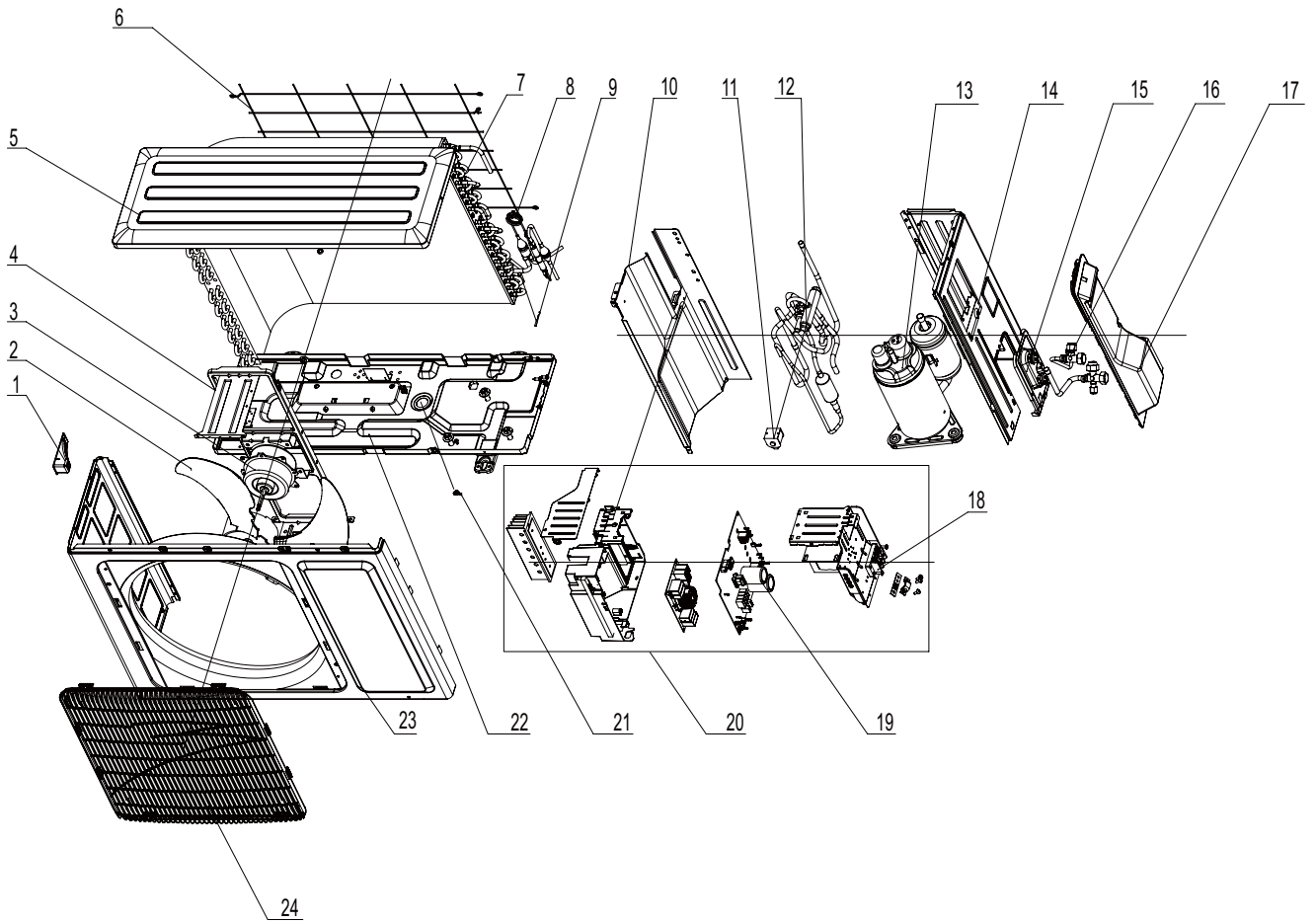


GWH12MB-K3DNA3B/O



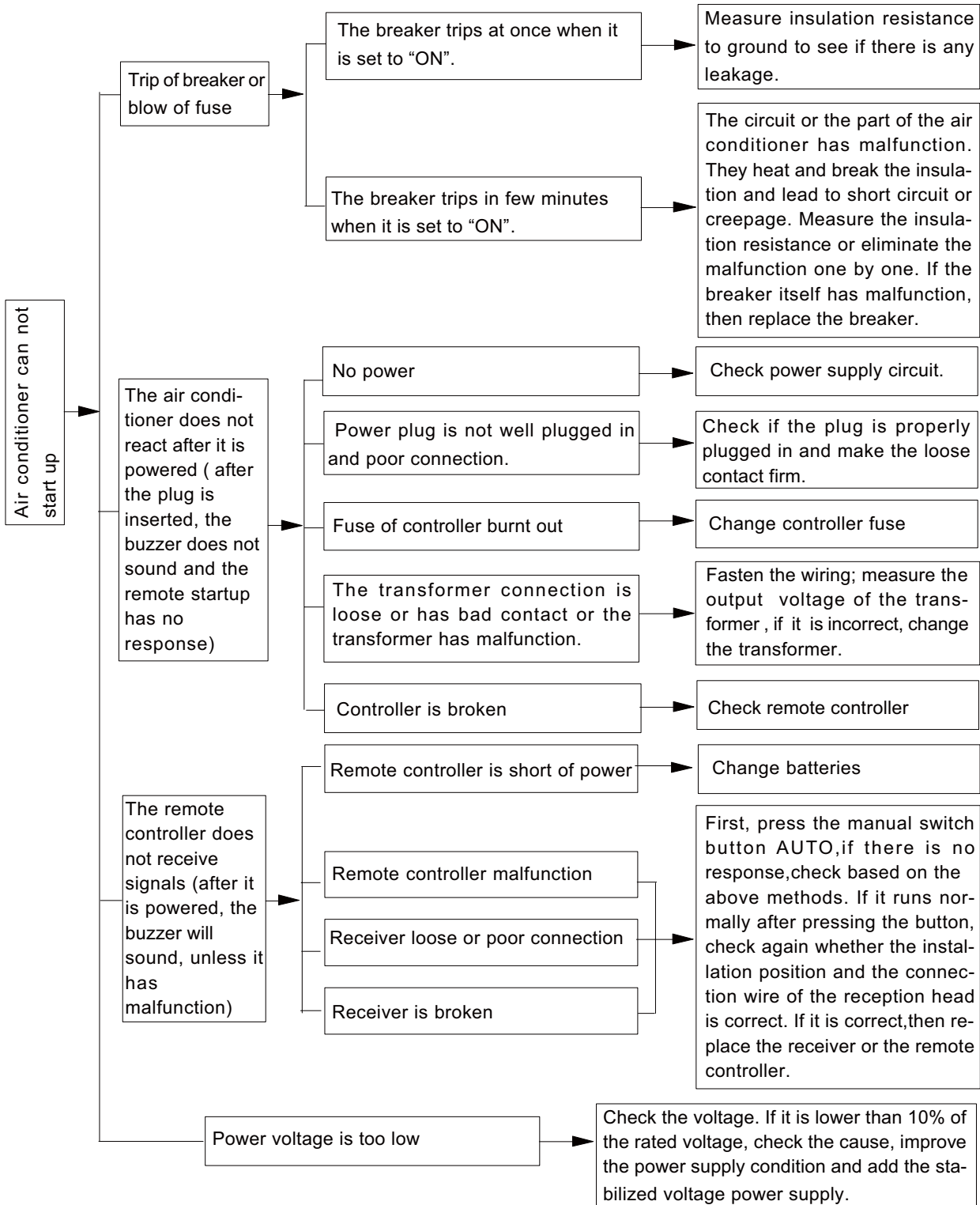
NO.	Description	Part Code	Qty
		GWH12MB-K3DNA3B/O	
	Product Code	CB171W0210	
1	Small Handle	26233100	1
2	Axial Flow Fan	10333004	1
3	Fan Motor	15013076	1
4	Motor Support	01703058	1
5	Top Cover Sub-Assy	01253454	1
6	Rear Grill	01473042	1
7	Condenser Assy	01113811	1
8	Capillary Sub-Assy	03063338	1
9	Temperature Sensor	3900030801	1
10	Clapboard Sub-Assy	01233385	1
11	Magnet Coil	4300040050	1
