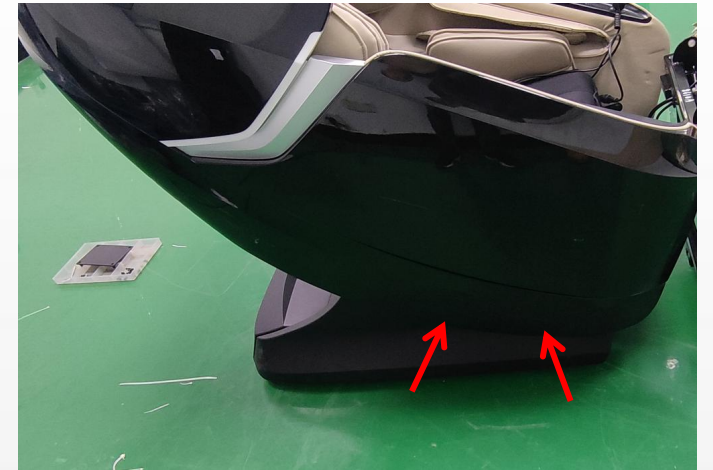
9、disassembly of rear cover:



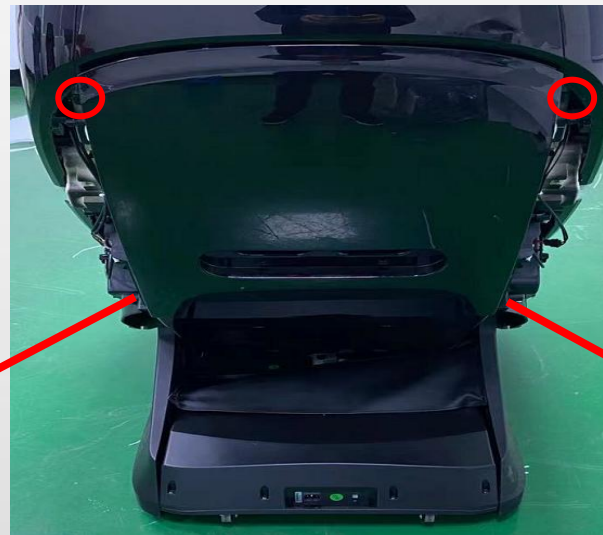
remove 6 screws



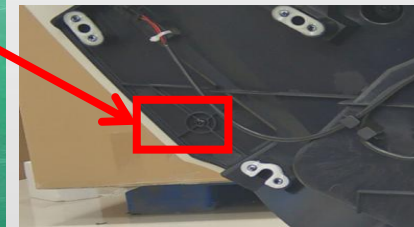
open the cover (left)



open the cover (right)



remove 4 screws, then remove rear cover





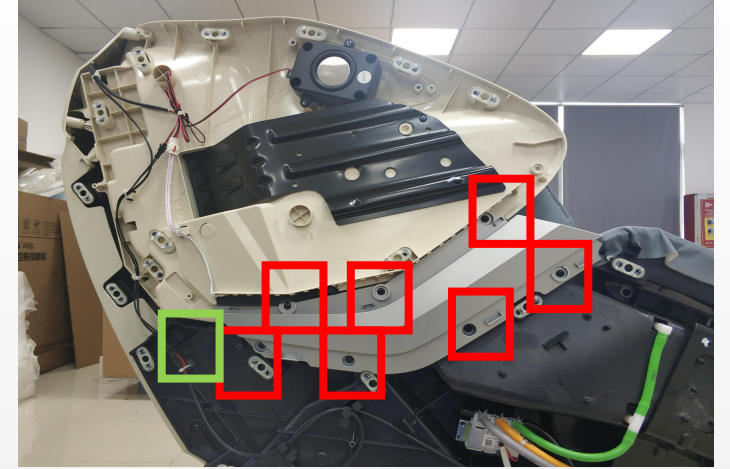
10、disassembly of the hood unit



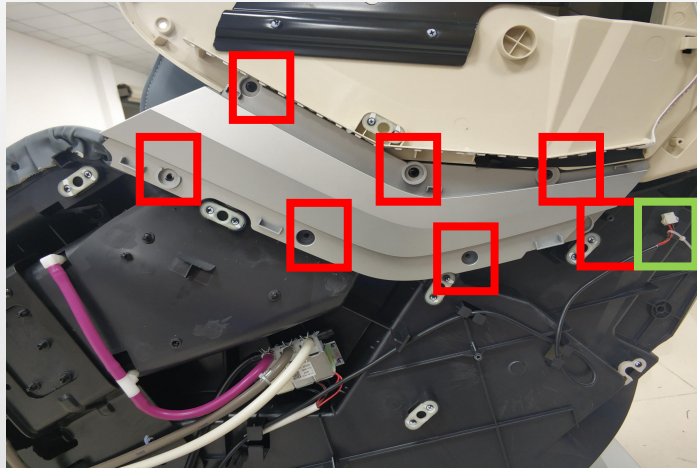
remove 2 screws



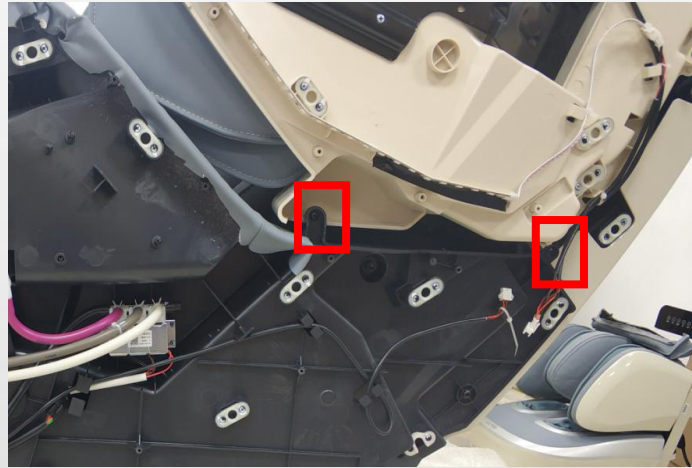
remove 6 screws and remove the cover



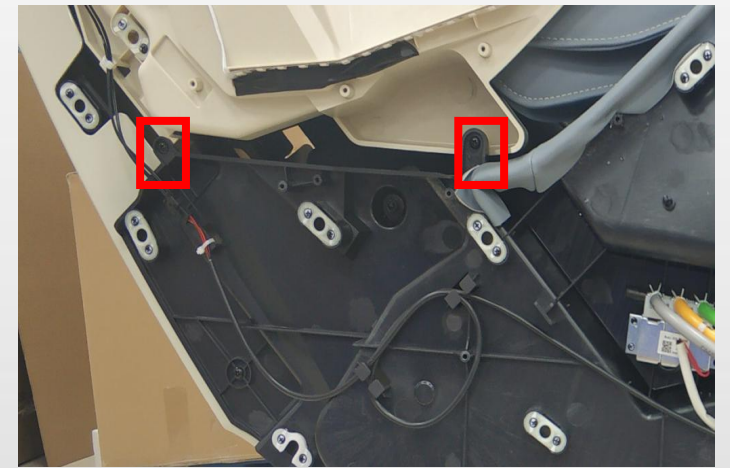
remove 7 screws and discontent the terminal



remove 7 screws and discontent the termina



remove 2 screws

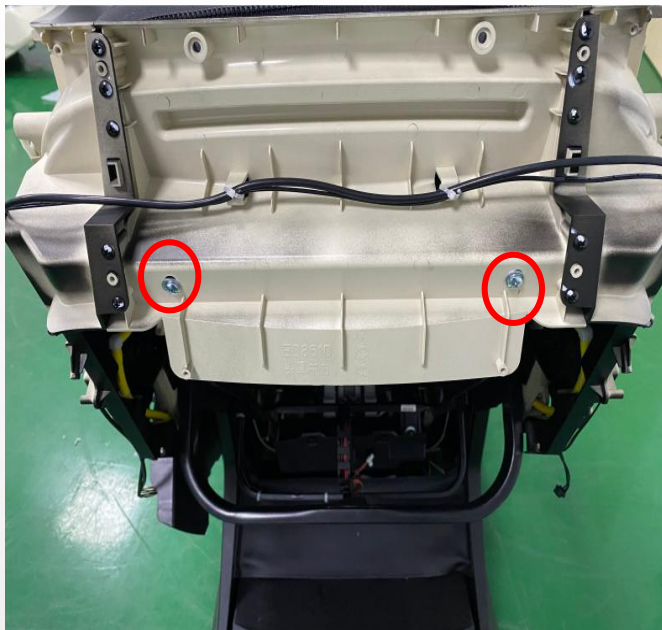


remove 2 screws

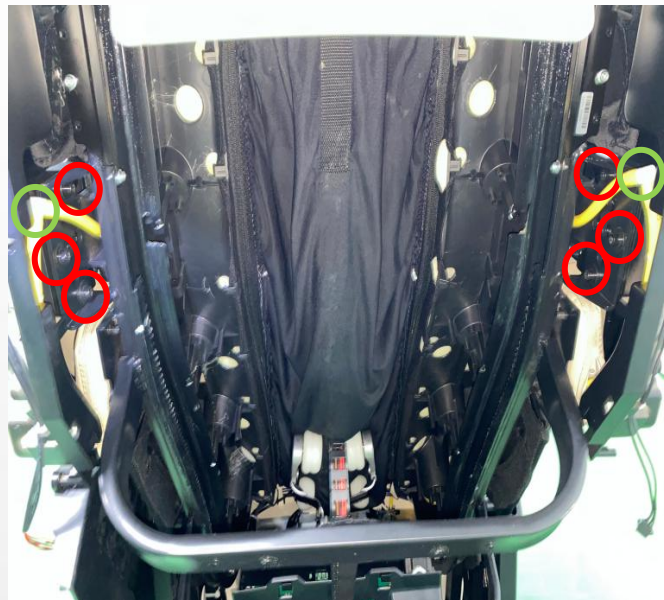


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remove 2 screws



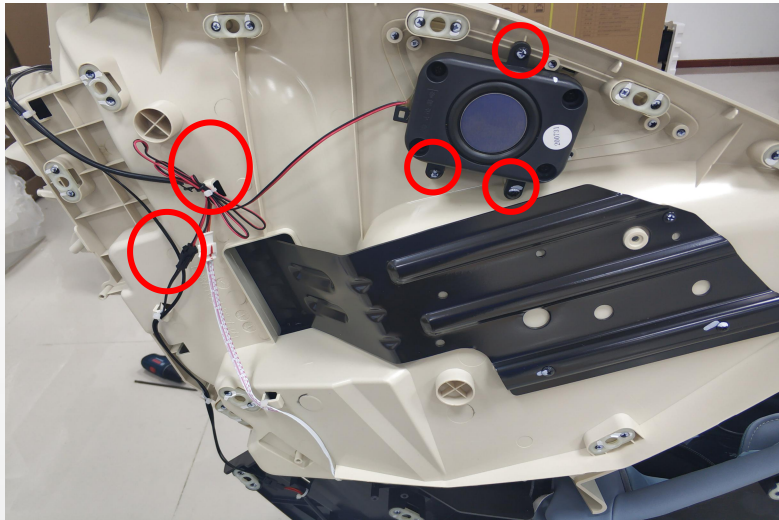
remove 3 screws and discontnet the air hose
(both side)



