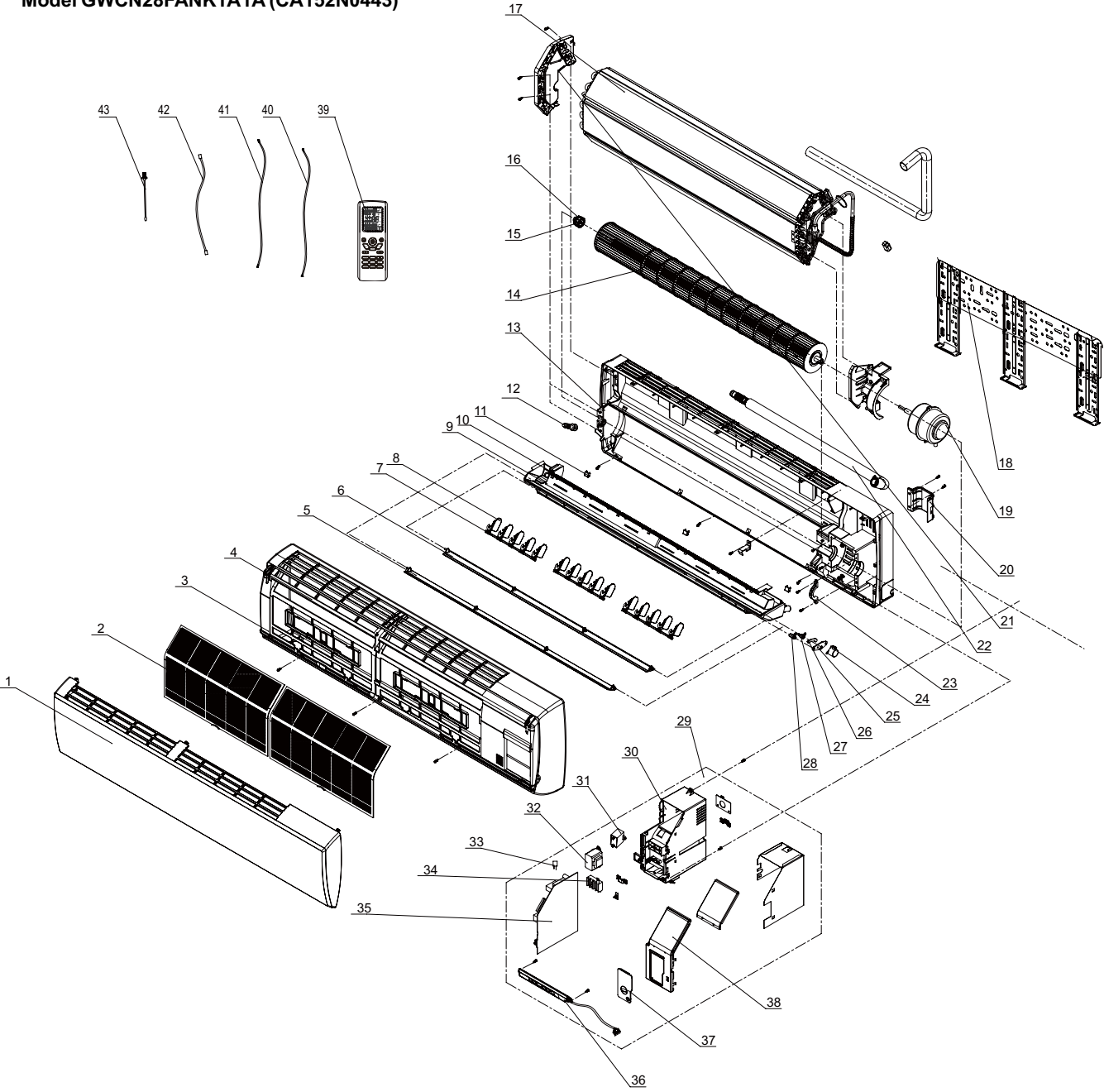


Model GWCN28FANK1A1A (CA152N0443)