12	4-way Valve Assy	03123385	1
13	Compressor and fittings	00103209_G	1
14	Right Side Plate Sub-Assy	0130317801	1
15	Valve Support	0170308901P	1
16	Valve	07100005	1
17	Big Handle	26233433	1
18	Terminal Board	42011113	1
19	Capacitor CBB61	33010034	1
20	Electric Box Sub-Assy	0260338007	1
21	Drainage Connector	06123401	1
22	Chassis Sub-assy	01203954P	1
23	Front Panel	01533027P	1
24	Front grill	22413433	1

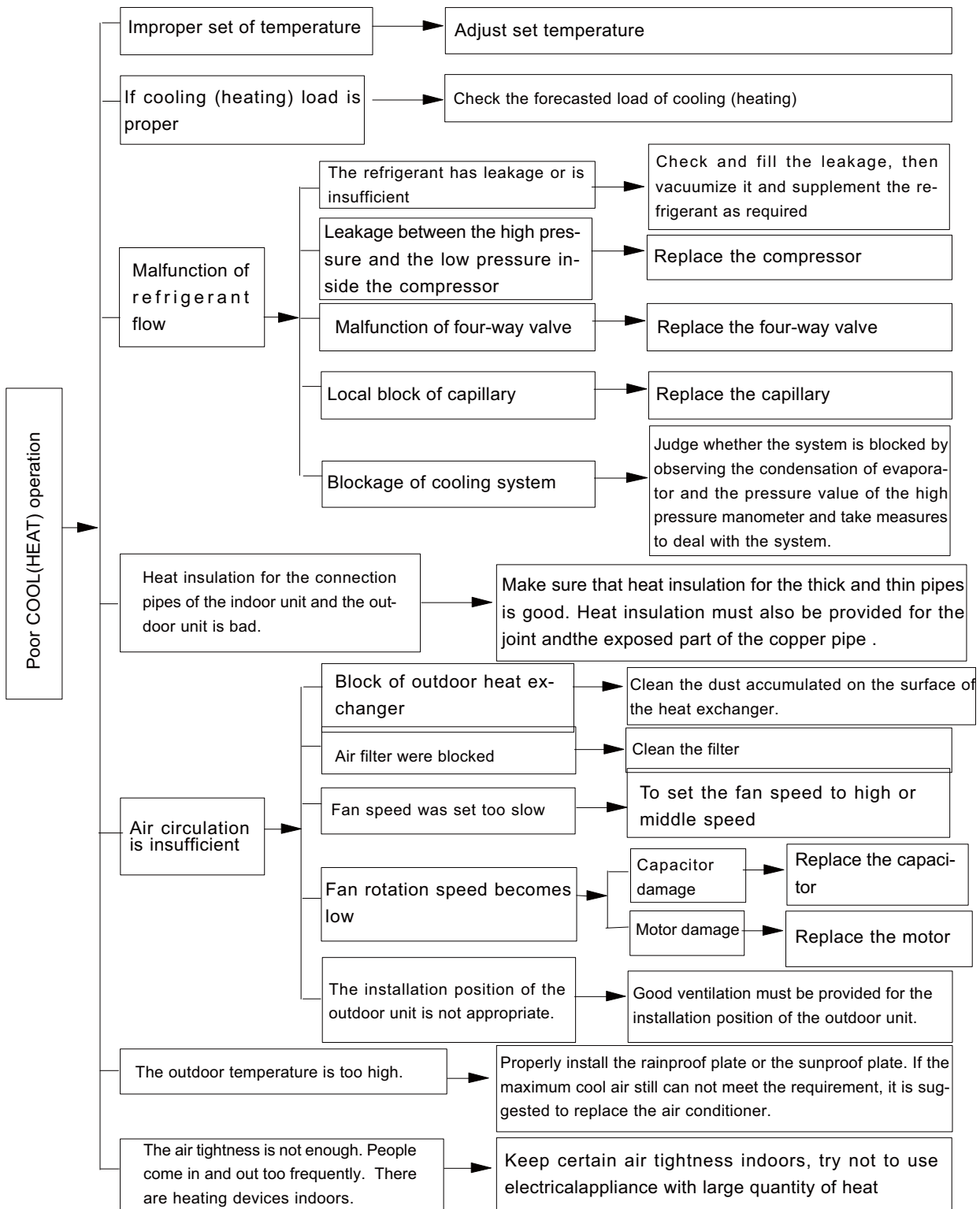
The data above are subject to change without notice.

