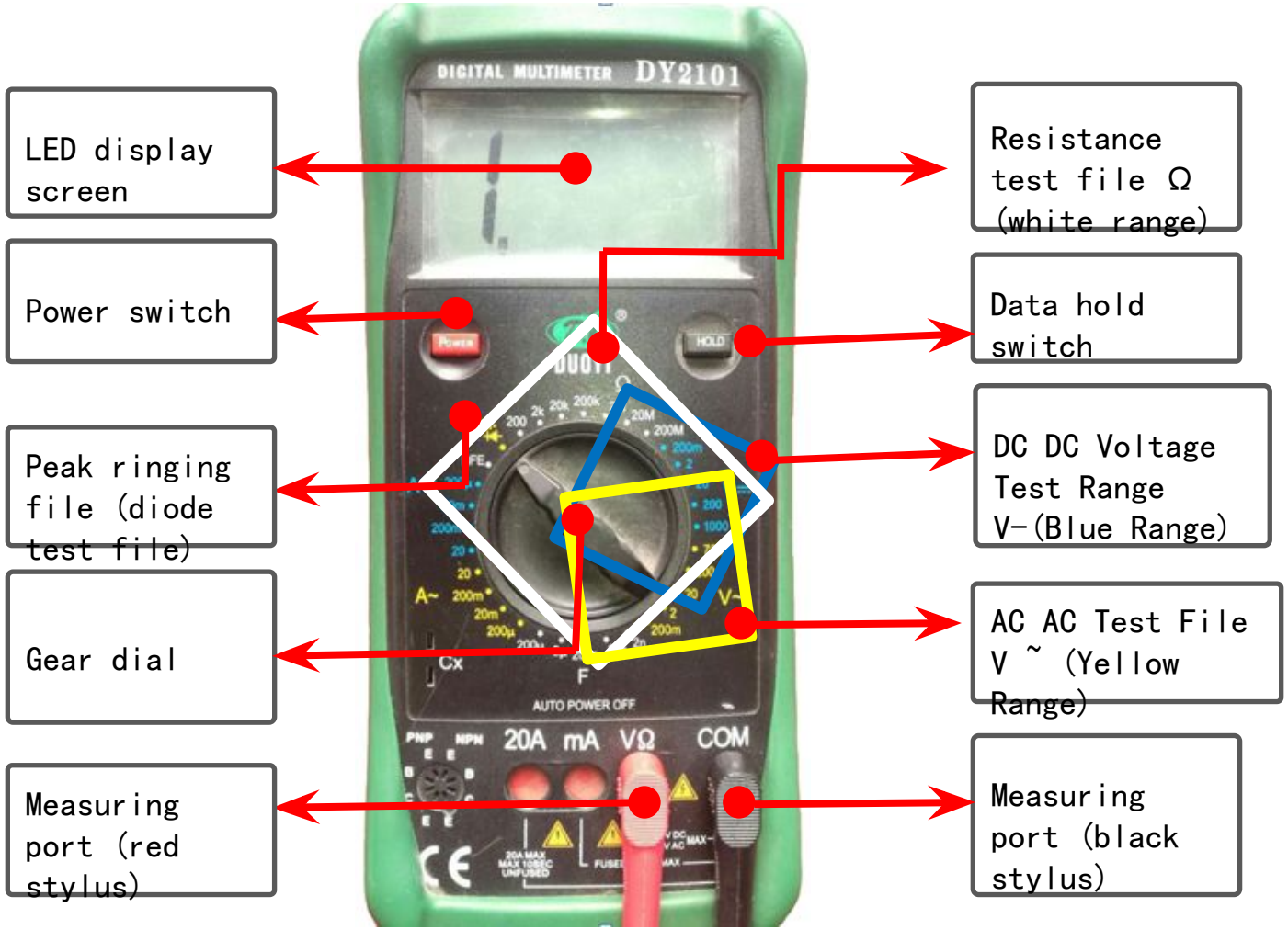
A202 -2

1. Introduction of maintenance tools

accessories	
8 Hexagon socket set	1.5/2.0/2.5/3.0/3.5/4.5/5/6mm
1 Seven in one wire stripping pliers	7/175mm
1 alloy wire cutters	6/150mm
1 adjustable spanner	8/200mm
1Mirror polished claw hammer	0.25kg
1 steel tap	3m*16mm
1 Double color handle screw batch	3*75-/3*75+/6*100-/6*100+
1 Magnetic sleeve joint rod with double color handle	
10 Screwdriver head	5-*5-/ph1/ph2/ph3/pz1/pz2/h4/h5/h6
6 Precision watch screwdriver	Cross #0/#1 line 1.4/2/2.4/3mm
1 High-quality external heat type long life electric luo iron	30w
1 solder sucker	
1 multimeter	830B
1 tin wire	
1 alloy nose pliers	6/150mm

2. Use and measurement of digital multimeter



2.1. Function and role of test gear

Power switch: On or off the power supply of digital multimeter.

Data holding switch: Memorize the measured data, which is convenient for comparing the measured data.

Peak sounding: Measure diode quality, line on-off, alarm function.

Resistance file: Measure the quality and value of resistance.

DC Voltage Range: Measure DC Voltage.

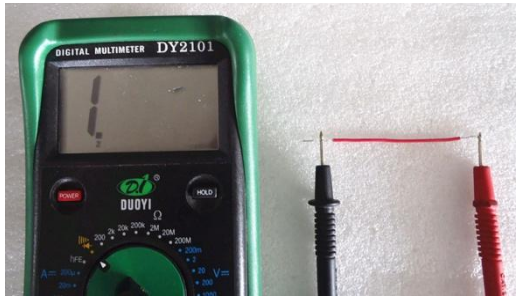
AC Voltage Range: Measure AC Voltage.

V Ω/COM: Red Pen Port (+ Pole) in V Ω Test and Black Pen Port (-Pole) in COM Test

Note: When carrying out resistance or voltage test, we should choose the appropriate measuring range. If the measuring range is too small, it will not be measured. If the measuring range is too small, it will be too large

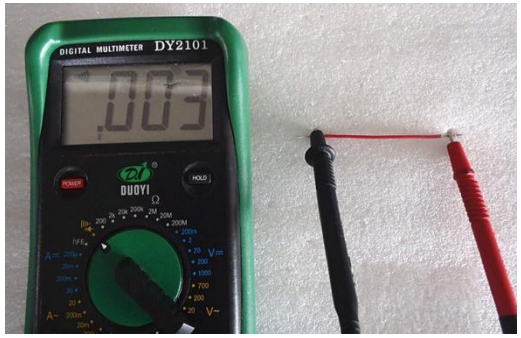
Large test error range; When the measuring voltage is unknown, choose a larger range for measurement.

2.2. Line on/off measurement



Open circuit

As shown in the left figure, first hit the multimeter to the buzzer file and turn on its power switch. At this time, the multimeter displays "1."; Then the two probes are distributed and contacted with the metal thread ends at both ends of the red wire in the figure. At this time, the multimeter still shows "1." There is no change, which means that there is an open circuit in the middle of the wire, that is, the line is impassable.



Conduction

As shown in the left figure, test with the same method as described above. If the multimeter displays the number ". 003" or ". 00N" and sounds an alarm, it means that the wire is conductive.

2.3. Measurement of motor

Motor measurement	 		As shown in the left figure, it is shown as "1", indicating that the internal coil of the motor has been open and poor.
			As shown in the left figure, the result is "42.5" Ω, which is within the normal resistance range, indicating that the motor is good.

--Other motor coil resistance reference

Air pump DC24V: 5-8 Ω solenoid valve DC24V: 157 Ω
Motor DC24V: 5-10 Ω Electric Cylinder DC24V: about 10 Ω

2.4. Measurement of AC Voltage

--As shown in the above figure: Measure the power supply of household plug-in board (220V), select 700 measuring range, and the test result is "225", which means that the actual voltage of this group of sockets is 225V at this moment (the switch is pressed down, so there is electricity and the lamp is illuminated).

--As shown in the above figure: Measure the power supply of our household plug-in board (220V), select 700, and the test result is "000", which means that the actual voltage of this group of sockets is 0V at the moment (the switch is not pressed, so there is no electricity and the lamp is not on).

Second, the introduction of common tools and parameters

2.5. Measurement of AC Voltage

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

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

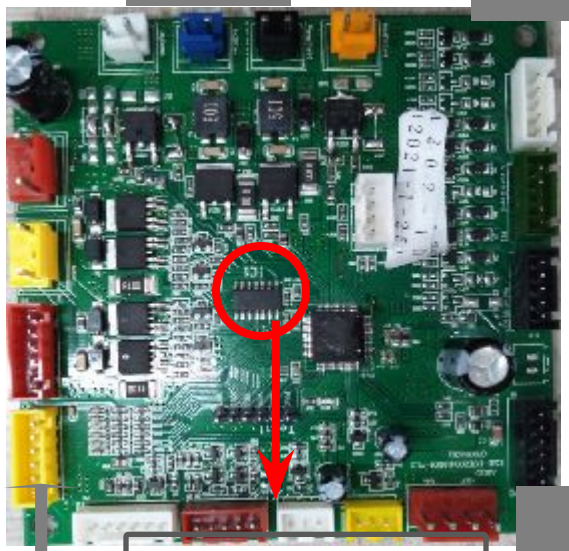
massage chair after-sales maintenance-how massage chair works

the control principle of massage chair

Robot massage! !

