



蒙发利

EASEPAL

中国·厦门蒙发利科技有限公司

Xiamen Comfort Science & Technology Co.,Ltd

# 产 品 维 修 手 册

## Maintenance Service Manual

产品型号/MODEL: EC-3205H

适用电压规格/ voltage specification: 110V

蒙发利集团·客服

By the Easepal's Customer Service Dept.

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## 1、产品预防措施进行检查和维修 Precautions for inspection and repair

### 检查: Inspection

- 确认机器的电源线是连接好的  
Verify that the power cord is tightly connected on the machine.
- 小心避免电击  
Be careful to avoid electric shock.

### 维修: Repair

- 维修前需先关闭电源供电  
Power off the supply before repair work begins.
- 维修过程中保持整洁  
Keep things tidy and in order during repair work.
- 当更换多个部件时，确定损坏的部件和重新使用的部件  
When changing more than one part, identify the parts that are damaged and re-use the serviceable parts.
- 在拆除装配过程中，不损坏其他部件和PCB  
During the dismantling or assembling process, do not damage other parts and PCB.
- 小心提防松动或断开连接的连接器再进行修理  
Be on the alert for loose or disconnected connectors during repair.
- 装配完成后不要留下螺丝或其他部件  
Do not leave any screws or other foreign objects in the unit after it is assembled.
- 维修完成后，确认产品是否恢复正常工作  
Carry out test operation of the machine after the repair work is done.
- 维修工作最好在地毯上进行，防止产品划伤或弄脏  
It is preferable to perform the repair work on a carpet to prevent scratching or dirtying the unit.
- 维修完成后清理工作现场  
Clean the workplace after repair work is completed.

## 2、产品故障列表 Trouble List

如下为常见的故障现象及维修方法。

Common Troubles and Maintenance Methods are listed as below:

故障序号 NO	现象 phenomenon	描述 Description	维修方法 maintenance method
01	开机无功能 No function	A. 手控器无显示: LCD NO DISPLAY ①、保险丝烧掉 Fuse melts (电源盒处和中心板上 (in the Power Source Box and main PCB) ②、电源电路接触不良。Power supply circuit Poorly connected ③、电源滤波器坏 EMC Board Failed ④、中心板坏 Main PCB failed	①、更换保险丝 Replace Fuse ②、更换电源盒 Replace Power Box ③、更换电源滤波器 Replace EMC Board ④、更换中心板 Replace main PCB
		B. 手控器有显示: LCD HAS DISPLAY ①、机械开关坏掉 或是机械开关的线材断开。 Mechanical switch fails or it's wire is broken ②、上下行程光电坏。 Up or Down Stroke Photoelectricity was failed ③、中心板坏掉 Main PCB failed ④、开机直揉捏其他按键无效 kneading all the time from power and no response with other button	①、更换机械开关或是线材 replace mechanical switch or wire ②、更换行程光电 Replace stroke photoelectricity ③、更换中心板 Replace main PCB ④、宽度检测板坏, 更换宽度检测板 Replace Width Inspection Board
02	宽中窄不能切换 the Width switchover isn't change	①、中心板宽度检测端子线材接触不良。 The terminals of Width Inspection on main PCB with wires were poorly connected ②、机芯宽度检测板端子线材接触不良。 The terminals of Width Inspection on mechanical with wires were poorly connected ③、宽度检测板坏。 Width Inspection failed ④、中心板坏 Main PCB failed	①、②点将端子接插到位或是更换线材 Plug the terminals well or replace the wires ③、更换宽度检测板 Replace Width Inspection ④、更换中心板 Replace the main PCB