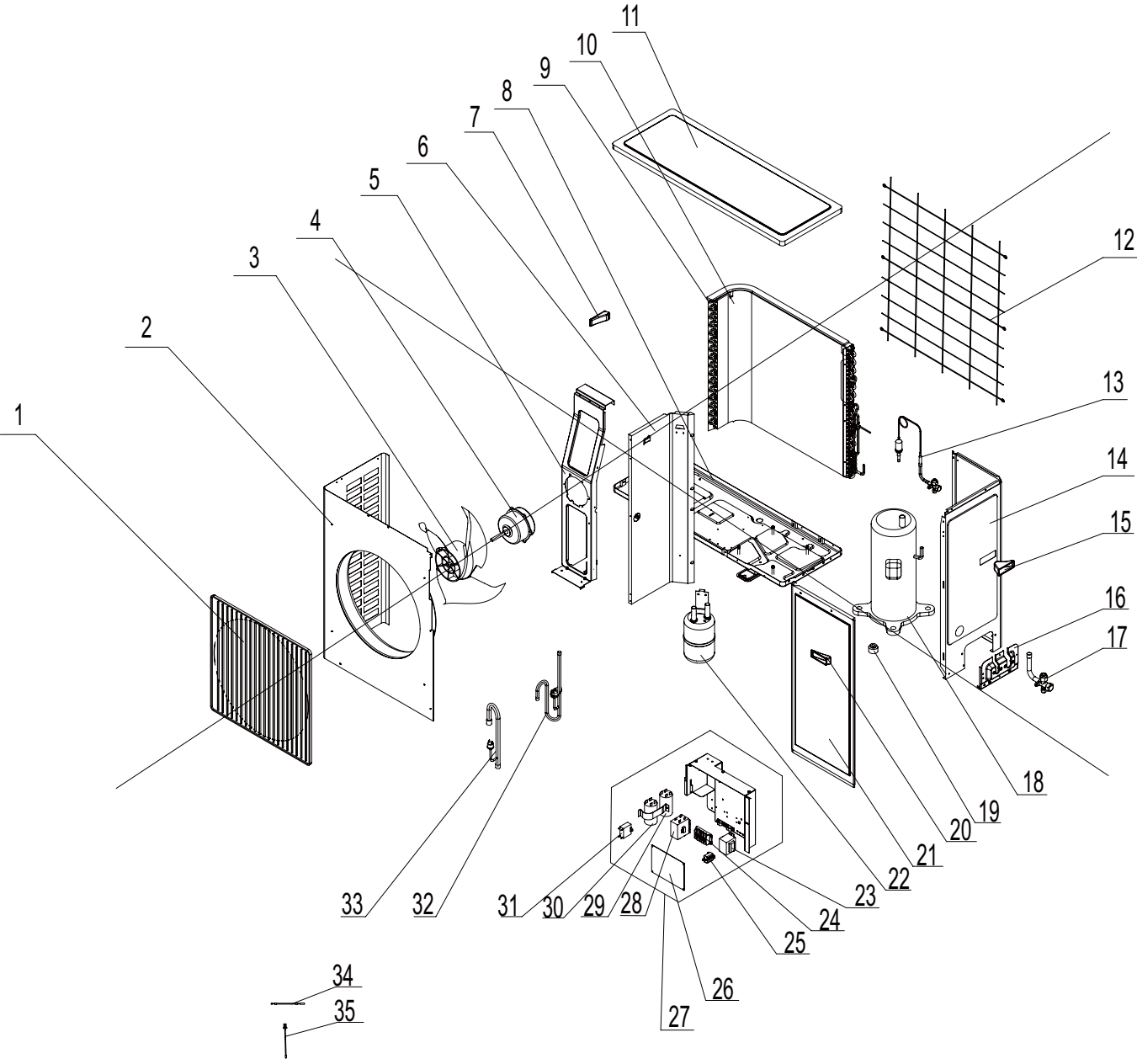
Exploded Views and Parts list

No.	Description	Part Code	Qty
		GWCN28FANK1A1A/I	
		Product Code	
1	Front Panel	20012138	1
2	Filter Sub-Assy	11122051	2
3	Front Case Sub-assy	2000257202	1
4	Front Case	2000237002	1
5	Upper Guide Louver	10512062	1
6	Lower Guide Louver	10512063	1
7	Connecting Rod of Swing Louver	10582040	3
8	Air Louver	10512110	15
9	Water Tray	20182043	1
10	Air Guider System in Water Tray Assy	101020162	1
11	Screw Cover	242520053	3
12	Rubber Plug (Water Tray)	76712012	1
13	Rear Case Sub-Assy	22202092	1
14	Cross Flow Fan	10352420	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	Axile Bush	10542704	6
17	Evaporator Assy	01002930	1
18	Wall Mounting Frame	01252398	1
19	Fan Motor	150121052	1
20	Pipe Clamp	26112071	1
21	Left Evaporator Support	24212041	1
22	Drainage Hose	0523001403	1
23	Motor Fixed Clip	26112069	1
24	Step Motor	1521210701	1
25	Press Plate(Crank)	26112070	1
26	Crank-guide	10582041	1
27	Lower crank	10562005	1
28	Upper Crank	10562004	1
29	Electric Box Assy	2010240629	1
30	Electric Box	20102250	1
31	Capacitor CBB61	33010737	1
32	Transformer	43110236	1
33	XY Capacitor	33020201	1
34	Terminal Board	42011233	1
35	Main Board	30035091	1
36	Display Board	30562006	1
37	Electric Box Cover	20102252	1
38	Electric Box Cover	20112044S	1
39	Remote Controller	30510049	1
40	Connecting Cable	400205405	1
41	Connecting Cable	400205235	1
42	Tube Sensor	390000591	1
43	Ambient Temperature Sensor	390000451	1

The data above are subject to change without notice.

