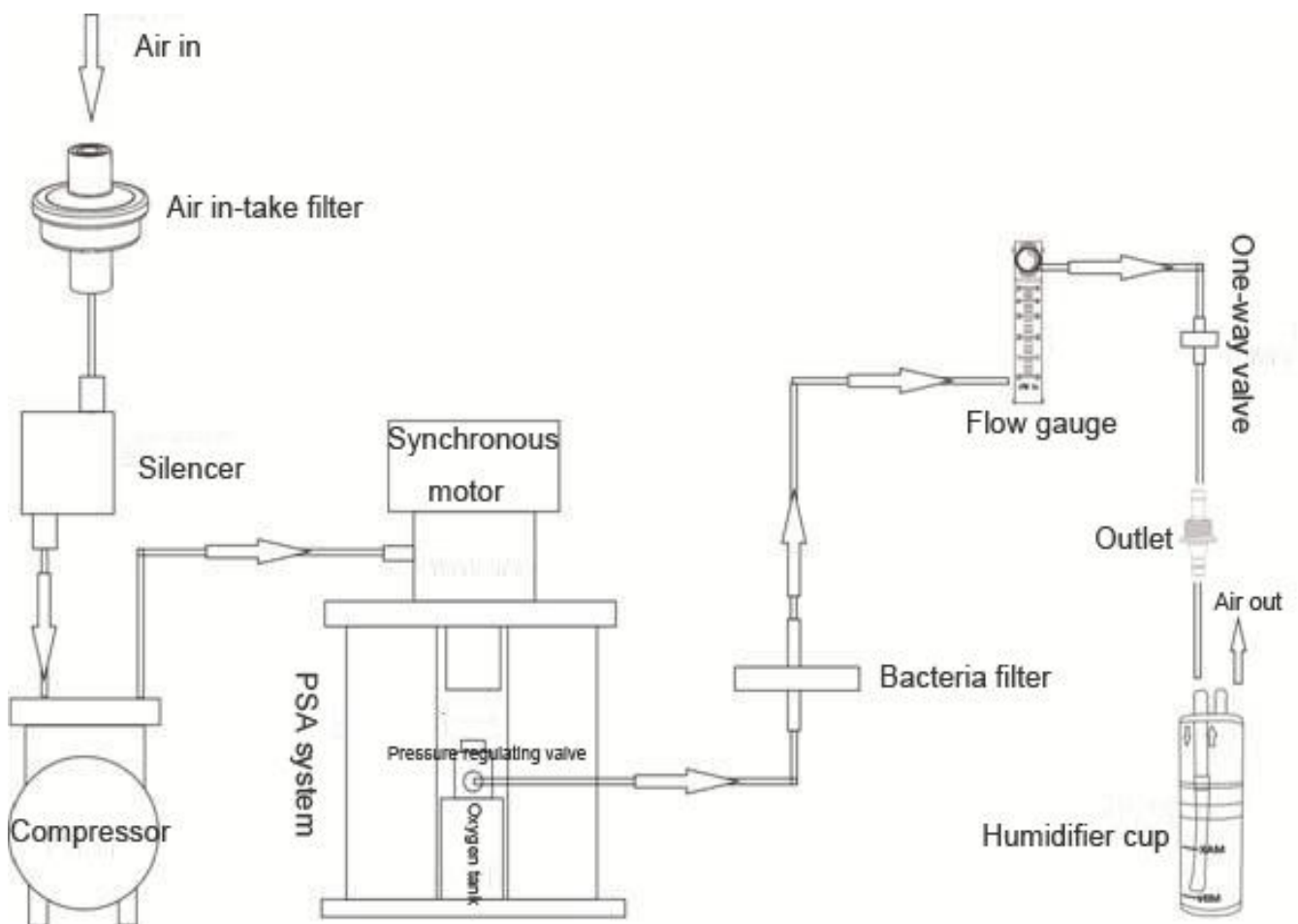
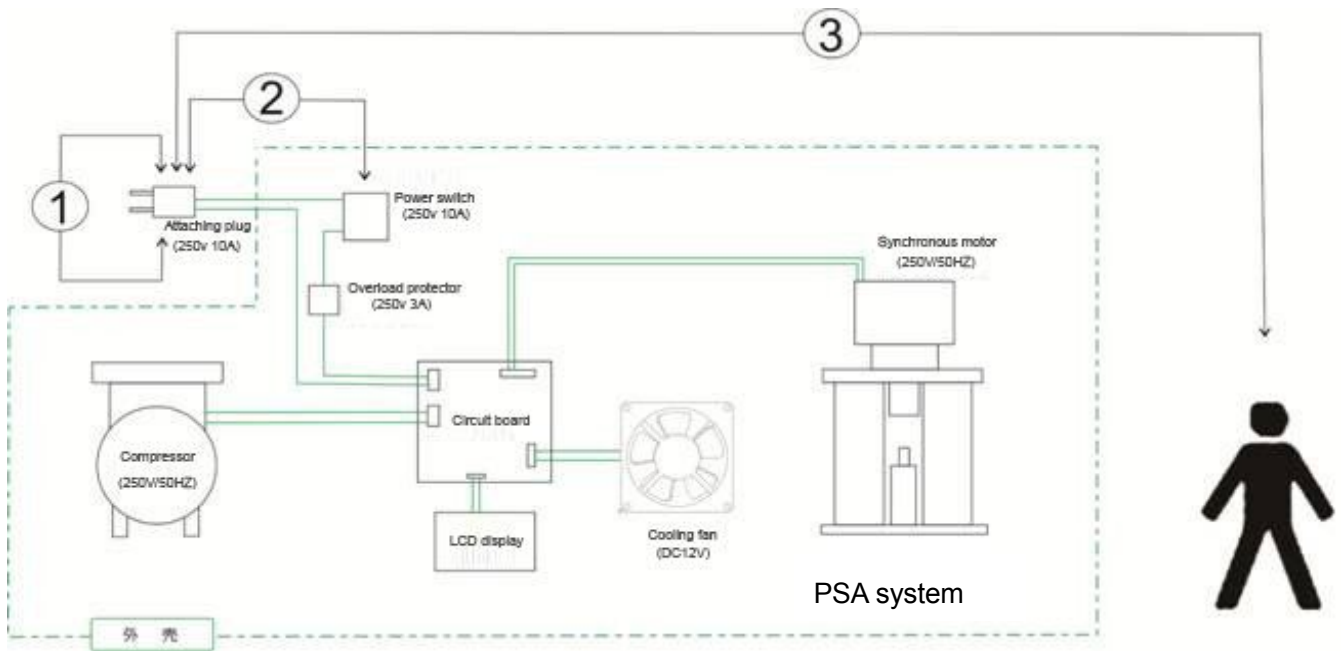


