



**INVERTER  
PORTABLE AIR CONDITIONER  
MAINTENANCE GUIDANCE**

变频空调检修外观拆卸指引

**MODEL: GDC16RWA / GDC18RWA**  

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**GDC18RBA**

EDITION: A/0

DATE: OCT. 10, 2009

## Dimplex inverter portable air conditioner trouble shooting and maintenance Guidance.

problem	cause	maintenance tool	maintenance methods	important notes
一、上电无反应 No signaling- Electrical live parts	◆电源线插头与插座接触不良	万用表 十字螺丝刀 尖嘴钳	★更换接触良好的插座	※1.断电后半分钟以上,方可拆机检查。以免电击伤人和烧毁万用表。 ※2.维修人员需接上可靠的接地,以免静电损坏主板元件。 ※3.主板更换时,请先记录各配线配插位置,再实施拆卸,以免安装新板时配错线上电损坏主板。 1.please wait at least 30 seconds before discharging unit for checking.This is to ensure not harming user & multimeter. 2.qualified technician to ensure the live parts to be earthly grounded in order to protect the parts to be safely operated 3.Please record all the socket lot and wiring connection before replacing the new mainboard.This is to ensure correct wiring connection to protect the live parts
	Incompatibility happened at connection of power plug & its power socket		Replace with workable power plug accordingly	
	◆滤波器烧坏		★机器上电开机,使用万用表在滤波器OUT端测试棕/蓝端子电压是否有AC220-240V电压输出?如有烧坏主更换之。	
	wave filter being damaged		turn on the unit.to use multimeter to detect wave filter "out- signal" to verify the voltage wether at 220-240V.or otherwise to replace it	
	◆主板20A保险丝烧坏		★目测主板保险丝是否烧断,如有烧断即更换之。	
	mainboard fuse of input current 20A was damaged		To detect the fuse wether workable or not otherwise to replace it	
	◆CN52或CN57配线端子松脱		★目测主板CN52\57是否松脱,如是请用钳子把端子夹紧重插。	
	CN52 or CN57 with loose wiring connection		To detect the wiring connection and affirm It by using pincer	
◆主板烧坏	★目测主板电子元件是否有明显熏黑、漏电短路爆裂现象,如是请更换主板			
	mainboard damaged		To check any sportmarks on mainboard chips & its workability not having short circuit otherwise to replace the new one	
	◆压缩机过热保护未解除		★用温度计测试排气管湿度是否高于125℃,如是证明其热保护开启,待冷却后再上电运行。	※1.断电后半分钟以上,方可拆机检查。以免电击伤人和烧毁万用表 ※2.维修人员需接上可靠的接地,以免静电损坏
	overheat protection of compressor fail to funtion		thermometer to check temperture at 125℃,If detect to be overheat but only to plug on after it is cool down	
	◆5P通信配线端子松		★目测主板CN801插座&驱动板CN7插座配线端是否松脱,如是请重新插好再上电。	

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二、压缩机不启动、启动不工作 Compressor not working.	5P with poor wiring connection	温度计 万用表 十字螺丝刀 尖嘴钳	To check wether CN801 socket & driver CN7 socket wiring terminal with poor connecting,or otherwise to connect it properly,then plug on for continual use	主板元件。 ※3.遇到如压缩机等主要部件故障，请送至专业的维修机构维修。 ※4.驱动板更换时，请先记录各配线配插位置，再实施拆卸，以免安装新板时配错线上电损坏驱动板。 ※5.2200 u F电解电容需区分正负极性，黑色线配正 (+) 极，白色线配负 (-) 极。 Please wait at least 30 seconds before discharging the unit for checking.This is to ensure not harming user & also protecting multimeter 2.qualified technician to ensure the live parts to be earthly grounded in order to protect the parts to be safely operated 3.Any problems related to main parts.eg compressor,please send to qualified or professional service center 4.Please record down the connections of wiring & its socket,when discharging the old driver and replace the new ones.5.please verify positive pole(black wire) & negative pole(white wire) of the 2200UF capacitor
	◆3P通信配线端子松		★目测主板CN102插座&驱动板CN6插座配线端是否松脱，如是请重新插好再上电。	
	3P with poor wiring connection		To check wether CN102 socket & driver CN6 socket wiring terminal with poor connecting,or otherwise to connect it properly,then plug on	
	◆2200uF电解电容损坏		★1.目测电解电容是否有明显熏黑破裂现象，如有请更换之。★2.使用万用表检测电解电容容量是否不足，如有请更换之。	
	2200U capacitor found to be damaged		To check wether capacitor with any spot marks or signs of damages. To use multimeter to check battery volumne, otherwise to replace new ones	
	◆驱动板损坏		★目测驱动板电子元件是否有明显熏黑、漏电短路爆裂现象，如是请更换主板。	
	driver damaged		To check wether capacitor with any spot marks or signs of damages. To use multimeter to check battery volumne, otherwise to replace new ones	
◆压缩机启动不工作	★上电启动机器,用手触摸压缩机机体,压缩机有启动,但不工作(机体不发热)，如是请送修更换。			
	Compressor out of working		Turn on unit and compressor is on but fail to operate(no heat).Please send it to replace	
	◆下风机排气风管排气不顺畅		★检查下风机排气风管管路是否顺畅,如若请清理之让其顺畅。	