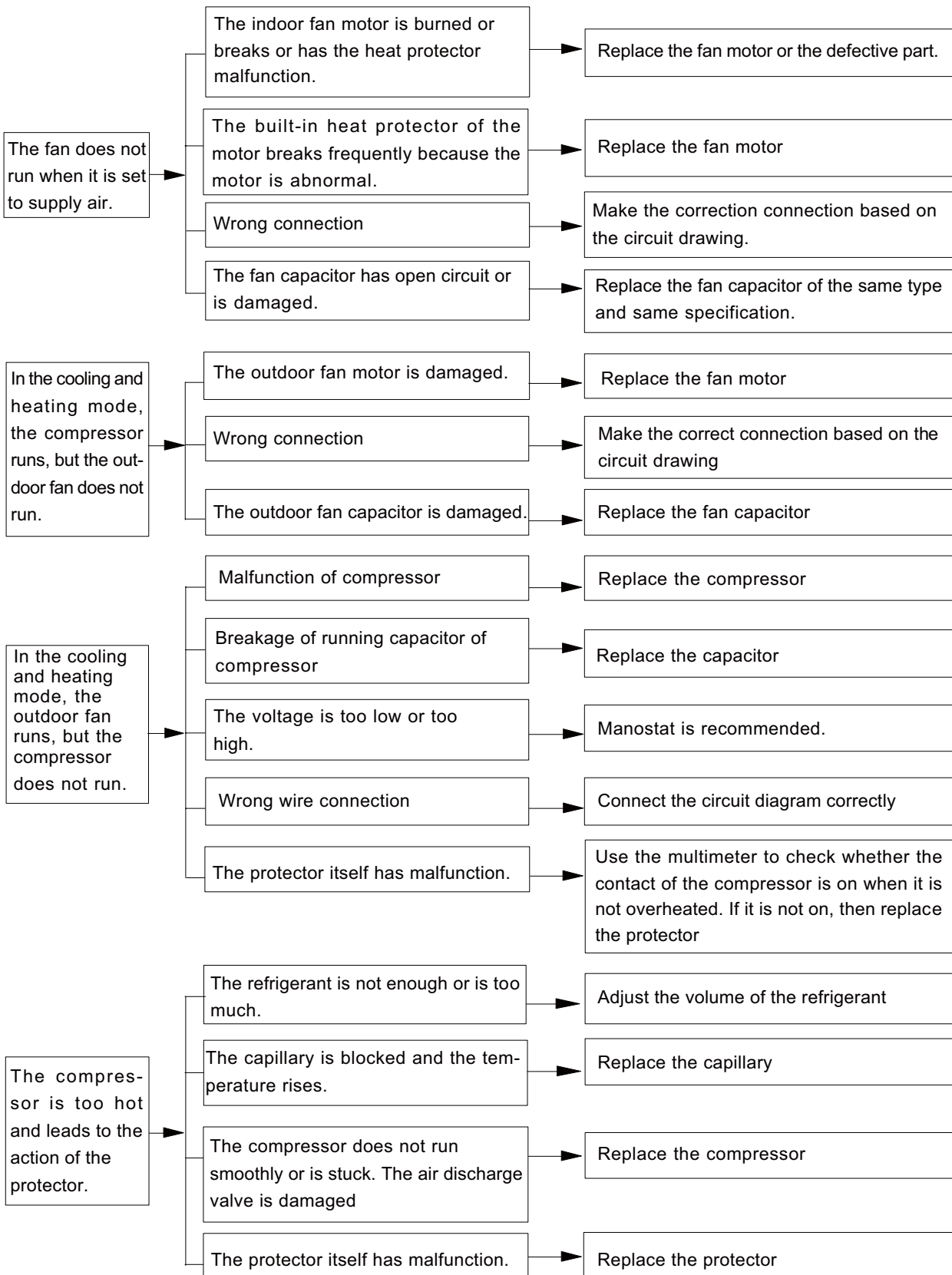
9. Troubleshooting

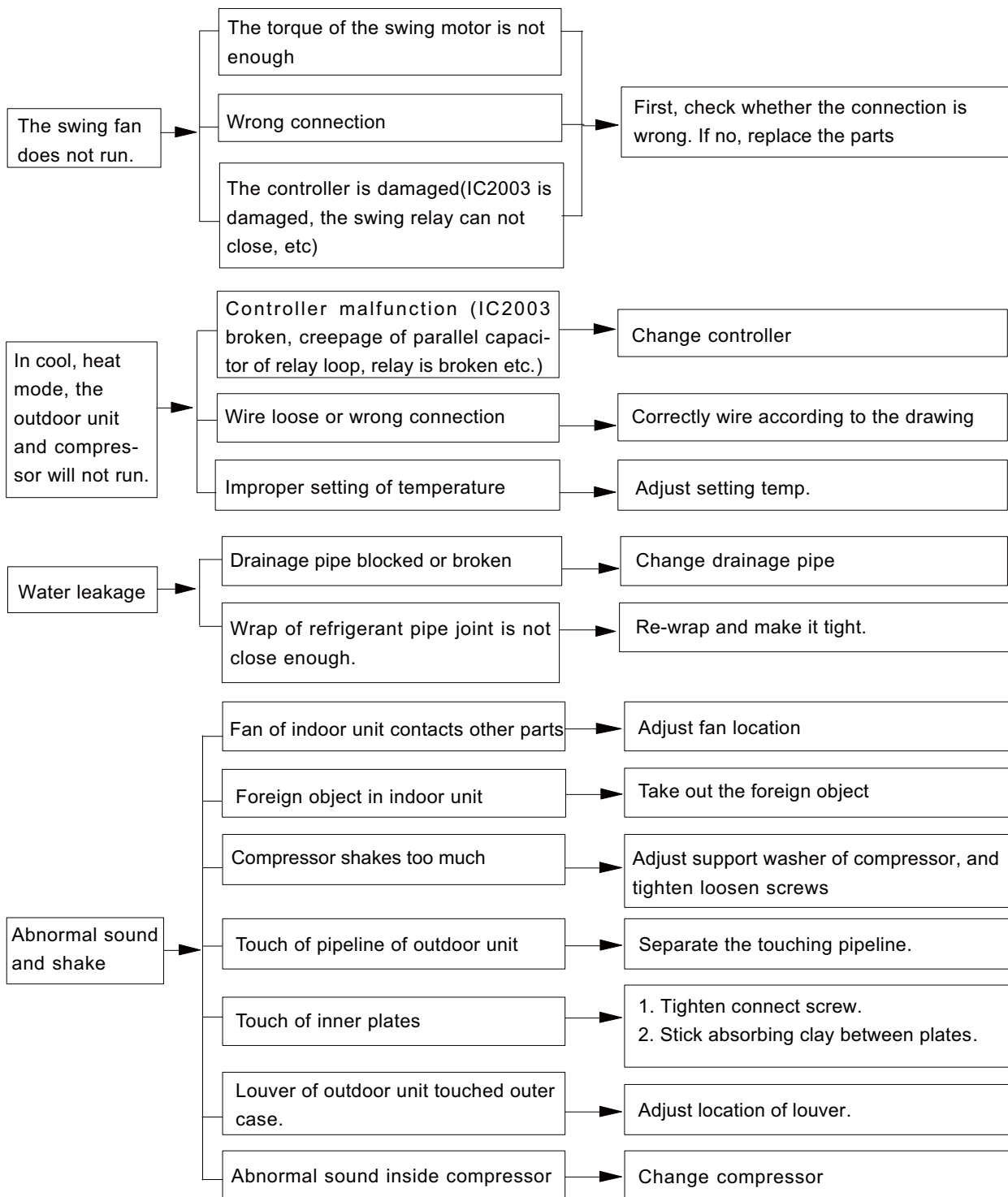
9.1 Malfunction Analysis

Note: When replacing the controller, make sure insert the wire jumper into the new controller, otherwise the unit will display C5