8.2 Outdoor Unit

Model GWCN28FANK1A1A/O

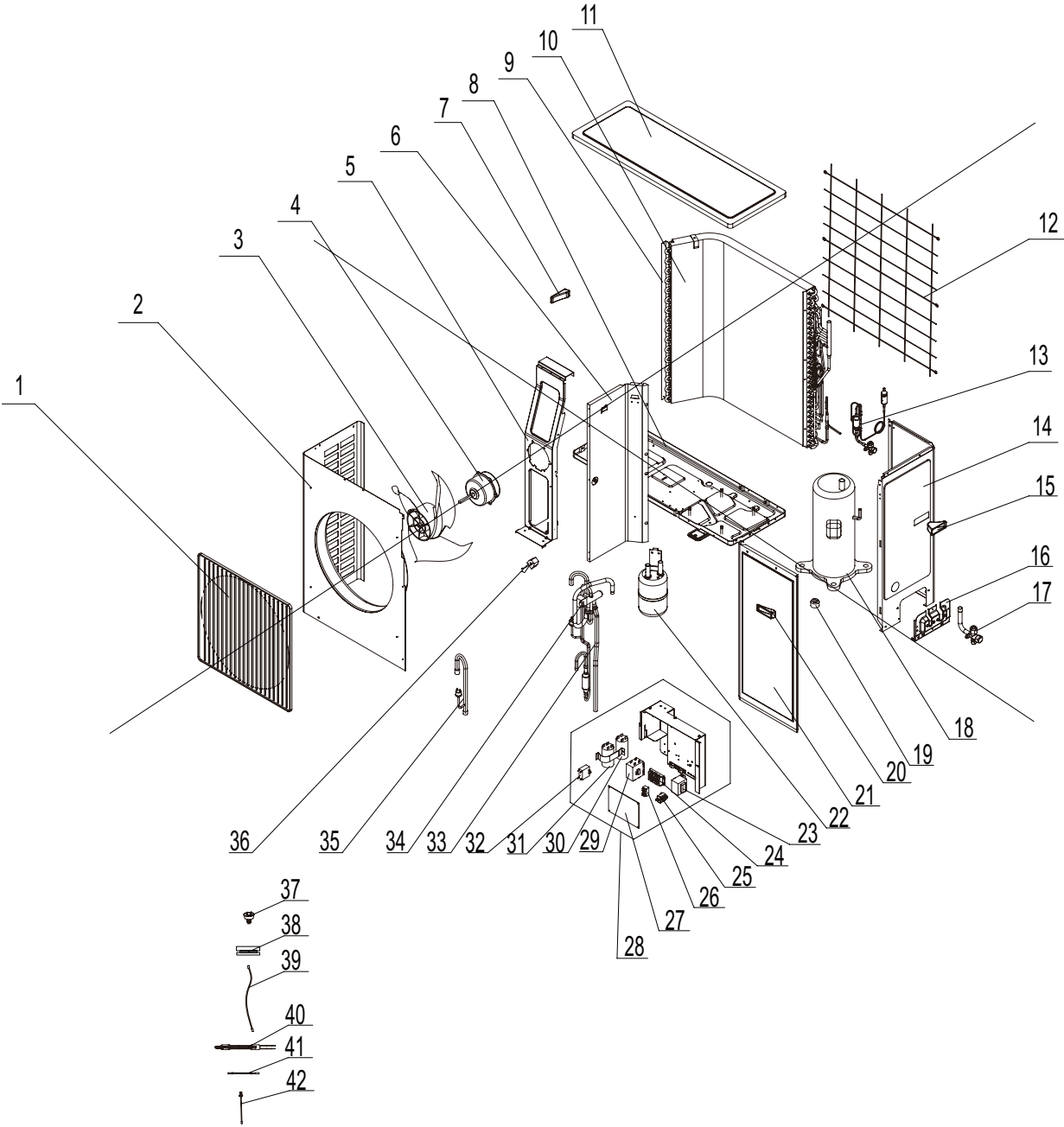


Exploded Views and Parts list

No.	Description	Part Code	Qty
		GWCN28FANK1A1A/O	
		Product Code	
		CA152W0440	
1	Front Grill Sub-assy	22265403	1
2	Cabinet	01435103P	1
3	Axial Flow Fan	10335401	1
4	Fan Motor	15015058	1
5	Motor Support Sub-Assy	01705403	1
6	Clapboard Sub-Assy	01235403	1
7	Left Handle	26235401	1
8	Chassis Sub-assy	01203715P	1
9	Condenser Support Plate Sub-assy	01175402	1
10	Condenser Assy	01113093	1
11	Top Cover	01255012P	1
12	Rear Grill	01475401	1
13	Capillary Sub-assy	0310360501	1
14	Rear Side Plate Sub-Assy	01308748	1
15	Handle	26235253	1
16	Valve Support Sub-Assy	01715402	1
17	Gas Valve Sub-Assy	07105252	1
18	Compressor and Fittings	00103154	1
19	Rubber Grommet	76710240	3
20	Handle	26235253	1
21	Front Side Plate Sub-Assy	01305406	1
22	Gas-liquid Separator	07225014	1
23	Transformer	43110236	1
24	Terminal Board	42010258	1
25	PTC Resistance	34060008	1
26	Main Board	30135313	1
27	Electric Box Assy	02603125	1
28	AC Contactor	44010245	1
29	Capacitor CBB65	33000018	1
30	Capacitor CBB65	33000012	1
31	Capacitor CBB61	33010010	1
32	Discharge Tube Sub-assy	03633988	1
33	Inhalation Tube Sub-assy	03533568	1
34	Ambient Temperature Sensor	390002064	1
35	Discharge Sensor	39000017	1

The data above are subject to change without notice.