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三、压缩机运行一段时间反复跳停 Compressor frequently off working after running a while	Exhaust hose of lower fan not able to produce consistent air discharge	十字螺丝刀	To check air discharge from exhaust hose and to replace it accordingly	※维修人员需接上可靠的接地，以免静电损坏主板元件
	◆驱动板芯片散热效果不良		★1.检查驱动板固定芯片之M3机械是否有滑牙现象，如有请更换驱动板散热器及M3机械螺丝。 ★2.检查驱动板芯片上的导热硅脂是否变干或不起作用，如是请重新在芯片涂上导热硅脂。	
	Driver chip not able to release heat properly		1.To check driver chip M3 wether has poor connection.2.To check driver chip silicon grease,its status,it turn out to be poor glueing without any effect.then please to glue it again	
	◆HEAT压缩机过载保护配线端子松		★拆机，目测各主板CN5配线端子是否有松脱现象，如有请重新插好。	
	heat compressor overprotection with poor wiring connection		discharge the unit, to test CN5 wiring terminal connection whether is ok.or otherwise to re-connect again	qualified technician to ensure the live parts to be earthly grounded in order to protect the parts to be safely operated
四、打水马达不转 Water motor is out of working	◆打水马达配线松脱 ◆打水飞轮卡死 ◆打水马达损坏	十字螺丝刀	★1.拆机，检查打水马达配线端子是否有脱落现象，如是请重新插好。 ★2.检查打水飞轮是否与冷凝器铝翅片卡死现象，如是请把翅片调整避开打水飞轮。 ★3.更换打水马达	※拆机前机台需有半分钟以上的放电时间,以免电击伤人。
	water motor with poor wiring connection water motor unworkable water motor damaged	To use screw driver	Discharge the unit, to test CN5 wiring terminal connection whether is ok.or otherwise to re-connect again	please wait at least 30 seconds before discharging the units, This is to ensure not harming users

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五、无制冷 Malfunction in cooling	◆冷媒泄漏	十字螺丝刀 焊枪 真空泵 冷媒充填机	★拆机，目测检查各管路接口处是否有油渍流出，如有证明油渍处冷媒泄漏，需更换或补焊重新充填冷媒。	※请送至专业的维修机构维修。
	Refrigerent leakage		discharge the unit, to test connection port of live parts wether any oil residues remains.if found any signs of above,then to replace it and solder the connection port and charge the refrigerent	
	◆压缩机故障		★拆机，检查压缩机上电后如不工作，机体不发热，此时需更换。	
	compressor problems	screwdriver,solder tools,Vacum Pump,Refrigerent charge,	discharge the unit.To check compressor working or not,or otherwise to replace the new one	send to qualified & professional repair service center
六、显示E1	◆室内温度传感器故障	to use screw driver	★1.拆机，目测检查室内温度传感器的插头是否牢固的插于主板CN10端子座上，如若请重新插好固定牢固。 ★2.如重新插好仍显示E1，此时需更换室内温度传感器了。	※维修人员需接上可靠的接地，以免静电损坏主板元件。
Display E1	room tempreture sensor errors		1.Discharge the unit.to check the tempreture sensor integrate into CN10 wiring terminal. 2.If display E1 after re-plug, please to change the tempreture sensor	qualified technicians to ensure the live parts to be earth grounding to protect the live parts from being damaged
七、显示E2	◆室内盘管传感器故障	十字螺丝刀 剪钳	★1.目测检查室内盘管传感器的插头是否牢固的插于主板CN60端子座上，如若请重新插好固定牢固 ★2.如重新插好仍显示E2，此时需更换室内盘管传感器了。	
display E2	evaporator tempreture sensor error	use screw driver,pincer	To check if tempreture sensor connecting to CN60 wether firmly fixed,or otherwise to re-fix it.If E2 display, then to replace the tempreture sensor	