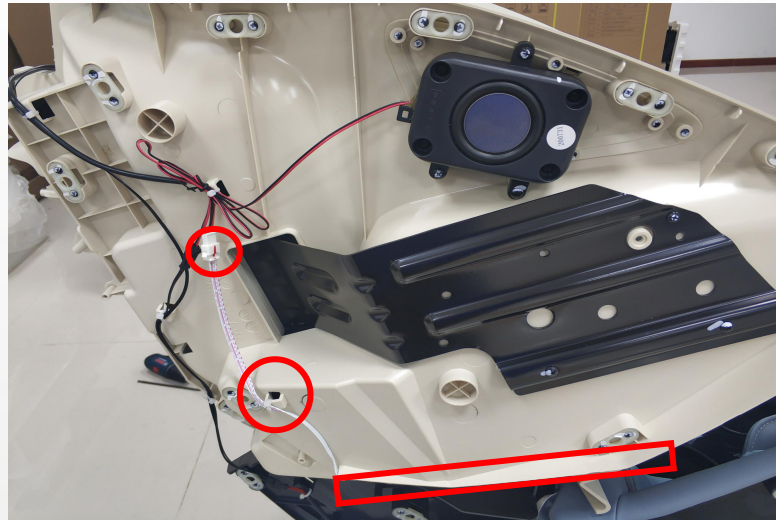
remove the hood



11、disassembly of inner hood



remove 3 screws and discontnet the terminal, remove the horn



discontnet the terminal and remove the LED

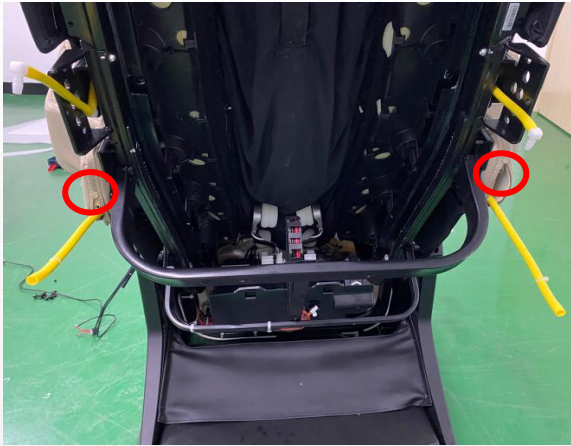


remove 9 screws, remove the horn net cover



12、disassembly of shoulder:

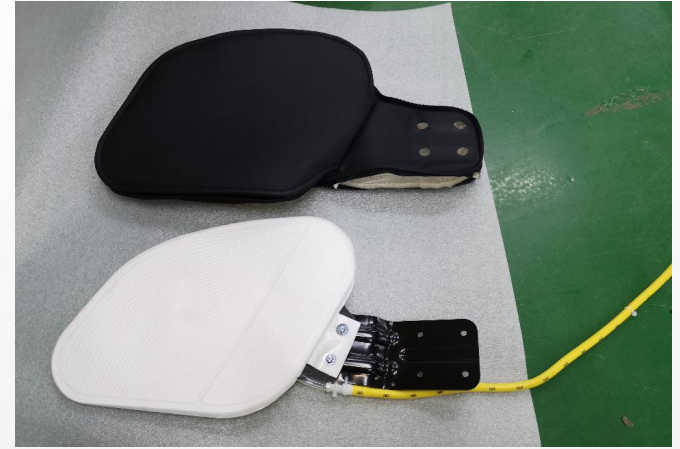
A. remove the hood



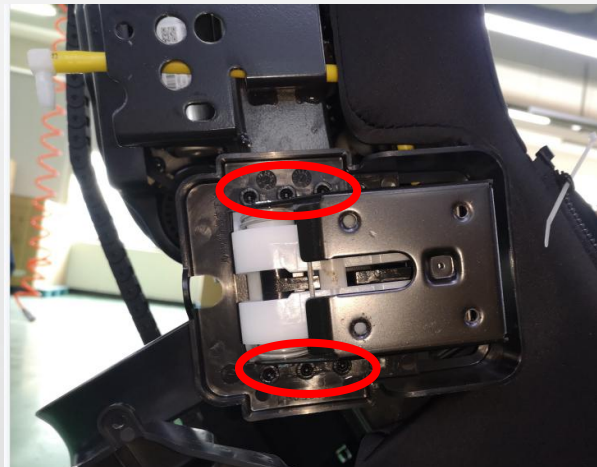
unzip the zipper



remove 4 screws and remove the shoulder



the shoulder



remove 6 screws

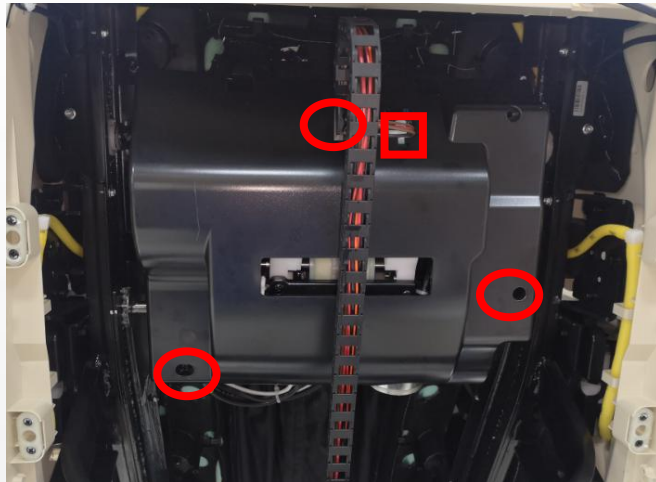


Shoulder rotating assembly

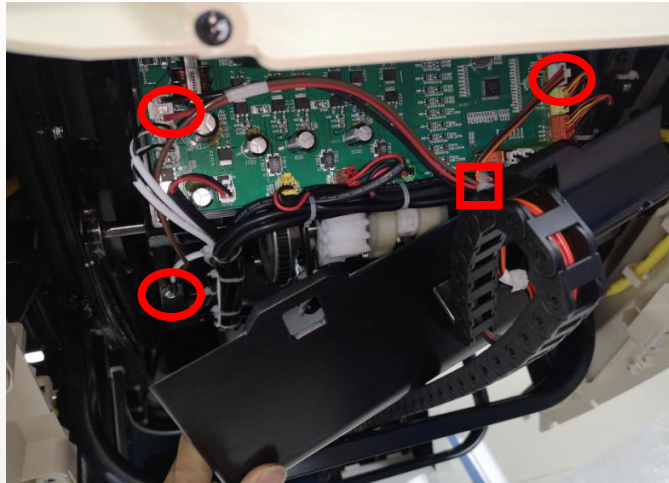


13、disassembly of the backrest cable:

A. remove rear cover



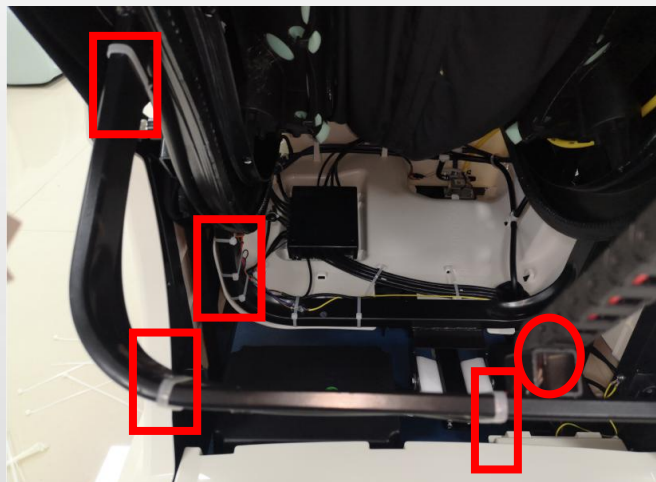
remove the screws, cut the cable tie



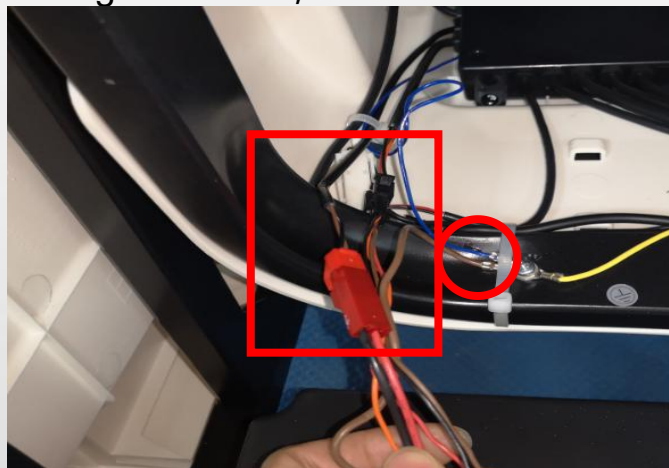
discontenct the terminal, remove the ground wire, cut the cable tie