## LG101 Oxygen Concentrator Service Manual

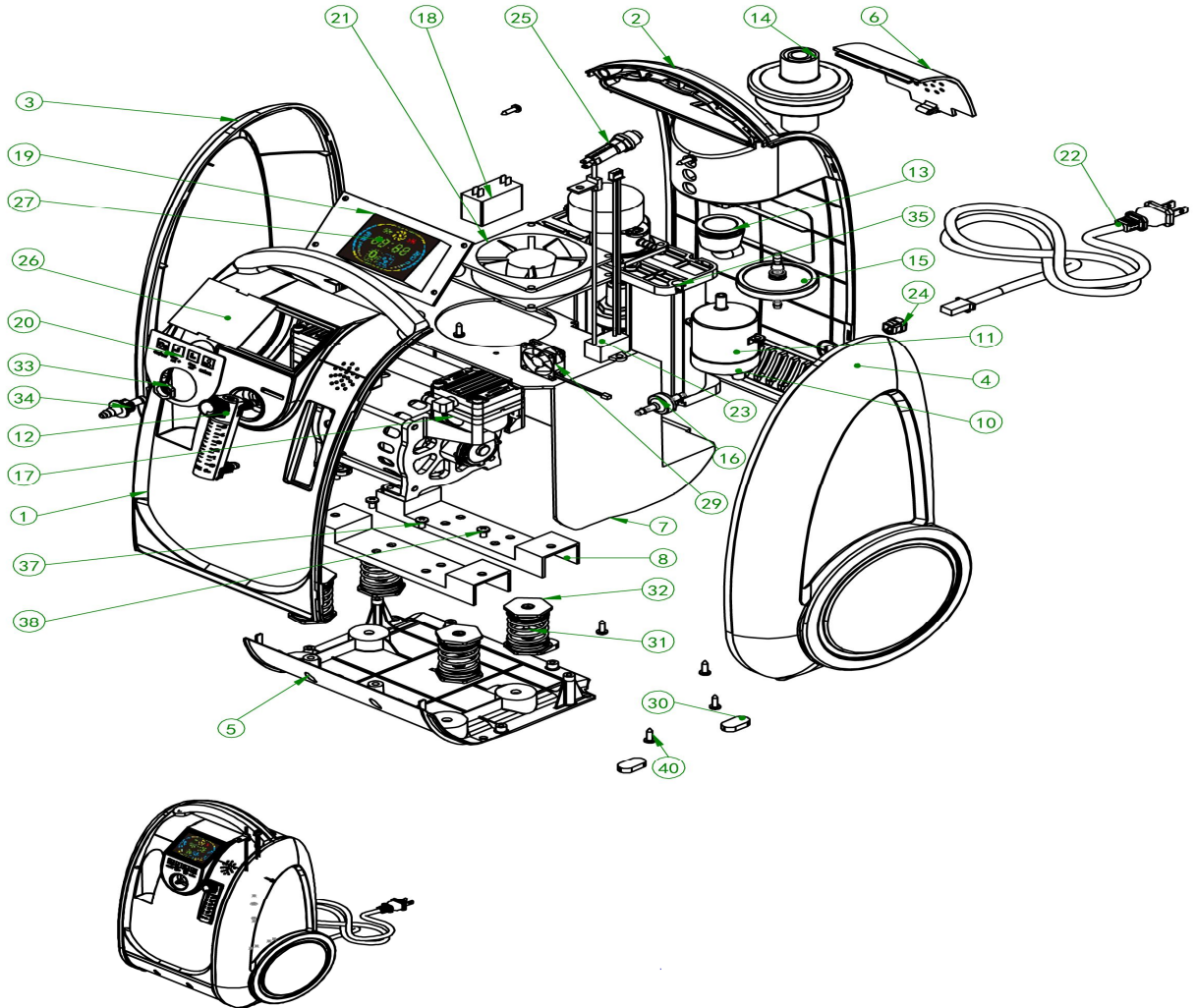
### Working Principle



## The Electric Circuit Diagram



## Structure Chart



- 1 Front shell
- 2 Rear housing
- 3 left shell
- 4 right shell
- 5 pedestal
- 6 Inlet cover
- 7 inner support
- 8 Compressor Support
- 9 EVA foams
- 10 upper silencer
- 11 lower silencer



# GBA Oxy-Tech Co.,Ltd

[www.oxygencare.cn](http://www.oxygencare.cn)

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- 12 flow meter
  - 13 silica gel connector
  - 14 air intake filter
  - 15 bacteria filter
  - 16 check valve
  - 17 Compresspor
  - 18 capacitor
  - 19 PCB mainboard
  - 20 membrane switch
  - 21 aerofoil fan
  - 22 AC power cord
  - 23 Anion Generator
  - 24 tieline buckle
  - 25 overload protector
  - 26 The screen plate
  - 27 LED Screen
  - 29 Anion fan
  - 30 foot pad
  - 31 Spring suspension foot
  - 32 Suspension foot pedestal
  - 33 collar nut for outlet
  - 34 Chi joint
  - 35 oxygen generation system
  - 36 Round head cross milling tail self tapping screw
  - 37 Round head cross screws
  - 38 Flat head cross screws
  - 39 Round head cross self-tapping screws
  - 40 Large flat head cross self-tapping screws
  - 41 Round head cross screws



## Common trouble shooting

- a) Remove the shell
- b) The oxygen flow of nasal cannula is weak
- c) LCD display indicator light
- d) Noisy
- e) Compressor
- f) Cooling fan
- g) Circuit board
- h) PSA system

## Trouble found and repair

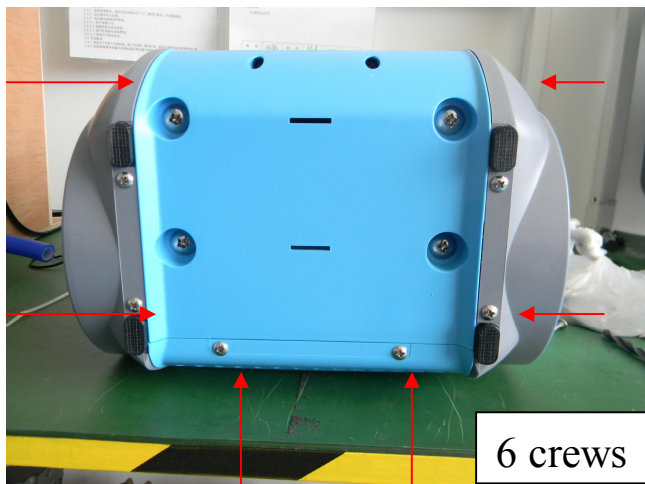
The following chart will help you analyze and fix the trouble of LG101.If the following suggestions can't help you fix the unit, please connect GBA oxy-tech.

**⚠ Warning** In case electric shock, only technician could move the shell.

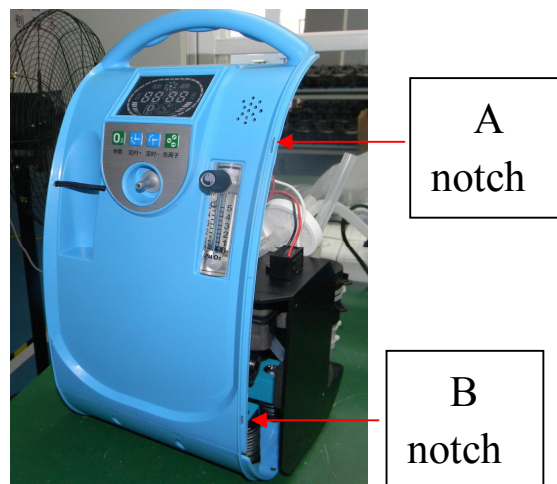
### a) Remove the shell

I Lay down the unit on the table, down the six screws at the bottom with screwdriver, 2 screws each side, 2 screws back cover. (P.S. P 1-1)

II Press the area nearby A and B with hand. (P.S. P 1-2) one by one until the side shell move out by itself, then take off two side shells. The side shells are buckled up by four notches.



P 1-1



P 1-2

III Twist off the 2 screws in handle (P.S. P 1-3) , take off the air-intake filter, take off silicone silencer joint, move the back shell. Please notice the electric cord.



P 1-3

## b) The oxygen flow of nasal cannula is weak

**oxygen flow of nasal cannula is weak, when you turn up the flow gauge and the floating ball could be on the top. Take off the humidifier cup, block off the oxygen outlet with hands, watch if the floating ball of flow gauge could back to bottom.**

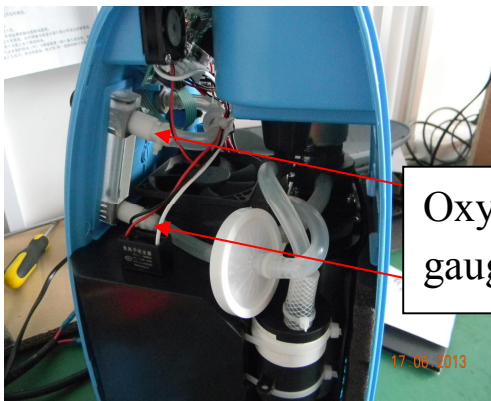
### I If the ball could, the points should be humidifier cup.

Re:

- a. Check the humidifier cup, tighten the cap of humidifier cup.
- b. Check the tubes of nasal cannula in case bending

### II Turn on the machine and turn up the flow gauge, the ball couldn't down to the bottom when you block off the oxygen outlet.

Re: the flow gauge leak. Change the flow gauge. (P.S. P 2-2) Disconnect the tube with the joint of flow gauge(P.S. P 2-1), then screw the joint anti-clockwise direction. Next take out the oxygen gauge and change new.



Oxygen gauge joints

P 2-1



Flow gauge

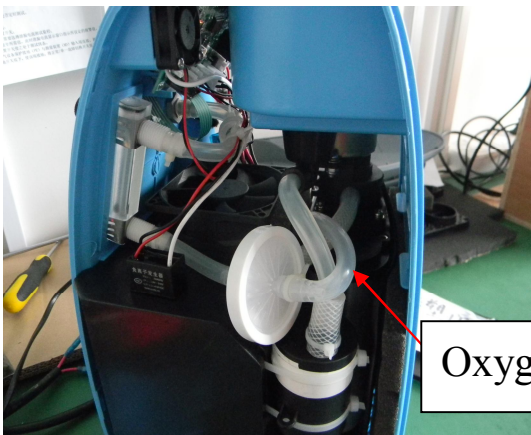
P 2-2

### III When you turn up the flow gauge to top, the ball between the scale 2 to 3

Re: block the outlet to see if the floating ball could be down to bottom.

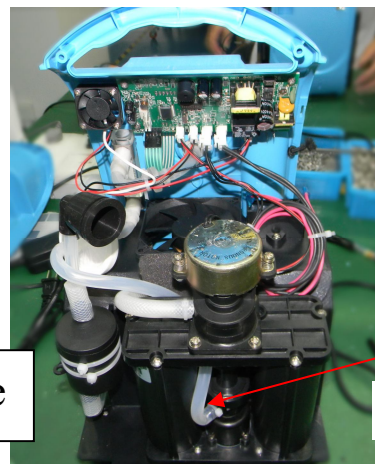
a. If it could, the points is that pipe of machine are blocked by bending. Move the shell to check the oxygen pipe inside of the machine. The following pictures show the easily-bending area(P.S. P 2-3, P 2-4). And smooth it in case bending

b. If it couldn't, the point is flow gauge. Change it



Oxygen pipe

P 2-3



Sway it

P 2-4

## c) LCD display indicator light

I turn on the machine, the unit doesn't work and LCD display doesn't on

Re: check the power strip first and then check the joint of electric cord power with the



circuit board. Check if it's connected closely.

## **II Turn on the machine, the unit work but the LCD display shows disordered**

Re: the program of circuit board error. Change the circuit board.

## **d) Noisy**

**Turn on the machine, the unit works. But it's big noisy, especially unnormal.**

Re:

a. Check if the four screws at the middle bottom of the machine are tightly. Screw down the four screws tightly.

b. Check if the leaf of the cooling fan is broken or the cooling fan crushed down. Change the fan and get the broken leaves out

## **e) Compressor**

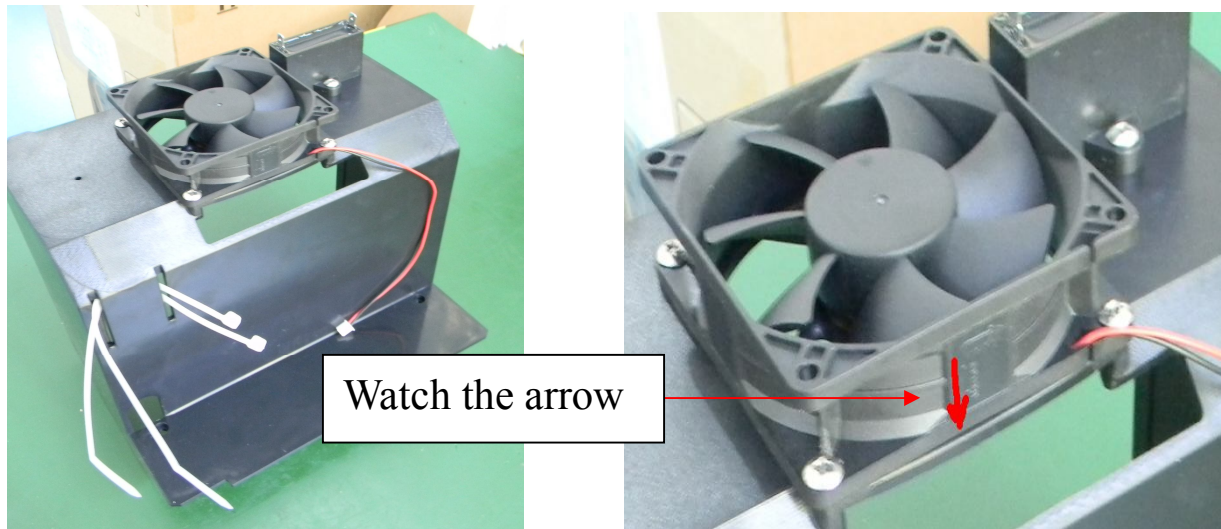
**Turn on the machine, the compressor screamy.**

Re: the compressor is aged. Change it

## **f) Cooling fan**

I The noise doesn't happen until the machine run 15 minutes at least

Re: Change the cooling fan. Install the fan with the arrow direction down as follow  
(P.S. P 6-1)



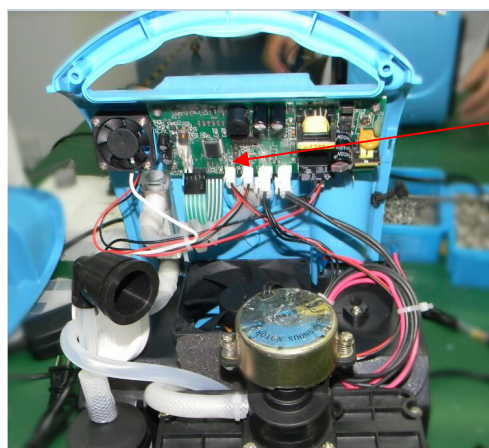
P 6-1

II The machine show over temperature alarm after run 2 hours continuously. And the cover of machine is very hot

Re: Check if there is something block the ventilation at the bottom of rear cover.  
Move the block.

III The over temperature alarm works when the machine run 20 minutes continuously at least.

Re: Check the electric joint of fan with circuit board. Change the fan if the it's closely.(P.S. P 6-2)



Joint of fan on  
circuit board

P 6-2

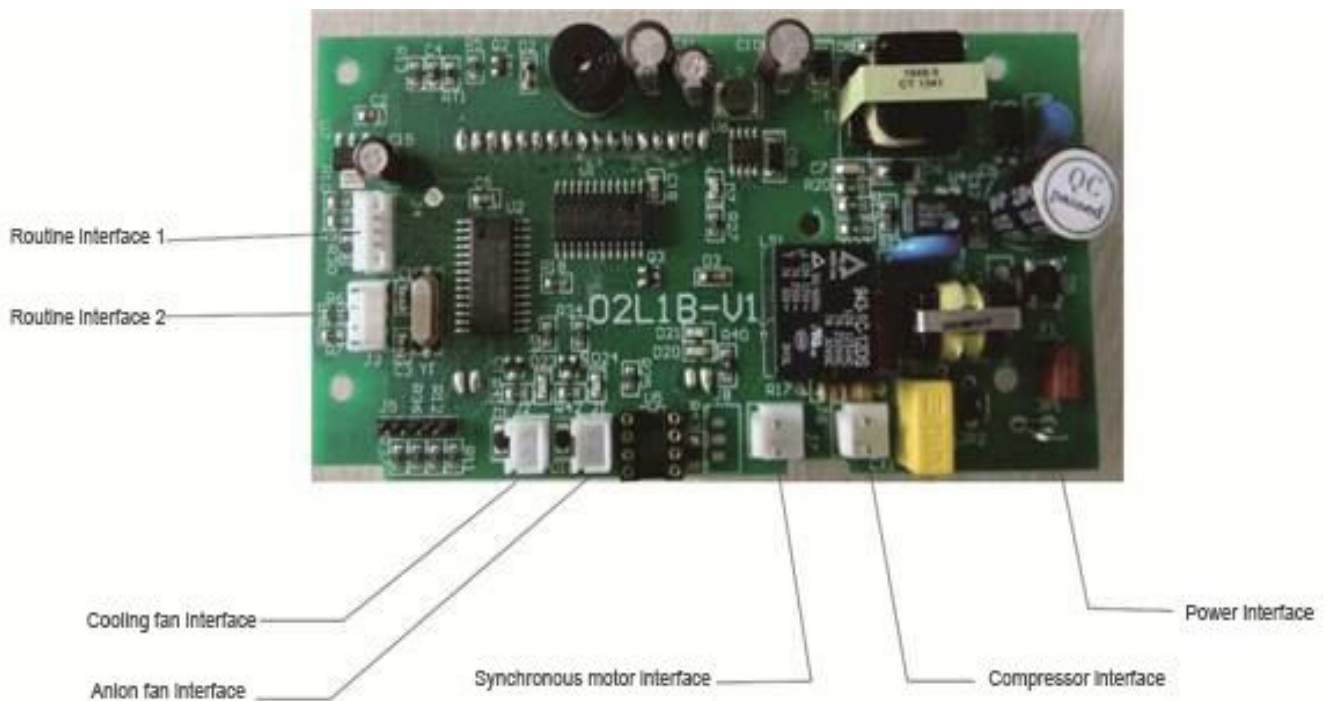
## g) Circuit board

I Turn on machine, the LCD display work normally, machine doesn't run.

Re: Check if the joints of circuit board with other parts are closely.

II Turn on machine, there is a burst of smoke out. Then the machine stop work.

Re: Move the shell, change the circuit board and connect the joints. (P.S. P 7-1 )



P 7-1

## h) PSA system

I The floating ball jump up and down drastic.

Re: Change the PSA system

II The oxygen purity can't be 90% at 1 liters oxygen flow.

Re: Change the PSA system