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八、显示E3	◆室外排气传感器故障	十字螺丝刀 剪钳	<p>★1.目测检查室外排气传感器的插头是否牢靠的插于主板CN61端子座上, 如若请重新插好固定牢固。</p> <p>★2.如重新插好仍显示E3, 此时需更换室外排气传感器了。</p>	<p>※1.维修人员需接上可靠的接地, 以免静电损坏主板元件。</p> <p>※2.主要零部件之更换, 请送至专业的维修机构维修。 1.qualified technician to ensure the live parts to be earth grounding to protect the live parts from being damaged 2.main live parts must be replaced and send to qualified repair service center</p>
E3 display	Air discharge temperature sensor error	use screw driver,pincer	To check if temperature sensor connecting to CN61 wether firmly fixed,or otherwise to re-fix it.If E3 display, then to replace the temperature sensor	
九、显示E4 E4 display	◆IPM 通讯故障	十字螺丝刀 剪钳	★拆机, 目测检查主板与驱动板之间的3芯和5芯通信线是否牢固插入端子座里, 如若请重新插好。	
	IPM signal transmitting error	use screw driver,pincer	discharge the unit.To check pin 3&pin 5 signal transmitting wether connect properly or not	
	◆主板IC松,接触不良	十字螺丝刀 镊子	★拆机, 目测检查主板模块是否牢靠的插于主板IC1的IC座上, 如有松动请重新插好。	
	mainboard IC loose, due to connecting problems	use screw driver,pincer	discharge the unit.To check mainboard connetion of IC1&IC socket firmly fixing or not.	
十、显示E5	◆EEPROM 故障	十字螺丝刀 镊子	★拆机, 更换主板IC14	
E5 display	EEPROM signal errors	use screw driver,pincer	discharge the unit.To replace mainboard IC14	
十一、显示E7	<p>◆水满故障</p> <p>◆打水马达故障</p>	十字螺丝刀	<p>★1.拔出机台排水塞将机体内的水排出, 然后上电开机。</p> <p>★2.拆机, 目测检查吹水满微动开关配线的插头是否牢靠的插于主板CN9端子座上, 如若请重新插好固定牢固。</p> <p>★3.如果是打水马达故障, 请更换打达马达。</p>	

**Dimplex inverter portable air conditioner trouble shooting and maintenance Guidance.**

<b>problem</b>	<b>cause</b>	<b>maintenance tool</b>	<b>maintenance methods</b>	<b>important notes</b>
E7 display	water full signal water motor fault	use screw driver	1.discharge the water plug and drain water,and then plug on the unit 2.discharge the unit,to check micro switch wiring wether firmly fix to CN9 socket. 3.If detect is belong to water motor fault,then to replace the water motor	

## Dimplex PCI变频空调检修外观拆卸指引 Inverter Mobile A/C maintainece guidance service manual

### (1) 左上后背板拆卸

Discharge the left back panel



1. 1使用十字批头, 将(图1)红色圈圈的螺丝拆卸;
1. 2使用六角梅花批头, 将(图2)的安全螺丝拆卸;
1. 3取下左上后背板, 如(图3).

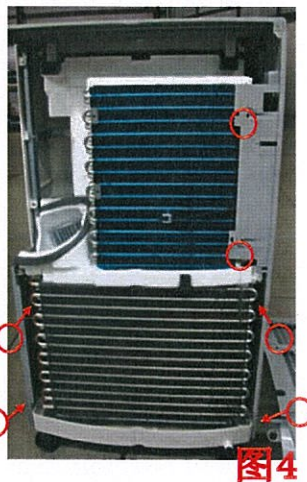
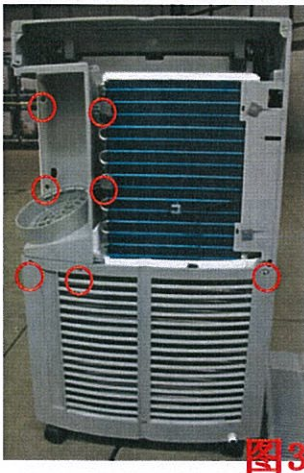
- 1.1 Discharge the screws as shown on pic 1
- 1.2. Discharge the screws as shown on pic 2.
- 1.3 Pull down the left back panel piece pic 3

### (2) 右上后背板&后背板下拆卸

Discharge the right back panel

2. 1使用十字批头, 将(图3)红色圈圈的螺丝拆卸;
2. 2取下右上后背板&后背板下, 如(图4).

- 2.1 Discharge the screws as shown on pic 3
- 2.2. Pull down the right back panel piece.pic 4



## Dimplex PCI变频空调检修外观拆卸指引

### (3) 侧板拆卸

Side casing discharge

3. 1使用十字批头, 将(图4)红色圈圈的螺丝拆卸;
3. 2取下左、右侧板(图5, 图6).

- 3.1 Discharge the screws as shown on pic 4
- 3.2. Pull down the left & right back panel piece, see pic 5& 6



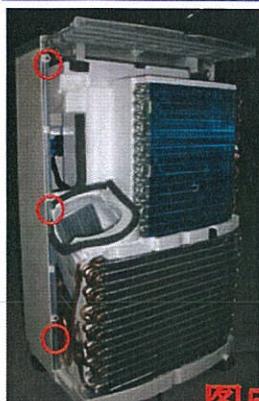


图5

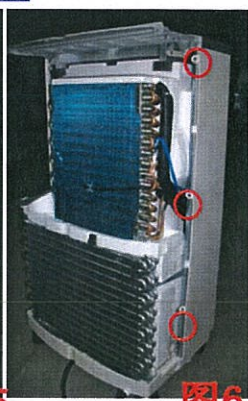


图6

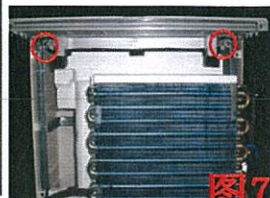


图7

#### (4) 外壳拆卸

#### Front casing discharge

4.1 使用十字批头，将(图5、6、7)红色圈圈的螺丝拆卸；  
4.2 取下外壳，如(图8、9)。

4.1 Discharge the screws as shown on pic 5,6&7  
4.2. Pull down the panel piece, see pic 8 & 9

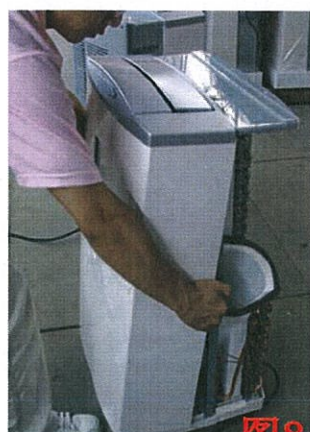


图8

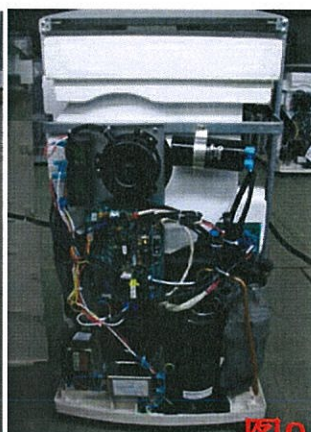
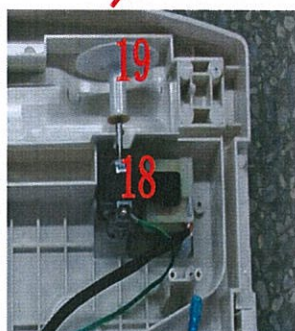
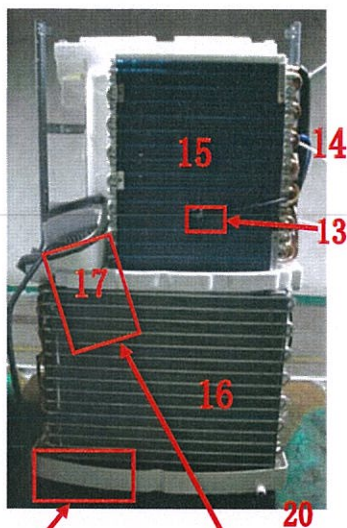
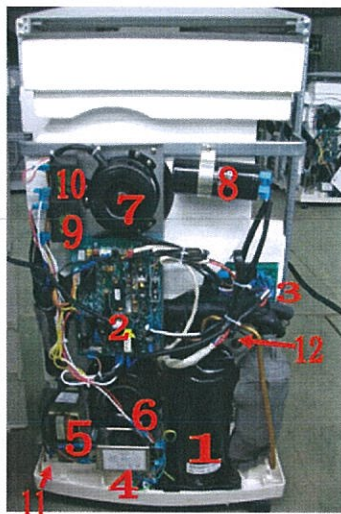


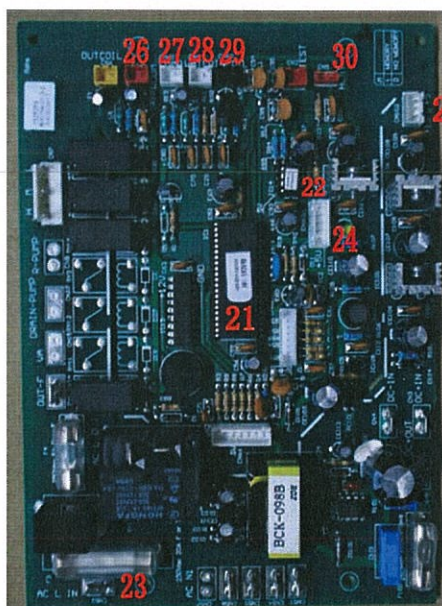
图9

### Dimplex PCI变频空调检修主要零部件指引



序	零件名称
1	压缩机 compressor
2	主板 mainboard
3	驱动板 driver
4	滤波器 wave filter
5	电抗 Resistor
6	下马达 lower motor
7	上马达 upper motor
8	2200uF电解电容 2200UF capacitor
9	下马达12uF电容 lower motor with 12uf capacitor
10	上马达8uF电容 upper motor with 8uf
11	水满微动开关 water full micro
12	室外排气传感器 Air discharge tempreture sensor
13	室内温度传感器 room tempreture sensor
14	室内盘管传感器 evaporator tempreture sensor
15	蒸发器 evaporator
16	冷凝器 condensor
17	驱动板散热器 driver heat releaser
18	打水马达 water pump motor
19	打水飞轮 water motor wheel
20	排水塞 water drain plug

### Dimplex PCI变频空调检修主要零部件指引



序	零件名称	
21	主板IC1	mainboard IC 1
22	主板IC14	mainboard IC 14
23	主板20A保险丝	mainboard 20A fuse
24	主板5P通信配线座	mainbord 5P transmission wiring socket
25	主板3P通信配线座	mainbord 3P transmission wiring socket
26	主板室内温度传感器座	mainbord room tempreture sensor socket
27	主板室外排气传感器座	mainbord air discharge tempreture sensor socket
28	主板水满开关配线座	mainbord water full switch wiring socket
29	主板室内盘管传感器座	mainbord evaporator tempreture sensor socket
30	主板压缩机过载保护器座	mainbord overload protector of compressor
31	主板CN52端子	mainbord CN52 wiring terminal
32	主板CN57端子	mainbord CN57 wiring terminal
33	驱动板5P通信配线座	driver 5p transimission socket
34	驱动板3P通信配线座	driver 3p transimission socket
35	导热硅脂&驱动板芯片	silicon grease & driver chip slot
36	压缩机过载保护器	overload protector of compressor

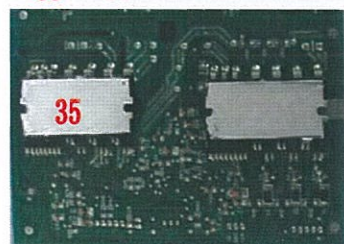
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33 34



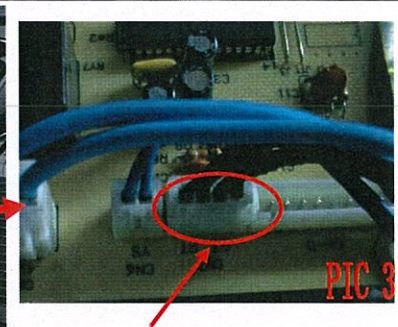
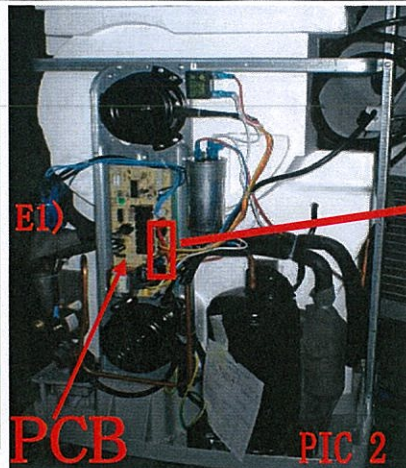
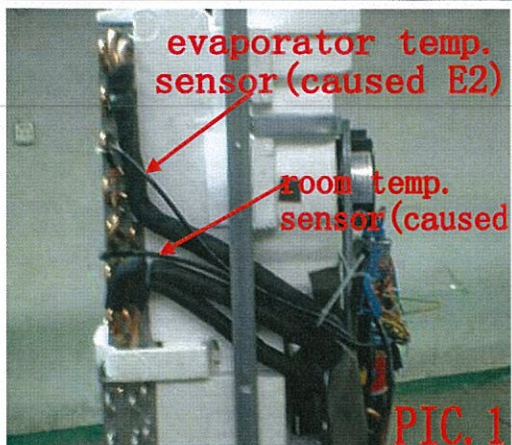
36