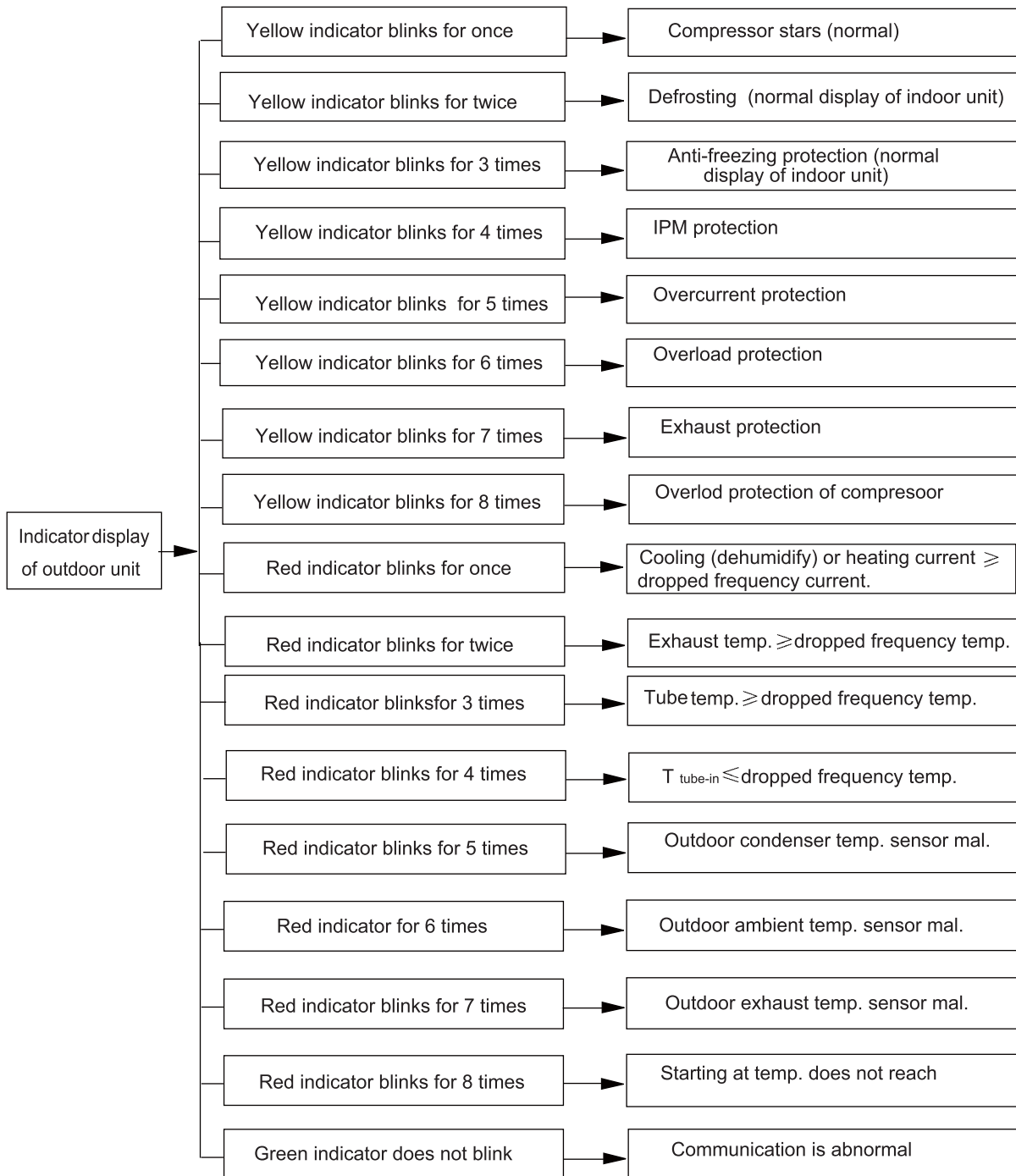


9.2 Flashing LED of Indoor/Outdoor Unit and Primary Judgement

Name of malfunction	Display of indoor unit	state of the lamps of outdoor unit PCB			Reasons
	ERROR CODE	GREEN-LED2	RED-LED3	YELLOW-LED4	
Stop for anti-freezing protection of indoor-unit	E2		blink-4 times	blink-3times	refrigerant leakage、 indoor unit air flow blocked up、 filter duty
Stop for exhaust protection	E4			blink-7 times	less refrigerant、 capillary blocked up、 ambient temperature is abominable
Stop for low voltage protection	E5			blink-5 times	low、 voltage、 ambient temperature is abominable
Stop for communication malfunction	E6	do not blink			communication line failure、 main PCB failure、 interfere souce、 connect line wrong
Stop for compressor overload protection	H3			blink-8 times	compressor shell over heat、 lessrefrigerant、 capillary blocked up
Overload protection	H4			blink-6 times	ambient temperature is abominable、 heat exchanger blocked up
Stop for IPMmodule protetion	H5			blink-4 times	IPM moudel over heat、 low voltage、 silica gel
DC motor (indoor unit) does not operate	H6				DC motor control terminal does not contact well; Blade does not rotate fluently due to incorrect installation; motor or control panel is damaged
Indoor ambient temperature sensor malfunction	F1				terminal connect not reliable、 temperature sensor maifunction
Indoor tube temperature sensor malfunction	F2				terminal connect not reliable、 temperature sensor maifunction
Outdoor ambient temperature sensor malfunction	F3		blink-6 times		terminal connect not reliable、 temperature sensor maifunction
Outdoor tube temperature sensor malfunction	F4		blink-5 times		terminal connect not reliable、 temperature sensor maifunction
Outdoor exhaust temperature sensor malfunction	F5		blink-7 times		terminal connect not reliable、 temperature sensor maifunction
Automatic defrosting	H1			blink-2 times	H1is not error code,it is noemal operation. Just heat pump has this fuction
REMARK:	1.Error codes only can be seen in the type which has the temperature display pcb.maybe some type has not this function,the lamps on the outdoor pcb are avaiable 2.Normally,the communication between indoor unit and outdoor unit is successful, the gree lam				

9.3 Malfunction Display

If malfunction occurs, corresponding code will display and the unit will resume normal until protection or malfunction disappears.



Analysis or processing of some of the malfunction display:

1. Compressor discharge protection

Possible reasons: shortage of refrigerant; blockage of air filter; poor ventilation or air flow short pass for condenser; the system has noncondensing gas (such as air, water etc.); blockage of capillary assy (including filter); leakage inside four-way valve causes incorrect operation; malfunction of compressor; malfunction of protection relay; malfunction of discharge sensor; outdoor temperature too high.

Processing method: refer to the malfunction analysis in the above section.

2. Low voltage overcurrent protection

Possible reason: Sudden drop of supply voltage.

3. Communication malfunction

Processing method: Check if communication signal cable is connected reliably.

4. Sensor open or short circuit

Processing method: Check whether sensor is normal, connected with the corresponding position on the controller and if damage of lead wire is found.

5. Compressor overload protection

Possible reasons: insufficient or too much refrigerant; blockage of capillary and increase of suction temp.; improper running of compressor, burning in or stuck of bearing, damage of discharge valve; malfunction of protector.

Processing method: adjust refrigerant amount; replace the capillary; replace the compressor; use universal meter to check if the contact of compressor is fine when it is not overheated, if not replace the protector.

6. System malfunction

i.e. overload protection. When tube temperature (Check the temperature of outdoor heat exchanger when cooling and check the temperature of indoor heat exchanger when heating) is too high, protection will be activated.

Possible reasons: Outdoor temperature is too high when cooling; insufficient outdoor air circulation; refrigerant flow malfunction.

please refer to the malfunction analysis in the previous section for handling method.

7. IPM module protection

Processing method: Once the module malfunction happens, if it persists for a long time and can not be self-canceled, cut off the power and turn off the unit, and then re-energize the unit again after about 10 min. After repeating the procedure for several times, if the malfunction still exists, replace the module.