mechanism cover



cut the cable tie, remove the screw



discontenct the terminals and remove the screw

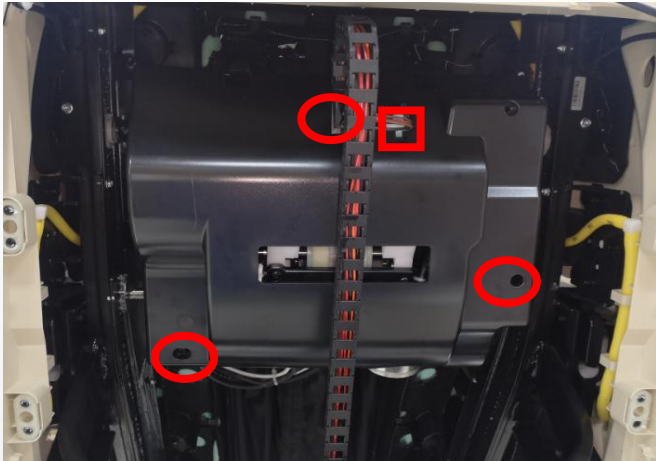


remove backrest cable

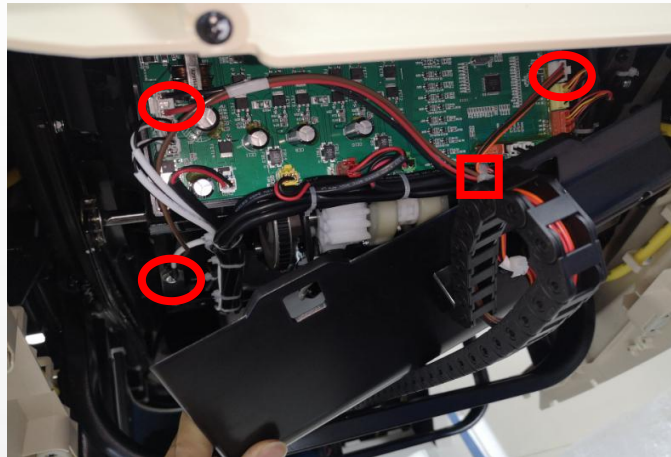


14、disassembly of the mechanism:

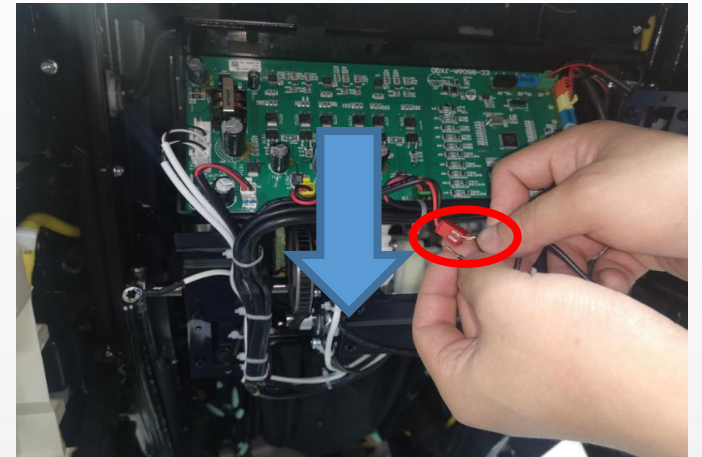
A. remove rear cover



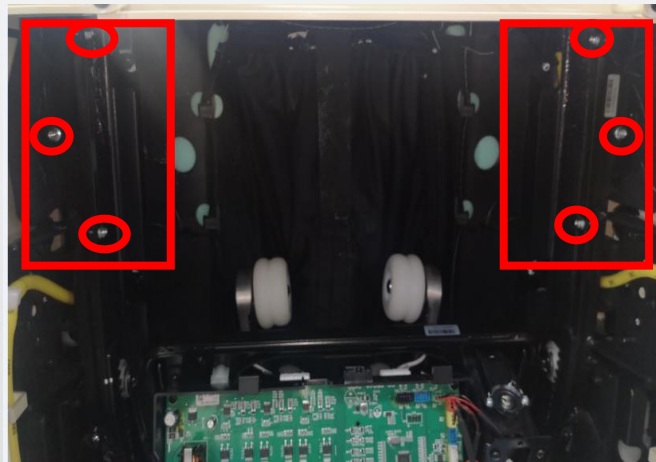
remove the mechanism cover



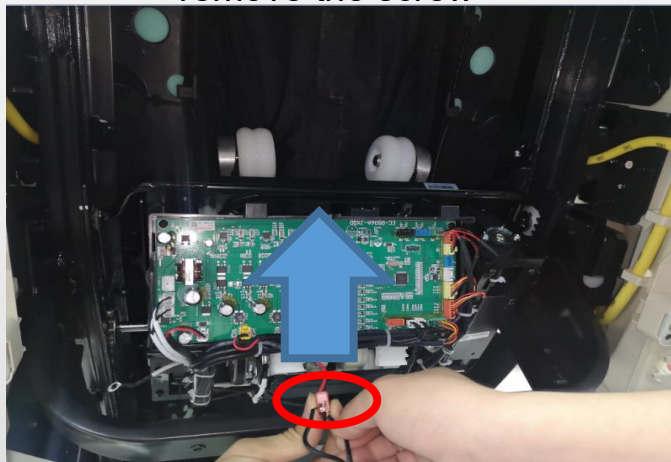
discontent the terminal and remove the screw



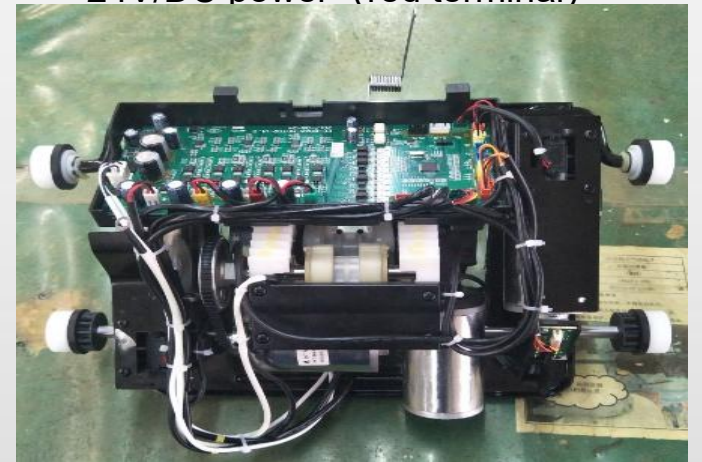
move down mechanism with a 24V/DC power (red terminal)



remove 2 baffle both side



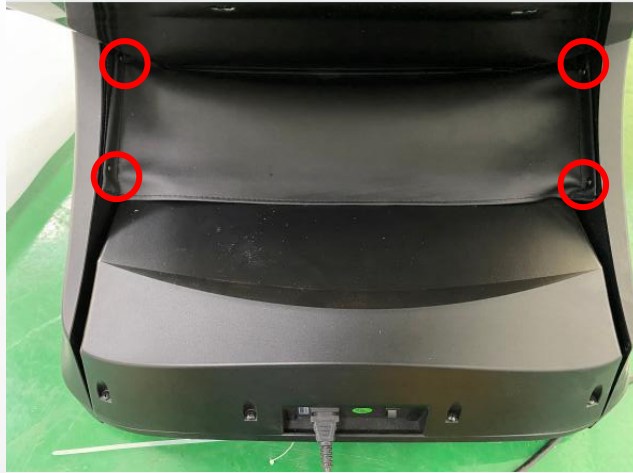
move up mechanism with a 24V/DC power



机芯



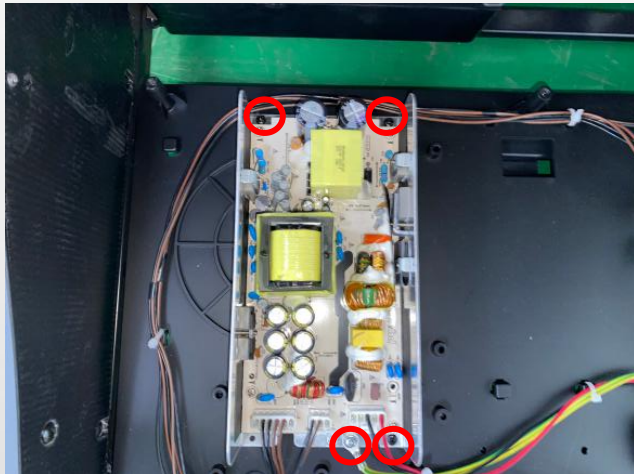
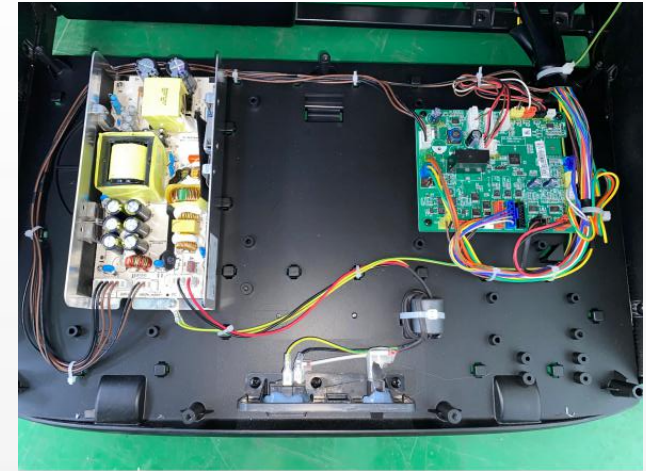
15、disassembly of main PCB box:



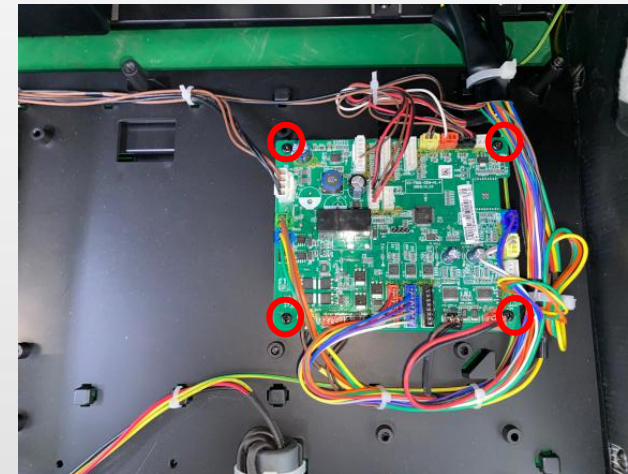
remove 4 screws and remove the cloth



remove 7 screws and remove the cover



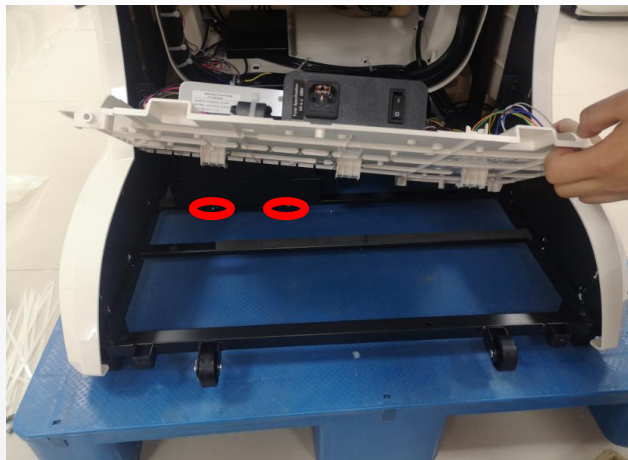
discontent the terminal and remove 4 screw, remove power PCB