Electric cylinder

Manipulator



CPU chip

Solenoid valve

Hand controller

Signal trigger

Switching power supply

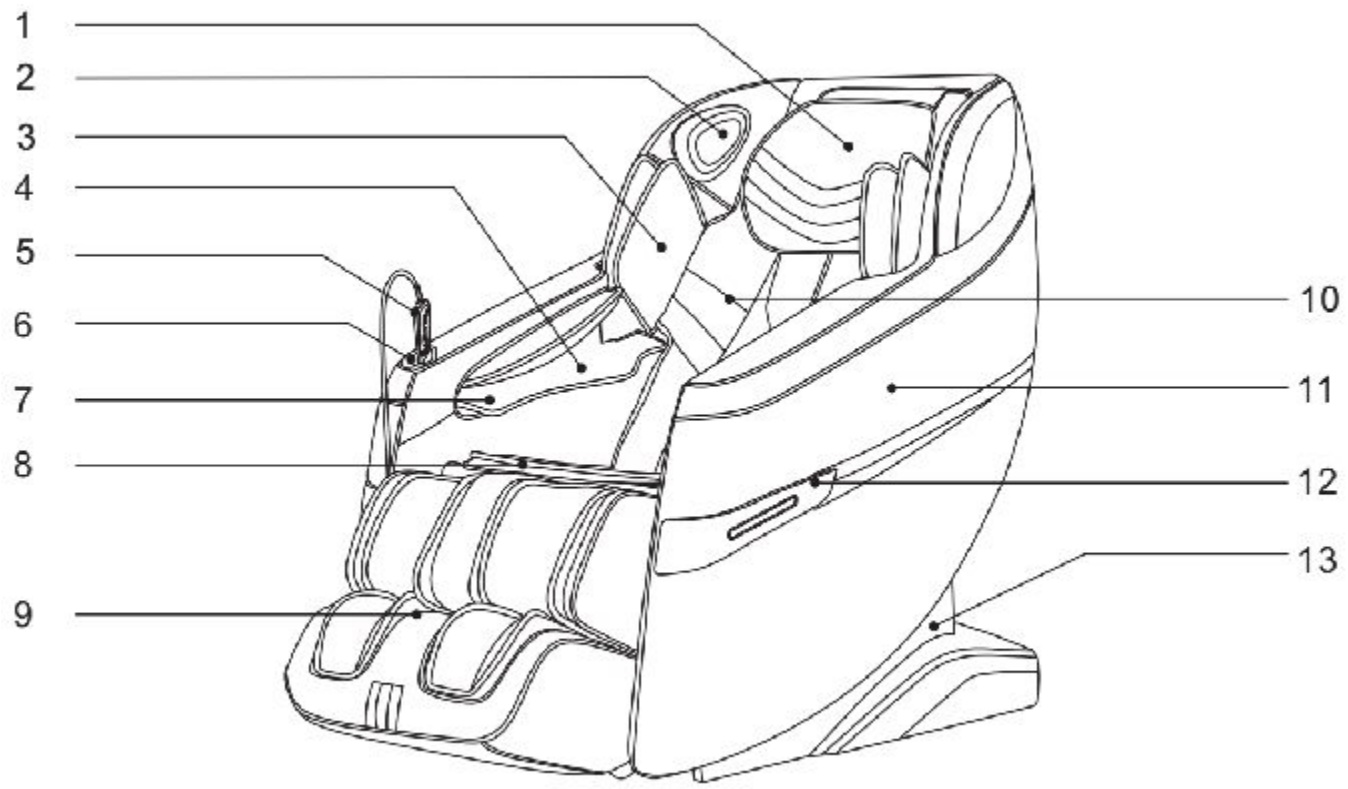
Air pump

A202-2Massage chair after-sale service-product internal structure

1. Appearance part name
2. Schematic diagram of internal structure
3. Distribution diagram of drive board plug-ins

Introduction of product structure

4.1. Part Name



1. pillow
2. 3D Speaker
3. Upper arm airbags assembly
4. Arm airbags assembly
5. remote
6. remoteplacement slot
7. Bump massage and magnetic therapy
8. Seat cushion
9. footrest
10. Backrest cushion
11. armrest
12. armrest decoration
13. Side cover