Model GWHN28FANK1A1A/O



Exploded Views and Parts list

No.	Description	Part Code	Qty
		GWHN28FANK1A1A/O	
		Product Code	
1	Front Grill Sub-assy	22265403	1
2	Cabinet	01435103P	1
3	Axial Flow Fan	10335401	1
4	Fan Motor	15015058	1
5	Motor Support Sub-Assy	1705403	1
6	Clapboard Sub-Assy	01235403	1
7	left handle	26235401	1
8	Chassis Sub-assy	01203715P	1
9	Condenser support plate sub-assy	01175402	1
10	Condenser Assy	01105175	1
11	Top Cover	01255012P	1
12	Rear Grill	01475401	1
13	Capillary Sub-Assy	03103798	1
14	Rear Side Plate Sub-Assy	01308748	1
15	Handle	26235253	1
16	Valve Support Sub-Assy	01715001	1
17	Gas Valve Sub-Assy	07105252	1
18	Compressor and fittings	00103154	1
19	Compressor Gasket	76710240	4
20	Handle	26235253	1
21	Front Side Plate Sub-Assy	01305406	1
22	Gas-liquid Separator	07225014	1
23	Transformer	43110236	1
24	Terminal Board	42010258	1
25	PTC Resistance	34060008	1
26	Terminal Board	42011103	1
27	Main Board	30135314	1
28	Electric Box Assy	0260312501	1
29	AC Contactor	44010222	1
30	Capacitor CBB65	33000012	1
31	Capacitor CBB65	33000018	1
32	Capacitor CBB61	33010010	1
33	4-way Valve Assy	03023856	1
34	4-way Valve	43000082	1
35	Inhalation Tube Sub-Assy	03533568	1
36	Magnet Coil	430004002	1
37	Drainage Connector	06123401	1
38	Drainage Plug	06813401	2
39	Tube sensor	3900012121	1
40	electrical heater	76515407	1
41	Ambient Temperature Sensor	390002064	1
42	Discharge sensor	39000017	1

The data above are subject to change without notice.

9. Troubleshooting

9.1 Precautions before Performing Inspection or Repair

Be cautious during installation and maintenance. Do operation following the regulations to avoid electric shock and casualty or even death due to drop from high altitude.

* Static maintenance is the maintenance during de-energization of the air conditioner. For static maintenance, make sure that the unit is de-energized and the plug is disconnected.

* Dynamic maintenance is the maintenance during energization of the unit. Before dynamic maintenance, check the electricity and ensure that there is ground wire on the site. Check if there is electricity on the housing and connection copper pipe of the air conditioner with voltage tester. After ensure insulation place and the safety, the maintenance can be performed.

Take sufficient care to avoid directly touching any of the circuit parts without first turning off the power.

At times such as when the circuit board is to be replaced, place the circuit board assembly in a vertical position.

Normally,diagnose troubles according to the trouble diagnosis procedure as described below.(Refer to the check points in servicing written on the wiring diagrams attached to the indoor/outdoor units.)

NO.	Troubleshooting procedure
1	Confirmation
2	Judgement by Flashing LED of Indoor/Outdoor Unit
3	How to Check simply the main part

Precautions when inspecting the control section of the outdoor unit:

A large-capacity electrolytic capacitor is used in the outdoor unit controller(inverter).Therefore,if the power supply is turned off,charge (charging voltage DC280V to 380V)remains and discharging takes a lot of time.. After turning off the power source,if touching the charging section before discharging, an electrical shock may be caused. Please open the outdoor unit after the unit is power off for 20min.

9.2 Confirmation

(1)Confirmation of Power Supply

Confirm that the power breaker operates(ON) normally;

(2)Confirmation of Power Voltage

Confirm that power voltage is AC 220–230–240 ± 10%.

If power voltage is not in this range, the unit may not operate normally.