03	不行走 NO Rolling	①、端子或是线材接触不良 Terminals or Wire Poorly Contact ②、上、下行程光电组件坏。 UP/ Down-stroke Photoelectricity Subassembly Failed ③、行走电机坏 Rolling Motor Failed ④、中心板坏 Main PCB failed	①、将端子接插到位或是更换线材。 Plug the terminal well or replace the wires ②、更换上、下行程组件 ReplaceUP/Down-StrokeSubassembly ③、更换机芯。 Replace gear box ④、更换中心板 Replace main PCB
04	不揉捏 No kneading	①、中心板端子没插到位或是线材接触不良。 The terminals on main PCB and wires are poorly connected ②、揉捏电机坏 Kneading motor failed ③、中心板坏 Main PCB failed	①、将端子接插到位或是更换线材。 Plug the terminal well or replace the wires ②、更换机芯 Replace gear box ③、更换中心板。 Replace main PCB
05	不敲击 No tapping	①、中心板端子没插到位 The terminals on main PCB and wires are poorly connected ②、敲击电机坏 Tapping motor failed ③、中心板坏掉 Main PCB failed	①、将端子接插到位 Plug the terminal well ②、更换机芯 Replace gear box ③、更换中心板 R Replace main PCB
06	手控器上按键无反映 The all buttons of controller aren't response	①、端子接触不良或线材接触不良 The terminals and wires are poorly connected ②、手控器 PCB 板坏 The PCB in the controller failed	①、将端子接插到位或是更换线材。 Plug the terminal well or replace the wires ②、更换手控器 Replace the controller
07	不升倒背 backrest can't recline or lift	①、平推杆连接线未接插到位 The terminal of electrically operated pusher and wires are poorly connected ②、平推杆坏 The electrically operated pusher failed ③、中心板坏 Main PCB failed	①、将连接线接插到位 Plug the terminal well ②、更换平推杆 Replace the electrically operated pusher ③、更换中心板 Replace main PCB

08	小腿不能升降 calves-rest can't lift or recline	①、电动推杆连接线未接插到位 The terminal of electrically operated pusher and wires are poorly connected ②、电动推杆坏 The electrically operated pusher failed ③、中心板坏 Main PCB failed	①、将连接线接插到位 Plug the terminal well ②、更换电动推杆 Replace the electrically operated pushe ③、更换中心板 Replace main PCB
09	小腿不充气 no gas charging in the calves-rest	①、气泵泄气阀端子接触不良 The terminal of the snuffle valves and wires are poorly connected ②、泄气阀坏 The snuffle valves fail ③、气泵坏 The inflator pump failed ④、中心板坏 Main PCB fails	①、将端子接好 Plug the terminal well ②、更换泄气阀。 Replace the snuffle valves ③、更换气泵。 Replace the inflator pump ④、更换中心板 Replace main PCB

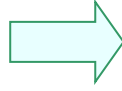
### 3、工具清单 Tools List Tools required

			
<p>螺丝刀</p> <p>Screwdriver size 1, 2, 3</p>	<p>尖嘴钳和斜口钳</p> <p>Diagonal cutter and long nose pliers</p>	<p>电烙铁</p> <p>Soldering Kit</p>	<p>扳手</p> <p>Spanner tools Kit</p>
			
<p>电笔</p> <p>Test pen</p>	<p>内六角扳手</p> <p>Allen Key set</p>	<p>内六角套筒扳手</p> <p>Ratchet Tools Set</p>	<p>热风枪</p> <p>Blower</p>
			
<p>电动螺丝刀</p> <p>Electric Driver</p>	<p>电工胶带</p> <p>electrical adhesive tape</p>	<p>扎扣</p> <p>Cable Ties</p>	<p>压线帽</p> <p>WIRE CONECTORS<sup>5</sup></p>

#### 4-1. 枕头的拆解 Disassembly of the pillow

A. 拉开拉链，取下枕头

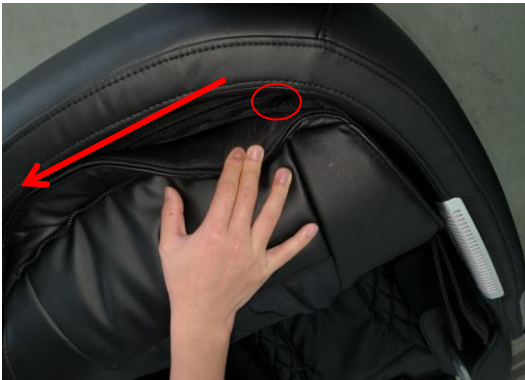
Unzip the zipper, take down the pillow



#### 4-2. 披风组件的拆解 Disassembly of the pillow

A. 拉开顶部拉链，断开披风加热丝接线端子。拉开披风与小腿的拉链，取下披风。

Unzip the zipper, disconnect the terminal. Unzip the zipper fixing leg rest, take down the backrest pad