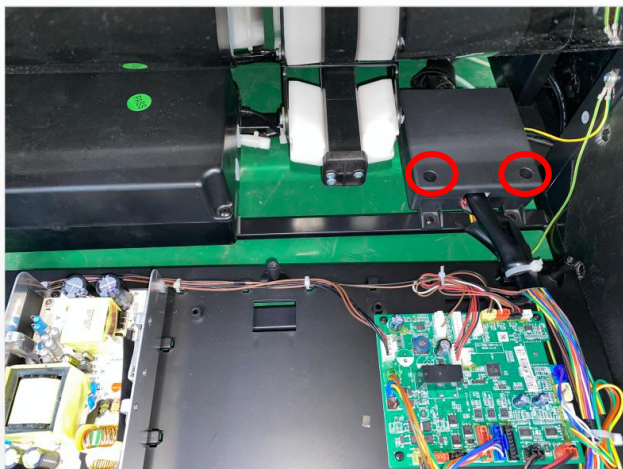
discontent the terminal and remove 4 screw, remove main PCB



16、disassembly of air pump:
A.remove main PCB box cover



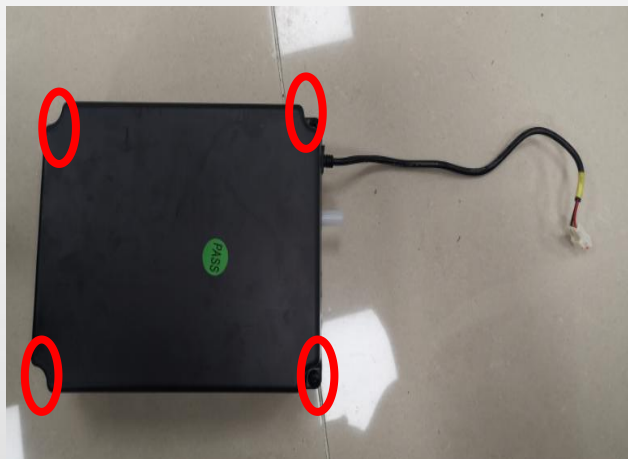
remove 2 screws



remove 2 screw



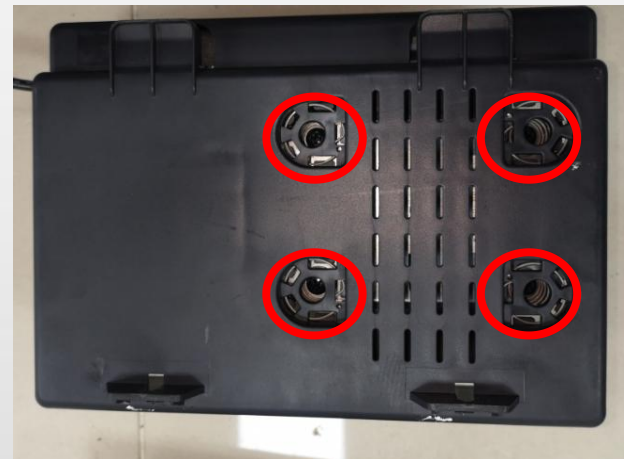
cut the cable tie and discontnet the terminal and air hose



remove 4 screws



discontnet the air hose



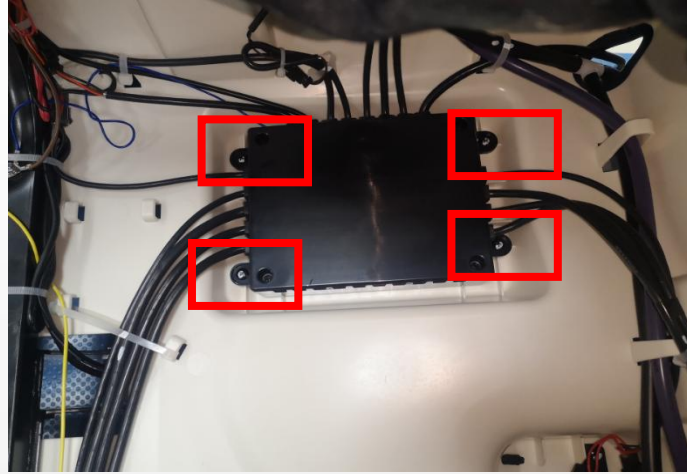
remove 4 screws and remove air pump



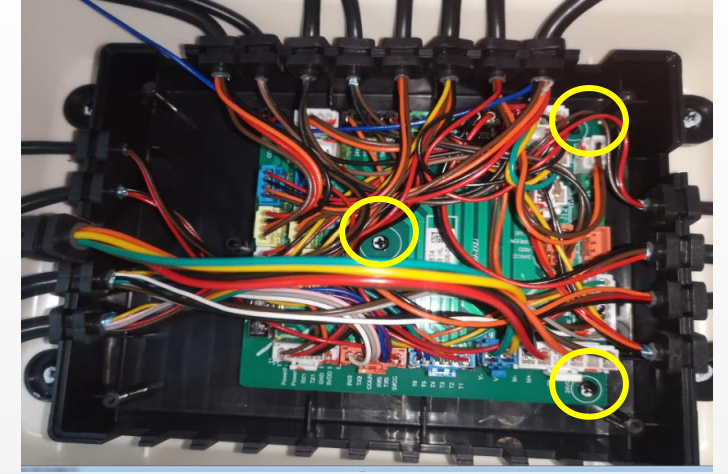
17、disassembly of under seat PCB and air valve:



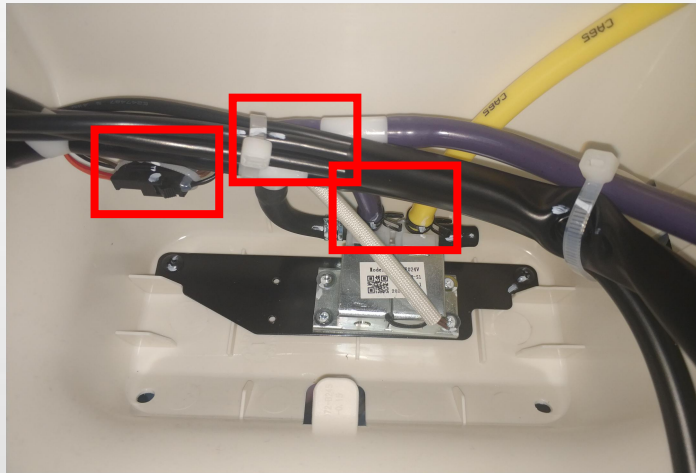
open rear cover



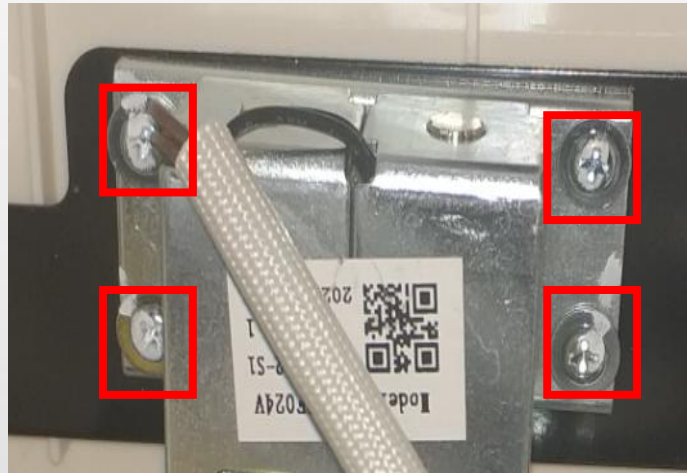
remove 4 screws



discontent all terminals, remove 3 screws, remove under seat PCB



cut the cable tie and discontent the terminal and air hose



remove 4 screws and remove the air valve



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18、disassembly of legrest :



unzip the zipper



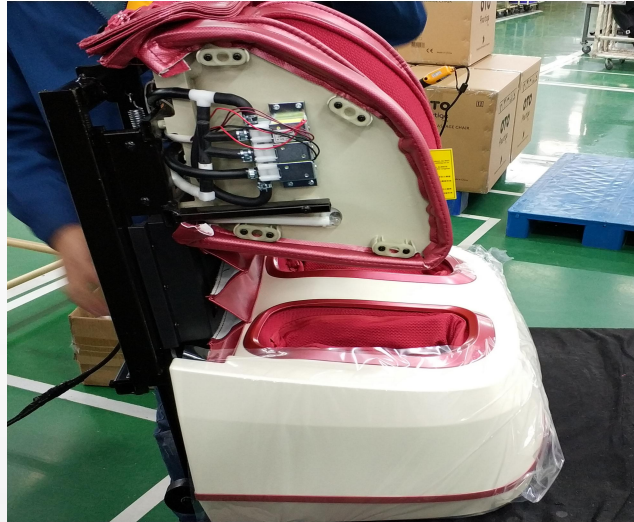
remove 2 baffle, move out legrest towards the right



discontent the terminal and air hose



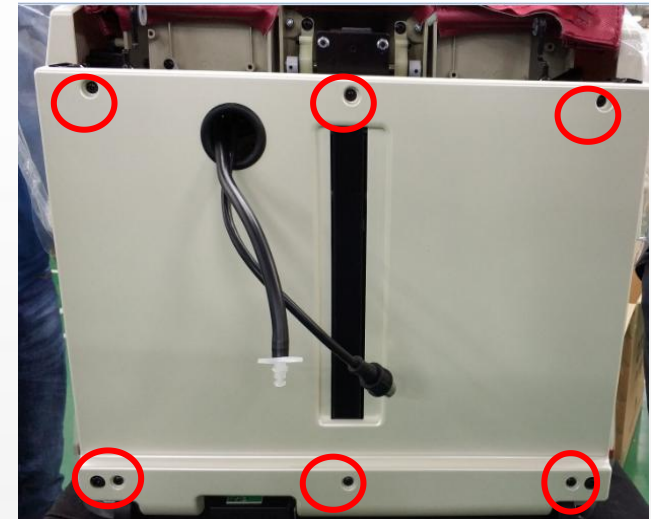
19、disassembly of upper legrest:



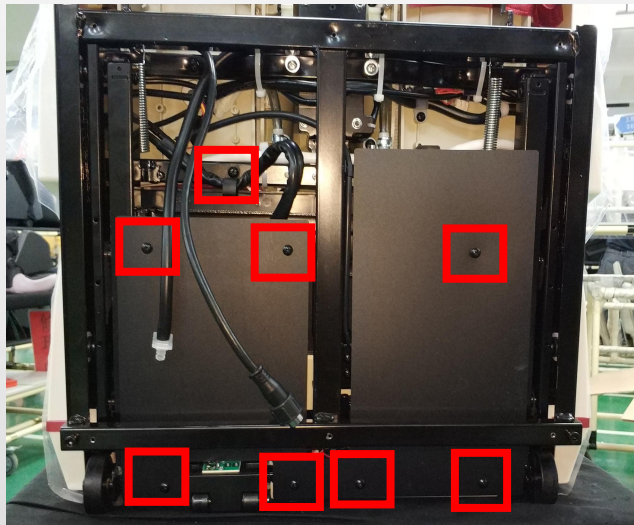
Stretch out the lower leg



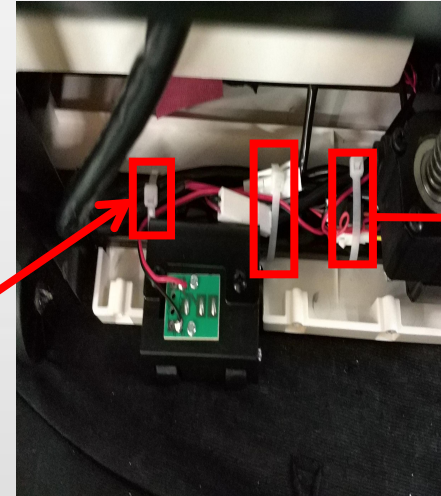
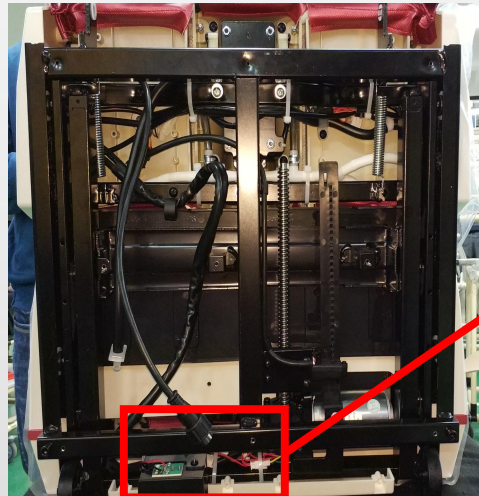
unzip the zipper



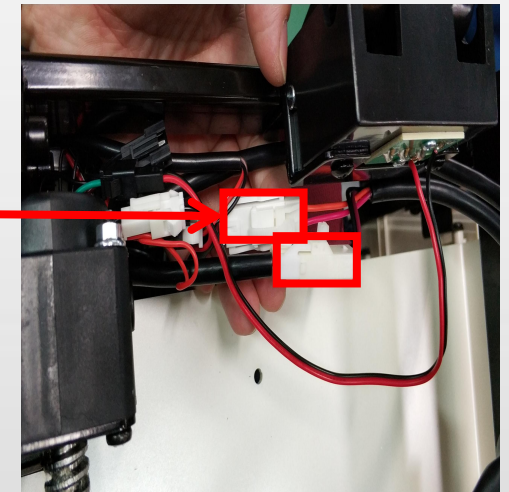
remove 6 screws

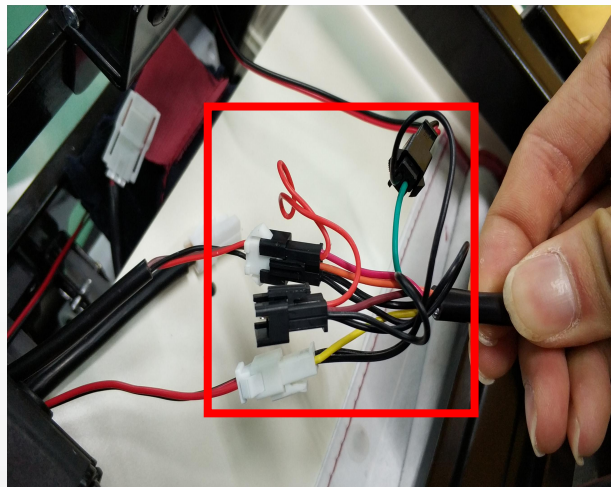


remove the baffle

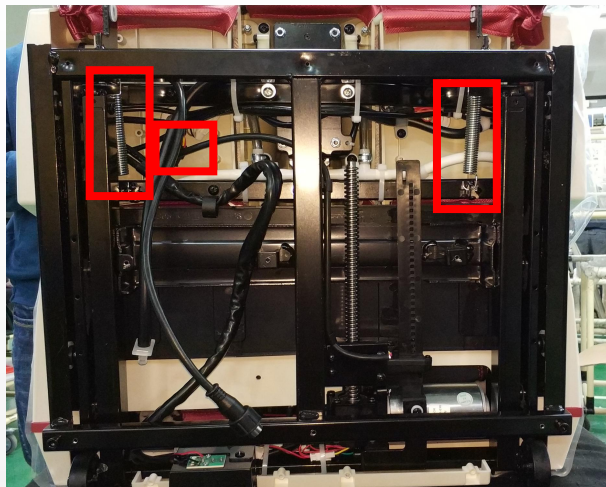


cut the cable tie

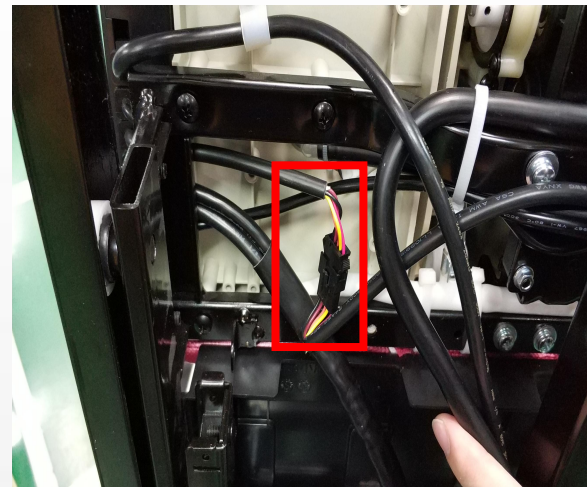




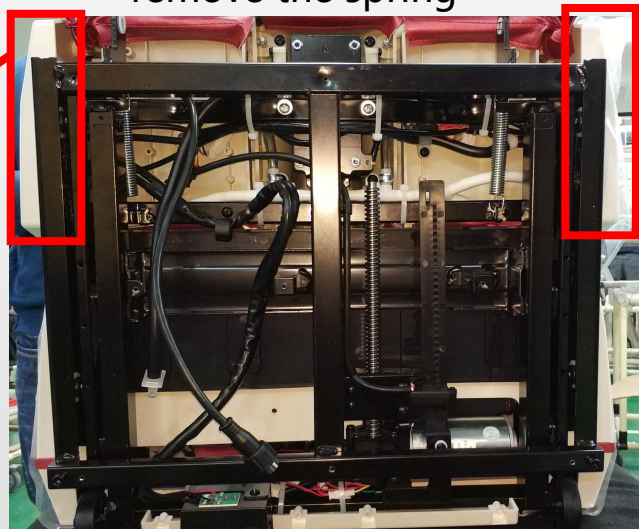
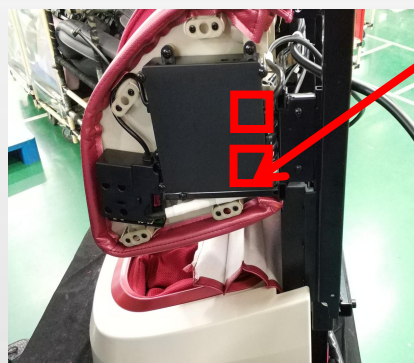
discontent the terminals



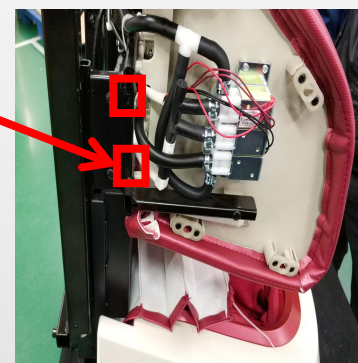
remove the spring

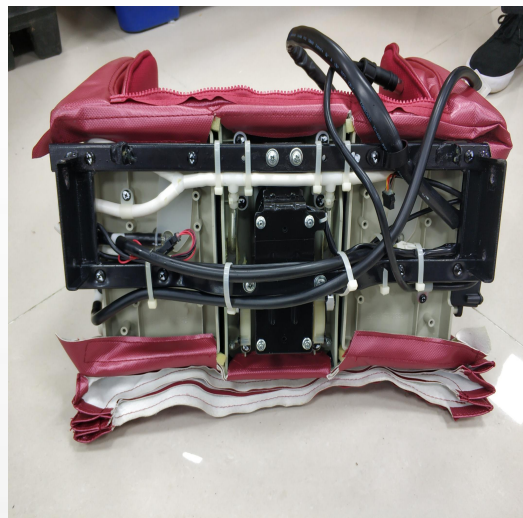


discontent the terminal



remove the screws fixing upper legrest





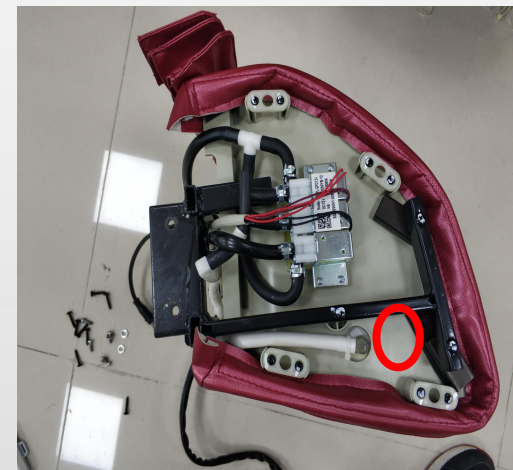
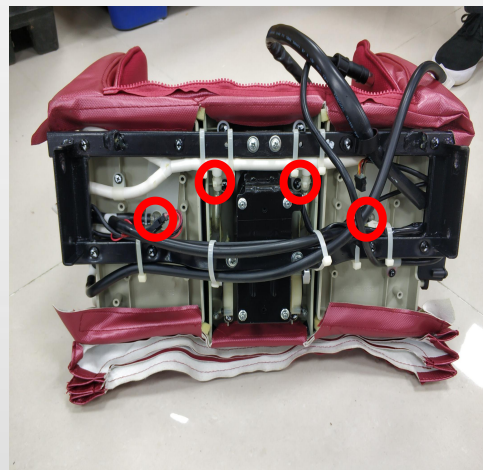
remove the cover