9.3 Judgement by Flashing LED of Indoor/Outdoor Unit

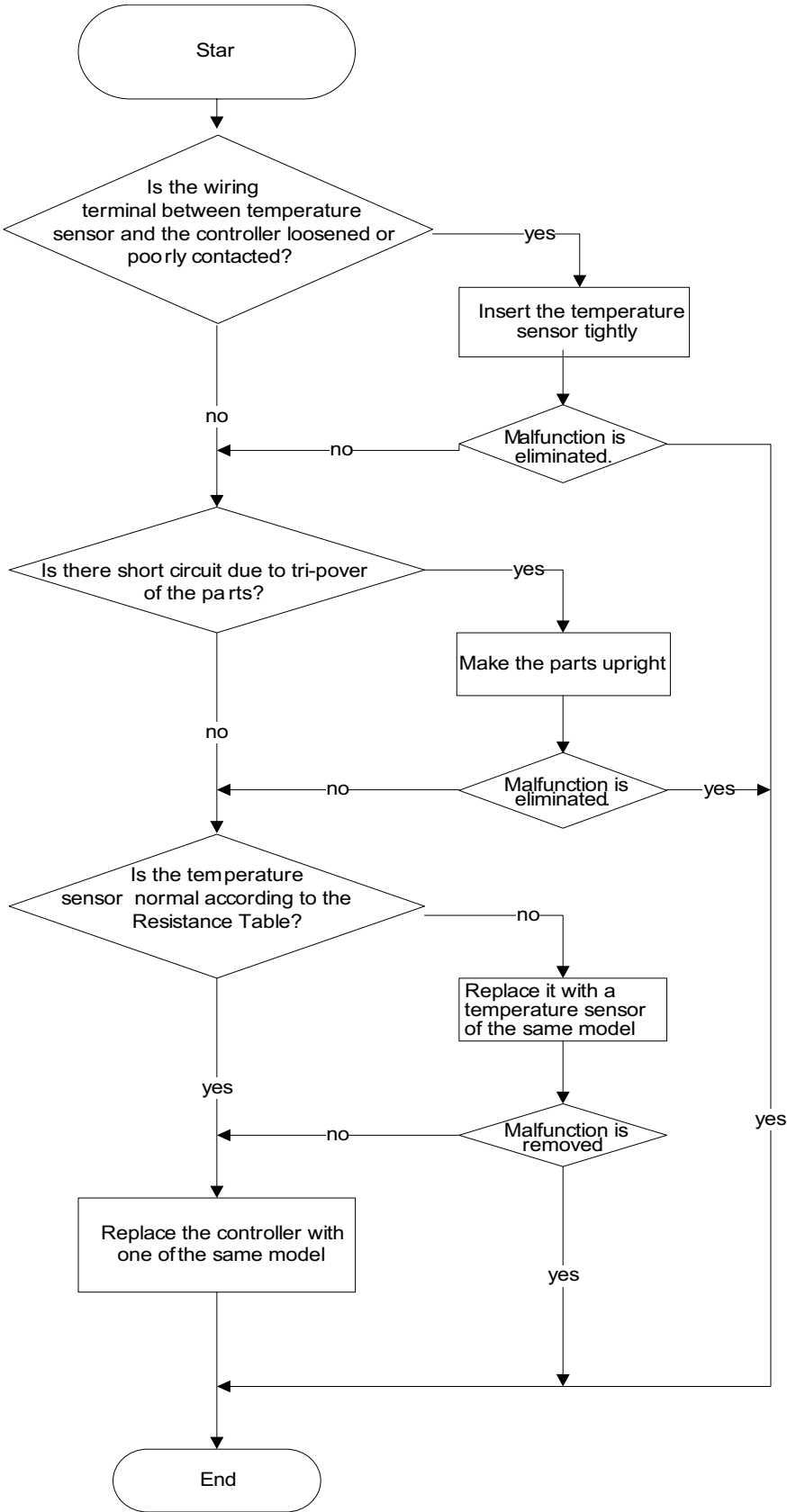
No.	Malfunction Name	Display Method of Indoor Unit			A/C Status	Possible Causes	
		Error Code	(During blinking, ON for 0.5S and OFF for 0.5 S)				
			Operation Lamp	COOL Lamp			HEAT Lamp
1	Indoor ambient temperature sensor is open/short-circuited	F1		OFF 3S and blinks once		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads (such as compressor, outdoor fan, 4-way valve) stop operation; During heating operation, the complete unit stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between indoor ambient temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to trip-over of the parts on controller; 3. Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken. 	
2	Indoor evaporator temperature sensor is open/short-circuited	F2		OFF 3S and blinks twice		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, except indoor fan operates, other loads stop operation; During heating operation, the complete unit stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between indoor evaporator temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3. Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken. 	
3	Outdoor ambient temperature sensor is open/short-circuited	F3		OFF 3S and blinks 3 times		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, compressor stops and indoor fan operates; During heating operation, the complete unit stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between outdoor ambient temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3. Outdoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken. 	
4	Outdoor condenser temperature sensor is open/short-circuited	F4		OFF 3S and blinks 4 times		<p>The unit will stop operation as it reaches the temperature point. During cooling and drying operation, compressor stops and indoor fan operates; During heating operation, the complete unit stops operation.</p> <ol style="list-style-type: none"> 1. The wiring terminal between outdoor condenser temperature sensor and controller is loosened or poorly contacted; 2. There's short circuit due to the trip-over of the parts on controller; 3. Outdoor condenser temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor) 4. Main board is broken. 	

5	High pressure protection	E1	OFF 3S and blinks once			<p>During cooling and drying operation, except indoor fan operates, all loads stop operation. During heating operation, if it is inverter unit, the complete unit stops; if it is floor standing unit, the complete unit stops and operation of remote controller or controller is unavailable.</p>	<ol style="list-style-type: none"> 1. The main board and the display panel are not connected well. 2. The OVC terminal on main board is not connected well with the high pressure switch on the complete unit. 3. The wiring of high pressure switch is loosened. 4. Refrigerant is superabundant; 5. Poor heat exchange (including blocked heat exchanger and bad radiating environment); 6. Ambient temperature is too high; (if it is 3-phase unit, the high pressure protection may be caused by overcurrent protection due to this reason) 7. The supply voltage is abnormal (if it is 3-phase unit, the high pressure protection may be caused by overcurrent protection due to this reason) 8. The air intake and air discharge at indoor / outdoor heat exchanger are not smooth. The air cycle is short circuited. 9. Filter and heat exchange fins of indoor/outdoor units are blocked. 10. The system pipeline is blocked. 11. The gas valve and liquid valve for outdoor unit are not completely opened. 12. The OVC input is at high level.
6	Freeze protection	E2	OFF 3S and blinks twice			<p>During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates.</p>	<ol style="list-style-type: none"> 1. Poor air-return in indoor unit; 2. Abnormal fan speed; 3. Dirty evaporator; 4. System is normal, but the indoor tube temperature sensor is abnormal, or the tube temperature sensor is not connected well.
7	High discharge temperature protection of compressor	E4	OFF 3S and blinks 4 times			<p>During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.</p>	<ol style="list-style-type: none"> 1. Abnormal system (e.g.: blockage, etc) 2. Abnormal rotation speed of outdoor motor (cooling) 3. Abnormal air intake (cooling) 4. System is normal, but the compressor discharge temperature sensor is abnormal or poorly contacted.

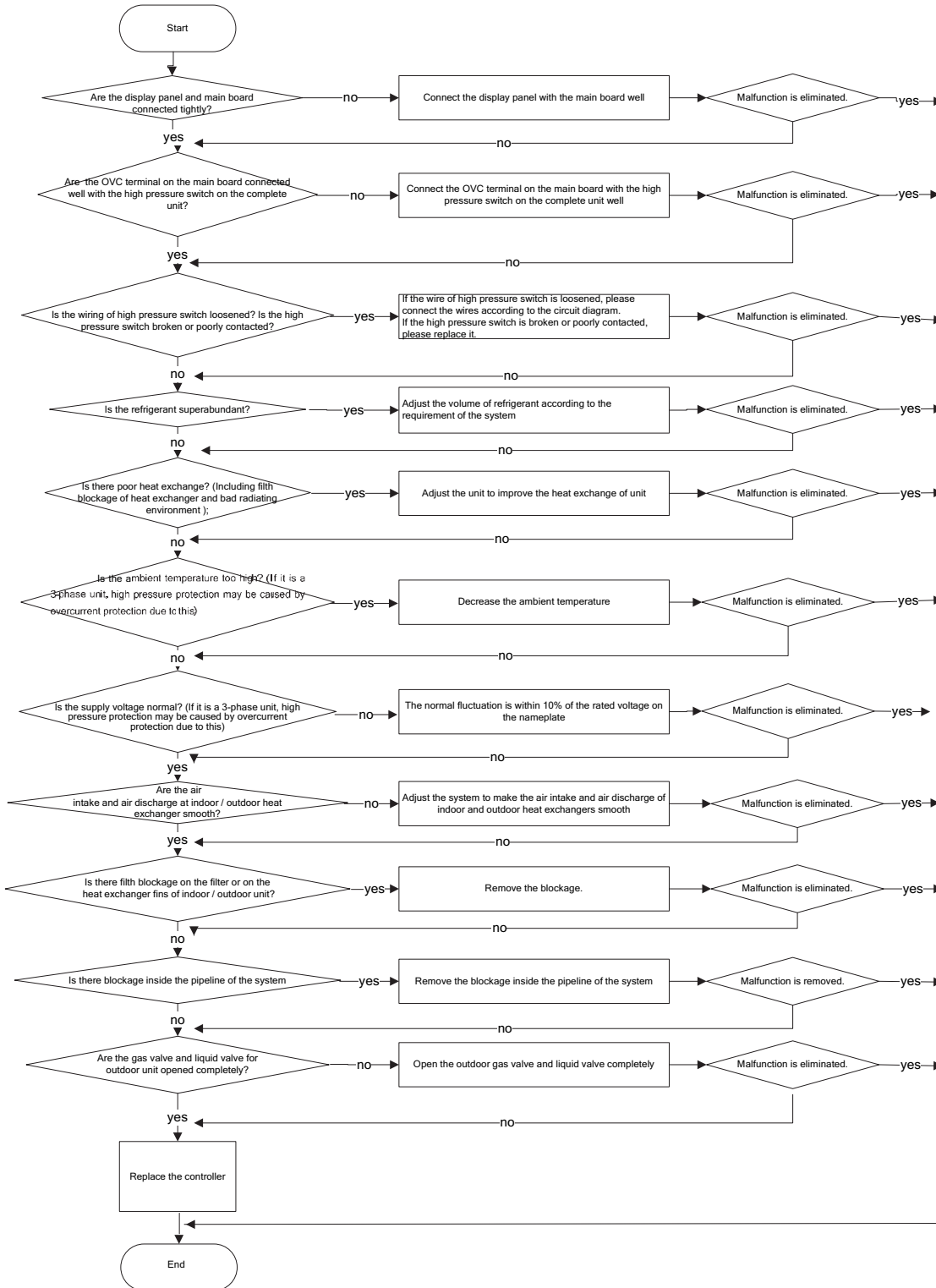
8	Overcurrent protection	E5	OFF 3S and blinks 5 times			During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	<p>1. Unstable supply voltage. Normal fluctuation shall be within 10% of the rated voltage on the nameplate.</p> <p>2. Supply voltage is too low and load is too high.</p> <p>3. Measure the current of live wire on main board. If the current isn't higher than the overcurrent protection value, please check the controller.</p> <p>4. The indoor and outdoor heat exchangers are too dirty, or the air inlet and air outlet are blocked.</p> <p>5. The fan motor is not running. Abnormal fan speed: fan speed is too low or the fan doesn't run.</p> <p>6. The compressor is not running normally. There is abnormal sound, oil leakage or the temperature of the shell is too high, etc.</p> <p>7. There's blockage in the system (filth blockage, ice plug, greasy blockage, Y-valve hasn't been opened completely)</p>
9	Communication malfunction	E6	OFF 3S and blinks 6 times			During cooling operation, compressor stops while indoor fan motor operates. During heating operation, the complete unit stops.	<p>1. The communication line is not connected tightly or poorly contacted. Poor contact of any line may cause communication malfunction.</p> <p>2. The match between main board and display panel is incorrect. Indoor and outdoor unit boards are matched incorrectly.</p> <p>3. Incorrect wire connection.</p> <p>4. Controller is damaged.</p>