IV. Introduction of product structure

4.2. Part Name

14. Backrest cover

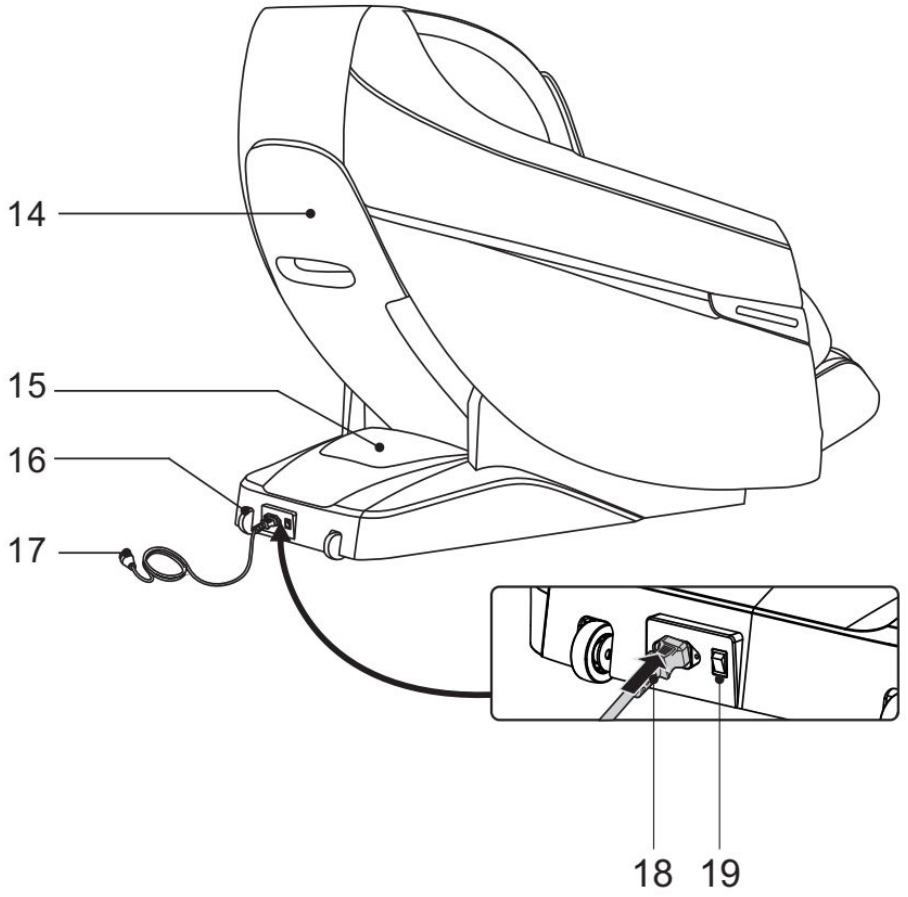
15. Back cover of power box

16. caster

17. Power cord and plug

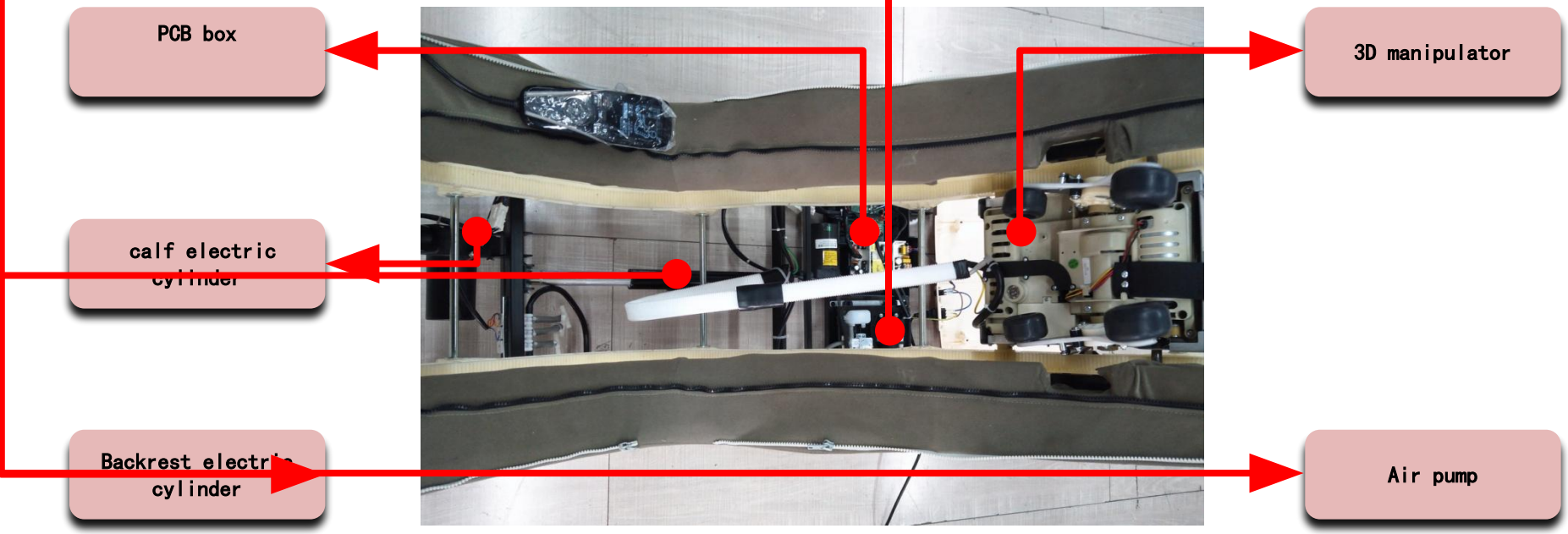
18. Power input

19. Power Switch



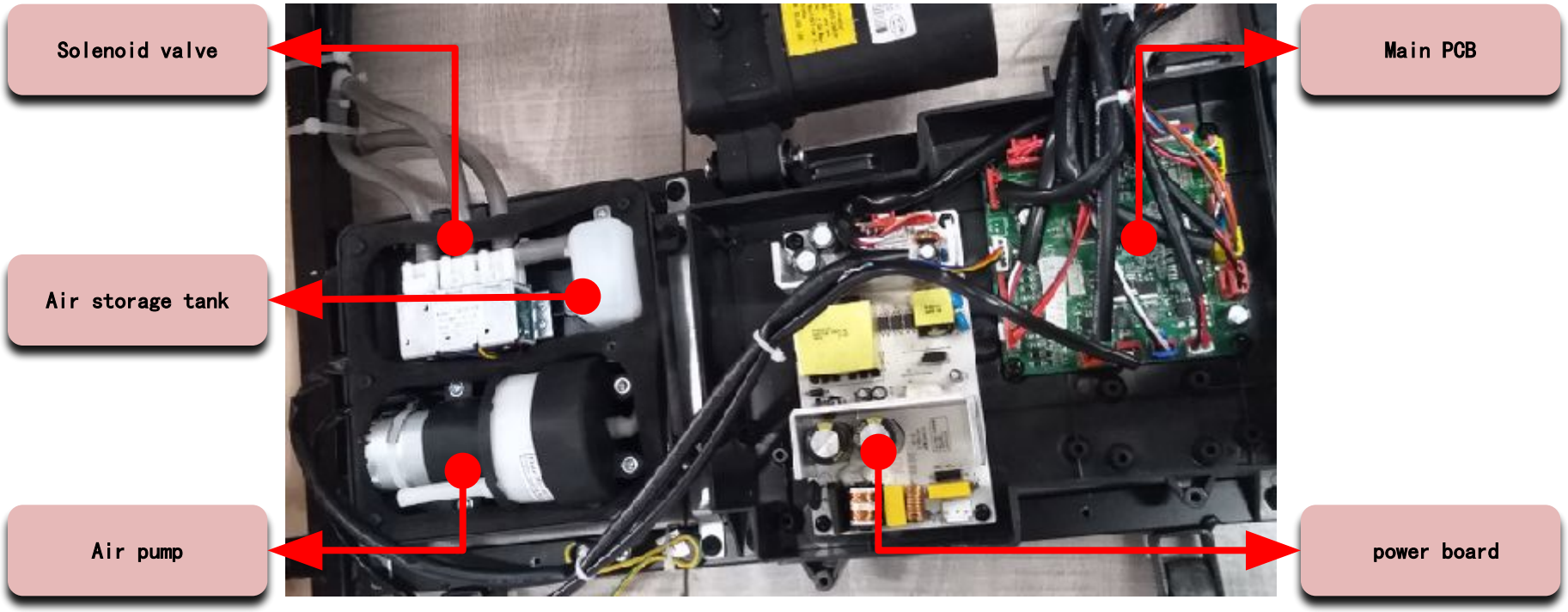
IV. Introduction of product structure

4.3 Schematic diagram of internal structure



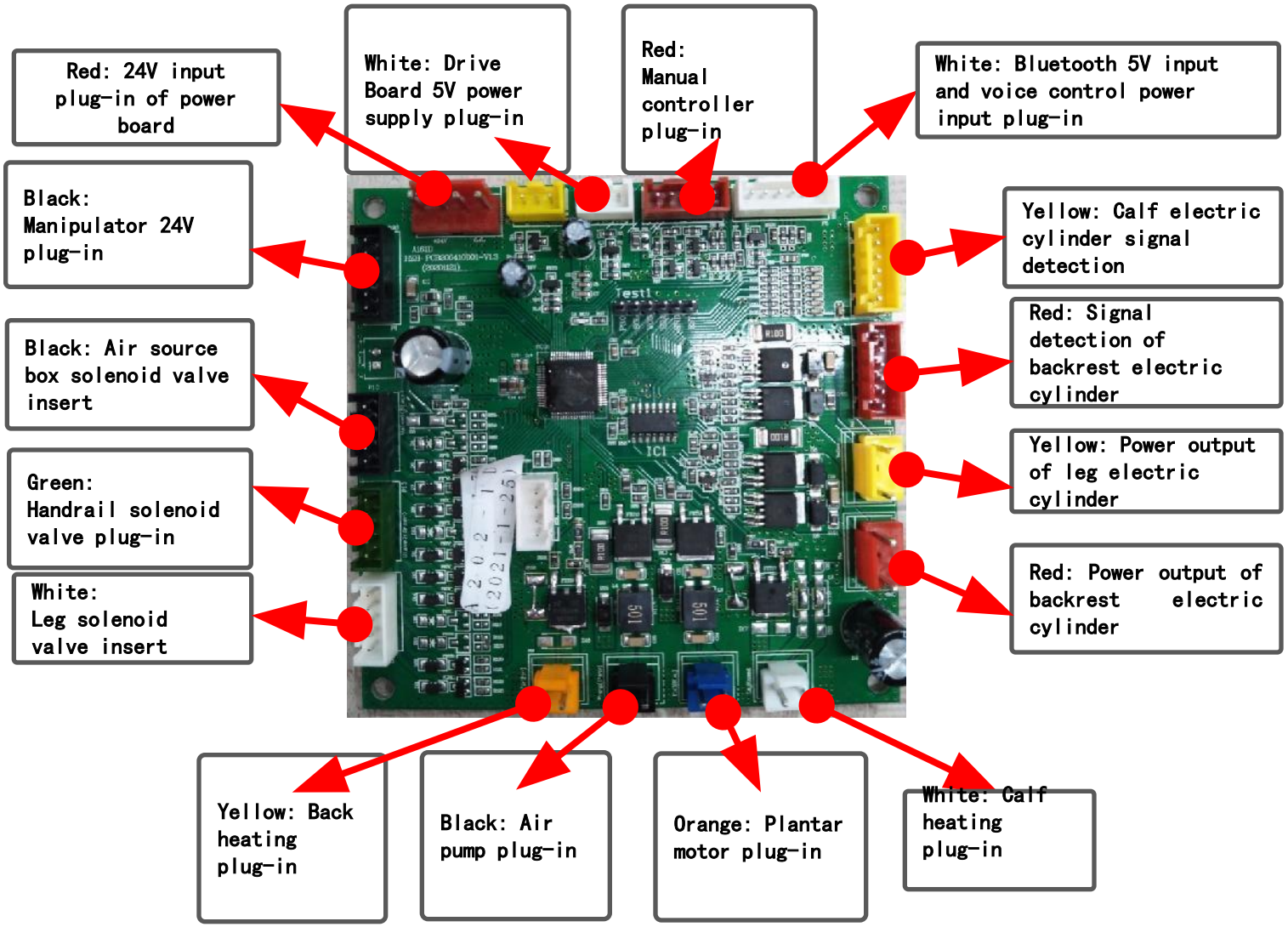
IV. Introduction of product structure

4.4. Schematic diagram of internal structure



IV. Introduction of product structure

4.5. Schematic diagram of PCB plug-in distribution



IV. Introduction of product structure

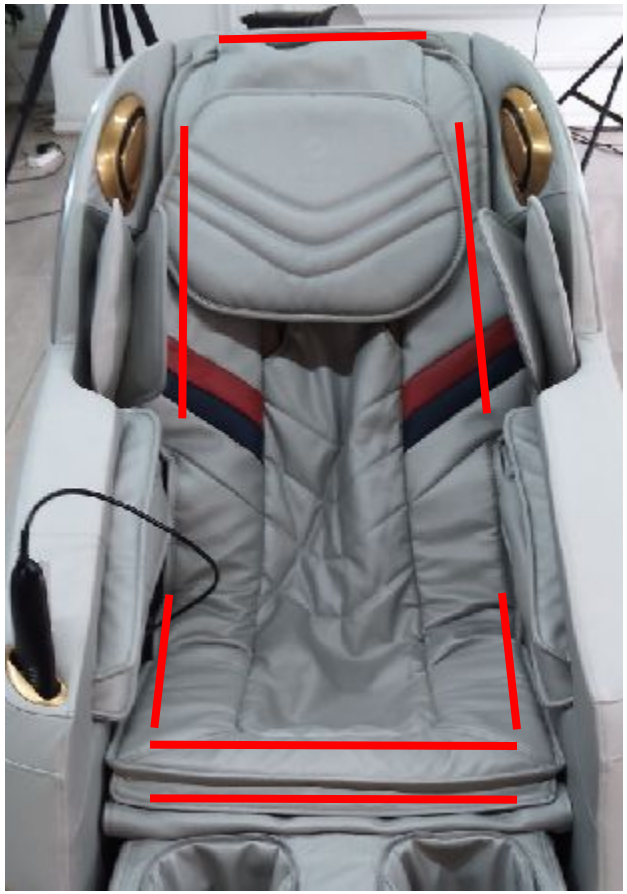
4.6. Schematic diagram of power board plug-in distribution