#### 4-3. 头罩组件的拆解 Disassembly of the hood unit

A. 取下靠背后盖

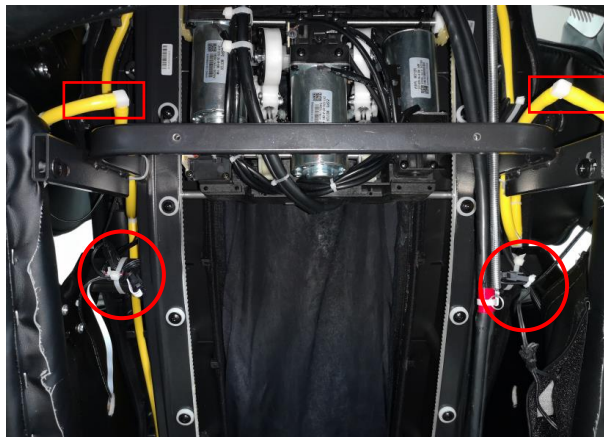
Remove the rear cover



Remove 4 screws

B.断开头罩端子，拔出头罩气管接头

Disconnect the terminals, disconnect the air hose



C.取下固定头罩的四枚螺丝，向后推出头罩组件。

Remove 4 screws fixing the hood, push out the hood unit backward



D.取下头罩装饰件的 2 枚螺丝，掰开装饰件，可以更换喇叭组件。  
Remove 2 screws, open the cover, then we can replace the horn

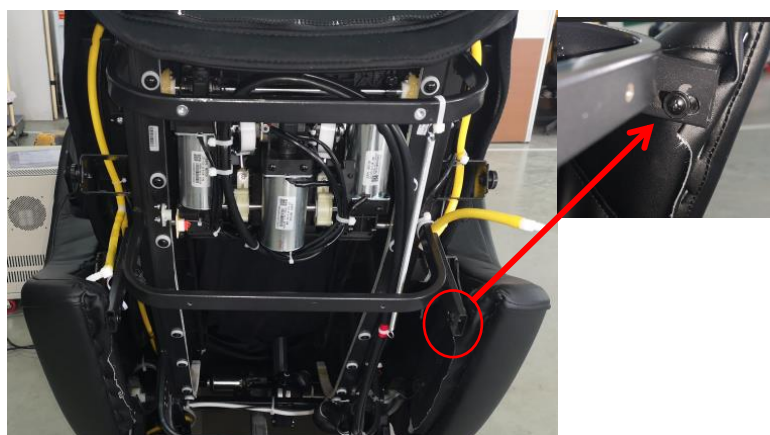


#### 4-4.侧板组件的拆解 Disassembly of the side panel

A.拉开侧板拉链，取下固定侧板侧边的螺丝。  
Unzip the zipper, remove the screw fixing side panel



B. 取下固定侧板后方的两枚螺丝  
Remove 2 screws fixing the panel backward



C. 抬起小腿，取下前面固定侧板的螺丝  
Raise the leg, remove the screw fixing the panel



D. 断开侧板接线端子，取下侧板  
Disconnect the terminals, then remove the side panel



E. 拆卸蓝牙板  
Disassembly of the Bluetooth PCB



拔掉端子，取下固定蓝牙板的螺丝，取下蓝牙板  
Disconnect the terminals, remove the screws, we can take down the Bluetooth PCBA

F. 取下固定 USB 供电板的螺丝，拔掉端子，可以更换 USB 供电板

Disconnect the terminals, remove the screws, then we can replace the USB power PCBA