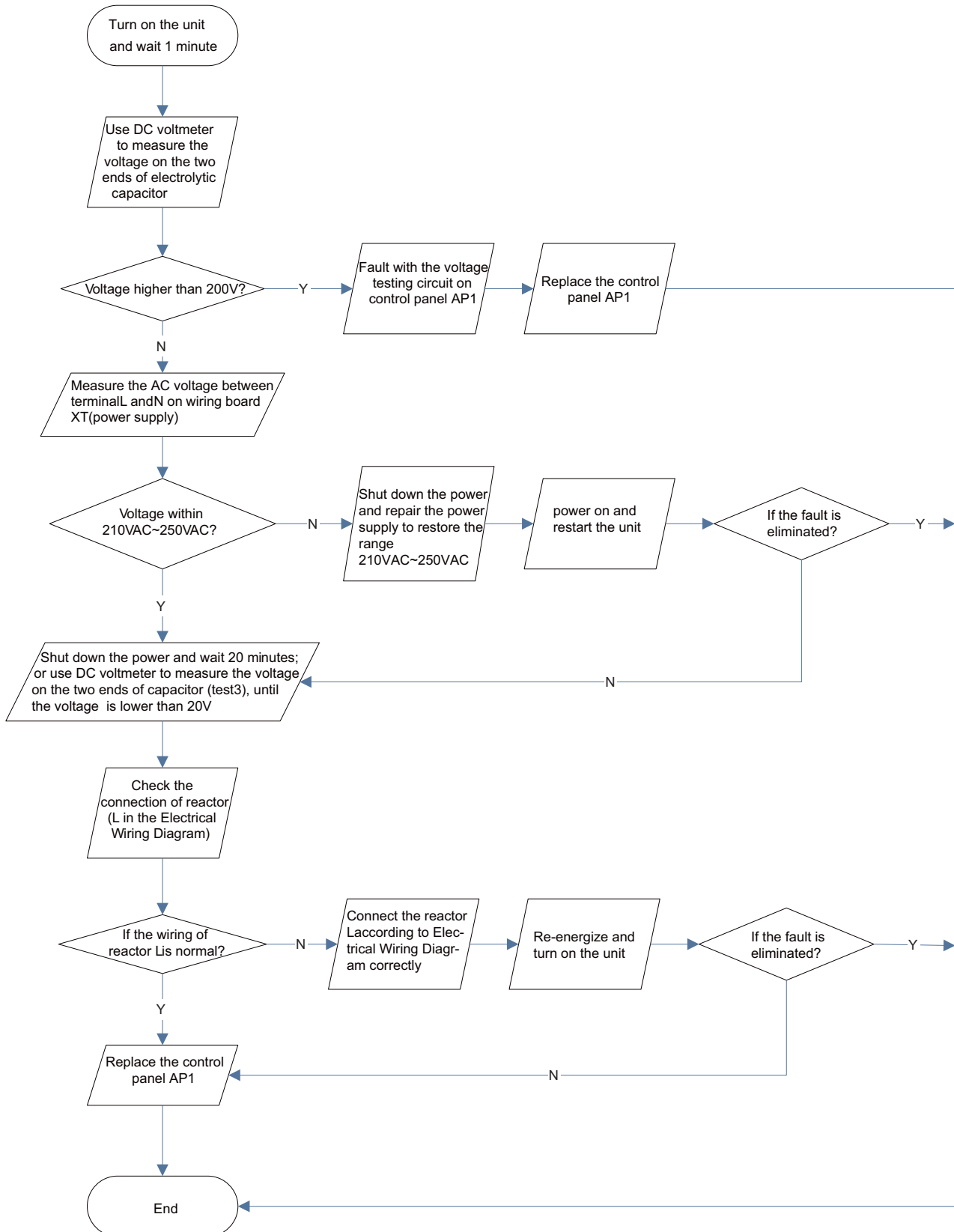
9.4 How to Check Simply the Main Part

(1) Capacitor charge fault (Fault with outdoor unit) (AP1 below refers to the outdoor control panel)

Main Check Points:

- Use AC voltmeter to check if the voltage between terminal L and N on the wiring board is within 210VAC~240VAC.
- Is the reactor (L) correctly connected? Is the connection loose or fallen? Is the reactor (L) damaged?

Fault diagnosis process:

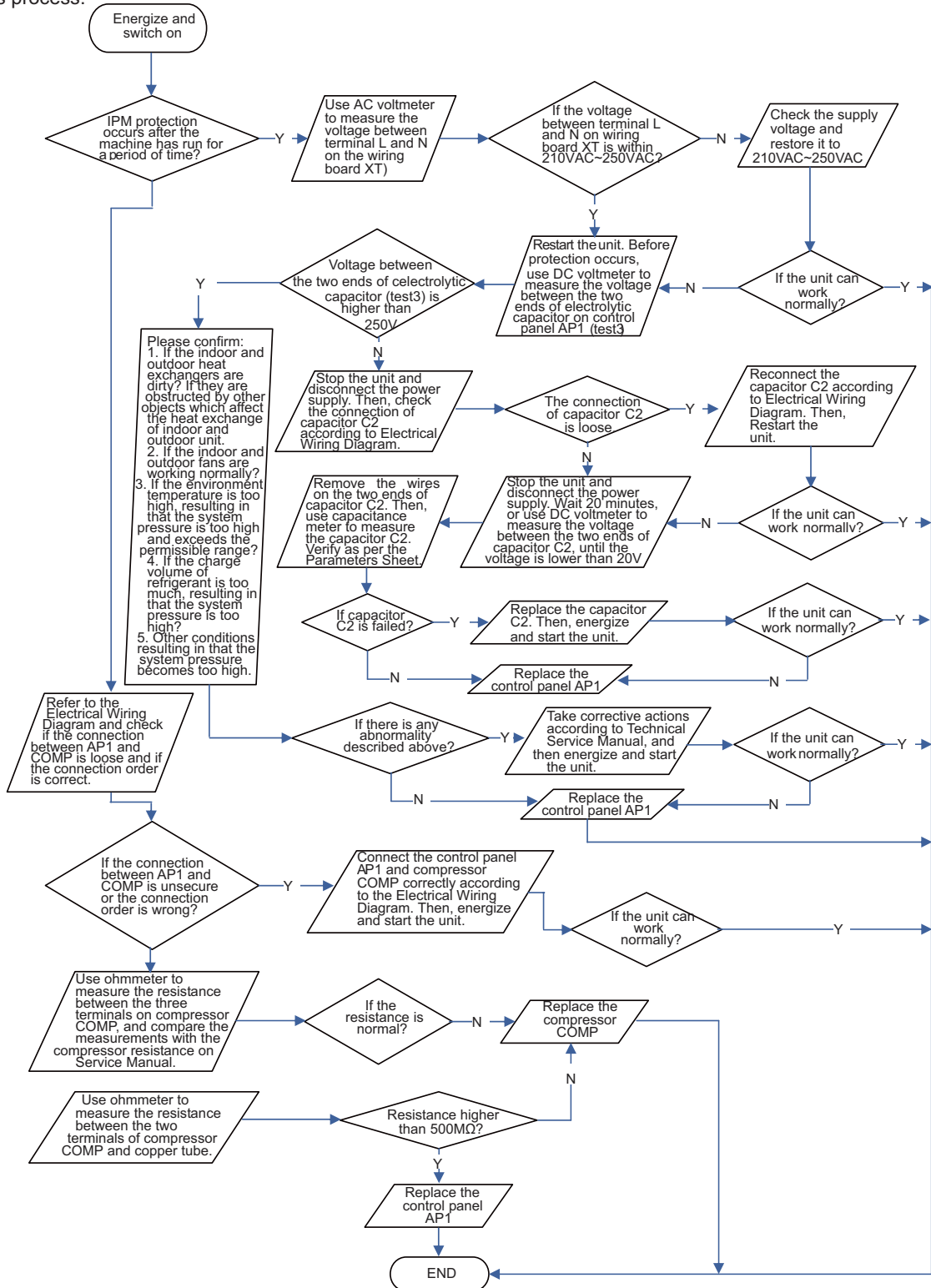


(2) IPM Protection, Out-of-step Fault, Compressor Phase Overcurrent (AP1 below refers to the outdoor control panel)

Main check points:

- Is the connection between control panel AP1 and compressor COMP secure? Loose? Is the connection in correct order?
- Is the voltage input of the machine within normal range? (Use AC voltmeter to measure the voltage between terminal L and N on the wiring board XT)
- Is the compressor coil resistance normal? Is the insulation of compressor coil against the copper tube in good condition?
- Is the working load of the machine too high? Is the radiation good?
- Is the charge volume of refrigerant correct?