9.4 How to Check Simply the Main Part

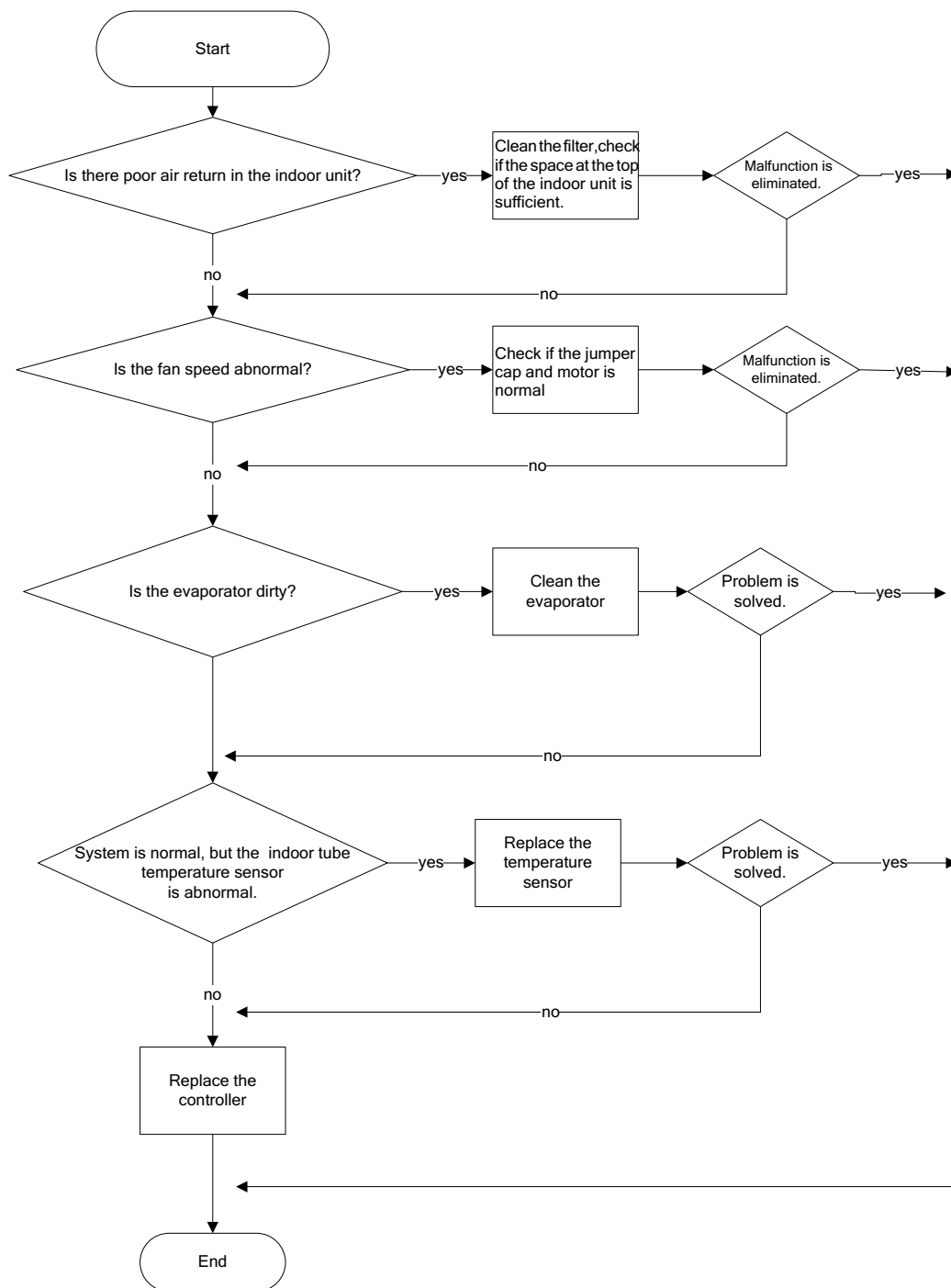
9.4.1 F1/F2/F3/F4 malfunction