#### 4-5.机芯组件的拆解 Disassembly of the gear box

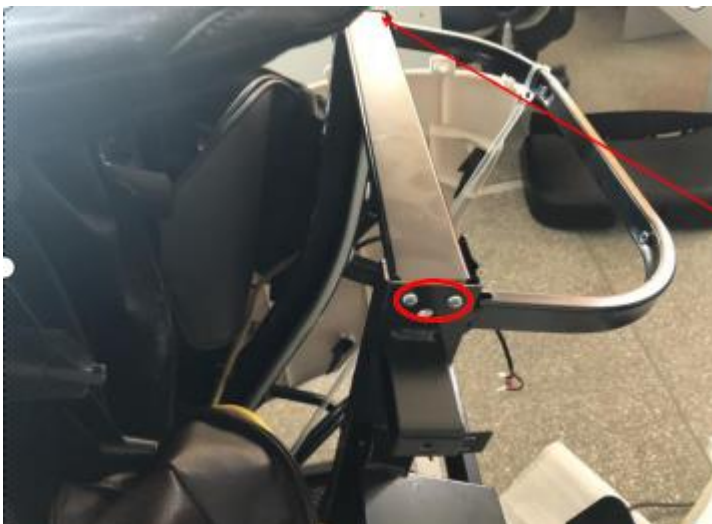
A.取下前靠背顶部两枚螺丝

Remove 2 screws fixing the front cover



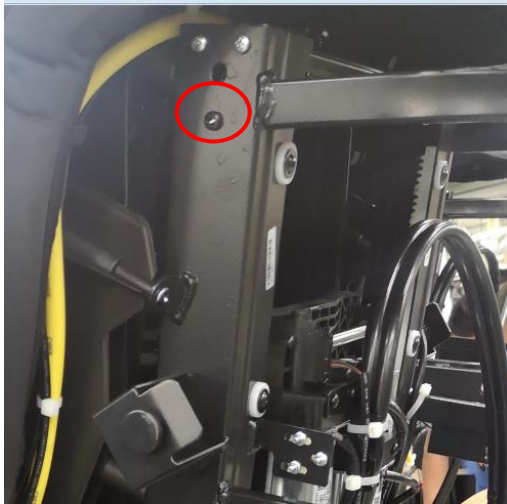
B.取下横梁

Remove the beam

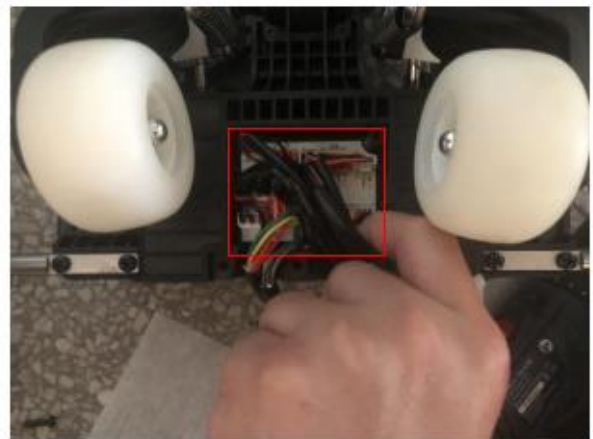
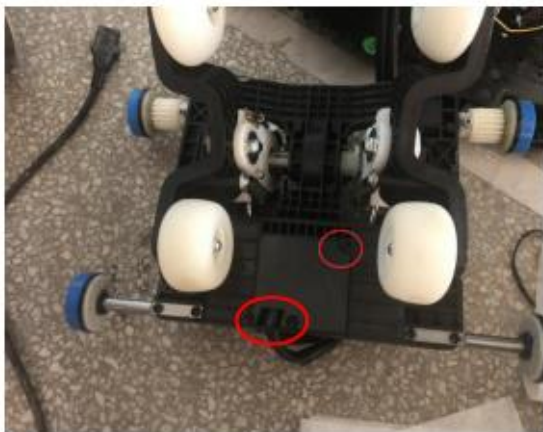


Remove the screws both side

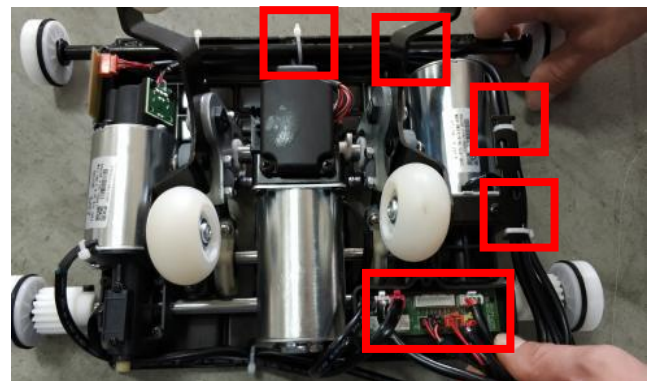
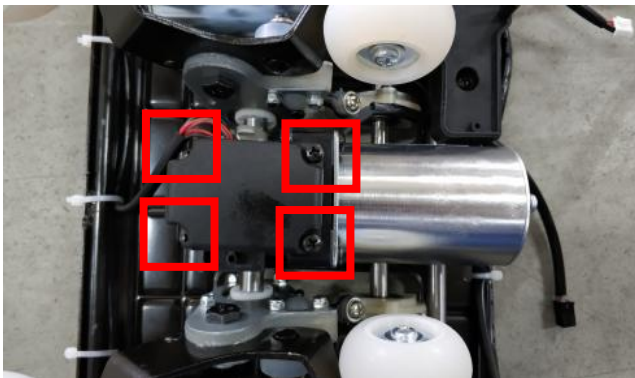
C. 取下两边限位螺丝  
Remove 2 screws