Fault diagnosis process:

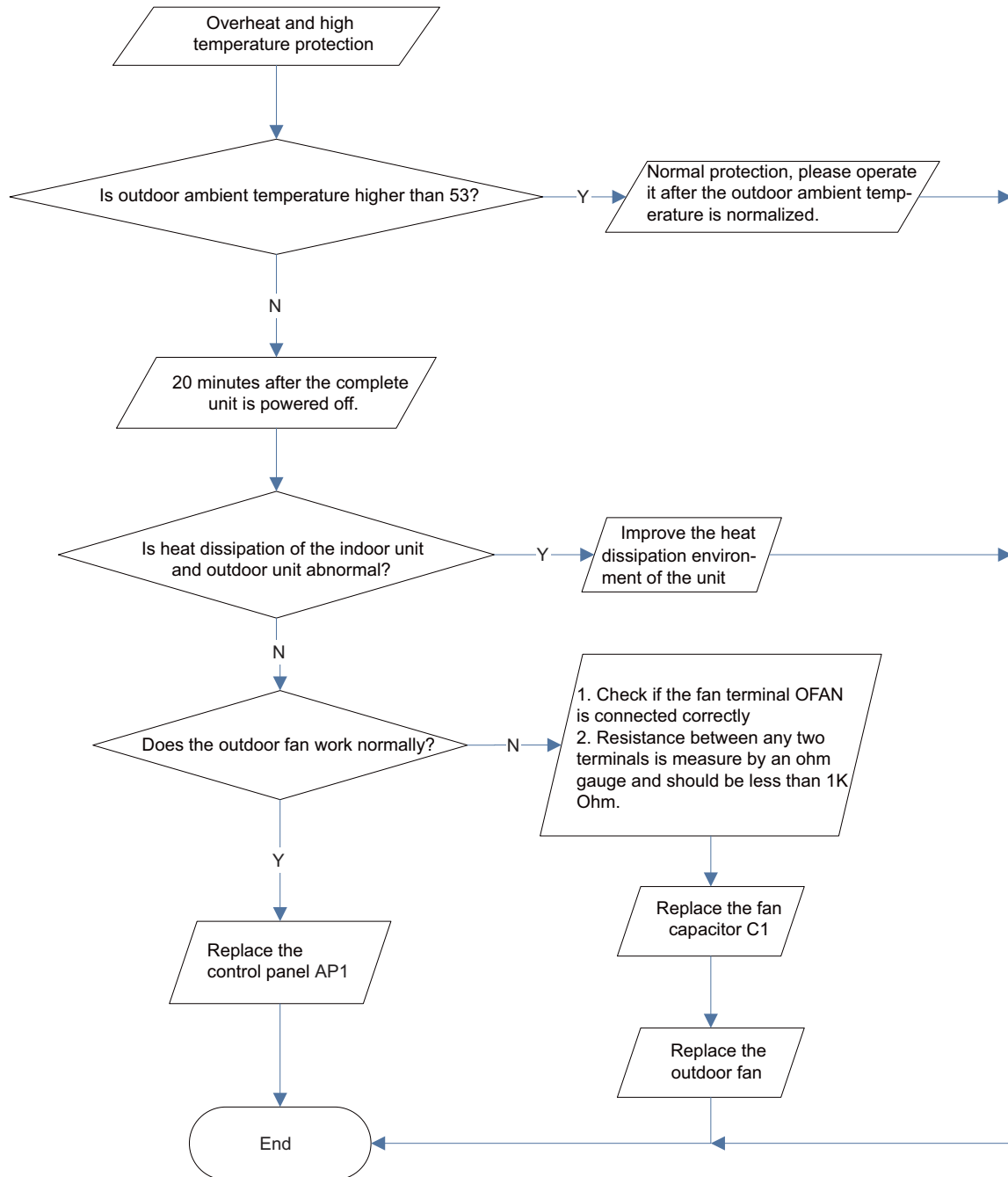


(3)High temperature and overload protection diagnosis (AP1 hereinafter refers to the control board of the outdoor unit)

Mainly detect:

- Is outdoor ambient temperature in normal range?
- Are the outdoor and indoor fans operating normally?
- Is the heat dissipation environment inside and outside the unit good?

Fault diagnosis process:

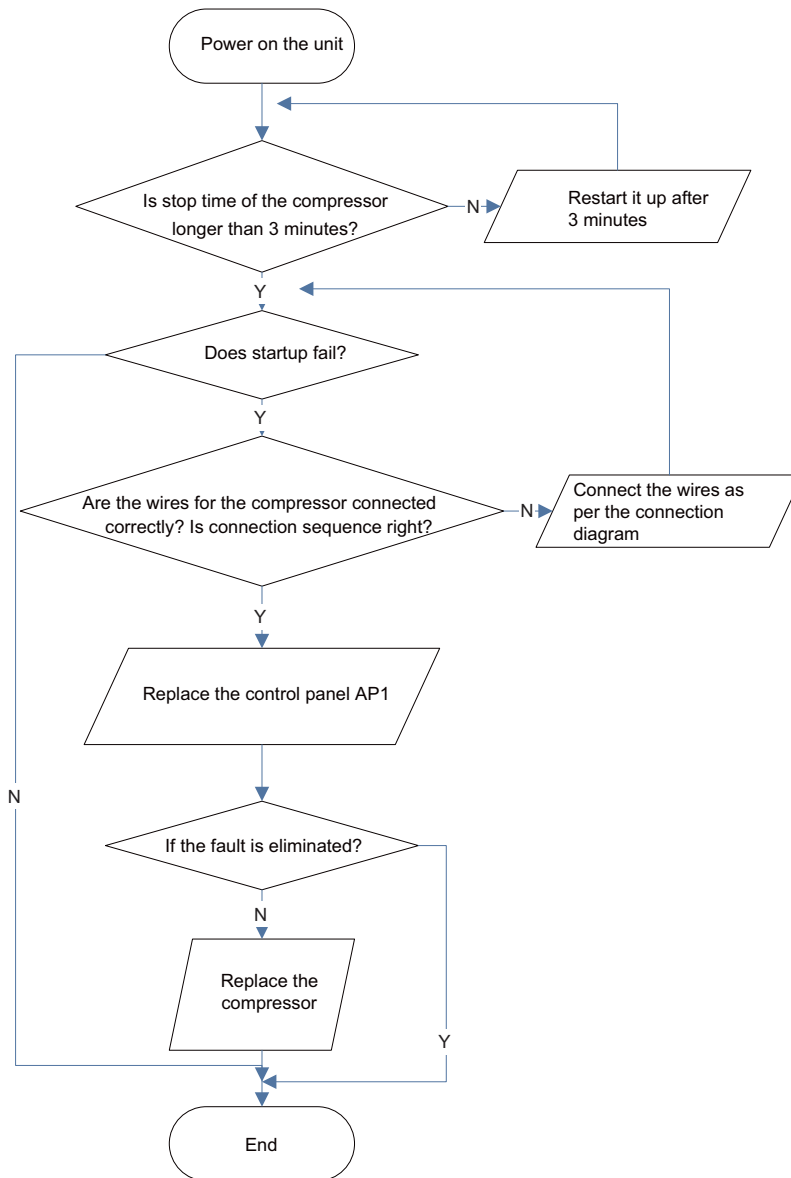


(4) Start-up failure (following AP1 for outdoor unit control board)

Mainly detect:

- Whether the compressor wiring is connected correct?
- Is compressor broken?
- Is time for compressor stopping enough?

Fault diagnosis process:

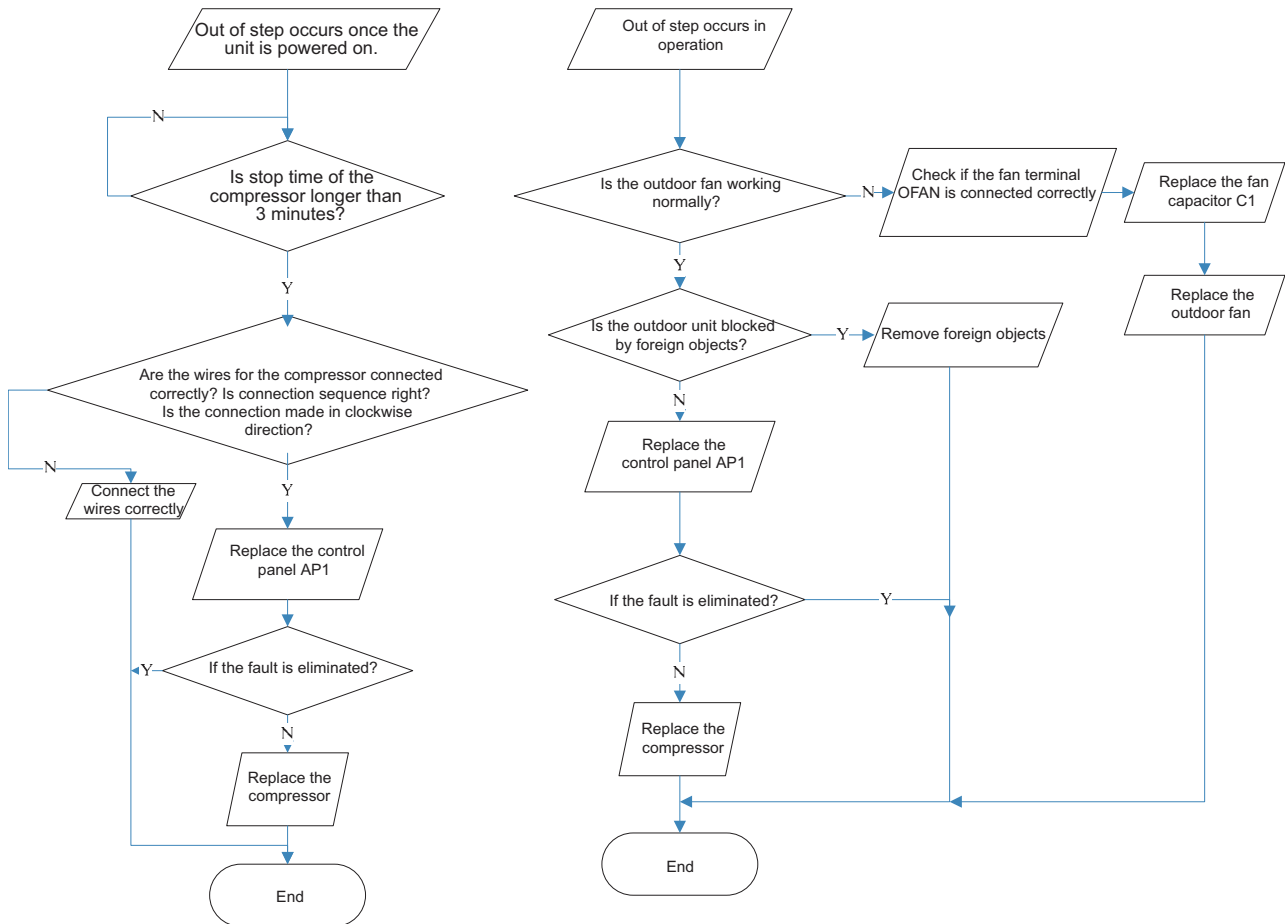


(5) Out of step diagnosis for the compressor (AP1 hereinafter refers to the control board of the outdoor unit)

Mainly detect:

- Is the system pressure too high?
- Is the input voltage too low?

Fault diagnosis process:



(6) Overload and air exhaust malfunction diagnosis (following AP1 for outdoor unit control board)

Mainly detect:

- Is the PMV connected well or not? Is PMV damaged?
- Is refrigerant leaked?

Fault diagnosis process:

