



福建怡和电子有限公司

FUJIAN YIHE ELECTRONICS CO.,LTD

产 品 维 修 手 册

Maintenance Service Manual

产品型号/MODEL: Titan TP-Epic 4D

(YH-9730L-TIT)

适用电压规格/ voltage specification: 120V



一、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. 控制器无反应 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、电源板坏 POWER PCB 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、更换电源板 Replace POWER PCB ④、更换中心板 Replace main PCB
		B. 控制器有反应: ①、上下行程光电坏。 Up or Down Stroke Photoelectricity was failed ②、中心板坏掉 Main PCB failed ③、开机直揉捏其他按键无效 kneading all the time from powerand no response with other button	①、更换行程光电 Replace stroke photoelecruicity ②、更换中心板 Replace main PCB ③、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	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

		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	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 Replace UP/Down-Stroke Subassembly 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

二. 故障检修流程图 Troubleshooting Process

在修理或者替换零配件过程中注意下面几点：

- A. 在拆卸连线，移动连接器，或者替换部件前一定要断开电源线插头。
- B. 因为半导体（像集成电路，或者其它的）很容易被静电损坏，所以当要触摸 PCB 前，请确保你的身体和大地有连线（佩带静电手环），或可以将手放在地端，以释放身体上所带的静电。

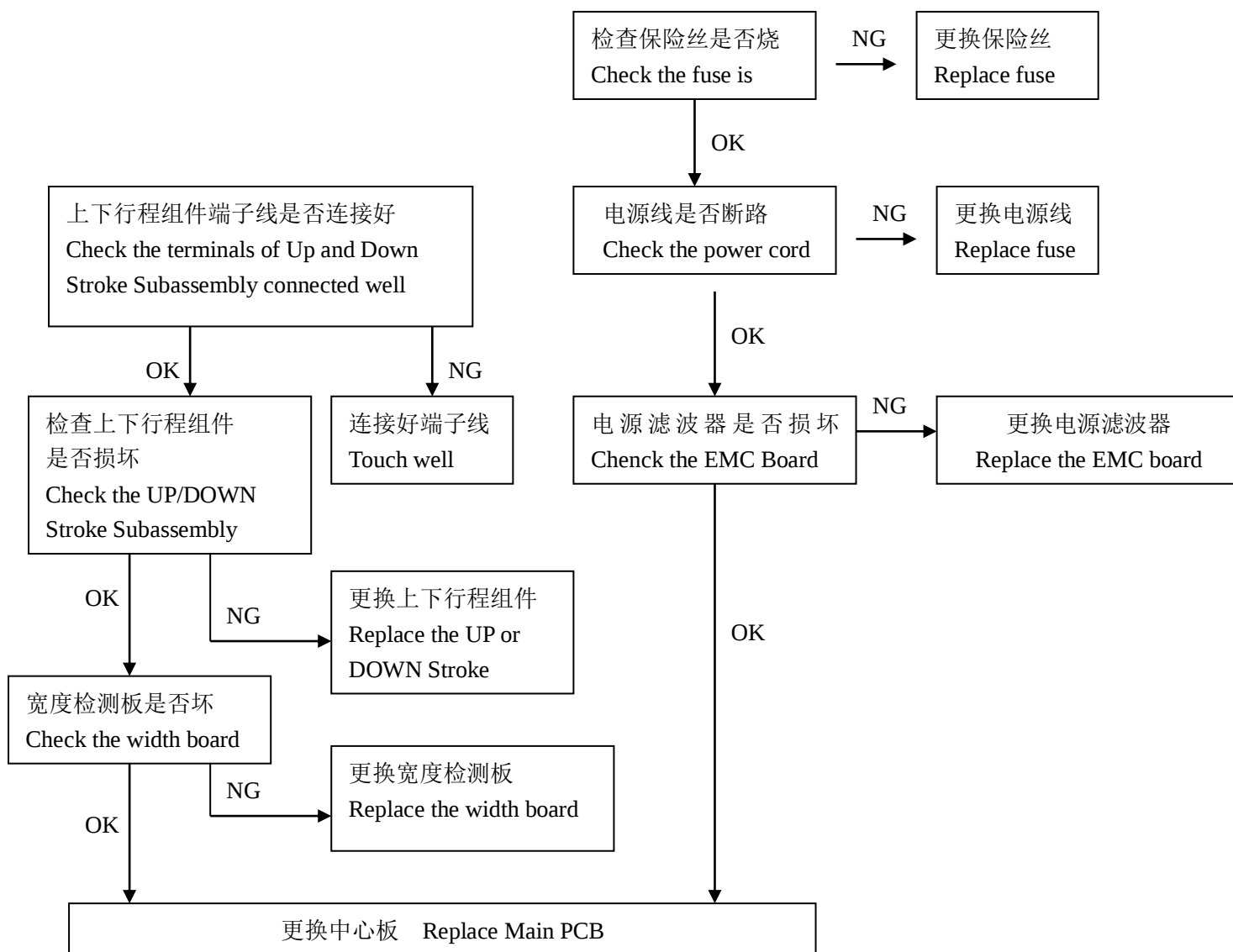
Notes for repairing chair or replacing parts

A. Make sure the power is off when you tear down the wires, move terminals or replacing parts.

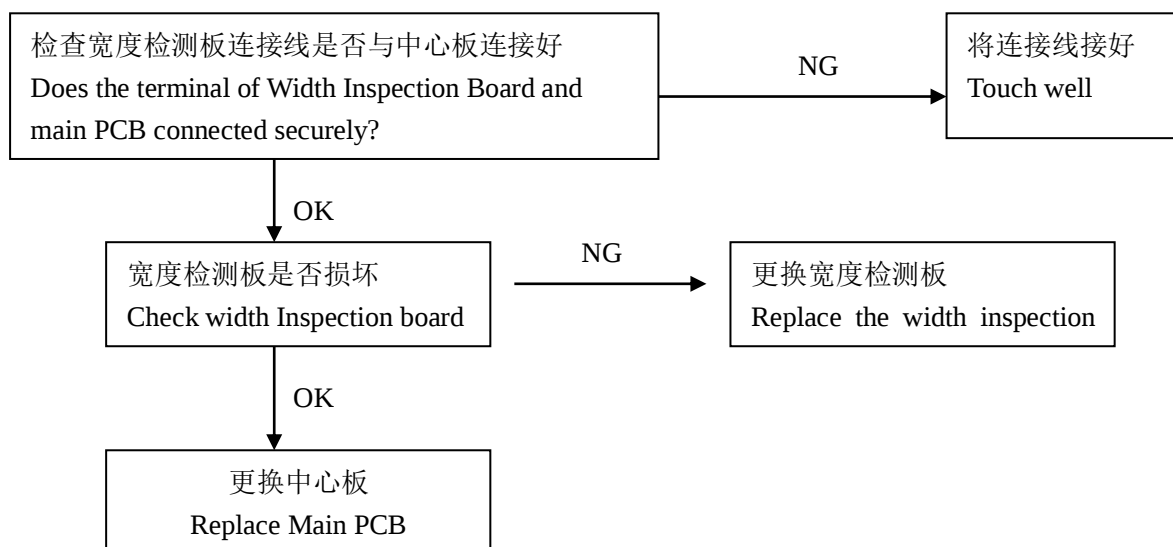
B. The semiconductors (like IC or something else) will easily be damaged by static.

So you touch the PCB before, please make sure your body is connected with the ground.

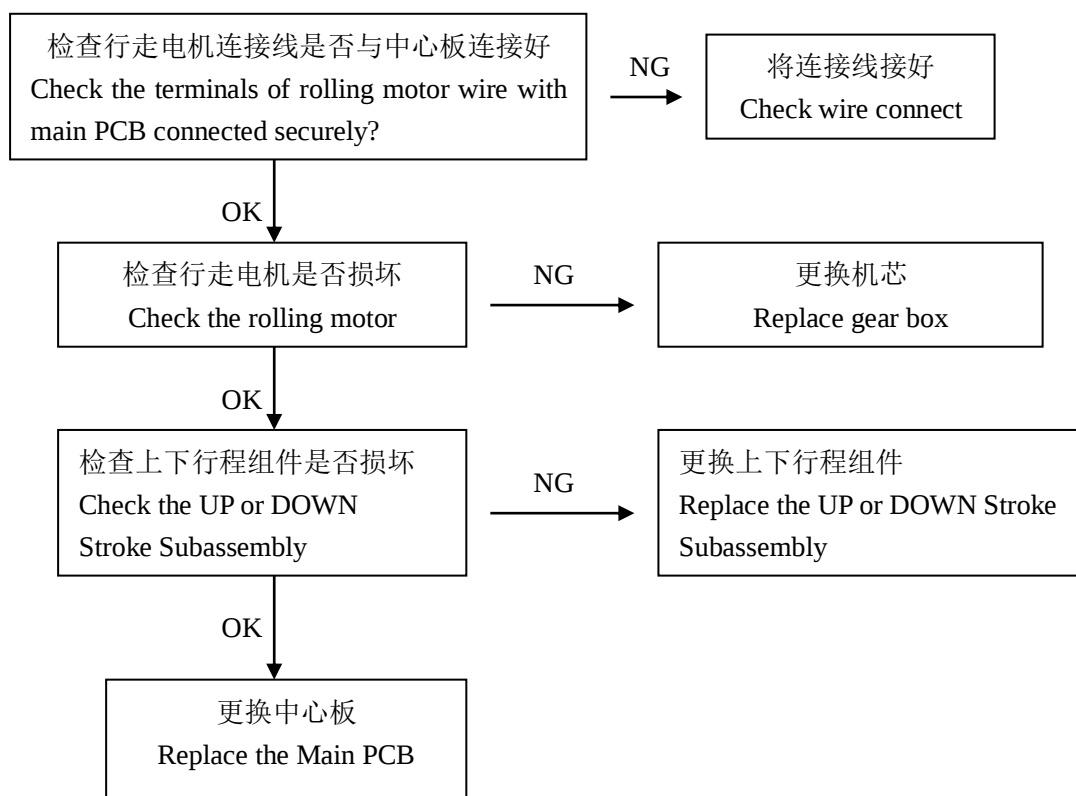
1、开机无功能/ No function



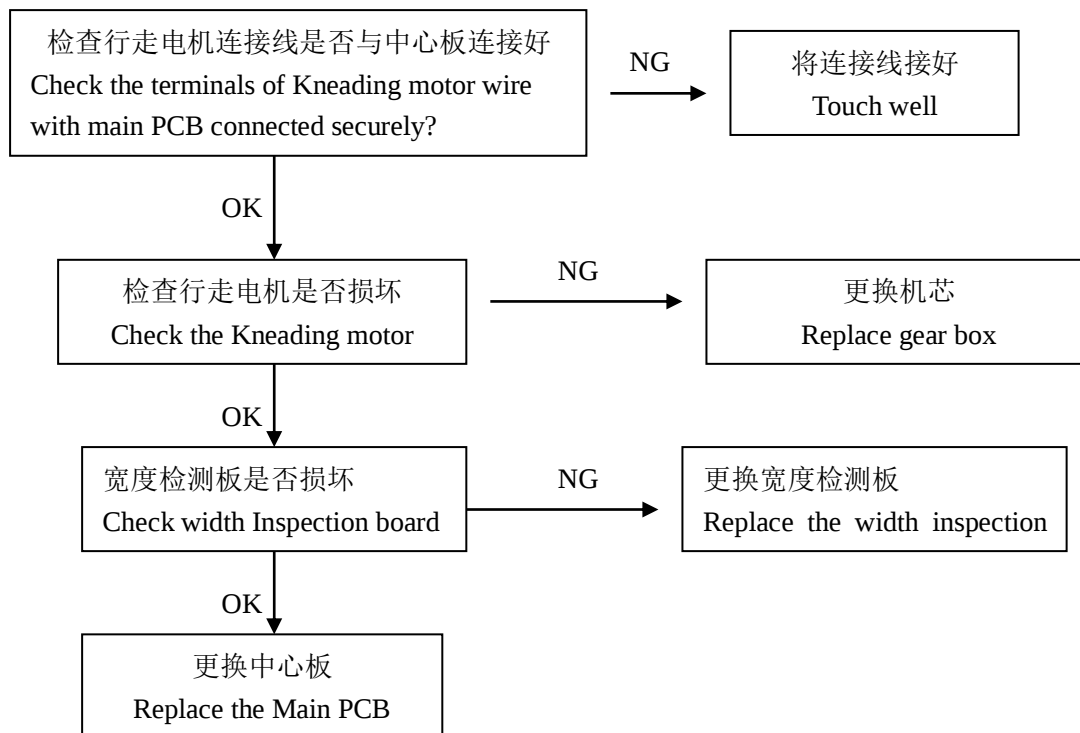
2、机芯宽中窄不能切换 Width cannot switch from narrow to wide



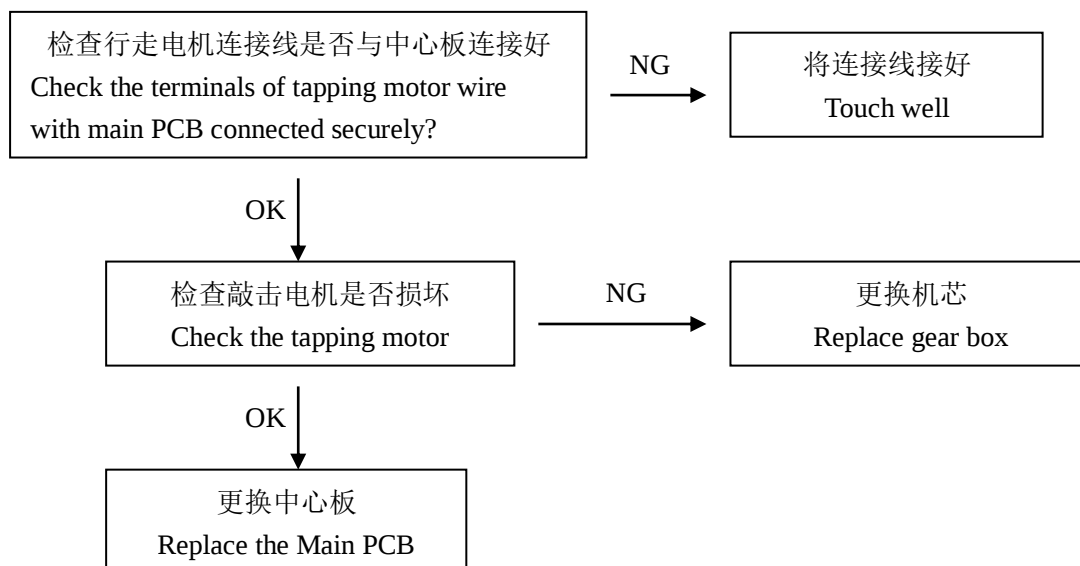
3、不行走/ NO ROLLING



4、不揉捏/ NO KNEADING



5、不敲击/ NO TAPPING



工具列表 Tools List

			
十 字 螺 丝 刀 Screwdriver size 1,2,3	老虎钳 尖嘴钳 Diagonal cutter and long nose pliers	斜口钳 Diagonal pliers	扳手 Spanner tools Kit
			
电笔 Test pen	六角扳手 Allen Key set	内六角扳手 Ratchet Tools Set	24V/DC 电源 24V/DC power
			
电动螺丝刀 Electric Driver	90 度弯头电动螺丝刀	扎扣 Cable Ties	压线帽 WIRE ONECTORS

目录

Table of Contents

1.小腿的拆卸更换 Footrest replacement.....	9
2.披风的拆卸更换 Backrest pad replacement	10
3.中心板、蓝牙板、开关电源、气泵、气阀、滤波板、灯带稳压板的拆卸更换 Mainboard, Bluetooth PCB, switching power board, air pump, air valve replacement.....	10
4.右侧板的拆卸更换: Right side board replacement.....	13
5.机芯上下行程霍尔板的拆卸更换 Up/down limited Hall board replacement	15
6.机芯的拆卸更换: Massage mechanism replacement.....	15
7.小腿推杆的拆卸更换: Footrest actuator replacement	17
8.靠背推杆的拆卸更换 Backrest actuator replacement	19
9.手控器的拆卸更换 Tablet controller replacement.....	20

1.小腿的拆卸更换 Footrest replacement

1-1、 将小腿与座架连接拉链拉开（图 1），小腿左右两边各有 1 颗螺丝螺母（图 2），用十字螺丝刀和扳手将螺丝螺母卸下（图 3），即可将小腿与座架分离；

Pull the zipper between the lower leg and the seat frame (Figure 1), and there is one screw nut on the left and right sides of the lower leg (Figure 2), and remove the screw nut with a Phillips screwdriver and a wrench (Figure 3) to separate the lower leg from the seat frame.



图 1



图 2



图 3



1-2、用斜口钳将固定小腿线束保护布套的扎扣剪掉，将保护布套拉开（图 4），将小腿电源线对插接头及气管接口拔掉（图 5），即可将小腿取下（图 6），小腿如果有损坏就可更换新的。

Use diagonal pliers to cut off the buckle that holds the calf harness protective cloth sleeve, pull the protective cloth sleeve apart (Fig. 4), and unplug the footrest power cord plug-in connector and air tube connector (Fig. 5), then the footrest can be removed (Fig. 6), and the footrest can be replaced with a new one if it is damaged.



图 4



图 5

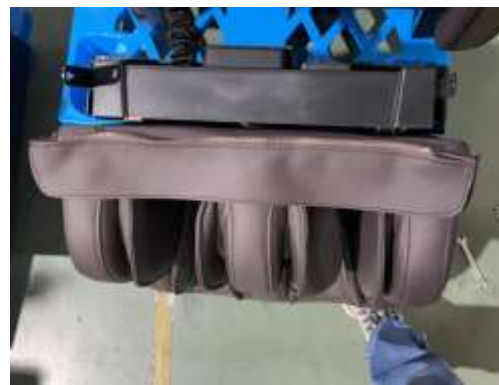


图 6

注意：在装回小腿时按上面的操作步骤逆向即可。

ATTN: When assembling the calf, follow the above steps to reverse the operation.

工具：十字螺丝刀、扳手、斜口钳。

Tools: Phillips screwdrivers, wrenches, diagonal pliers.

2. 披风的拆卸更换 Backrest pad replacement

2-1、将披风最上端粘毛扣掀开，拉链拉开（图 7），将电源连接线对接插头以及气管拔掉（图 8）

Open the top buckle of the backrest pad, unzip it (Picture 7), and unplug the power cable from the plug and the air tube (Picture 8).



图 7



图 8

2-2、将披风腰部两侧背面、座部两侧背面、座部前端背面拉链（图 9、①②③④⑤）拉开，即可将披风取下（图 10），披风如果有损坏就可更换新的。



图 9



注意：在装回披风时按上面的操作步骤逆向即可。

ATTN: When assembling the backrest pad, follow the above steps to reverse the operation.

3. 中心板、蓝牙板、开关电源、气泵、气阀、滤波板、灯带稳压板的拆卸更换 Mainboard, Bluetooth PCB, switching power board, air pump, air valve replacement

3-1、将固定中心盒的三颗螺丝卸下（图 11），将中心盒盖板向上掀开（图 12）

Remove the 3 screws holding the power box (Fig. 11) and lift the lid of the power box (Fig. 12)



图 11



图 12

3-2、将中心板上各接线端子拔掉（图 13），将固定中心板的 4 颗螺丝（图 14）卸下，即可将中心板取下（图 15），中心板如果有损坏就可更换新的。

Remove the mainboard wire connectors(Fig. 13) and removing the four screws that hold the mainboard(Fig. 14) (Fig. 15), and replace the mainboard with a new one if it is damaged.



图 13

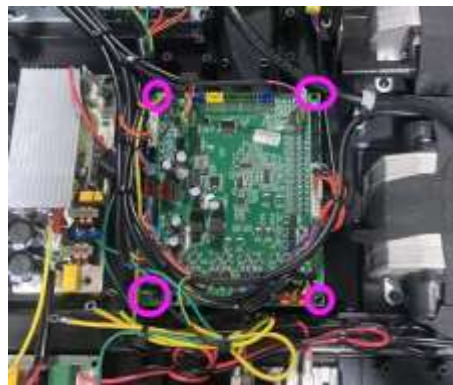


图 14



图 15

3-3、将语音播报板上各接线端子拔掉（图 16），将固定语音板的 4 颗螺丝（图 17）卸下，即可将板取下（图 18），语音板如果有损坏就可更换新的。

Unplug the terminal blocks on the Bluetooth PCB/voice board (Fig. 16), remove the four screws that hold the Bluetooth PCB (Fig. 17) (Fig. 17), and replace the Bluetooth PCB with a new one if it is damaged.



图 16



图 17



图 18

3-3、将电源板上 2 个对插端子拔掉（图 19），将固定电源板的 4 颗螺丝（图 20）卸下，即可将电源板取下（图 21），电源板如果有损坏就可更换新的。

The switching power board can be removed by unplugging the two plug-in terminals (Fig. 19) and remove the four screws holding the switching power board (Fig. 20) (Fig. 21), and replace the switching power board with a new one if it is damaged.



图 19



图 20



图 21

3-4、用斜口钳将固定气泵线束的扎扣剪掉，中心板上气泵对插端子拔掉，将固定气泵的 4 颗螺丝、固定伸缩带的 4 颗螺丝、固定气管的 1 颗螺丝卸下，将气管连接拔掉（图 22），即可将气泵取下（图 23），气泵如果有损坏就可更换新的。

Cut off the buckle that fixes the wiring harness of the air pump with diagonal pliers, unplug the air pump plug-in terminal on the mainboard, remove the 4 screws that fix the air pump, the 4 screws that fix the telescopic belt, and the 1 screw that fixes the air pipe, and unplug the air pipe connection (Figure 22), then the air pump can be removed (Figure 23), and the air pump can be replaced with a new one if it is damaged.



图 22

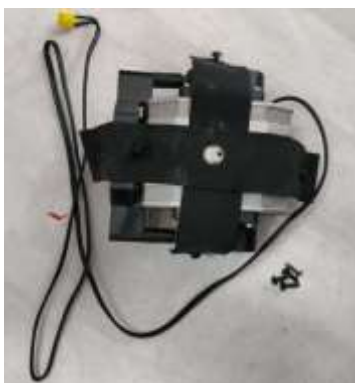


图 23

3-5、用斜口钳将固定气阀线束的扎扣剪掉，中心板上气阀对插端子拔掉，将固定气泵的 4 颗螺丝卸下，将气管连接拔掉（图 24），即可将气阀取下（图 25），气阀泵如果有损坏就可更换新的。

Cut off the buckle of the wiring harness of the fixed air valve with diagonal pliers, unplug the valve plug-in terminal on the mainboard, remove the 4 screws that fix the air pump, and unplug the air pipe connection (Fig. 24), then the air valve can be removed (Fig. 25), and the air valve pump can be replaced with a new one if it is damaged.



图 24



图 25

注意：在装回中心板、语音板、开关电源、气泵、气阀、按上面的操作步骤逆向即可。

Attn: When assemble the mainboard, Bluetooth PCB/voice board, switching power board, air pump, air valve, please follow above steps to reverse the operation.

工具：十字螺丝刀、斜口钳。

Tools: Phillips screwdriver, diagonal pliers.

4.右侧板的拆卸更换：Right side board replacement

4-1、用螺丝刀将固定后盖的 4 颗螺丝（图 30）卸下，即可后盖取下（图 31）；

Remove back cover by unscrew the 4 screws that hold the back cover in place with a screwdriver (Fig. 30) (Fig. 31).



图 30



图 31

4-2、用斜口钳将蓝牙音箱电源线固定扎扣剪掉将，对插端子拔开（图 32），用斜口钳将气管固定扎扣剪掉，拔掉气管接头（图 33）；

Cut off the fastener of the power cord of the Bluetooth speaker with diagonal pliers, unplug the plug-in terminal (Fig. 32), cut off the air tube fixing fastener with diagonal pliers, and unplug the air tube joint (Fig. 33);



图 32



图 33

4-3、将美腿抬起来（图 34），用内六角扳手将侧板 1 颗固定螺丝卸下（图 34），将右侧板前后端向上提起（图 35），即可将右侧板卸下（图 36），右侧板如果有损坏就可更换新的。

Lift the leg up (Fig. 34), remove one of the fixing screws on the side panel with an Allen wrench (Fig. 34), lift the front and back ends of the right side panel up (Fig. 35), and replace the right side panel with a new one if damaged.



图 34



图 35

图 36

注意：在装回侧板时首先将侧板下方挂钩挂在座架上，上方挂钩卡入沟槽内，其余按上面的操作步骤逆向即可。左侧板更换方法与右侧板相同。

ATTN: When assembling the side panel, first hang the lower hook of the side plate on the seat frame, the upper hook is snapped into the groove, and the rest steps can be reversed according to the above operation steps. The left side board is replaced in the same way as the right side board.

工具：斜口钳、内六角扳手。

Tools: Diagonal pliers, Allen wrenches.

5.机芯上下行程霍尔板的拆卸更换 Up/down limited Hall board replacement

5-1、机芯上下行程霍尔板的拆卸，（图 41）Disassembly of the up/down Hall board

5-2、用螺丝刀将机芯线路板盒子的 4 个螺丝松开（图 42），即可将壳卸下（图 43），然后将行程霍尔板的端子拔掉（图 44），即可将传感器卸下（图 45），上下行程霍尔板如果有损坏就可更换新的。

The mech PCB cover can be removed by loosening the 4 screws a screwdriver (Fig. 42), and then the sensor can be removed by unplugging the terminals of the stroke Hall board (Fig. 44), and the up/down Hall board can be replaced with new ones if damaged.



图 41



图 42



图 43

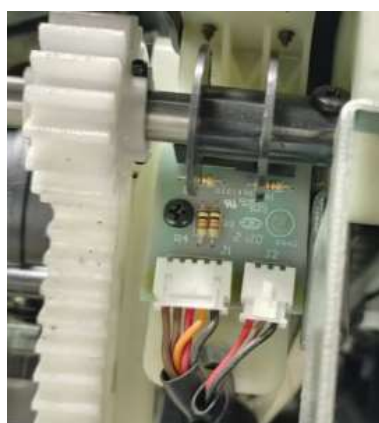


图 44

图 45

注意：在装回机芯上下行程传感器的操作步骤逆向即可。

ATTN: The operation of assembling the up/down Hall board can be reversed according to the above steps.

工具：斜口钳、十字螺丝刀。

Tools: Diagonal pliers, Phillips screwdrivers.

6.机芯的拆卸更换：Massage mechanism replacement

6-1、机芯的拆卸，首先按照后盖的拆卸流程先将后盖拆下；

To disassemble the massage mechanism, first remove the back cover according to the disassembly process of the back cover;

6-2、用螺丝刀将固定靠背的 6 颗螺丝卸下（图 46、47），将靠背往前掀开一段距离（图 48）；

Use a screwdriver to remove the six screws that hold the backrest (Fig. 46 and 47) and lift the backrest forward for some distance (Fig. 48).



图 46



图 47



图 48

6-3、用 90 度弯头电动螺丝刀将机芯导轨上端限位横杆两端 4 颗螺丝卸下（图 49），取下横杆（图 50）；
Use a 90-degree elbow electric screwdriver to remove the four screws at both ends of the limiting crossbar at the upper end of the movement rail (Fig. 49) and remove the crossbar (Fig. 50).

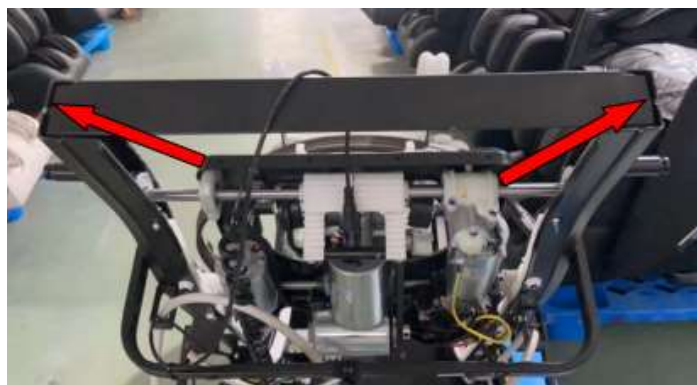


图 49



图 50



6-4、用螺丝刀将机芯中心板外盖固定螺丝卸下（图 51），取下外盖（图 52）；
Remove the fixing screws on the outer cover of the mainboard of the mechanism PCB cover with a screwdriver (fig. 51) and remove the outer cover (fig. 52);



图 51



图 52

6-5、用斜口钳将固定机芯电源线的扎扣剪掉（图 53），用螺丝刀将接地螺丝卸下，取下电源线的接地线，将机芯中心板上电源线的对插端子拔掉（图 54）；
Cut off the buckle holding the power cord of the massage mechanism with diagonal pliers (Fig. 53), remove the

grounding screw with a screwdriver, remove the grounding wire of the power cord, and unplug the plug-in terminal of the power cord on the mechanism PCB(Fig. 54);



图 53

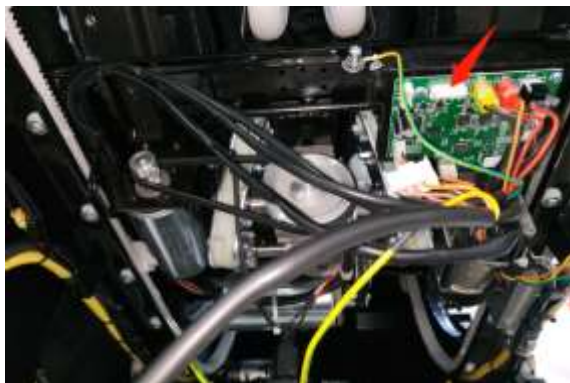


图 54

6-6、将机芯中心板上的行走电机接线端子拔掉（图 55），将行走电机接线端子连接 24V 电源，即可将机芯从导轨中退出取下（图 56），机芯如果有损坏就可更换新的。

Unplug the moving motor terminal on the mechanism PCB(Fig. 55) and connect the moving motor terminal to a 24V power supply to exit the movement from the guide rail (Fig. 56), and replace it with a new one if it is damaged.



图 55



图 56

注意：在装回机芯中心板的操作步骤逆向即可。

Attn: When assemble the massage mechanism, please follow the above steps to reverse the process.

工具：十字螺丝刀、斜口钳、90 度弯头电动螺丝刀、24V 电源。

Tools: Phillips screwdriver, diagonal pliers, 90 degree elbow electric screwdriver, 24V power supply.

7.小腿推杆的拆卸更换：Footrest actuator replacement

7-1、小腿推杆的拆卸，首先按照小腿的拆卸流程将小腿拆卸；

For the disassembly of the footrest actuator, firstly please follow the footrest disassembly steps to disassemble the footrest.

7-2、电源开启，将按摩椅调整至零重力状态后，切断电源使按摩椅保持零重力状态（图 57）；

After the power is turned on, adjust the massage chair to zero gravity, cut off the power supply to keep the massage chair in zero gravity (Figure 57);



图 57

7-3、用螺丝刀将座架前挡板 6 颗螺丝卸下（图 58），将座部前盖板的 7 颗螺丝卸下（图 59）

Use a screwdriver to remove the 6 screws from the front bezel of the seat frame (fig. 58) and remove the 7 screws from the front cover of the seat (fig. 59)

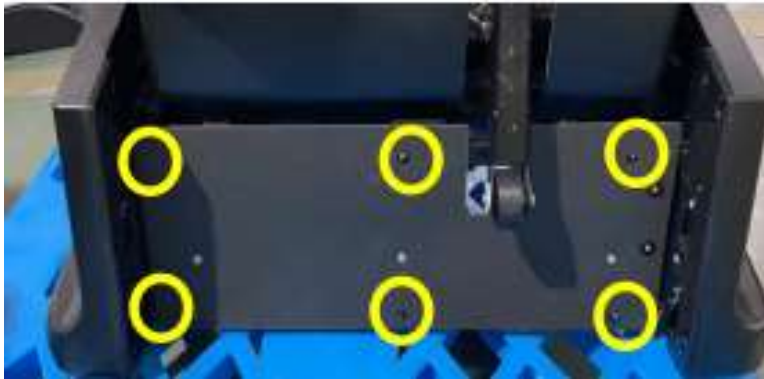


图 58



图 60

7-4、用斜口钳将固定线束的扎扣剪掉（图 61），用螺丝刀松开接地螺丝，将接地端子取出（图 62），拔掉小腿推杆电源线接线端子（图 63）

Cut off the fastener that holds the wiring harness with diagonal pliers (Fig. 61), loosen the grounding screw with a screwdriver, remove the grounding terminal (Fig. 62), and unplug the power cord terminal of the lower footrest actuator (Fig. 63)

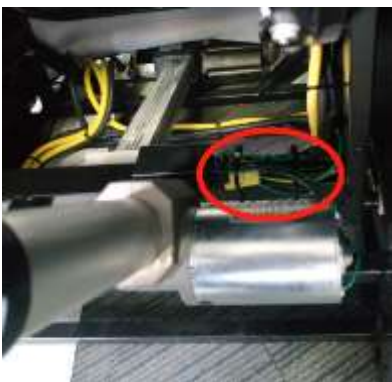


图 61

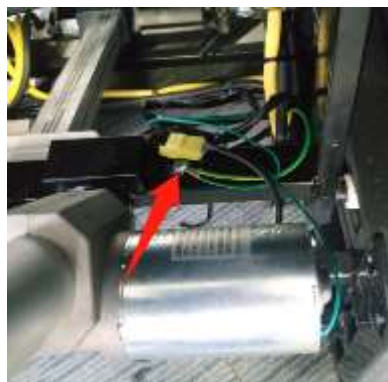


图 62



图 63

7-5、拔掉小腿推杆前后两端波浪形开口销，取下销轴（图 64），即可将小腿推杆取下（图 65），小腿推杆如果有损坏就可更换新的。

The footrest actuator can be removed by removing the wavy cotter pins at the front and rear ends of the footrest actuator and removing the pin shaft (Fig. 64), and the footrest actuator can be replaced with a new one if it is damaged.



图 64



图 65

注意：在装回小腿推杆的操作步骤逆向即可。

ATTN: When installing the lower leg pusher, follow the steps above and do the opposite.

工具：十字螺丝刀、斜口钳。

Tools: Phillips screwdriver, diagonal pliers.

8. 靠背推杆的拆卸更换 Backrest actuator replacement

8-1、靠背推杆的拆卸 Follow above backrest cover replacement to disassemble the backrest cover

8-2、用内六角扳手将固定推杆的 2 颗螺丝卸下，（图 66）； Remove the 2 screws holding the actuator with an Allen wrench (fig. 66);

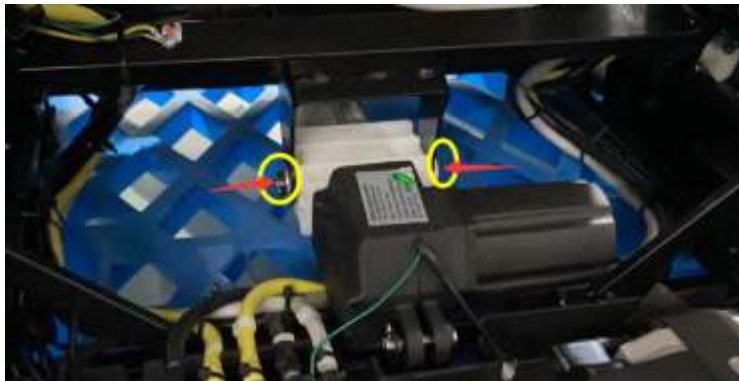


图 66

8-3、按照 3-1 的拆卸流程将中心盒盖板拆卸，拔掉靠背推杆电源线接线端子，用螺丝刀松开接地螺丝，将接地端子取出，再将推杆尾部固定插销拔出（图 67），即可将靠背推杆取下，（图 68），靠背推杆如果有损坏就可更换新的。

According to the disassembly process of 3-1, remove the power box cover, unplug the power cord terminal of the backrest actuator, loosen the grounding screw with a screwdriver, take out the grounding terminal, and then pull out the fixed bolt at the end of the actuator (Fig. 67), then the backrest actuator can be removed, (Fig. 68), and the backrest actuator can be replaced with a new one if it is damaged.

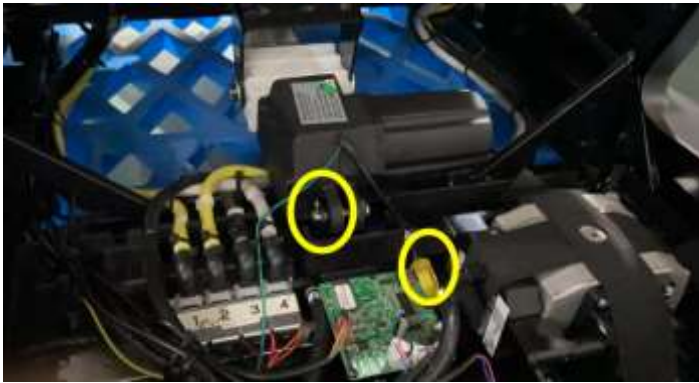


图 67



图 68

注意：在装回靠背推杆的操作步骤逆向即可。

工具：十字螺丝刀、六角扳手、斜口钳。

Note: The procedure for reinstalling the backrest actuator can be reversed.

Tools: Phillips screwdriver, hex wrench, diagonal pliers.

9.手控器的拆卸更换 Tablet controller replacement

9-1、在按摩椅左侧披风下方，将手控器对插接头旋开（图 69），即可将手控器取下（图 70），手控器如果有损坏就可更换新的。

Under the backrest pad on the left side of the massage chair, unscrew the tablet controller (Fig. 69) to remove the handset (Fig. 70), and replace it with a new one if it is damaged.



图 69



图 70