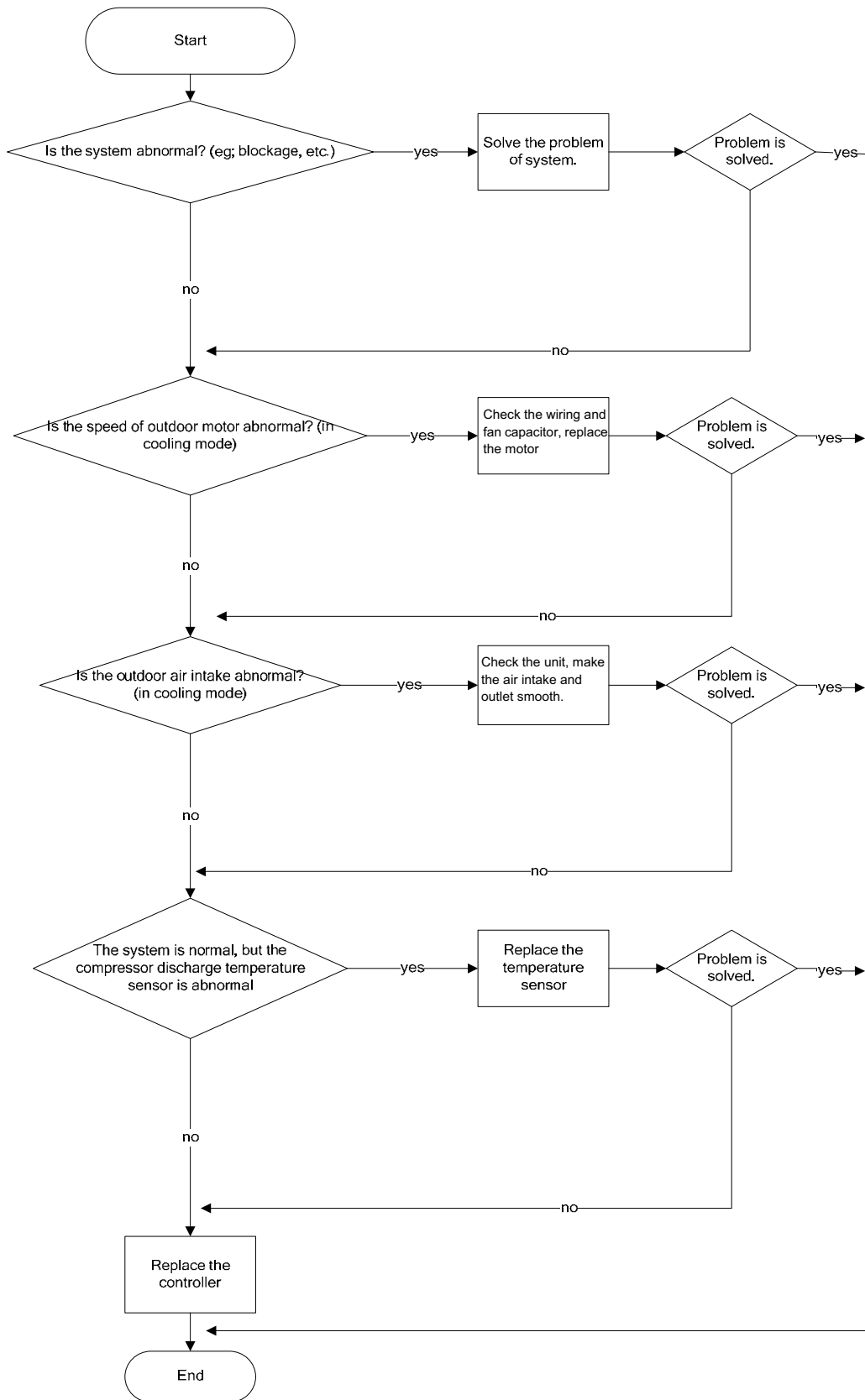
9.4.2 E1 malfunction



9.4.3 E2 malfunction



9.4.4 E4 malfunction



9.4.5 E5 malfunction

