

9. Maintenance

9.1 Error Code List

Malfunction Name	Display Method of Indoor Unit (Error Code)	A/C Status	Possible Causes(For specific maintenance method, please refer to the following procedure of troubleshooting)
Indoor ambient temperature sensor is open/short-circuited	F1	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.	<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.
Indoor evaporator temperature sensor is open/short-circuited	F2	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.	<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.
Blocked protection of IDU fan motor	H6	IDU fan, ODU fan, compressor and electric heat tube stop operation. Horizontal louver stops at the current position.	<ol style="list-style-type: none"> 1. The feedback terminal of PG motor is not connected tightly. 2. The control terminal of PG motor is not connected tightly. 3. Fan blade rotates unsmoothly. 4. Malfunction of motor 5. Main board is broken.
Malfunction protection of jumper cap	C5	Operation of remote controller or control panel is available, but the unit won't act.	<ol style="list-style-type: none"> 1. There's not jumper cap on the main board. 2. Jumper cap is not inserted properly and tightly. 3. Jumper cap is damaged. 4. Controller is damaged.
Zero-crossing inspection circuit malfunction of the IDU fan motor	U8	Operation of remote controller or control panel is available, but the unit won't act.	<ol style="list-style-type: none"> 1. Quick de-energization and energization. Wrong judgement by the controller because the electric discharging of capacitor is slow. 2. Zero-crossing inspection circuit of main board for controller is abnormal.
High pressure protection	E1	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.	<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.
Communication malfunction	E6	During cooling operation, compressor stops while indoor fan motor operates. During heating operation , the complete unit stops.	<ol style="list-style-type: none"> 1. The communication line is not connected tightly or poorly contacted. Poor contact of any line may cause communication malfunction. 2. The match between main board and display panel is incorrect. Indoor and outdoor unit boards are matched incorrectly. 3. Incorrect wire connection. 4. Controller is damaged.

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Overcurrent protection	E5	During cooling and drying operation, compressor and outdoor fan stop while indoor fan operates. During heating operation, all loads stop.	<ol style="list-style-type: none"> 1. Unstable supply voltage. Normal fluctuation shall be within 10% of the rated voltage on the nameplate. 2. Supply voltage is too low and load is too high. 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. 4. The indoor and outdoor heat exchangers are too dirty, or the air inlet and air outlet are blocked. 5. The fan motor is not running. Abnormal fan speed: fan speed is too low or the fan doesn't run 6. The compressor is not running normally. There is abnormal sound, oil leakage or the temperature of the shell is too high, etc. 7. There's blockage in the system (filth blockage, ice plug, greasy blockage, Y-valve hasn't been opened completely)
Overload malfunction	E8	The entire unit stops.	<ol style="list-style-type: none"> 1. Indoor and outdoor heat exchanger is too dirty? Or air inlet/outlet is blocked? 2. Fan motor doesn't work at a normal fan speed; fan speed is too low or the fan doesn't run. 3. Compressor operates normally or not? Is there any abnormal noise or oil leak? Casing is too hot? 4. System is blocked inside? (Dirt blockage? Ice blockage? Oil blockage? Y-valve is not fully open?) 5. Main board temperature sensor detects wrongly.
Overload protection for compressor	H3	The entire unit stops.	<ol style="list-style-type: none"> 1. Outdoor and indoor heat exchangers are too dirty or the air inlet/ outlet is blocked. 2. Fan motor doesn't work at a normal fan speed; fan speed is too low or the fan doesn't run. 3. Compressor doesn't work normally. Strange noise or leakage occurs. Temperature of the shell is too high. 4. System is blocked inside(dirt block, ice block, oil block, Y-valve not fully open). 5. High pressure switch is abnormal 6. The refrigerant is leaking and cause overheating protection to compressor
Insufficient fluorine protection	F0	Indoor fan runs according to set fan and other loads will stop.	<ol style="list-style-type: none"> 1.Refrigerant leakage; 2.Indoor evaporator temperature sensor works abnormally; 3.The unit has been plugged up somewhere; 4.The compressor can't be started up normally. Because the power voltage for the complete unit is too low, and the outdoor working condition is too high.
Outdoor condenser temperature sensor is open/shortcircuited	F4	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.	<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.
Malfunction of detecting plate(WIFI)	JF	Loads operate normally, while the unit can't be normally controlled by APP.	<ol style="list-style-type: none"> 1. Main board of indoor unit is damaged; 2. Detection board is damaged; 3. The connection between indoor unit and detection board is not good;
Anti-freezing protection for evaporator	E2		Not the error code. It's the status code for the operation.
Cold air prevention protection	H1		Not the error code. It's the status code for the operation.
Refrigerant recovery mode	Fo		Refrigerant recovery. The Serviceman operates it for maintenance.

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Defrosting	Heating indicator off for 0.5s and then blinks for 10s		Not the error code. It's the status code for the operation.
Undefined outdoor unit error	oE	Cool: compressor and outdoor fan stops operation, while indoor fan operates; Heat: compressor, outdoor fan and indoor fan stop operation.	<ol style="list-style-type: none"> 1. Outdoor ambient temperature exceeds the operation range of unit (eg: less than -20°C or more than 60°C for cooling; more than 30°C for heating); 2. Failure startup of compressor? 3. Are wires of compressor not connected tightly? 4. Is compressor damaged? 5. Is main board damaged?
Cold air prevention protection	E9		Not the error code. It's the status code for the operation.

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9.2 Procedure of Troubleshooting

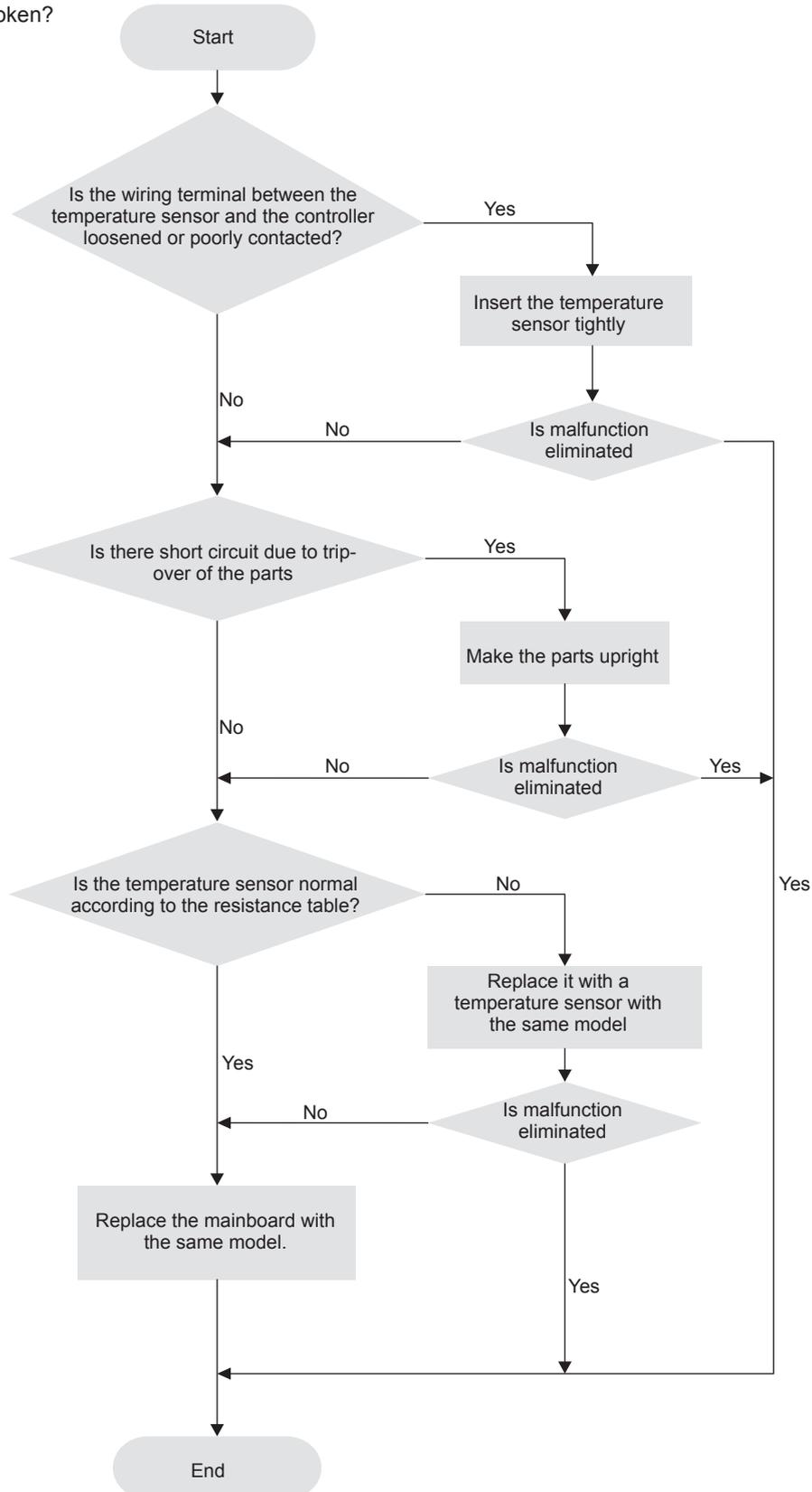
● Indoor unit:

1. Malfunction of Temperature Sensor F1, F2

Main detection points:

- Is the wiring terminal between the temperature sensor and the controller loosened or poorly contacted?
- Is there short circuit due to trip-over of the parts?
- Is the temperature sensor broken?
- Is mainboard broken?

Malfunction diagnosis process:



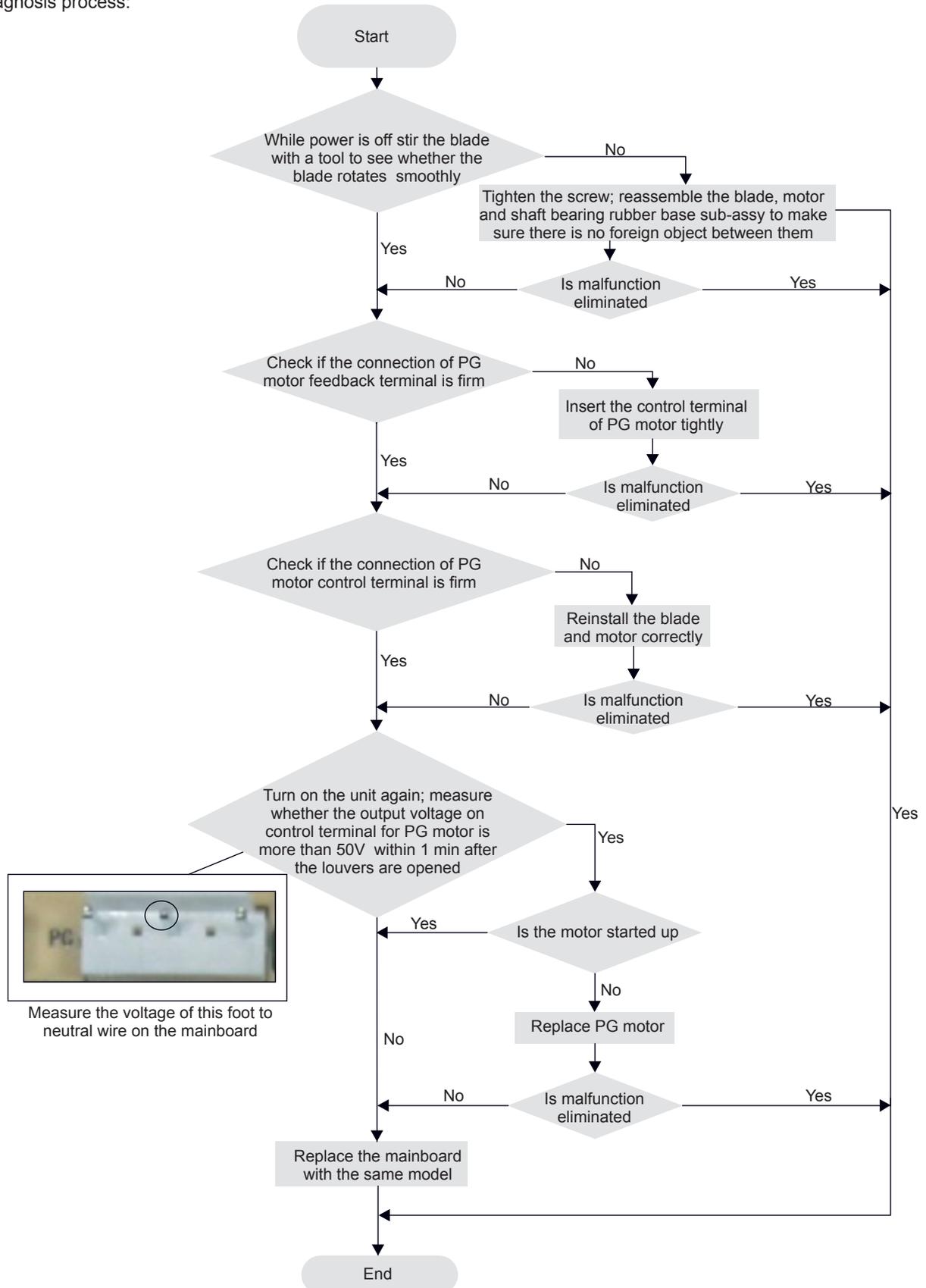
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2. Malfunction of Blocked Protection of IDU Fan Motor H6

Main detection points:

- Smoothly the control terminal of PG motor connected tightly?
- Smoothly the feedback interface of PG motor connected tightly?
- The fan motor can't operate?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:



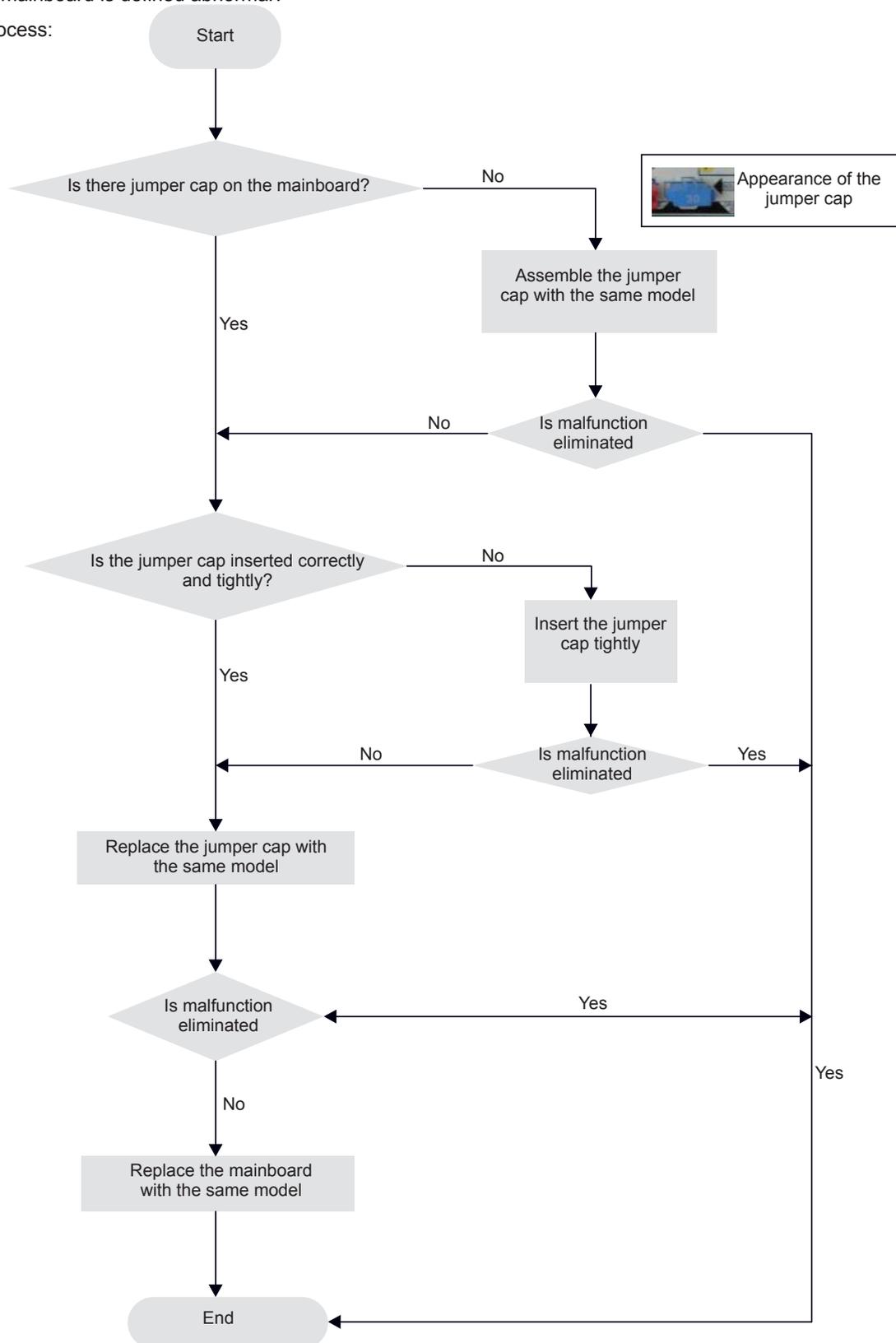
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3. Malfunction of Protection of Jumper Cap C5

Main detection points:

- Is there jumper cap on the mainboard?
- Is the jumper cap inserted correctly and tightly?
- The jumper is broken?
- The motor is broken?
- Detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:



Appearance of the jumper cap

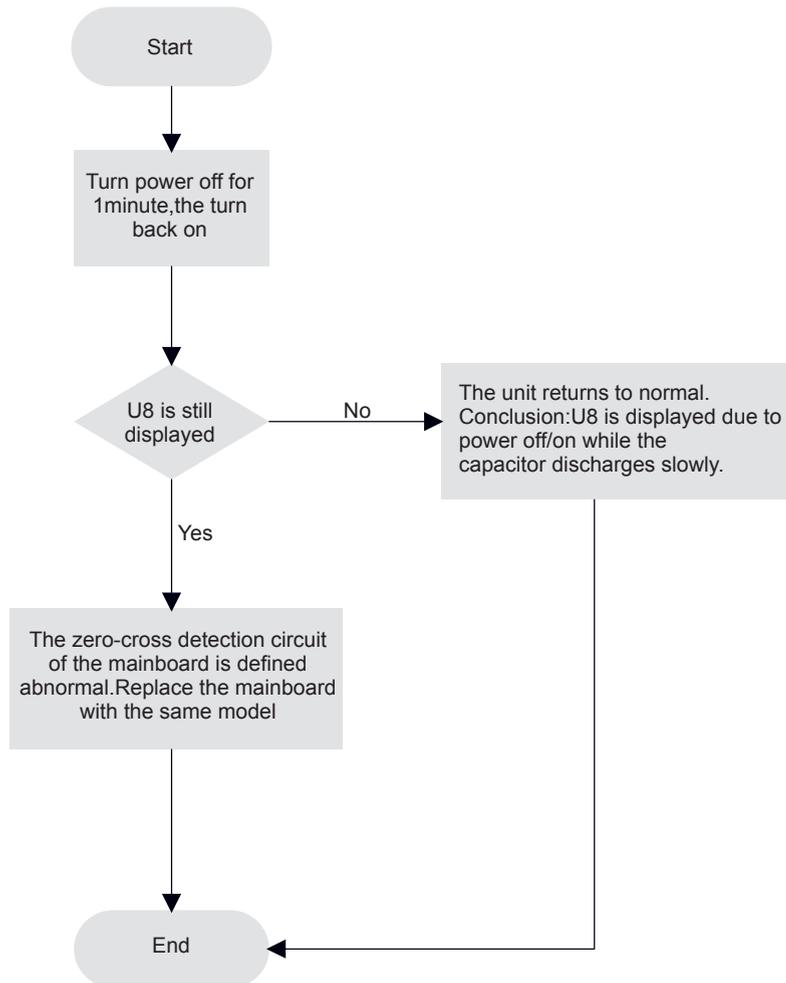
9. Maintenance

4. Malfunction of Zero-crossing Inspection Circuit Malfunction of the IDU Fan Motor U8

Main detection points:

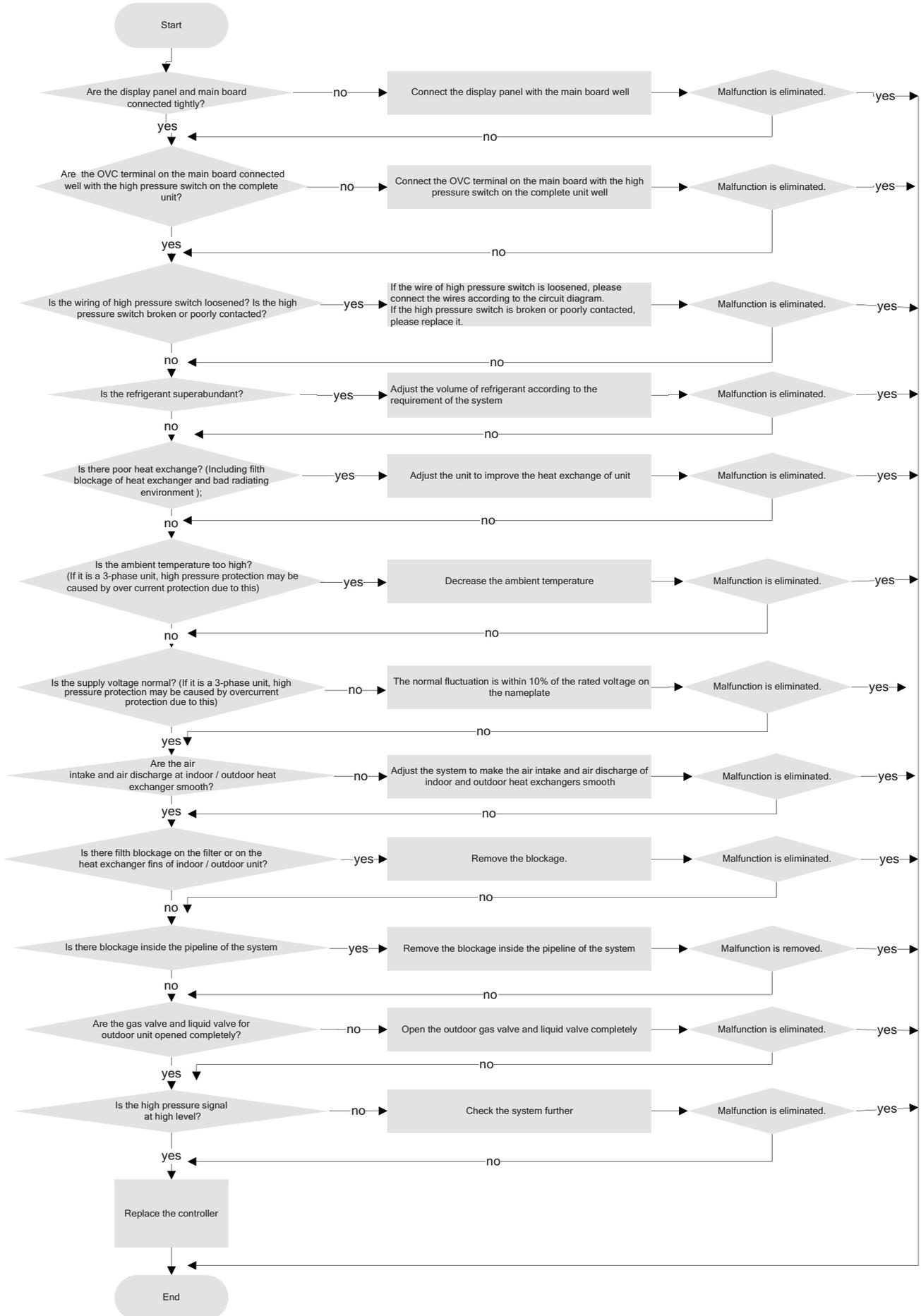
- Instant energization after de-energization while the capacitor discharges slowly?
- The zero-cross detection circuit of the mainboard is defined abnormal?

Malfunction diagnosis process:



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5. High pressure protection (E1)



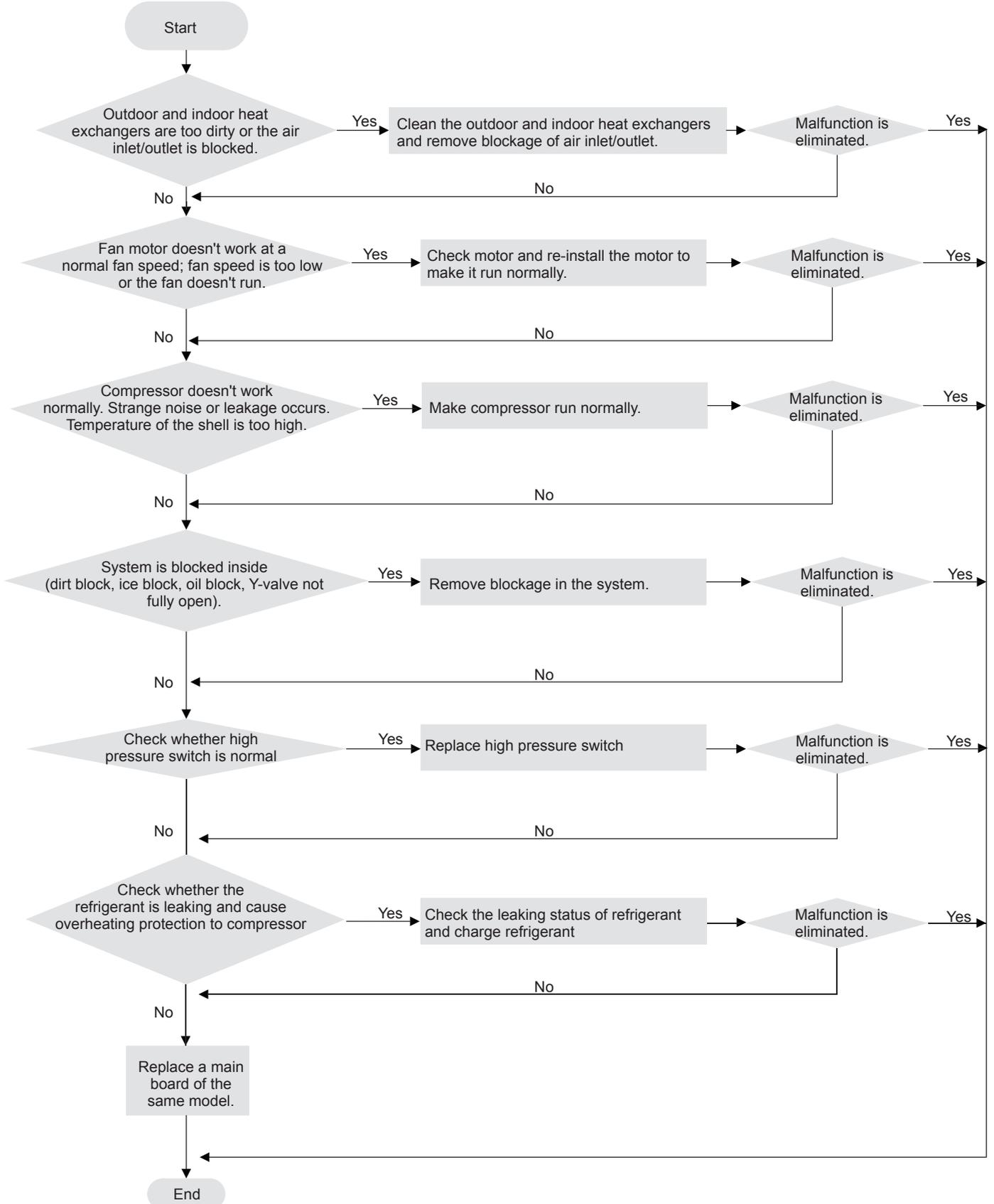
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6. Overload Protection Compressor H3

Main detection points:

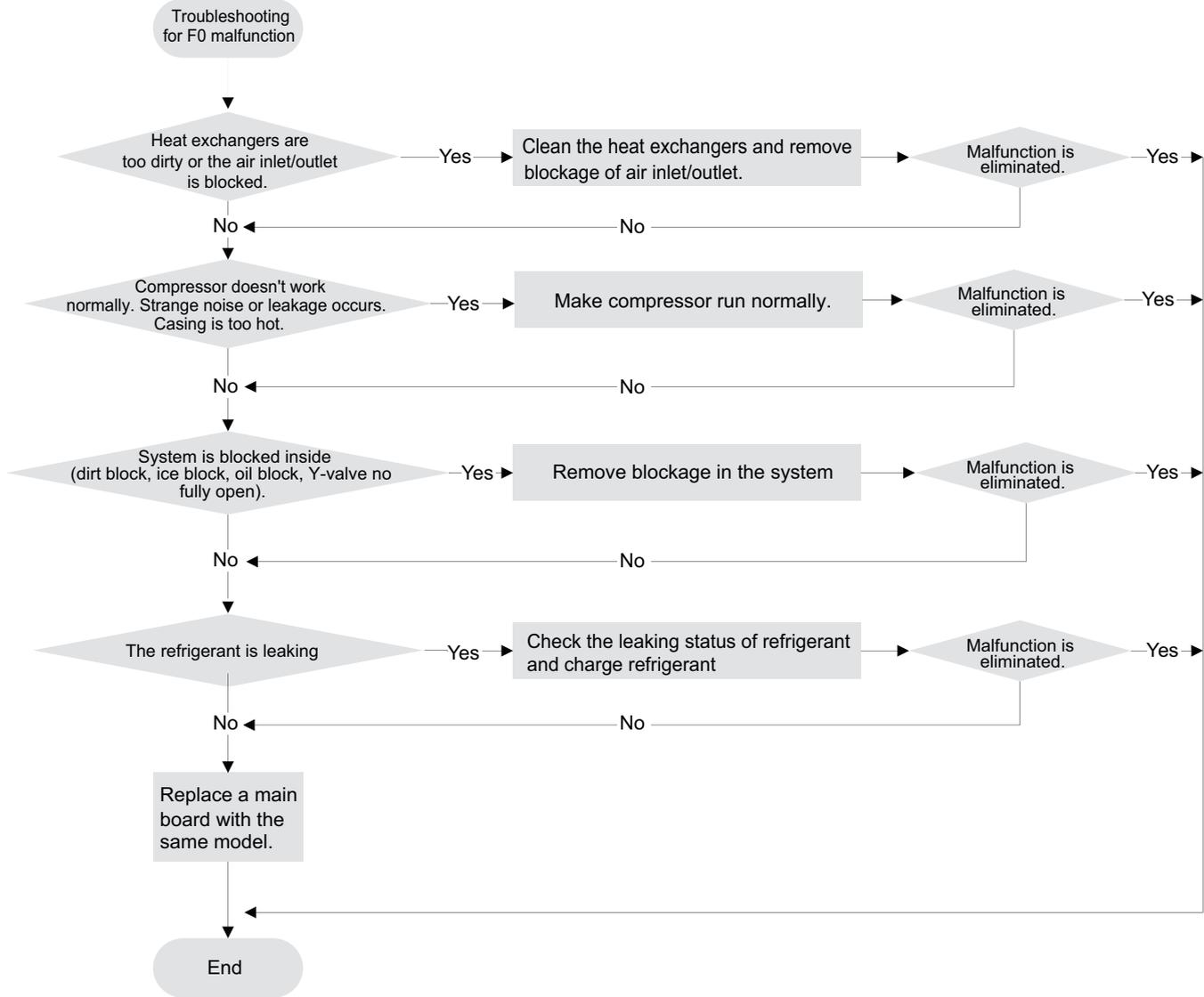
- Heat exchange of unit is not good? (heat exchanger is dirty and unit radiating environment is bad)
- Fan motor is not working?
- Too much load of the system causes high temperature of compressor after working for a long time?
- Whether high pressure switch is normal?
- If the refrigerant is leaked?

Malfunction diagnosis process:



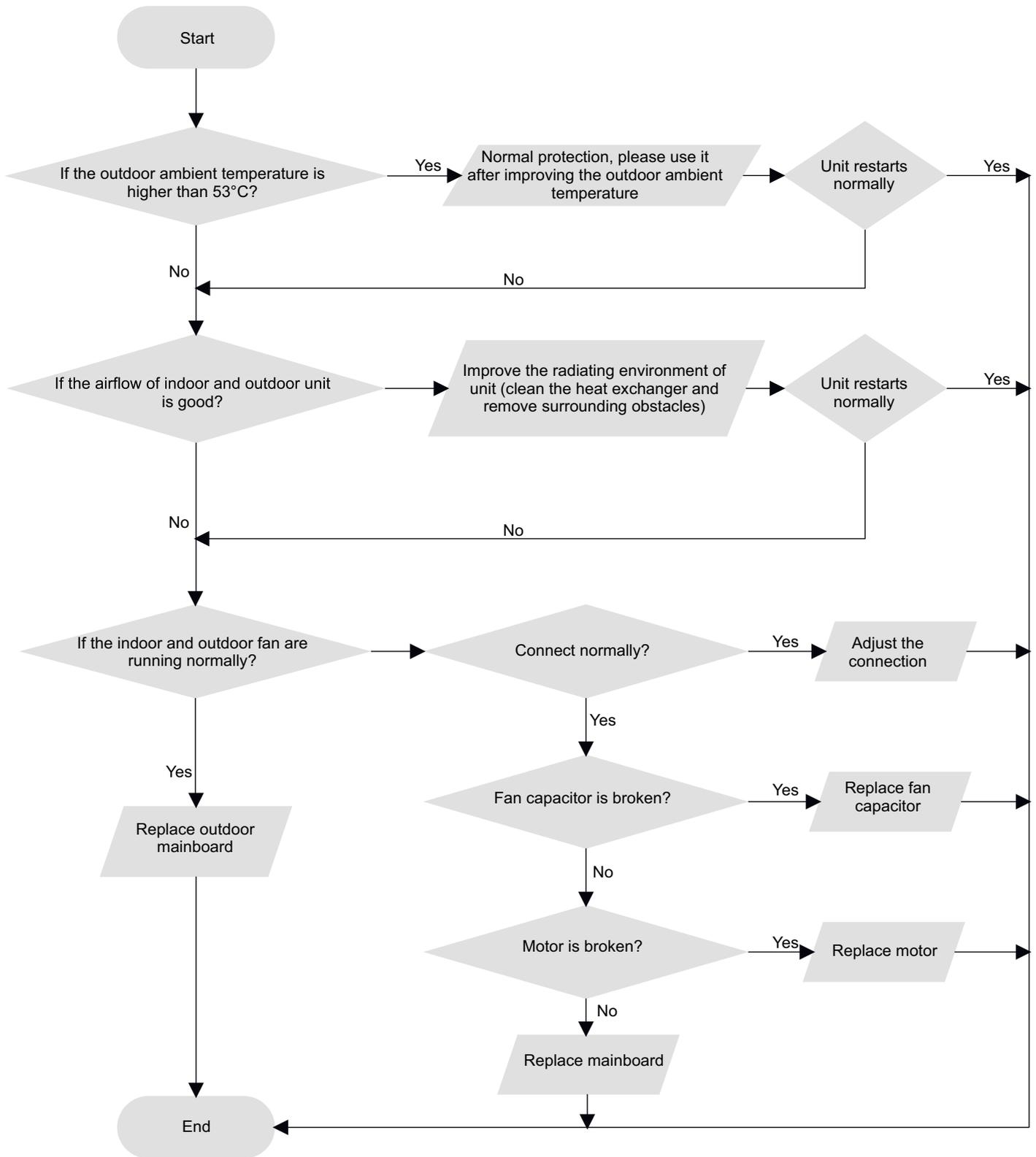
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7. Malfunction of Insufficient fluorine protection F0