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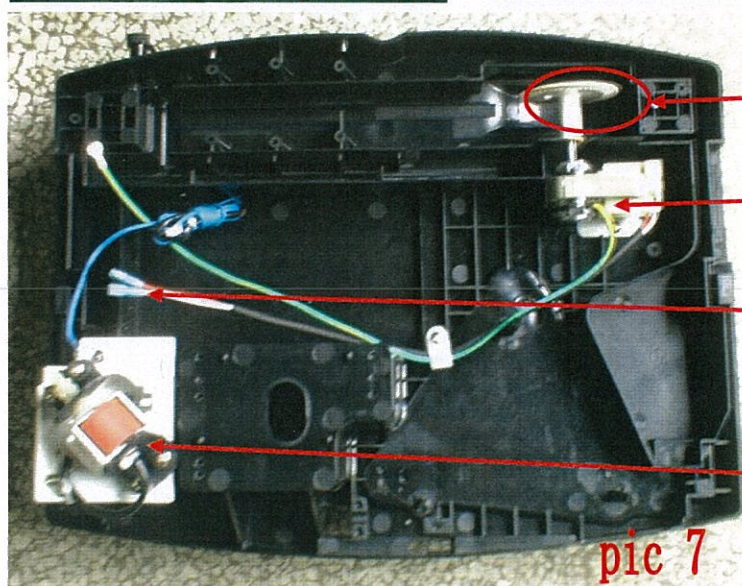
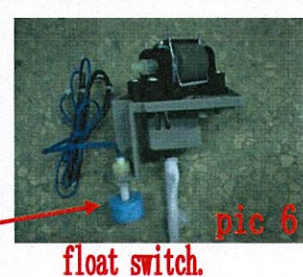
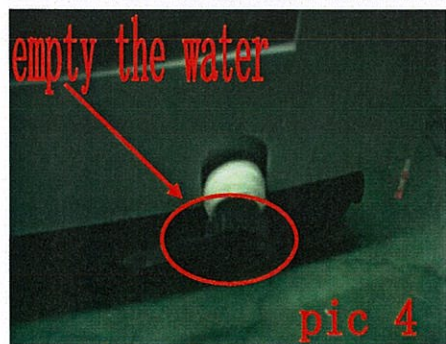


Trouble shooting	cause	solution
Display E1	Room temperature sensor fault	change the whole sensors when either E1 or E2 displayed. Details pls see below picture 1,2,3 show.
Display E2	Evaporator temperature sensor fault	



change this terminal and the sensor if displays either E1 or E2

trouble	cause	solution step:	picture guidance
Display E7	water full	1,empty the water	pic 4
	float switch fault	2,change the float switch	pic 5、 6
	water wheel blocked	3,clear the block to the water wheel	pic 7
	the terminal of water motor to PCB is loose.	4,check the wire&connection	pic 7
	water motor & water pump is broken.	5,change the motor	pic 7
	PCB fault.	6,change the PCB	pic 2



clear the blocks to the water wheel.

water motor

check if the wire terminal of water motor to PCB is loose.

water pump

# GDC16RWA, GDC18RWA, GDC18RBA

## 16K and 18K Error code

PROBLEM	CAUSE
SHOW E1	Indicates open circuit or short circuit in room temperature sensor.
SHOW E2	Indicates open circuit or short circuit in evaporator temperature sensor.
SHOW E3	Indicates a fault in the compressor air outlet temperature sensor.
SHOW E4	Indicates a data transmission error between the compressor drive plate and main PCB.
SHOW E5	Indicates IC error.
SHOW E6	Indicates open circuit or short circuit in condenser temperature sensor. (Just for both cooling&heating model.)
SHOW E7	Indicates the water tank is full inside.

1. Please do not turn off the unit at the power point when the unit is running. Use the power button to turn unit off before turning off at power point.
2. If the unit was turned off at the power point please wait at least 3 minutes before restarting the unit.