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
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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.

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.
b) The oxygen flow of nasal cannula is weak

The 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.
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

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. Srew down the four screws tightly.
  b. Check if the leaf of the cooling fan is broken or the cooling fan crushed down. Change the fun and get the broken leaves out

e) Compressor

Turn on the machine, the compressor screamry.
Re:  the compressor is aged. Change it

f) Cooling fan

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)
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)
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 ）

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