D. 完成以上步骤后，直接加压 24V 给行起电机向上行走至顶端后提出机芯  
Move out the gear box with a 24V power

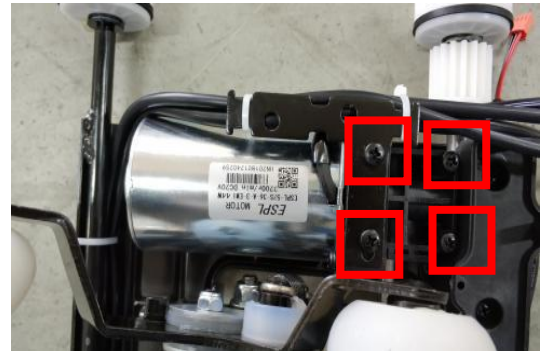
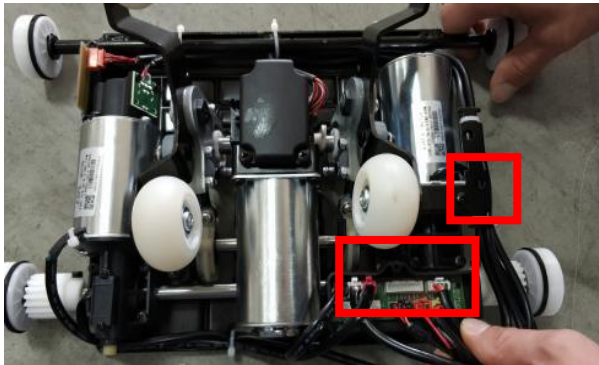


拆卸行星齿轮  
Disassembly of the kneading motor



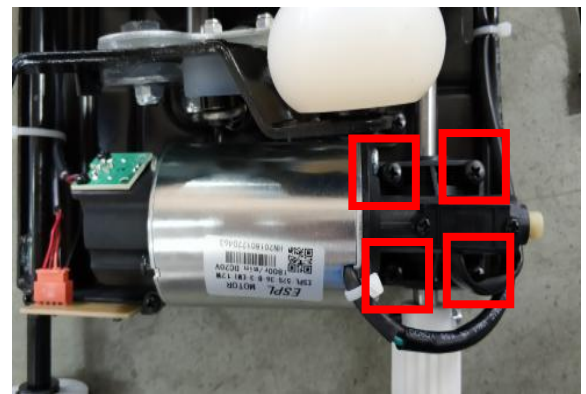
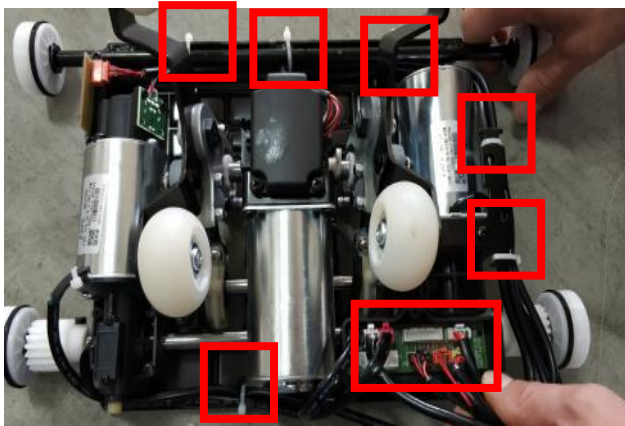
#### F. 拆卸敲击电机

Disassembly of the tapping motor



#### G. 拆卸行走电机

Disassembly of the rolling motor



#### 4-6. 人体检测板的拆解 Disassembly of the body detection PCBA

A. 取下固定人体检测组件的螺丝，拔掉端子，可以更换人体检测组件

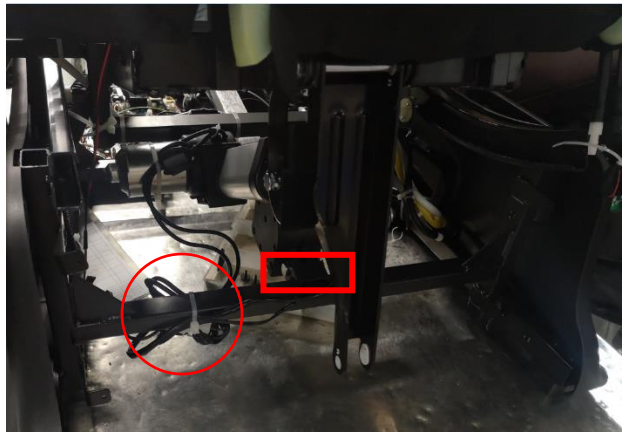
Remove the screws fixing the body detection PCBA, disconnect the terminals, then we can replace it



#### 4-7.平推杆的拆解 Disassembly of the actuator

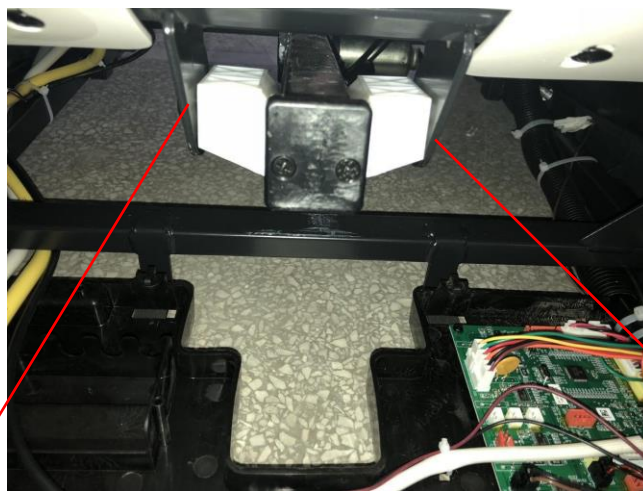
A.断开平推杆接线端子，取下固定平推杆的销轴。

Disconnect the terminals, remove the shaft



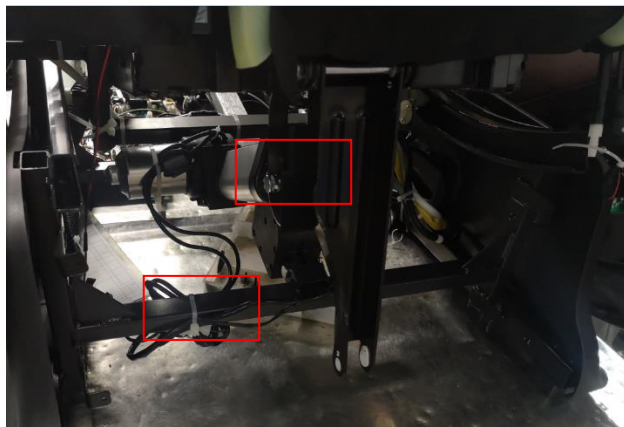
B.取下平推杆两边的螺丝，取下平推杆

Remove the screws both side, take down the actuator



C.将插销取下,并且剪掉扎扣后即可将小腿推杆取下

Take down the shaft, cut the cable tie, connect the terminals



#### 4-8.中心盒的拆解 Disassembly of the main PCB box

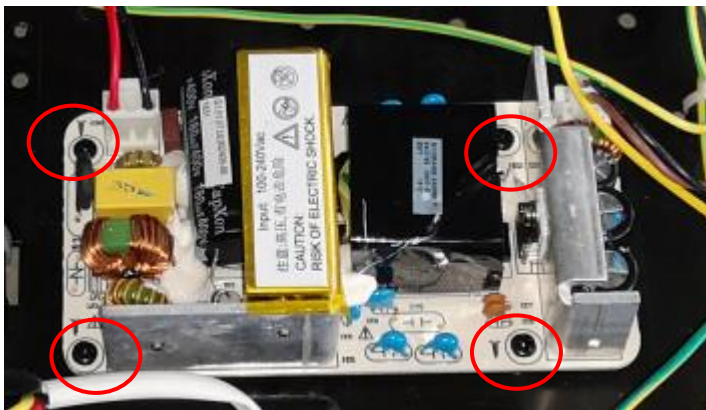
A.取下固定中心盒上盖的 2 枚螺丝, 移出中心盒上盖

Remove 2 screws fixing the cover, remove the cover



B. 拔掉电源板上的端子，取下固定电源板的螺丝，可以取下电源板

Disconnect the terminals on power PCB, remove the screws, take down the power PCB



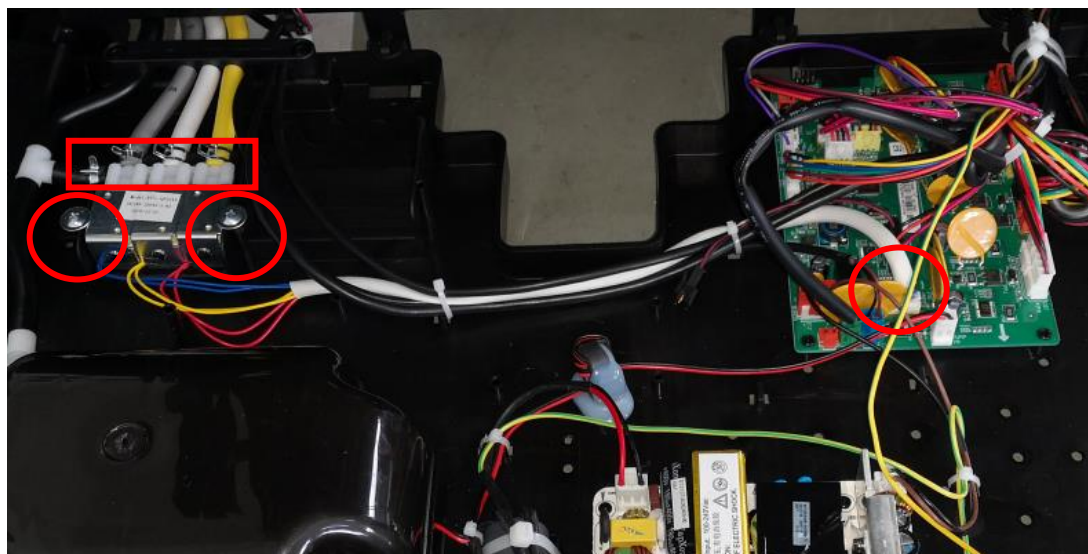
C. 拔掉中心板上的端子，取下固定中心板的螺丝，可以取下电源板

Disconnect the terminals on main PCB, remove the screws, take down the main PCB



D. 拔掉气阀端子，拔掉气管接头，取下螺丝，移出气阀

Disconnect the terminal and the air hose, remove the screws, take down the air valve



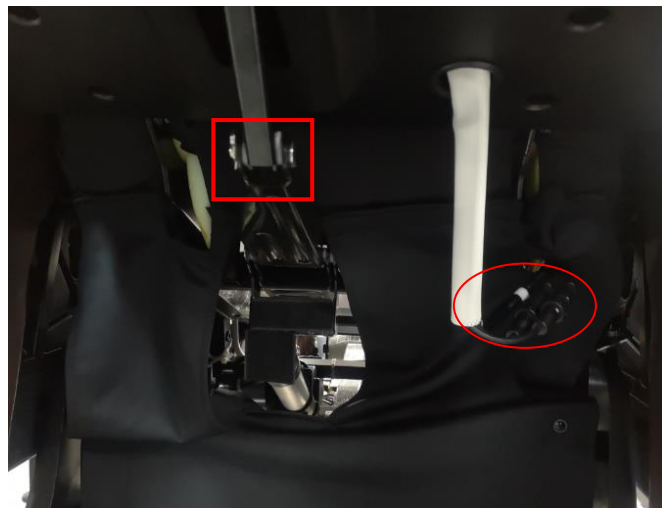
#### 4-9.小腿的拆解 Disassembly of the leg rest