V. Product Disassembly and Assembly (Cushion Assembly)

5.1. Disassembly Schematic Diagram of Cushion Assembly

1. Remove the chain at the position of 7 red lines on the inner side of the cushion edge in Figure A on the right

2. Lift the cushion and remove the heating wire interface in Figure B on the right to remove the cushion assembly

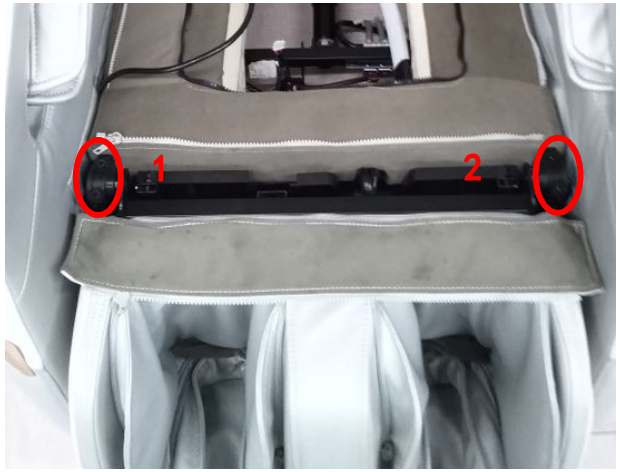


A

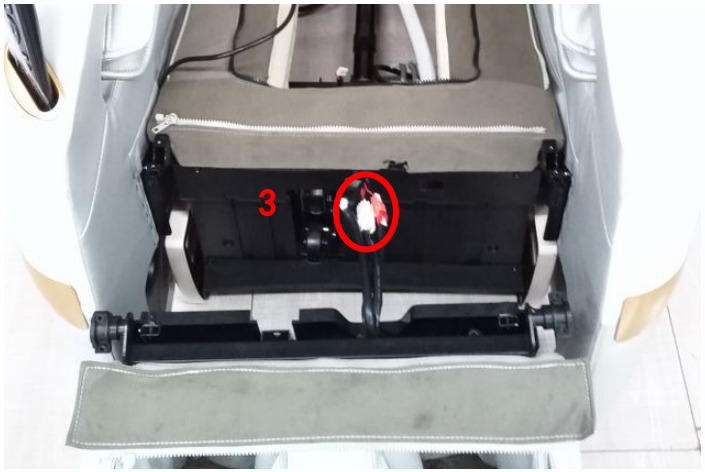
B

V. Product disassembly and assembly (calf)

5.2. Schematic diagram of calf disassembly



A



B

C

A. Remove the mounting seat screws 1 ~ 2 in Figure A

B. Separate the air hose from the plug-in in Figure B3

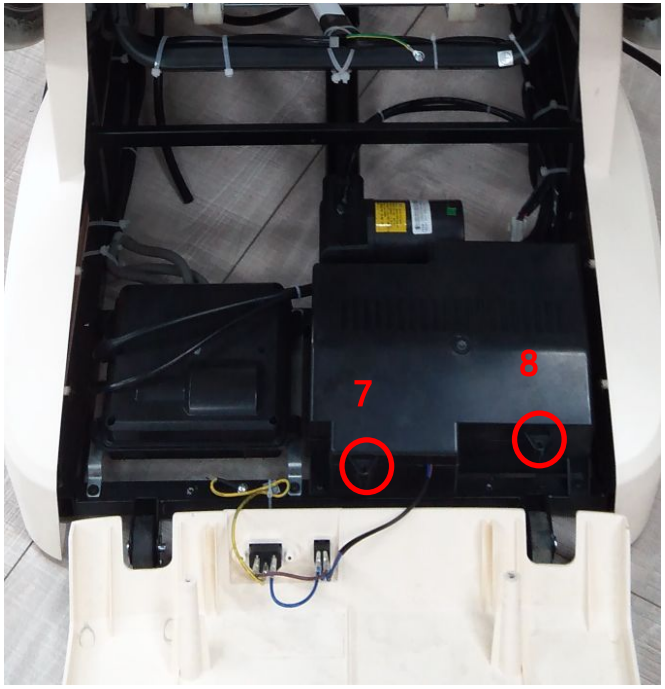
C. Remove the lower leg assembly

V. Product disassembly and assembly (backrest cover and PCB box cover)

5.3. Schematic diagram for disassembly of backrest cover and PCB box cover

A

A. Remove the screws in Figure A1 ~ 4 to remove the rear cover



B

B, remove the screws in Figure A5 ~ 6
Remove the back cover of the seat frame

C

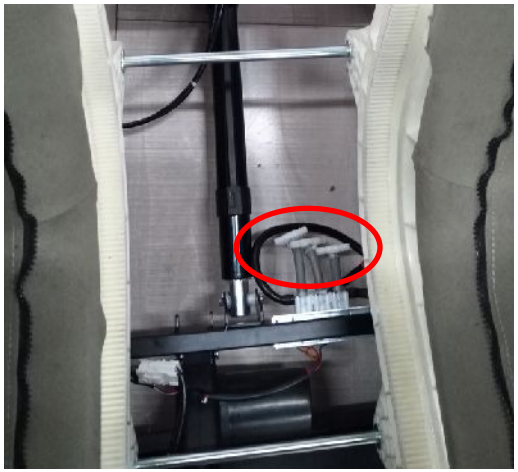
C, remove the screws in Figure B7 ~ 8 and remove the drive box cover as shown in Figure C

V. Product Disassembly and Assembly (Space Capsule)

5.4. Schematic diagram of capsule disassembly

A

A, put the figure A
Plug-in removed



B

B, place at Figure B
Removal of air hose

C

C, circle the figure C
Remove left and right screws

D

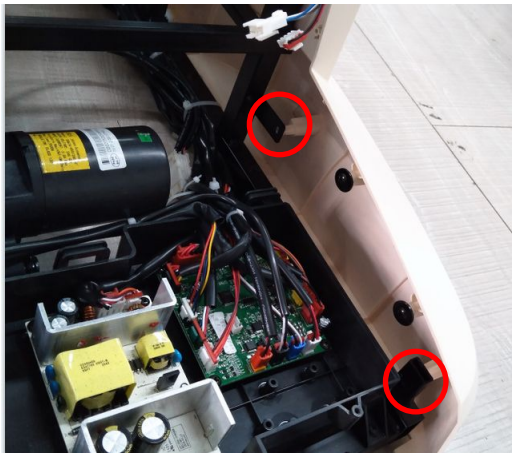
D. Remove the capsule hook back and take it down

V. Product Disassembly and Assembly (Side Cover)

5.5. Schematic diagram of side cover disassembly

A

A. Put the front end of the seat frame in Figure A Remove the inner two screws



B

B, put the rear end of the seat frame in Figure B Remove the inner two screws

C

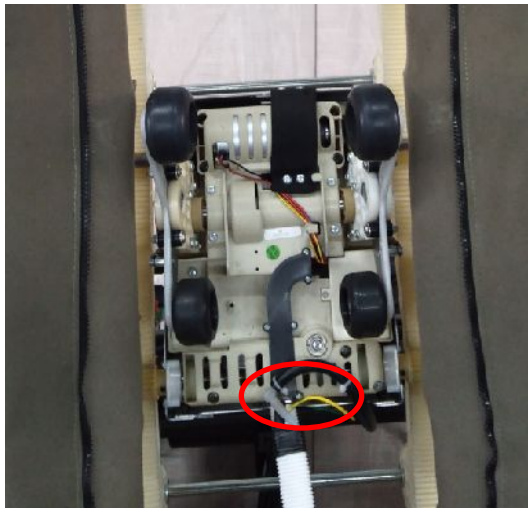
C. Remove the two screws on the outer side of the seat frame in Figure C and remove the side cover

V. Product Disassembly and Assembly (Manipulator)

5.6. Schematic diagram of manipulator disassembly

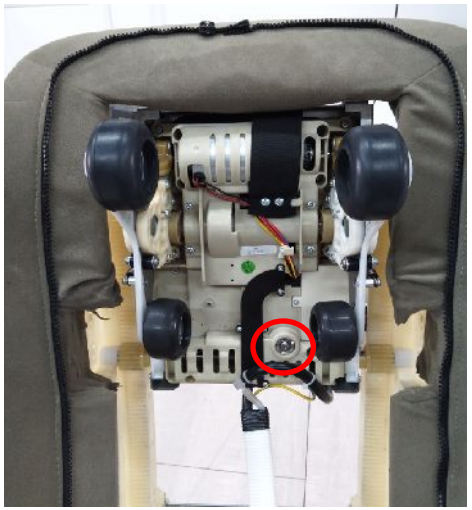
A

A. Put Figure A against the front end of the frame Remove the inner two fixing blocks



B

B, the manipulator in Figure B Separation of wire harness and air hose



C

C, as shown in Figure C, rotate the moving motor with a straight screwdriver to make the manipulator to the fixing block place, then take out it

V. Product Disassembly and Assembly (Decorative Strip)

5.7. Schematic diagram of armrest decoration disassembly

A

A, as shown in Figure A, slightly tilt the inner side of the decorative strip with a straight screwdriver

B

B. Remove 3 pieces as shown in Figure B
Take off the trim strip of the car buckle

C

C, as shown in Figure C, slightly tilt the inner side of the remote case with a one-character screw knife

D

D. Remove the remote case as shown in Figure D. Pay attention to whether the buckle is broken. If it is broken, it needs to be replaced

V. Product Disassembly and Assembly (Horn Cover)

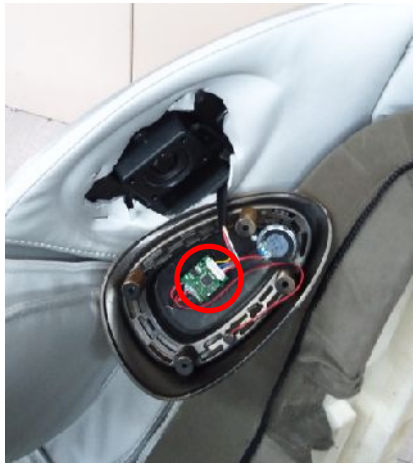
5.8. Schematic diagram of horn cover disassembly

A

A, as shown in Figure A, slightly tilt the inner side of the decorative strip with a straight screwdriver

B

B. Remove 4 pieces as shown in Figure B Screw off trim strip



C

C, as shown in Figure C, remove the horn cover you will find a sound control board on the rightside

V. Product Disassembly and Assembly (Upper Arm Air Bag)

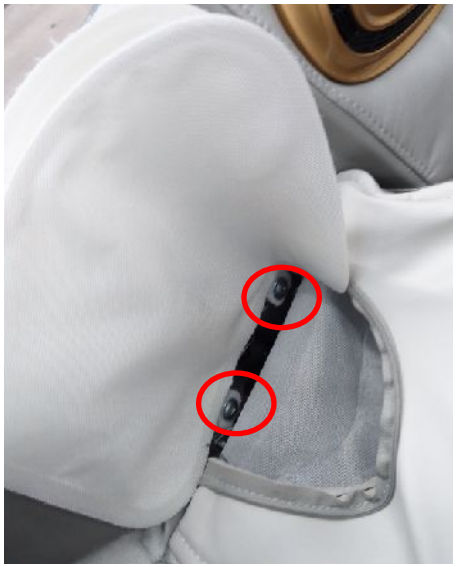
5.9. Schematic diagram of shoulder airbag disassembly

A

A. Unzip Figure A

B

B, take out the air hose in Figure B



C

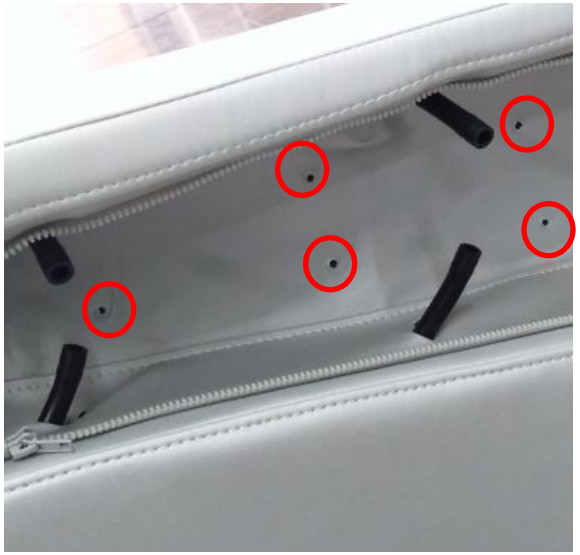
C, remove the screws in Figure C and take out the air bag

V. Product Disassembly and Assembly (Arm Airbag)

5.10. Side Cover Assembly Disassembly Schematic Diagram

A

A. Unzip Figure A



B

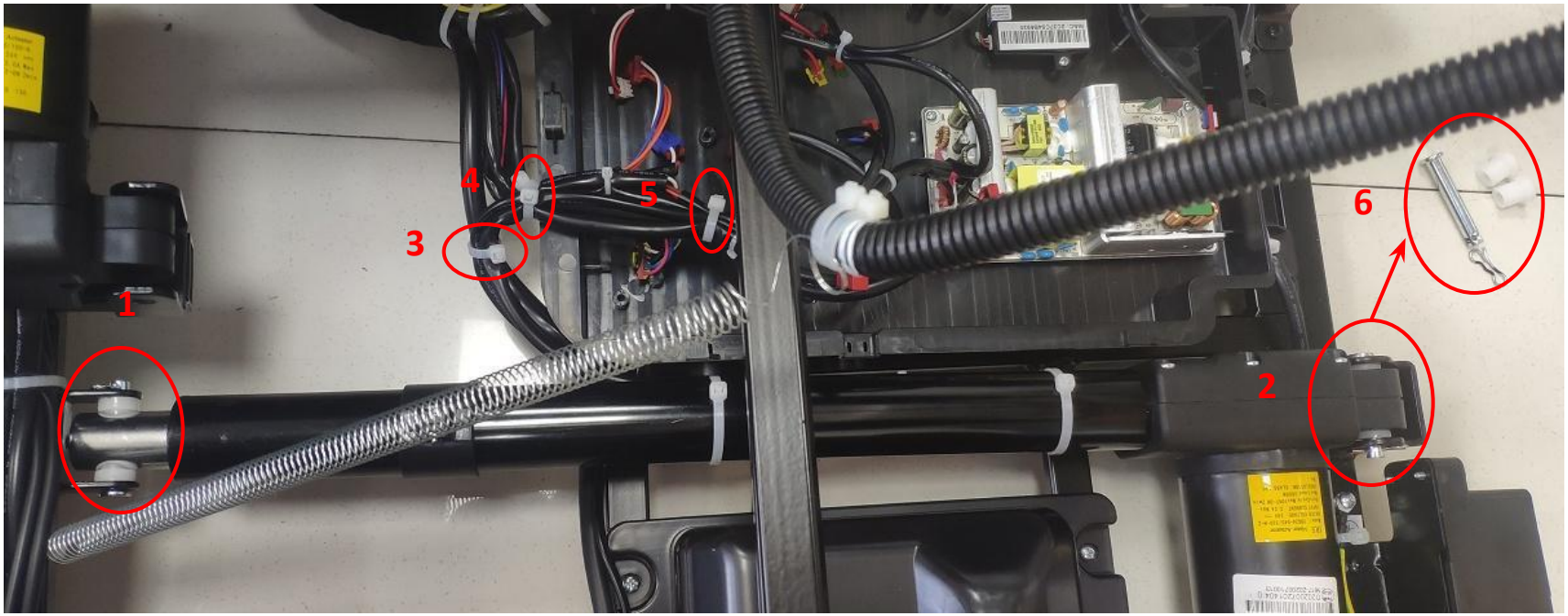
B, take out the 4 air hose in Figure B and the 5 screws inside the holster

C

C, as shown in Figure C, remove the holster and airbag

V. Product Disassembly and Assembly (Backrest Electric Cylinder)

5.11. Schematic diagram of disassembly of backrest electric cylinder

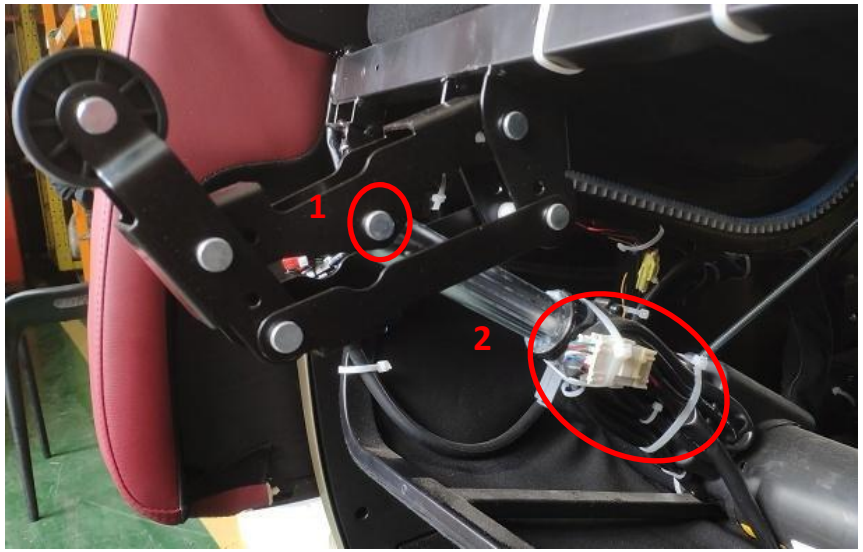


1. Remove the tie at the positions 3 ,4, 5 in the above figure, and take out the two red plugs of the electric cylinder

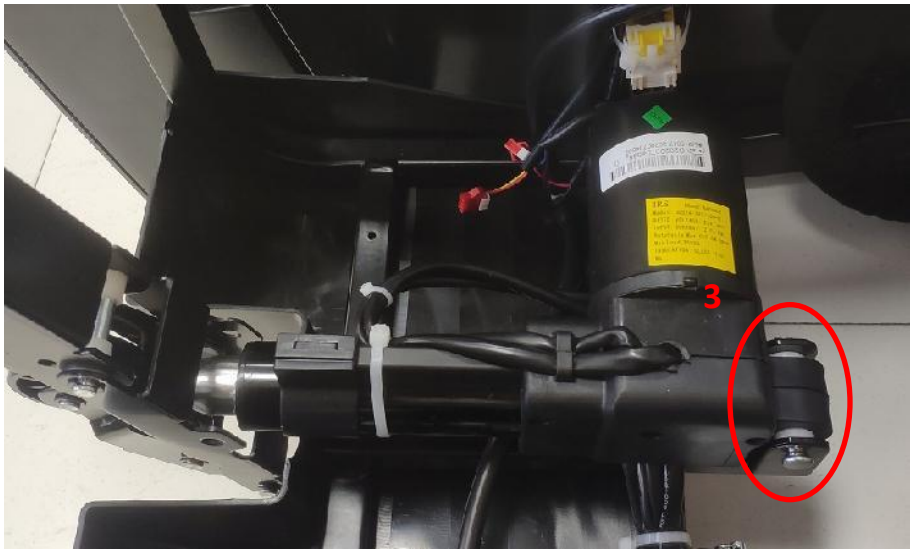
2. Remove the R-shaped bolt and pin shaft at positions 1 and 2 as the above figure, 6 for your reference, and then take out the electric cylinder

V. Product Disassembly and Assembly (Calf Electric Cylinder)

5.12. Schematic diagram of disassembly of backrest electric cylinder



A



B

1. Remove the snap ring and pin at position 1 when you extending the lower leg as Figure A, remove the tie at position 2, and pull out the plug of the electric cylinder

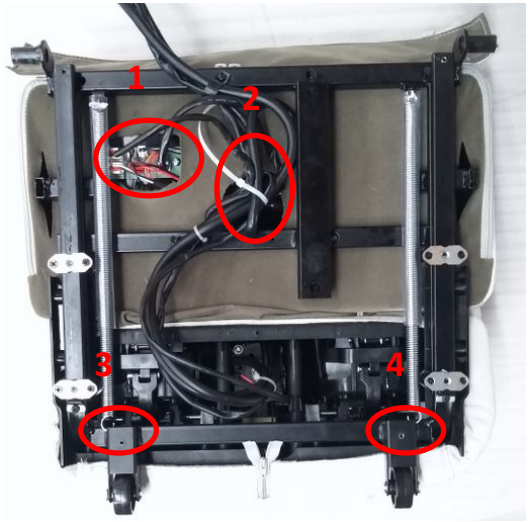
2. Remove the R-shaped bolt and pin shaft at the position in Figure B3 and take out the electric cylinder

V. Product disassembly and assembly (upper and lower legs)

5.13. Schematic diagram of disassembly and assembly of upper and lower legs

A

A. Remove the 4 screws as Figure A



B

B, Separate the plug and air hose in place 1 and 2 , take out the spring in place 3 and 4

C

C, take off the zipper in Figure C and separate the lower leg

V. Product Disassembly and Assembly (foot motor)

5.14. Schematic diagram of disassembly and assembly of calf roller

A

A. Remove the 4 screws in Figure A

B

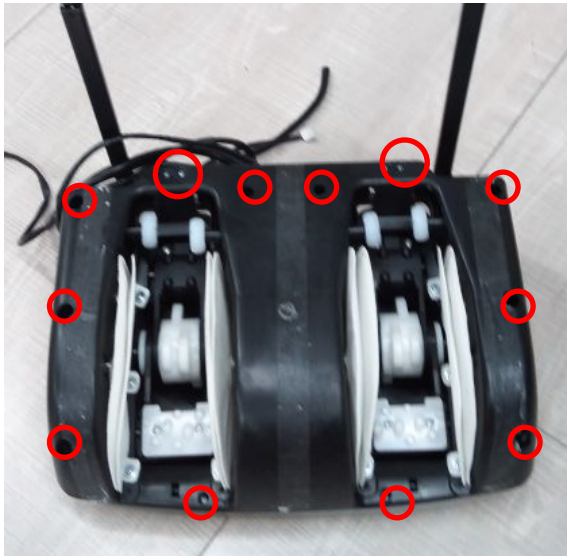
B. Remove the 4 screws in the foot pad in Figure B

C

C, unzip the zip of Figure C and dismantles Martin, then remove the leather cover

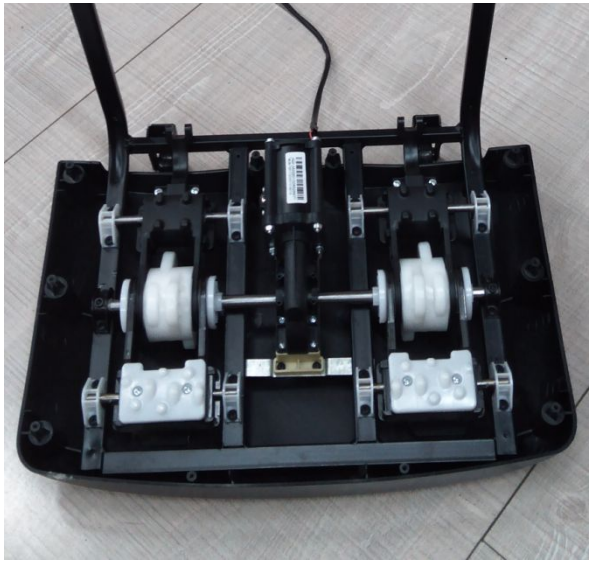
V. Product Disassembly and Assembly (foot motor)

5.15. Schematic diagram of foot motor disassembly



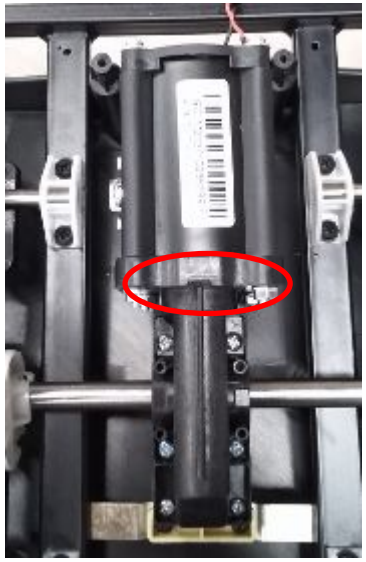
A

A. Remove the 12 screws in Figure A



B

B. Separate the upper cover and the base as shown in Figure B



C

C, remove the screws circled in Figure C and take out the motor

VI. Product error code

6.1. Error code (press the calf down + stand button at the same time, then press the zero gravity button to enter, power off and exit.)

Display	Malfunction	Possible causes	Troubleshooting
C1 - C5	Kneading motor	1. The damage of MOS tube of kneading motor cannot be controlled 2. The mian PCB is broken, circle number cannot be detected, and the motor is overcurrent 3. The connecting wire of the manipulator is disconnected, or the plug-in is loose	Check whether the relevant accessories and wiring harness are in good condition, and reorganize and replace them
F1 - F6	Traveling motor	1. The damage of MOS tube of Traveling motor cannot be controlled 2. The mian PCB is broken, circle number cannot be detected, and the motor is overcurrent 3. The connecting wire of the manipulator is disconnected, or the plug-in is loose	Check whether the relevant accessories and wiring harness are in good condition, and reorganize and replace them
E1 - E3	Tapping motor	1. The damage of MOS tube of tapping motor cannot be controlled 2. The mian PCB is broken, circle number cannot be detected, and the motor is overcurrent 3. The connecting wire of the manipulator is disconnected, or the plug-in is loose	Check whether the relevant accessories and wiring harness are in good condition, and reorganize and replace them
E4 - E9	calf electric cylinder	1. Overload or other reasons make the running speed of the calf electric cylinder very slow 2. The mian PCB is broken, plug-in looseness and motor overcurrent	Check whether the relevant accessories and wiring harness are in good condition, and reorganize and replace them
EA -EF	Backrest electric cylinder	1. Overload or other reasons make the running speed of the backrest electric cylinder very slow 2. The mian PCB is broken, plug-in looseness and motor overcurrent	Check whether the relevant accessories and wiring harness are in good condition, and reorganize and replace them

VI. Product error code

6.2. Error code (LC mode entry method: key combination: press the lower leg down + backrest up + lying down key at the same time)

Display	Malfunction	Possible cause	Troubleshooting
F7	power board 24V power supply	1. The insurance burns out and the power supply is loose 2. Poor switching power supply	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
F8	manipulator 24V power supply	1. Poor switching power supply 2. Main PCB failure 3. The plug-in is loose	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
F9	Manipulator communication failure	1. Drive board failure 2. The plug-in is loose and the connecting harness is open 3. Detect line faults	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
FA - FC	Back heating	1. Drive board failure 2. The plug-in is loose and the connecting harness is open	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
FD-FF	Roller motor	1. The damage of MOS tube of roller motor cannot be controlled. 2. Motor failure. 3. Motor drive circuit problem 4. Overload or other reasons make the motor unable to work normally.	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them

VI. Product fault code

6.2. Error code (LC mode entry method: key combination: press the lower leg down + backrest up + lying down key at the same time)

Display	Malfunction	Possible cause	Troubleshooting
C6	Damage of MOS tube of air pump can not be controlled	1. The plug-in is loose 2. Drive board failure 3. Open connection harness	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
C7	Air pump not running, not connected	1. The plug-in is loose 2. Drive board failure 3. Open connection harness	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
C8	Stroke and overflow of air pump	1. The plug-in is loose 2. Drive board failure 3. Open circuit of connecting wiring harness and overcurrent open circuit	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
C9	Damage of leg heating MOS tube can not be controlled	1. The plug-in is loose 2. Drive board failure 3. Open circuit of connecting wiring harness and overcurrent open circuit	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them
CA/CB	Leg heating is not running, not connected, or thermally protected	1. The plug-in is loose 2. Drive board failure 3. Open circuit of connecting wiring harness and overcurrent open circuit	Check whether the relevant circuits, wiring harnesses and plug-ins are in good condition, and reorganize or replace them

1. The whole machine does not work

2. Kneading doesn't work

3. Tapping doesn't work

4. The manipulator does not walk up and down

5. The sole roller does not work

6. The backrest electric cylinder does not work

7. The calf electric cylinder does not work

8. Backrest heating does not work

9. A certain group of airbags does not work

10. Bluetooth MP3 does not work

11. Intelligent voice control does not work

Ⅶ, product fault diagnosis

7.1. The whole machine does not work

Figure 1

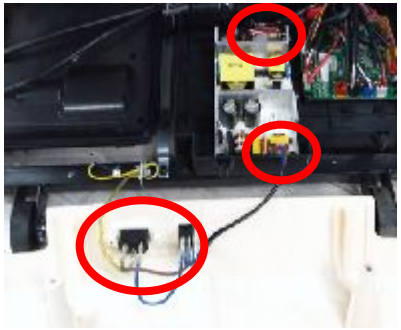


Figure 2

Figure 3

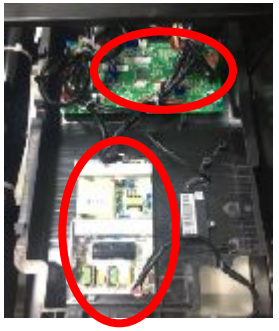


Figure 4

Fault judgment and maintenance:

A. First of all, eliminate external factors, such as the power cord and power socket do not supply power, and the power switch of massage chair is closed. (Figure 1)

B, the power switch box assembly or the power switch plug-in is loose and falls off, the wiring harness is reorganized, replace the power board (Fig. 2 and Fig. 4)

C. If power supply in normal condition, the remote controller is damaged and the chair cannot be turned on. Replace a new remote to try, or use shortcut key on the armrest to turn on the chair, if the chair can work normal, we can prove the remote is broken, or the wire harness is damaged. (Figure 3)

D, check whether the switching power supply has 24V voltage and 5V voltage to be transmitted to the driving board, if there is no voltage output, replace the power board , or else, replace the driving board.

The main reasons that affect the whole machine not working are: external power supply, switching power supply, manual controller and driving board

Ⅶ, product fault diagnosis

7.2. The kneading motor does not work

Figure 1

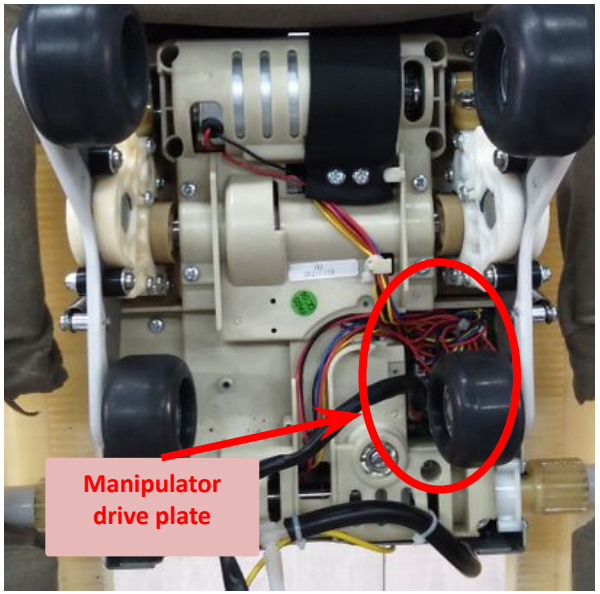


Figure 2

Fault judgment and maintenance:

A. First, check whether the wiring harness of the manipulator drive board poor contacted or plug-in falls off (Fig. 1 and Fig. 2)

B. To judge whether the motor is damaged, you can use the power supply of the motor to judge whether the motor is good or damaged (Figure 2)

C, check whether the width detection board is damaged

Ⅶ, product fault diagnosis

7.3. The tapping motor does not work

Figure 1

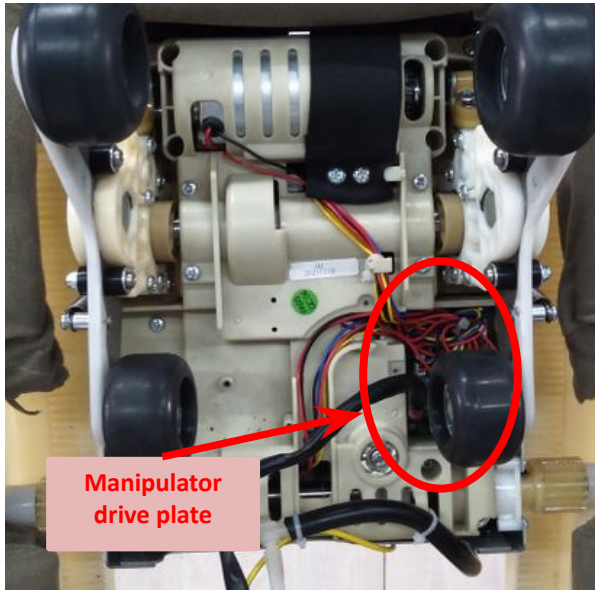


Figure 2

Fault judgment and maintenance:

A. First, check whether the wiring harness of the manipulator drive board poor contacted or plug-in falls off (Fig. 1 and Fig. 2)

B. To judge whether the motor is damaged, you can use the power supply of kneading motor to judge whether the motor is good or bad (Figure 2)

C, check whether the width detection board is damaged

Ⅶ, product fault diagnosis

7.4. The manipulator cannot walk up and down

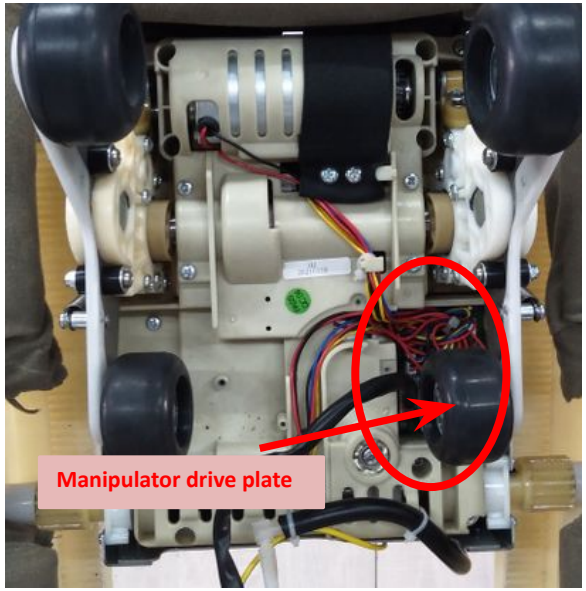


Figure 1

Figure 2

Figure 3

Fault judgment and maintenance:

A. First, check whether the wiring harness of the manipulator drive board has poor contact or plug-in falls off (Figure 1)

B. To judge whether the motor is damaged, you can use the power supply of the motor to judge whether the motor is good or bad (Figure 1)

C. Check whether the stroke circle detection board is damaged (Figure 1)

D. Judge whether the upper and lower stroke detection plate is damaged (Figure 2)

E. Is the broken drive plate damaged (Figure 3)

Ⅶ, product fault diagnosis

7.5. The sole roller does not work

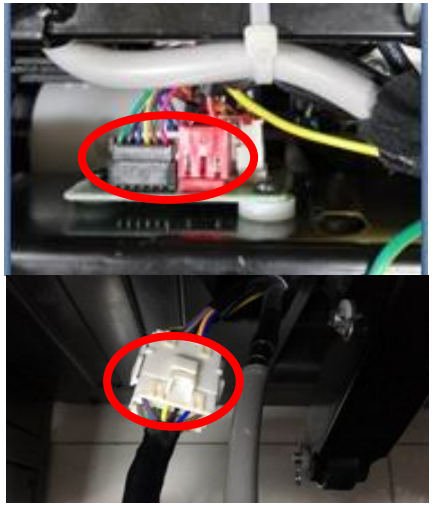


Figure 1

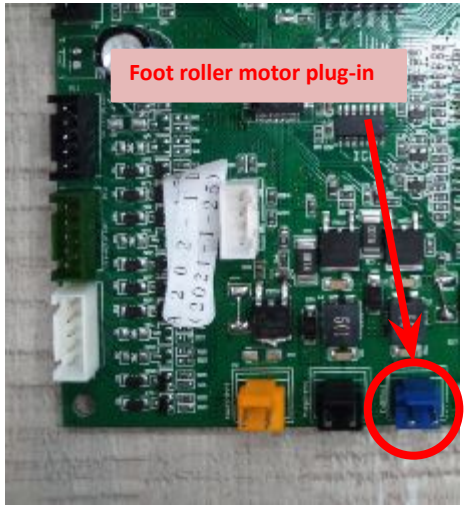


Figure 2

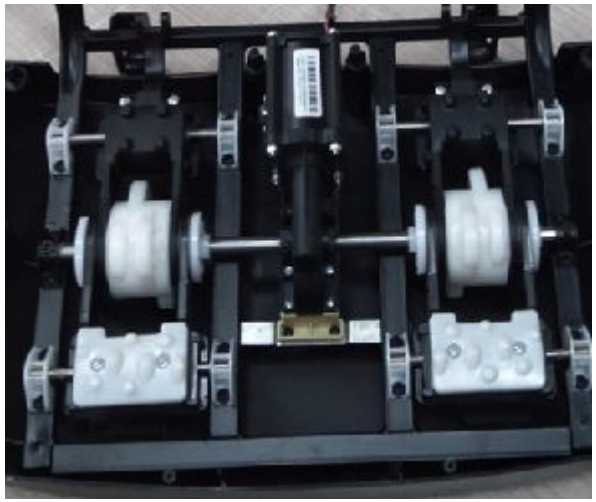


Figure 3

Fault judgment and maintenance:

A. Check whether the connecting wiring harness between the lower leg and the host is in poor contact and whether there is DC24V output (under Figure 1)

B, if there is no voltage output, check whether the plug-in on the drive board is loose and whether there is voltage output, no

Consider replacing the drive plate (Figure 2)

C, the above is normal, and then check whether the plug-in on the calf adapter plate is abnormal (Figure 1)

D. The above is normal. If the wiring harness is all right, consider replacing the sole roller motor (Figure 3)

Ⅶ, product fault diagnosis

7.6. The backrest electric cylinder does not work

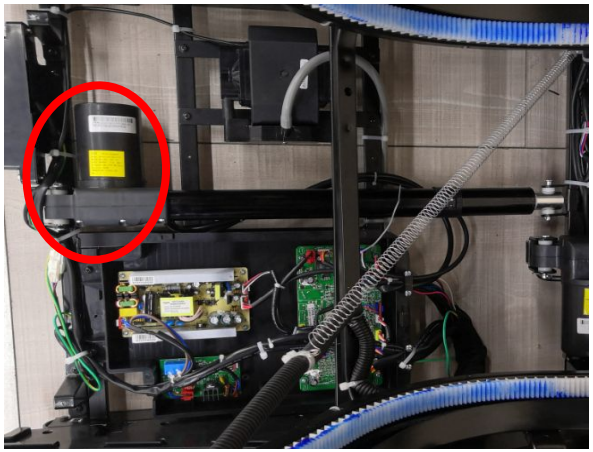


Figure 1

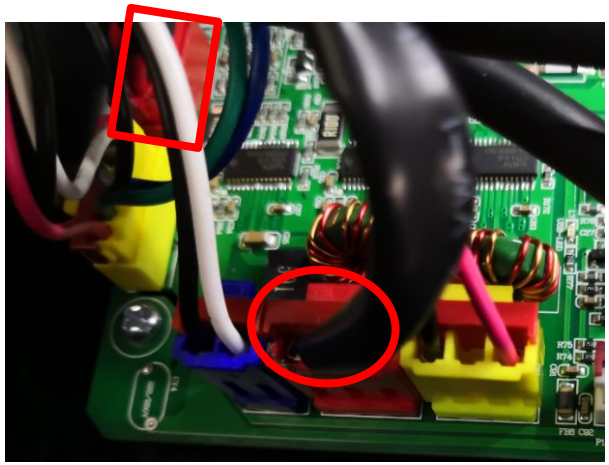


Figure 2

Fault judgment and maintenance:

A. First, press and hold the control button of the electric cylinder, listen to the buzzer sound "beep, beep,", and after loosening, send out two "drip" sounds to judge that the signal of the electric cylinder has not been detected, and the electric cylinder may be damaged or the drive plate may be damaged, so it can be replaced;

B. Replace the non-working electric cylinder plug-in with another working electric cylinder plug-in (note: from the motherboard end), but it still does not work after replacement, which proves that the electric cylinder has been damaged and needs to be replaced. After replacement, the electric cylinder can work, which proves that the motherboard has been damaged and needs to be replaced

The main reasons that affect the backrest electric cylinder not working: backrest electric cylinder, drive plate and wiring harness

Ⅶ, product fault diagnosis

7.7. The calf electric cylinder does not work

Figure 1

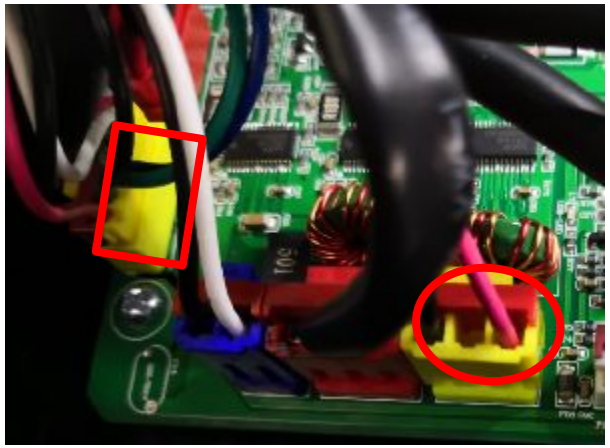


Figure 2

Fault judgment and maintenance:

A. First, press and hold the control button of the electric cylinder, listen to the buzzer sound "beep, beep,", and after loosening, send out two "drip" sounds to judge that the signal of the electric cylinder has not been detected, and the electric cylinder may be damaged or the drive plate may be damaged, so it can be replaced;

B, the electric cylinder plug-in that does not work and another electric cylinder plug-in that can work (note: from the motherboard end) are exchanged with each other. It still doesn't work after replacement, which proves that the electric cylinder has been damaged and needs to be replaced. After replacement, the electric cylinder can work, which proves that the motherboard has been damaged and needs to be replaced

Main reasons that affect the non-operation of leg electric cylinder: leg electric cylinder, drive plate and wiring harness

Ⅶ, product fault diagnosis

7.8. Back heating does not work

Figure 1

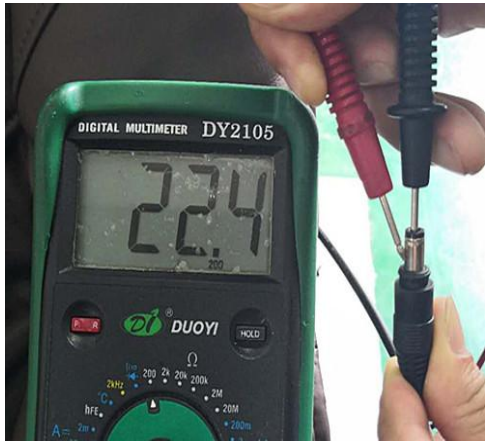


Figure 2

Figure 3

Figure 4

Fault judgment and maintenance:

A. Check whether the backrest heating wire plug-in poor contacted or falls off (Figure 1);

B, use a multimeter to measure whether there is AC24V voltage in the yellow plug-in of the driving board and the plug-in of the backrest cushion. If there is no damage to the driving board, replace the driving board; Figure 3

C, you can also use multimeter to measure the resistance of backrest heating wire as shown in Figure 2. There is a resistance driving line problem, and the backrest heating wire is replaced without resistance; Figure 4

The main reasons that affect the backrest heating are backrest heating wire, driving plate and wire harness

Ⅶ, product fault diagnosis

7.9. A certain set of air pressure does not work

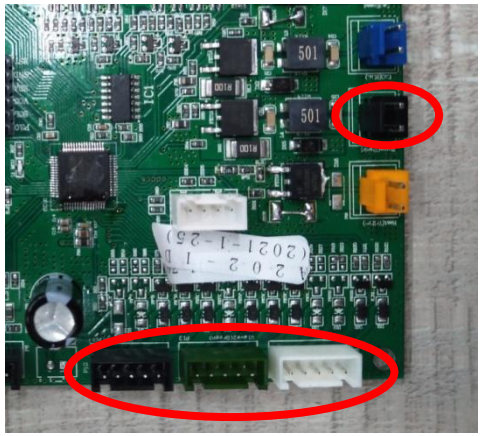


Figure 1

Figure 2

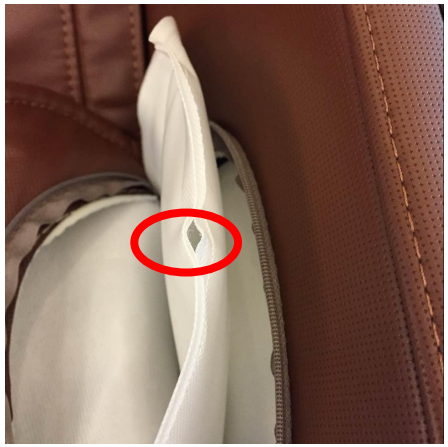


Figure 3

Fault judgment and maintenance:

A. Check whether the air bag is broken and whether the air hose is bent (Figure 2 and Figure 3); high probability!

B, the solenoid valve controlling the air pressure of the road is damaged (Figure 2); Low probability of damage

C. If the peripheral circuit for controlling the air pressure is abnormal, replace the driving board (Figure 1).

The main reasons that affect the airbag not working are: the airbag is damaged, the air hose is bent, and the solenoid valve

Ⅶ, product fault diagnosis

7.10, Bluetooth MP3 does not work

Figure 1

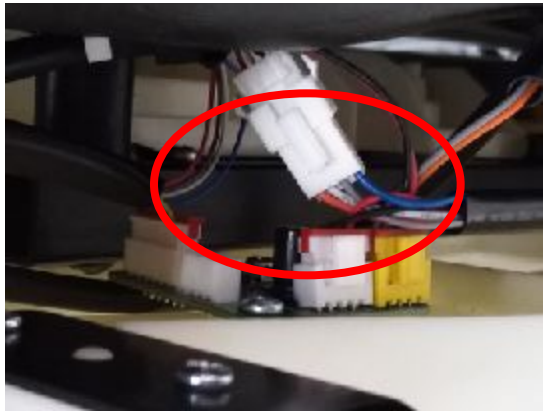


Figure 2

Figure 3

Fault judgment and maintenance:

A. (If the mobile phone is successfully paired with Bluetooth) Check that the wiring harness of the audio Bluetooth board is poor contacted or the Bluetooth MP3 board is poor.
It can be replaced; (Figure 1)

B, checking whether the connection line between the audio Bluetooth board and the speaker is in poor contact; (Figure 2)

C, if the oneside horn does not work, check the wiring harness and replace the horn; (Figure 3)

The main reasons that affect the non-operation of Bluetooth MP3 board are Bluetooth board, wiring harness and driving board

Ⅶ, product fault diagnosis

7.11. Intelligent voice control does not work

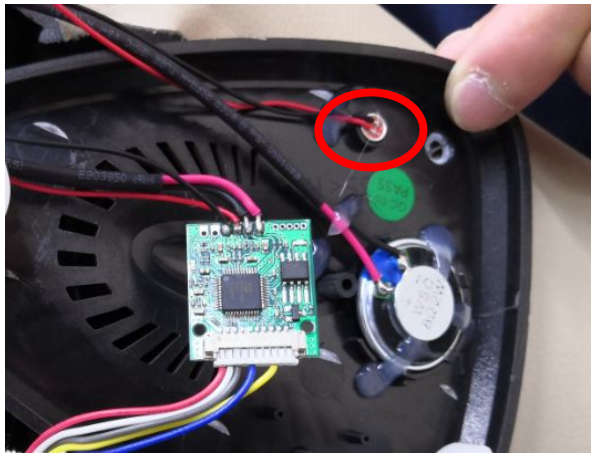


Figure 1

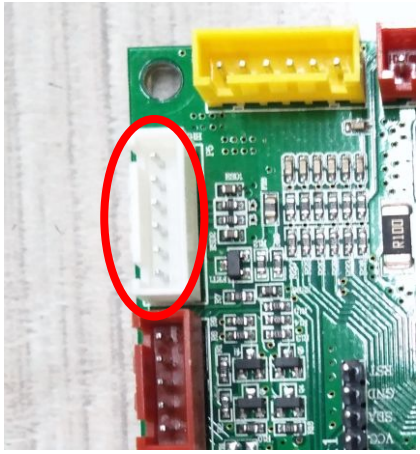


Figure 2

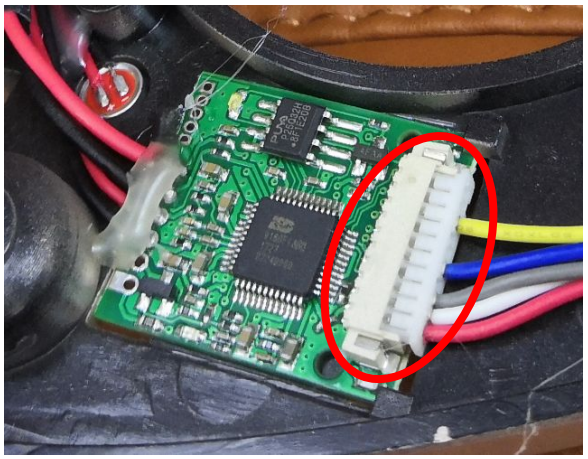


Figure 3

Fault judgment and maintenance:

A. Turn on the massage chair function through the voice commands, and listen to whether the voice has a response. Figure 1;

B, voice control does not work, the receiving microphone wiring harness and signal is poor, or the drive board and intelligent voice control board are damaged Figure 2 and Figure 3.