remove the screws



discontent the air hose, remove air bags

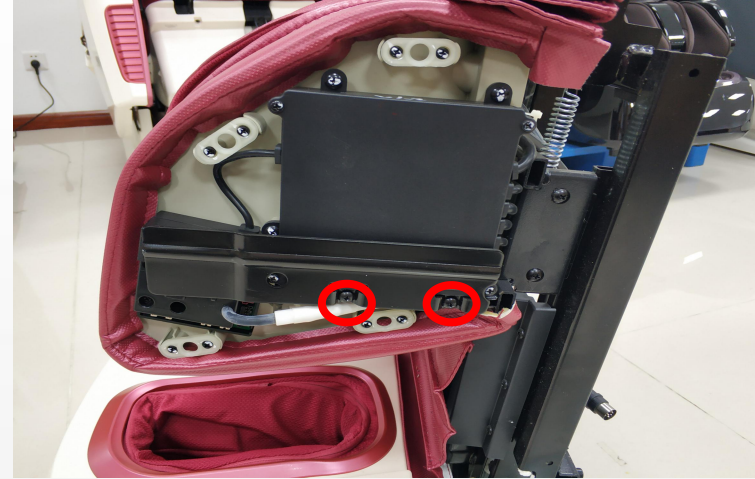




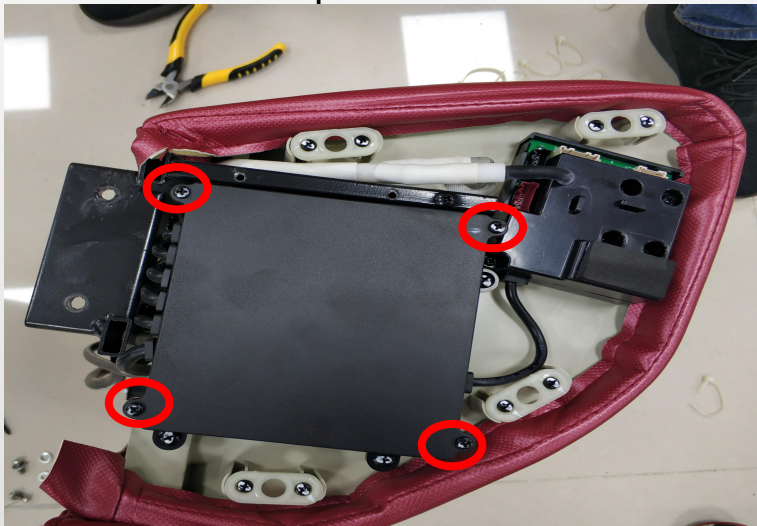
20、disassembly of legrest PCB



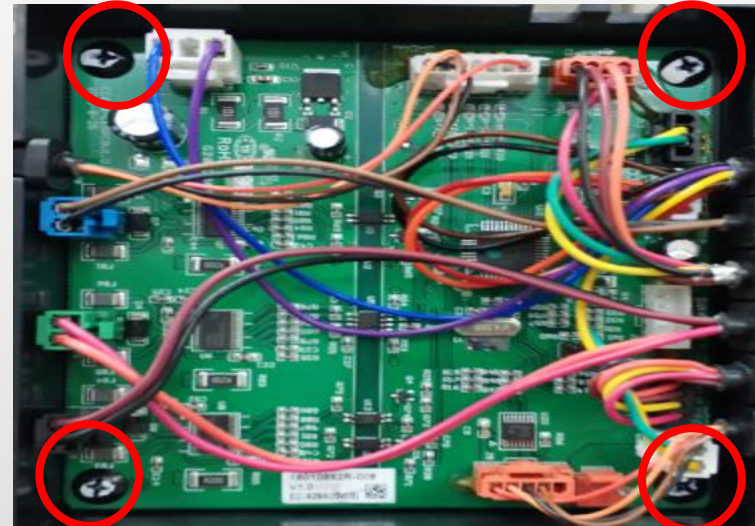
open left cover



remove 2 screws



remove 4 screws



discontent all terminals, remove 4 screws



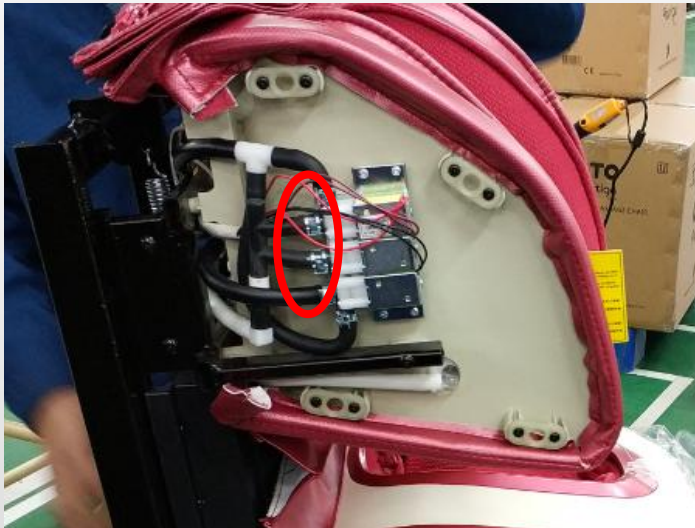
21、disassembly of air valve



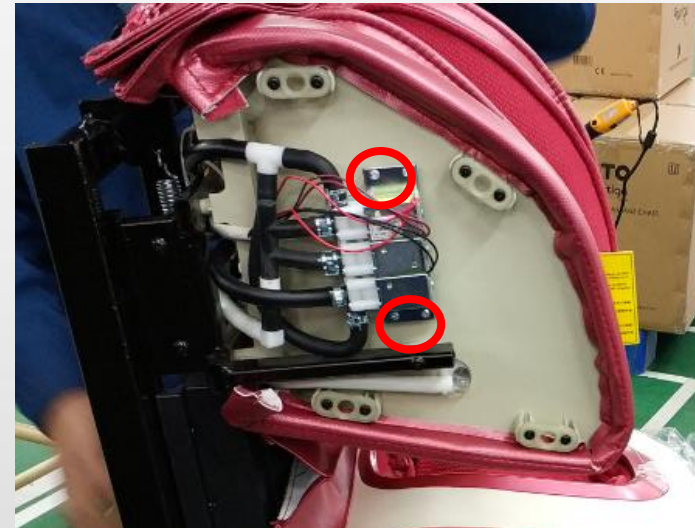
open left cover



cut cable tie, disconten the terminal



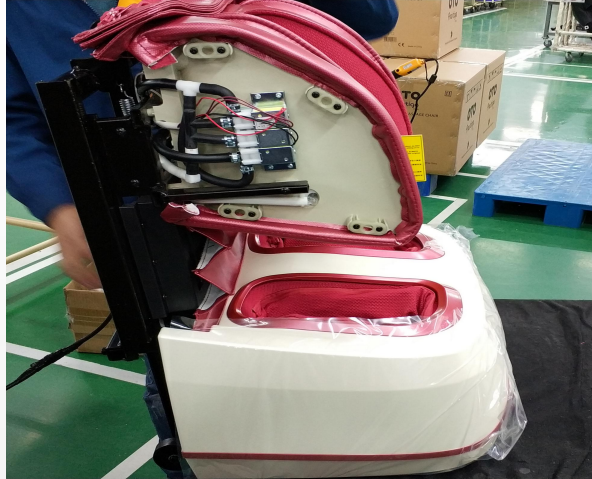
disconten the air hose



remove the screws fixing air valve



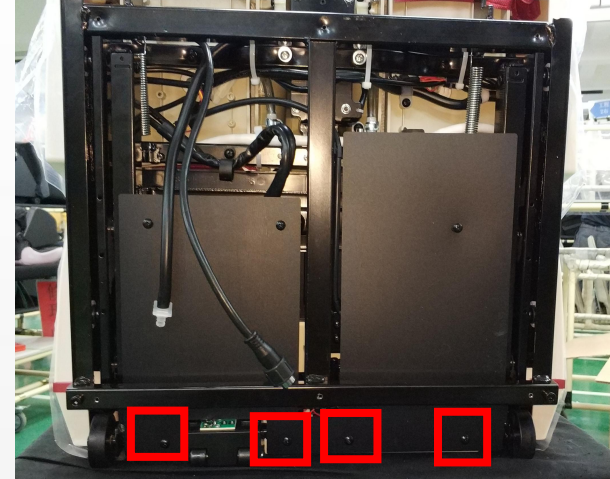
22、disassembly of foot massage unit:



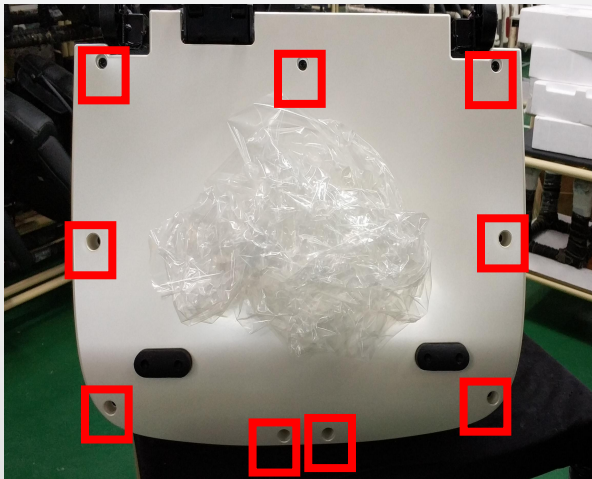
Stretch out the lower leg



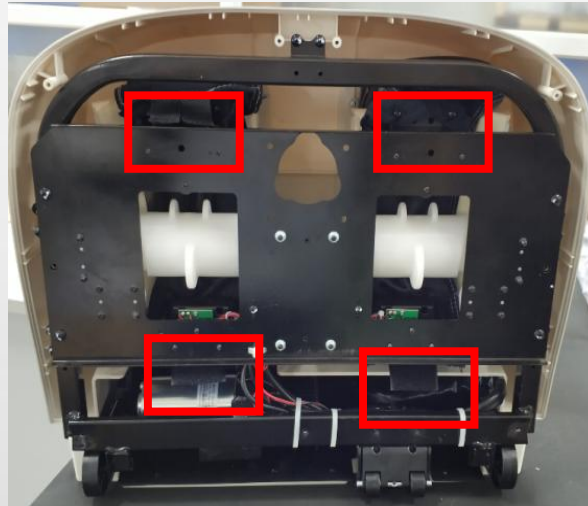
unzip the zipper



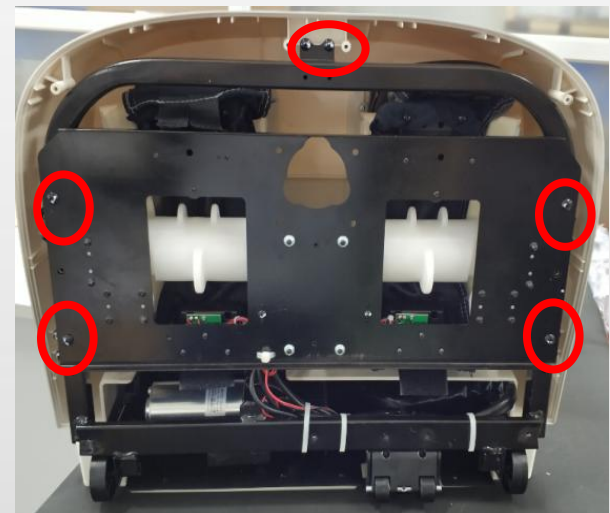
remove the screws



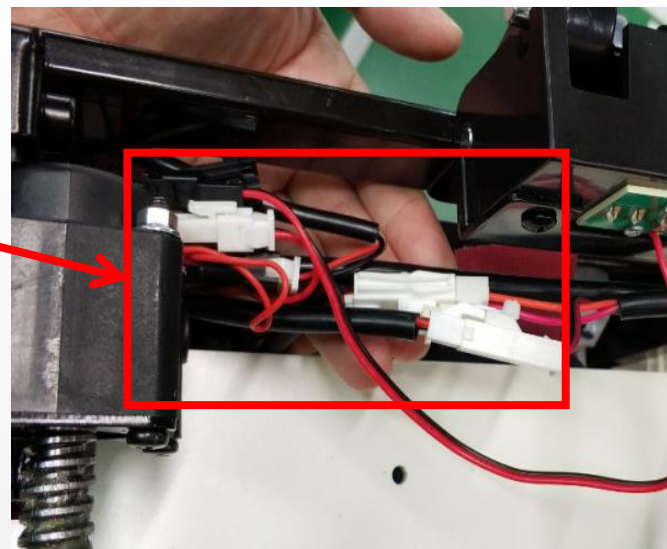
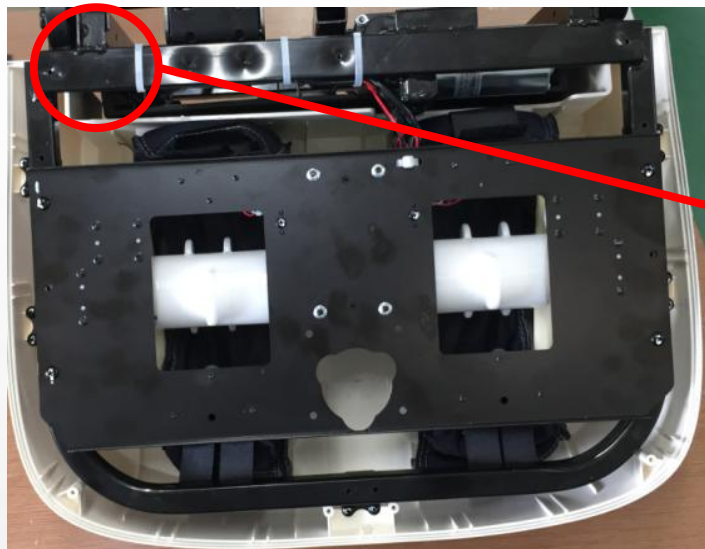
remove bottom cover



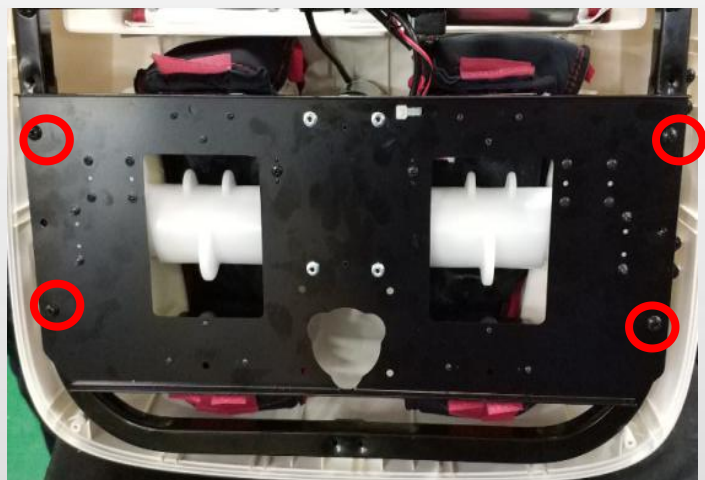
Remove the turnbuckle



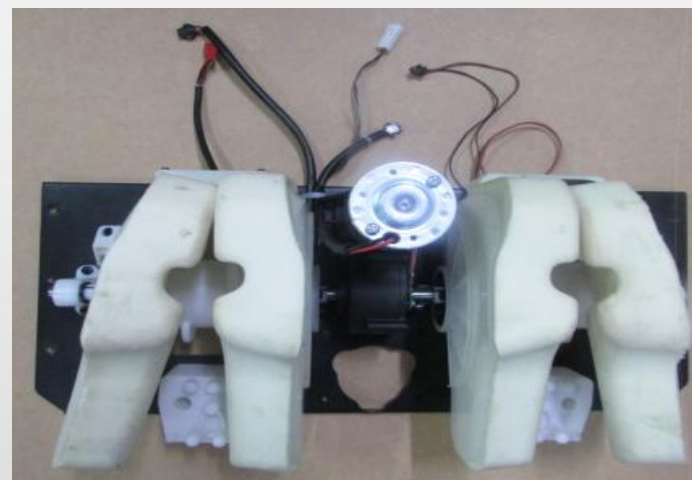
remove 6 screws



cut the cable tie, discontent the terminals

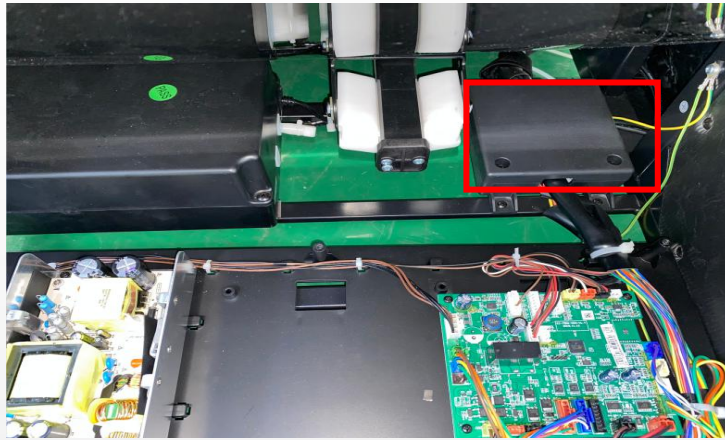


.remove 4 screws

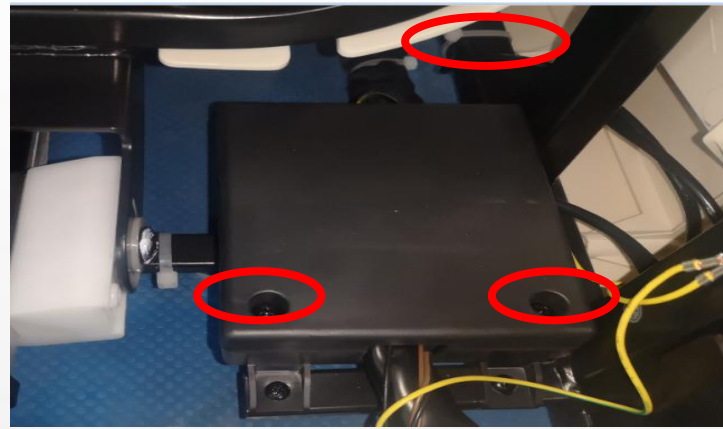


remove foot massage unit

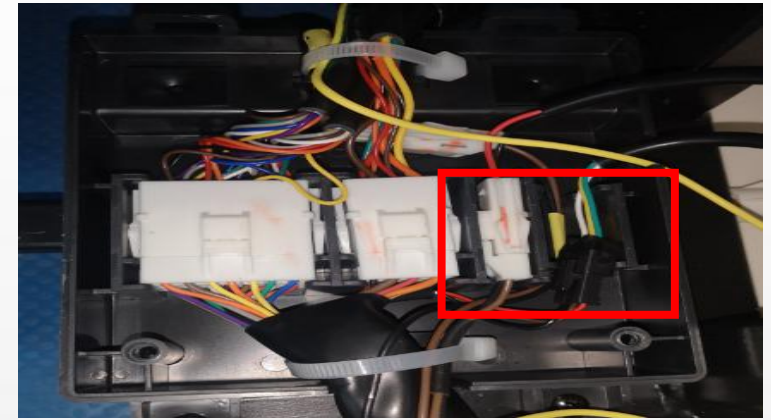
23、 disassembly of backrest actuator: One person is required to lift the backrest at the rear to prevent injury when removing the backrest actuator !



connector inside the box



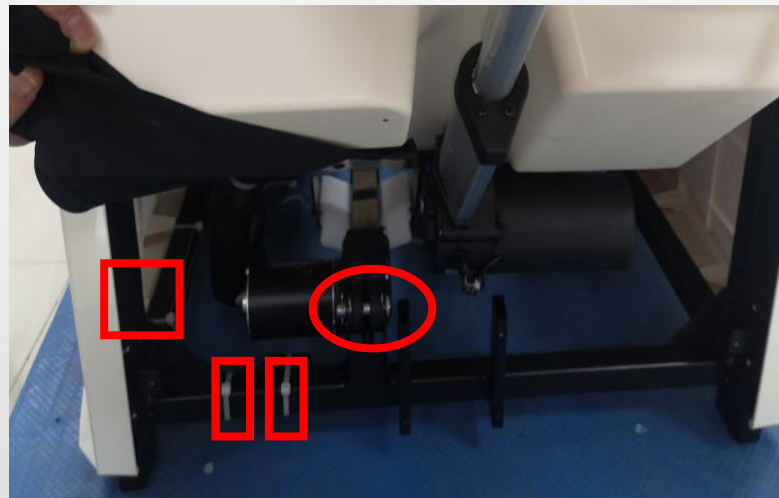
remove 2 screws



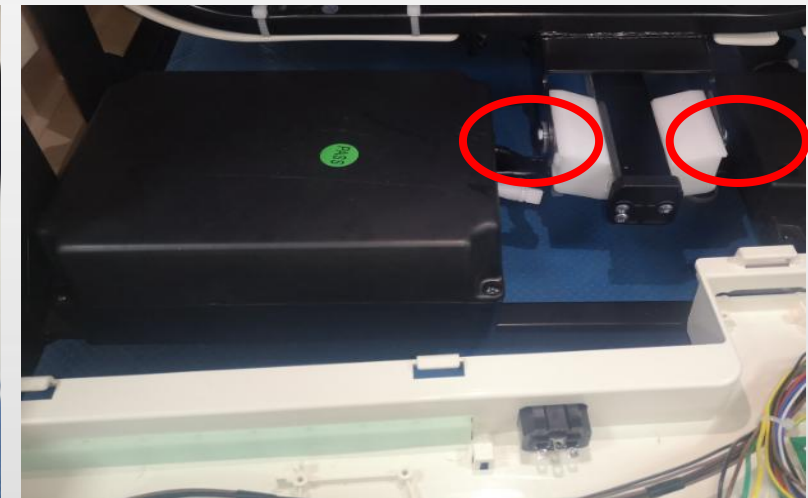
discontent the terminals



remove 4 screws



cut the cable tie, remove the shaft



remove 2 screws



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24: disassembly of legrest actuator:

A. remove the rear cover



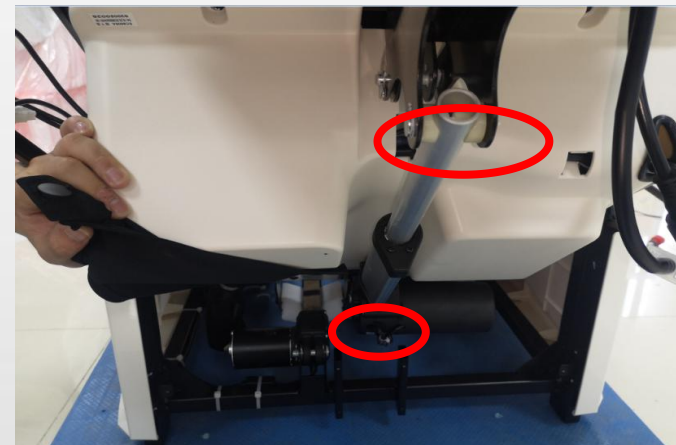
cut the cable tie



discontent the terminal



remove 4 screws



remove the shaft, remove legrest actuator



五、Massage chair fault judgment

No.	phenomenon	problem description	steps of shooting the trouble	remark
1	remote control tested any key pressed more than 4 seconds	1.one of the KEY has been blocked.	1.check the key of the remote control	turn on the chair
2	remote control did not connected more than 4 seconds	1.remote control wire is broken or the remote control is disconnected	1.reconnecte the remote control or change the remote control wire.	turn on the chair
3	backrest signal is abnormity	1.backrest wire is not well connected. 2.backrest wire is broken	1.check whether the backrest wire is well connected 2.change the backrest wire	turn on the chair
5	remote control tested any key pressed more than 45 seconds	1.one of the KEY has been blocked.	1.check remote control or side panel controller	enter auto-check model
6	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	enter auto-check model



32	Side panel controller fails to communicate with main PCB more than 4S	connector of wire not well	1. check the connector of wire 2. change the wire	enter auto-check model
40	The position sensor of the rolling motor is abnormal, no change of the position code disk is detected after 8s.	1. Position sensor is broken 2. The connection between the main PCB and the 3D PCB is abnormal 3. rolling motor is broken or locked 4. Drive circuit components are damaged	1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB	enter auto-check model
41	The position coding of rolling motor is abnormal, the code disk is in an incorrect position	1. position sensor broken 2. Incorrect initial position of code disk 2. mechanism overshoot	1. change the sensor 2. the mechanism to the initial height position, and then turn the code disk to the correct initial position.	enter auto-check model



42	The rotation speed sensor of the core massage (rolling) motor is abnormal, that is, no change of the rotation speed code disk is detected more than 4S.	<ol style="list-style-type: none"> 1. position sensor is broken 2. The connection between the main PCB and the 3D PCB is abnormal 3. motor is broken or locked 4. Drive circuit components are damaged 	<ol style="list-style-type: none"> 1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB 	enter auto-check model
44	The position sensor of the core kneading motor is abnormal, that is, no change of the position code plate is detected after 8s.	<ol style="list-style-type: none"> 1. position sensor is broken 2. The connection between the main PCB and the 3D PCB is abnormal 3. motor is broken or locked 4. Drive circuit components are damaged 	<ol style="list-style-type: none"> 1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB 	enter auto-check model
46	The rotation speed sensor of the core kneading motor is abnormal, that is, no change of the rotation speed code disk is detected after 5S.	<ol style="list-style-type: none"> 1. position sensor is broken 2. The connection between the main PCB and the 3D PCB is abnormal 3. motor is broken or locked 4. Drive circuit components are damaged 	<ol style="list-style-type: none"> 1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB 	enter auto-check model



48	The position sensor of the core expansion motor is abnormal, i.e no change of the position code disk is detected after 10s.	1.position sensor is broken 2.The connection between the main PCB and the 3D PCB is abnormal 3.motor is broken or locked 4.Drive circuit components are damaged	1.change the sensor 2.check the wire 3.check or change the motor 4.change main PCB	enter auto-check model
49	The position coding of the core expansion motor is abnormal, that is, the code disk is in an incorrect position.	1.position sensor is broken 2.Incorrect initial position of code disk 2.mechanism overshoot	1.change the sensor 2.Move the mechanism to the initial retraction position	enter auto-check model
50	Abnormal rotation speed (count) sensor of core expansion motor	1.position sensor is broken 2.The connection between the main PCB and the 3D PCB is abnormal 3.motor is broken or locked 4.Drive circuit components are damaged	1.change the sensor 2.check the wire 3.check or change the motor 4.change main PCB	enter auto-check model



59	backrest Count sensor abnormal	<ol style="list-style-type: none"> 1. count sensor broken 2. the wire is broken 3. motor is broken or locked 4. Drive circuit components are damaged 	<ol style="list-style-type: none"> 1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB 	enter auto-check model
63	leg rest Count sensor abnormal	<ol style="list-style-type: none"> 1. count sensor broken 2. the wire is broken 3. motor is broken or locked 4. Drive circuit components are damaged 	<ol style="list-style-type: none"> 1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB 	enter auto-check model
65	lengthen and shorten anti pinch sensor trigging (legrest)	<ol style="list-style-type: none"> 1. counting sensor broken 2. Abnormal connection 	<ol style="list-style-type: none"> 1. change counting sentor 2. check the wire 	enter auto-check model
66	anti pinch sensor trigging (legrest actuator)	<ol style="list-style-type: none"> 1. counting sensor broken 2. Abnormal connection 	<ol style="list-style-type: none"> 1. change counting sentor 2. check the wire 	enter auto-check model



68	Calf extension position (count) sensor abnormal	1. count sensor broken 2. the wire is broken 3. motor is broken or locked 4. Drive circuit components are damaged	1. change the sensor 2. check the wire 3. check or change the motor 4. change main PCB	enter auto-check model
69	Abnormal coding of crus extension position (the shortest and longest limit sensors are valid at the same time)	1. position sensor broken 2. wire broken	1. change the sensor 2. check the wire	enter auto-check model
70	Calf extension shortest limit sensor failure	1. position sensor broken 2. wire broken	1. change the sensor 2. check the wire	enter auto-check model
71	Calf extension longest limit sensor failure	1. position sensor broken 2. wire broken	1. change the sensor 2. check the wire	enter auto-check model



72	The back heating thyristor is short circuited, i.e. the temperature is greater than or equal to 78 degrees detected for 10s.	The heating wire is short circuited and caused by overcurrent.	(1)check or chuange the heater (2)Check whether the back frame wire and the heating of the core are short circuited and replace if there is any problem.	enter auto-check model
73	The back heating thermistor is short circuited, i.e. the AD detection value is less than or equal to 5 in 5S.	Heating thermistor wire short circuit to ground	Check whether the back frame wire and the heating of the core are short circuited and replace if there is any problem.	enter auto-check model
74	The back heating thermistor has an open circuit, that is, the ad detection value is greater than or equal to 247 in 5S.	Heating thermistor wire disconnected	Check whether the back frame wire and the heating of the movement are open circuit, and replace if there is any problem.	enter auto-check model



	Leg anti pinch	the sensor triggering	(1) Check if there is anything under the leg (2) Replace the sensor wire or sensor	(1) enter auto-check model (2) Warning signal appears on the pad control
	leg lengthen and shorten anti pinch	the sensor triggering	(1) Check if there is anything under the leg (2) Replace the sensor wire or sensor	(1) enter auto-check model (2) Warning signal appears on the pad control