A 拉开小腿连接座架的拉链

Unzip the zipper

B 将小腿插销取掉后将小腿像右边推处，断开连接小腿的气管和连接线后即可取出小腿

Remove the shaft both side, disconnect the terminals and air hose



C.分离后的腿部 Disconnect the legrest



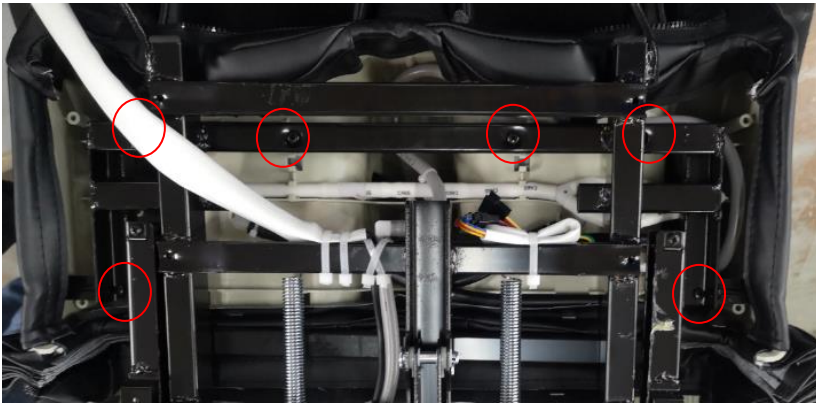
分离后的小腿组件  
Legrest

1. 取下固定小腿保护盖的螺丝，取下小腿保护盖

Remove the screws fixing the cover, take down the cover



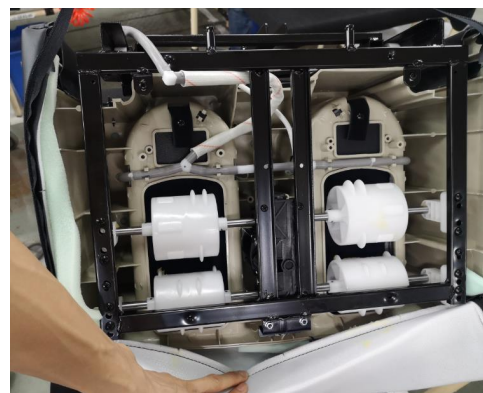
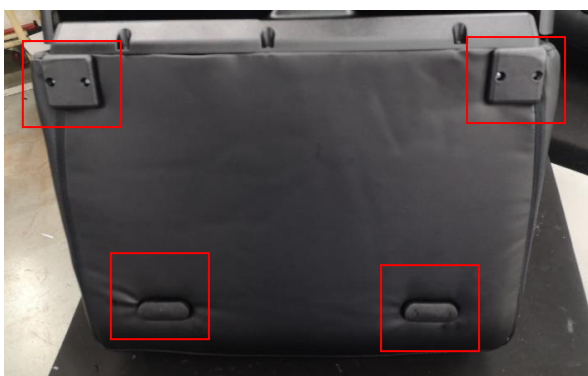
2. 取下固定上小腿组件的螺丝  
Remove the screws fixing upper leg rest



3. 拔掉端子和气管，取下上小腿组件，然后可以更换上小腿皮套和气袋  
disconnect the terminal and air hose, take down upper leg rest, then we can replace the leather and air bag

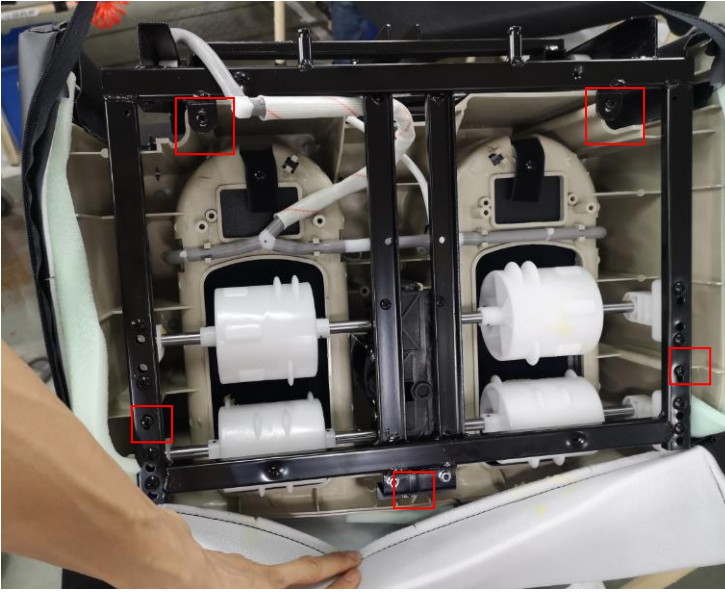


3. 取下下小腿脚垫，拉开下小腿皮套  
Remove the mats, unzip the zipper



4. 取下固定下小腿的螺丝，拔掉气管，取下下小腿组件

Remove 5 screws fixing lower leg rest, disconnect the air hose, take down lower leg rest



5. 现在，我们可以更换下小腿皮套。如果需要，可以更换脚机组件

Now we can replace the leather of lower leg rest. If necessary, we can replace the foot massage unit



4-10.中心盒实物接线图 Physical wiring diagram of main PCB box