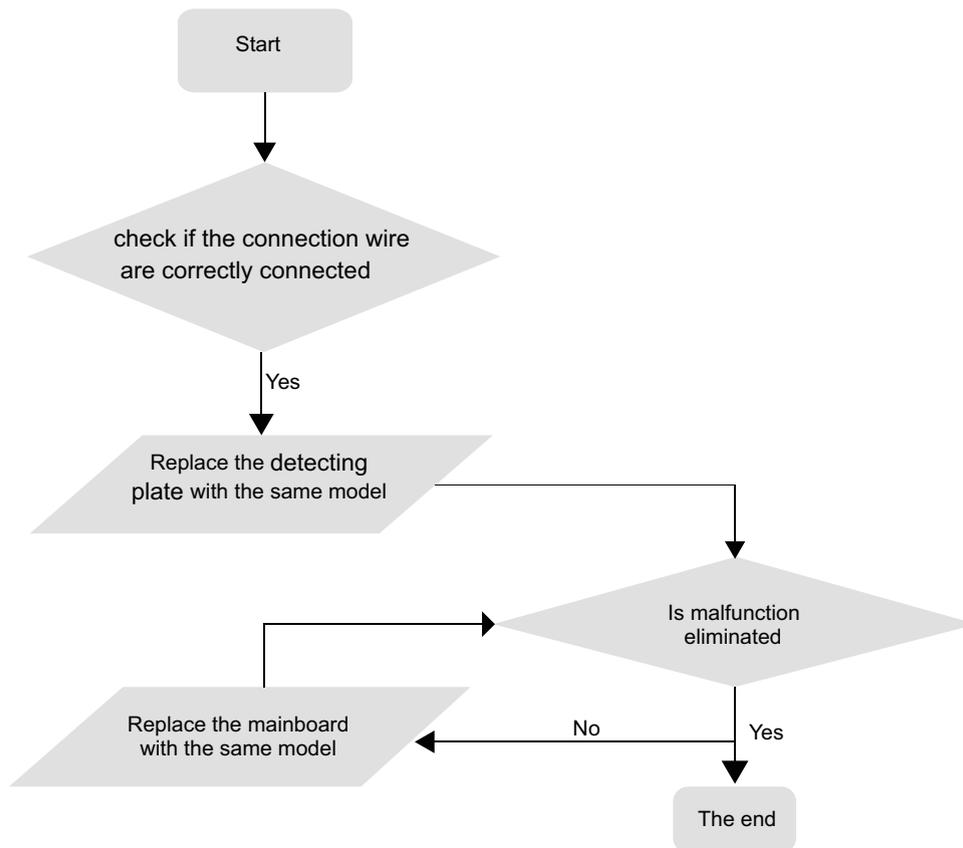
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8. High Temperature and Overload Protection (AP1 below means control board of outdoor unit) E8



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9. Malfunction of detecting plate(WIFI) JF



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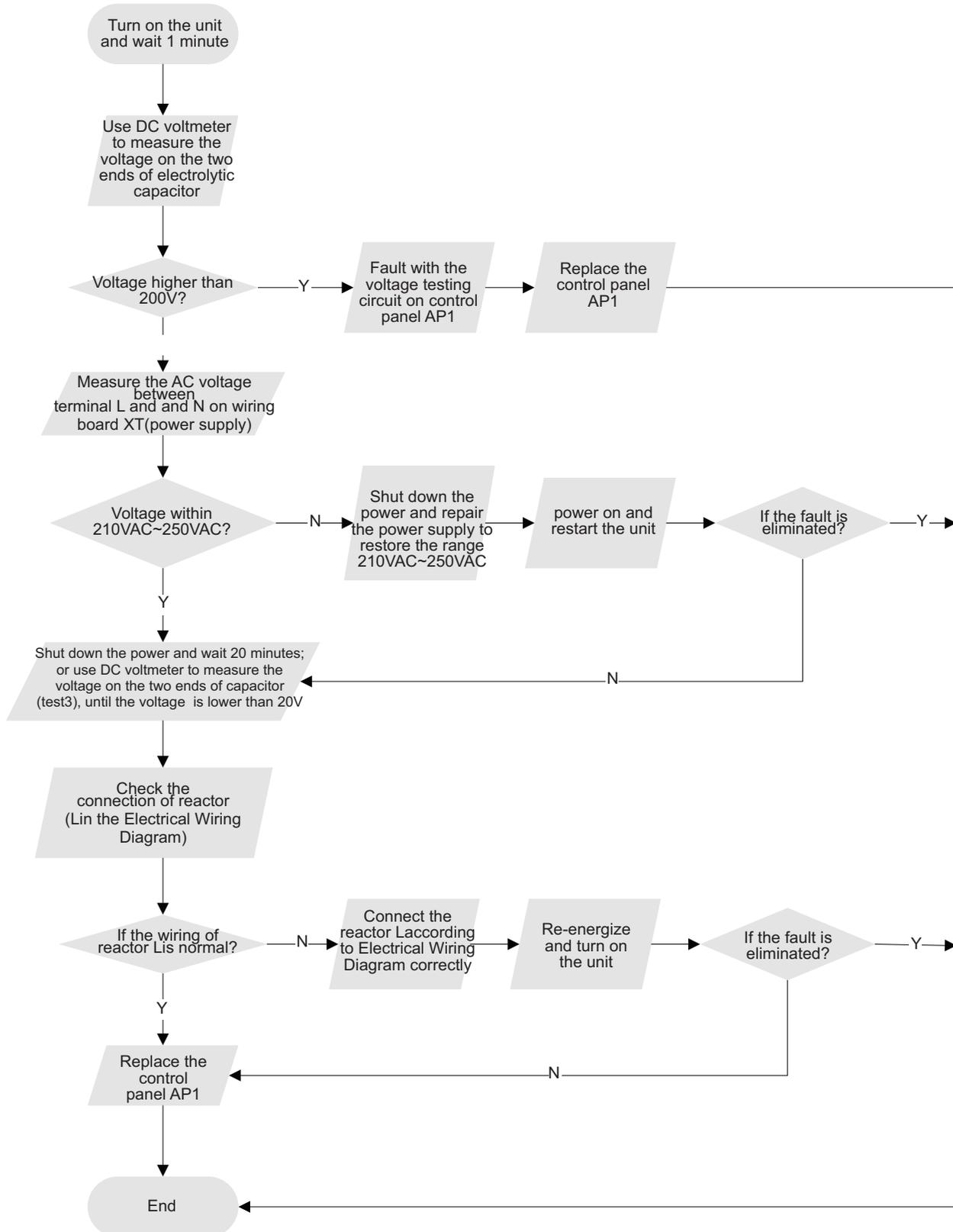
•Outdoor unit:

1.Capacity charging malfunction (outdoor unit malfunction) (AP1 below is control board of outdoor unit)

Main detection point:

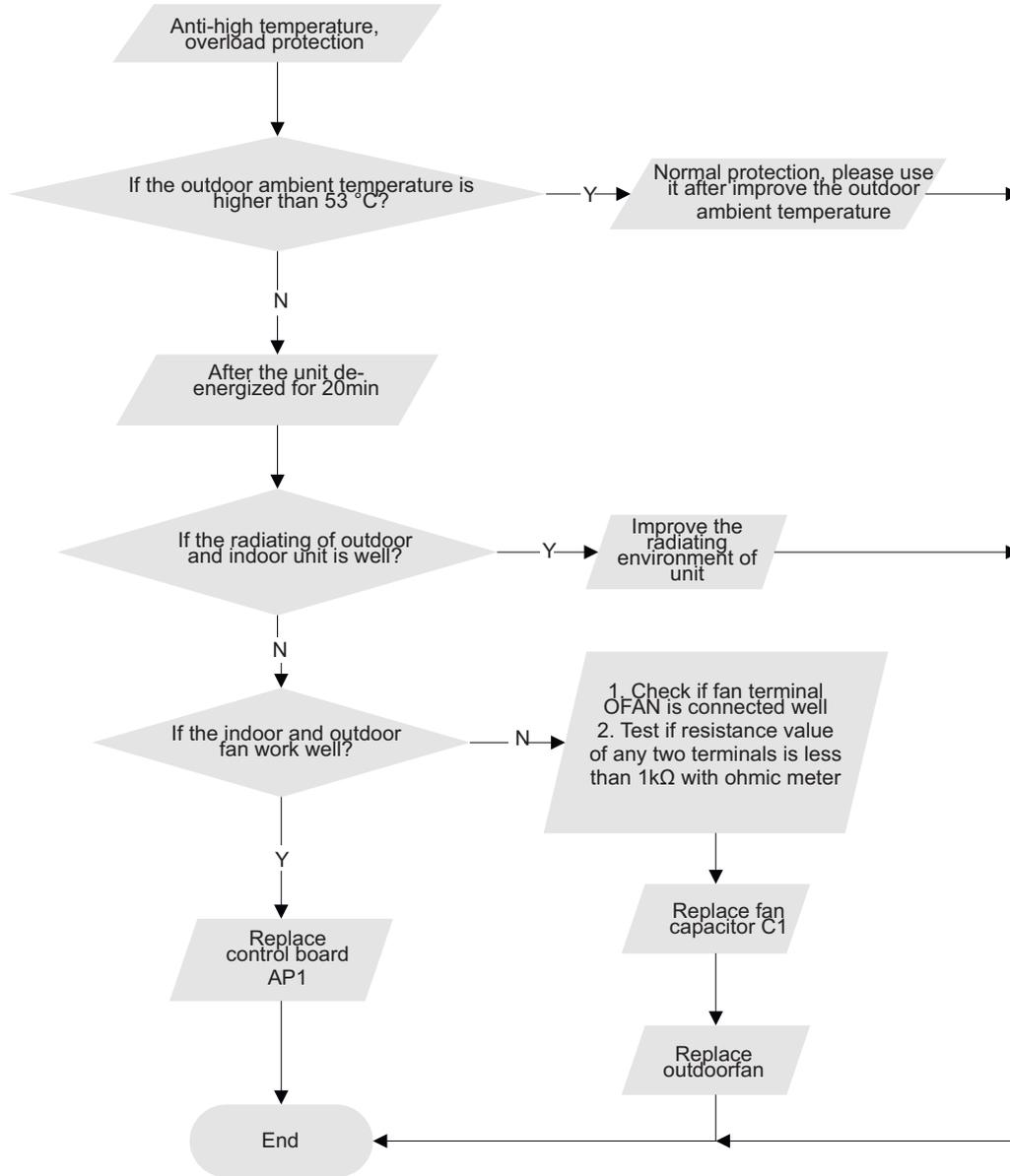
- Detect if the voltage of L and N terminal of wiring board is between 210AC-240AC by alternating voltage meter;
- Is reactor (L) well connected? Is connection wire loosened or pull-out? Is reactor (L) damaged?

Malfunction diagnosis process:



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2. Diagnosis for anti-high temperature, overload protection (AP1 below is control board of outdoor unit)



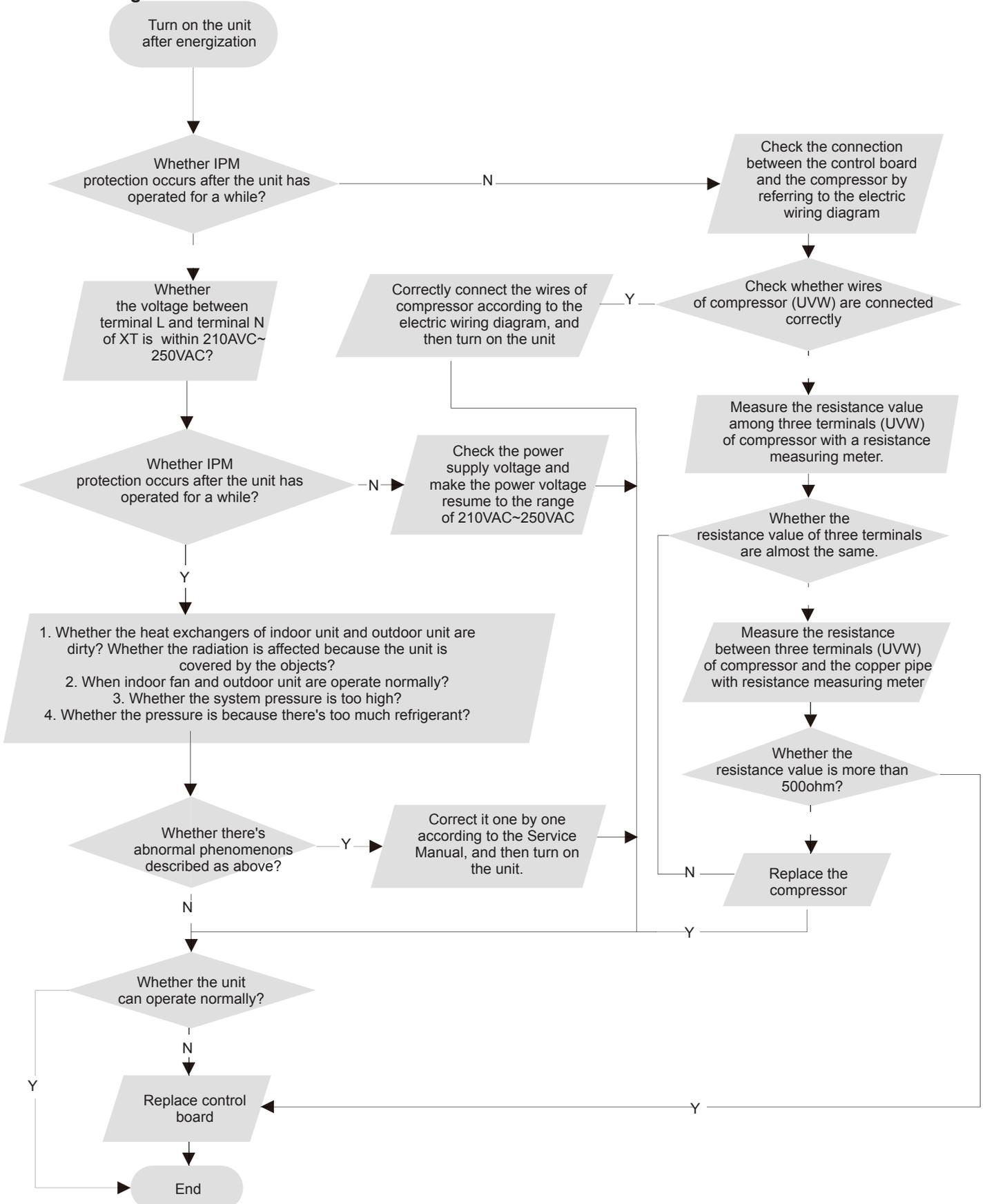
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3. IPM protection, phase current overcurrent (the control board as below indicates the control board of outdoor unit) H5/P5

Mainly detect:

- (1) Compressor COMP terminal (2) voltage of power supply (3) compressor (4) Refrigerant-charging volume (5) air outlet and air inlet of outdoor/indoor unit

Troubleshooting:



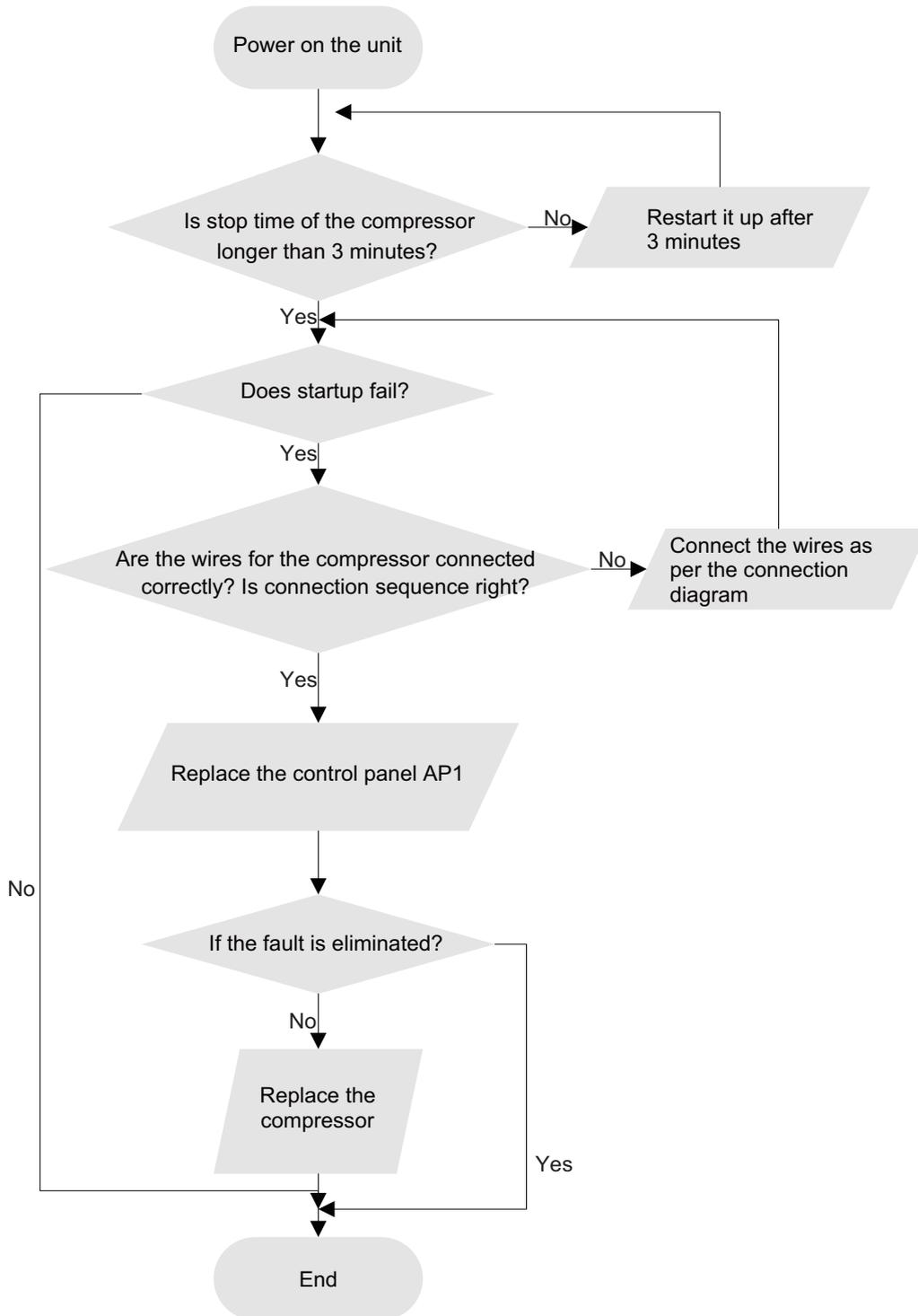
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4. Start-up failure (following AP1 for outdoor unit control board)

Mainly detect:

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

Fault diagnosis process:



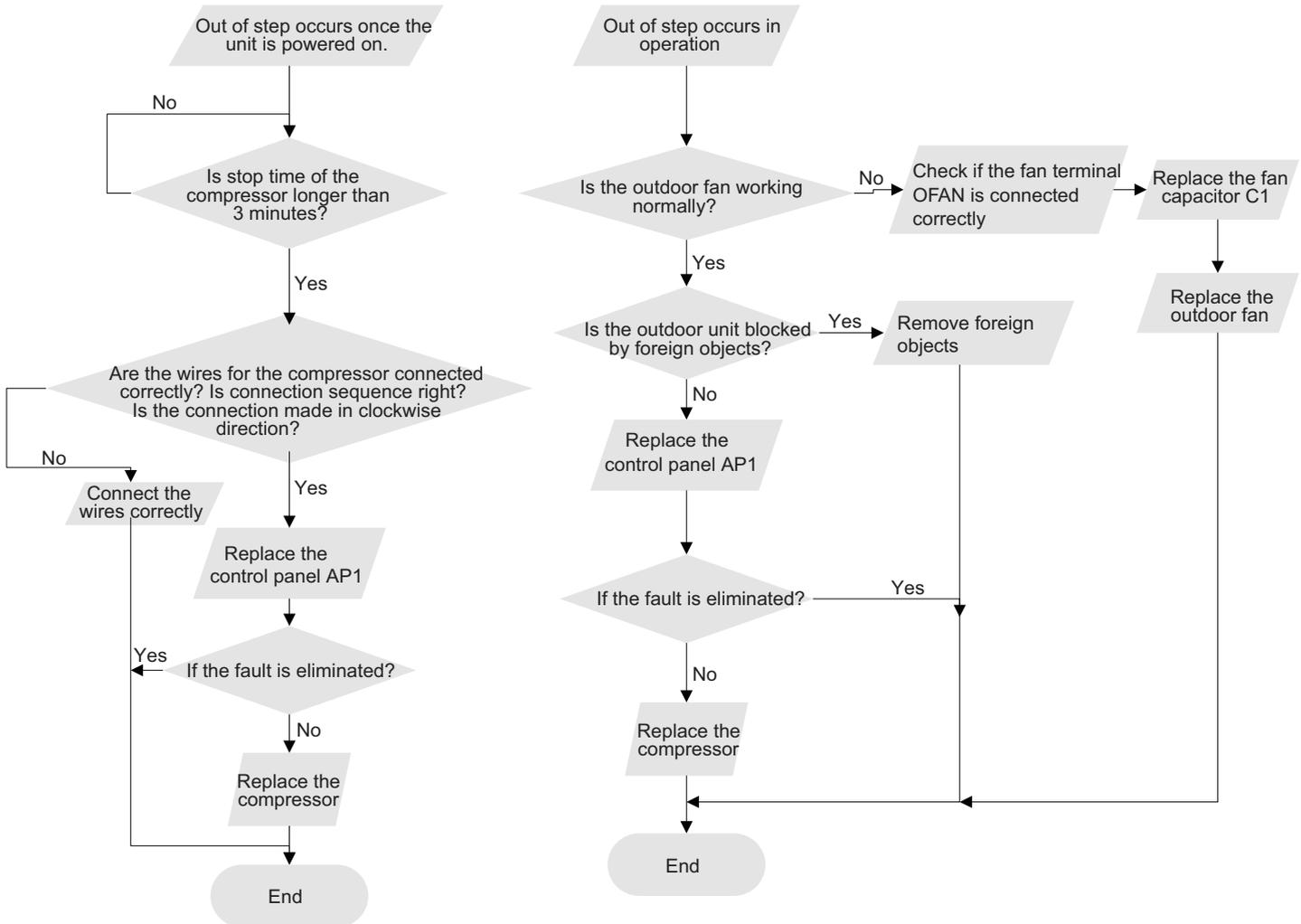
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5. Out of step diagnosis for the compressor (AP1 hereinafter refers to the control board of the outdoor unit)

Mainly detect:

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

Fault diagnosis process:



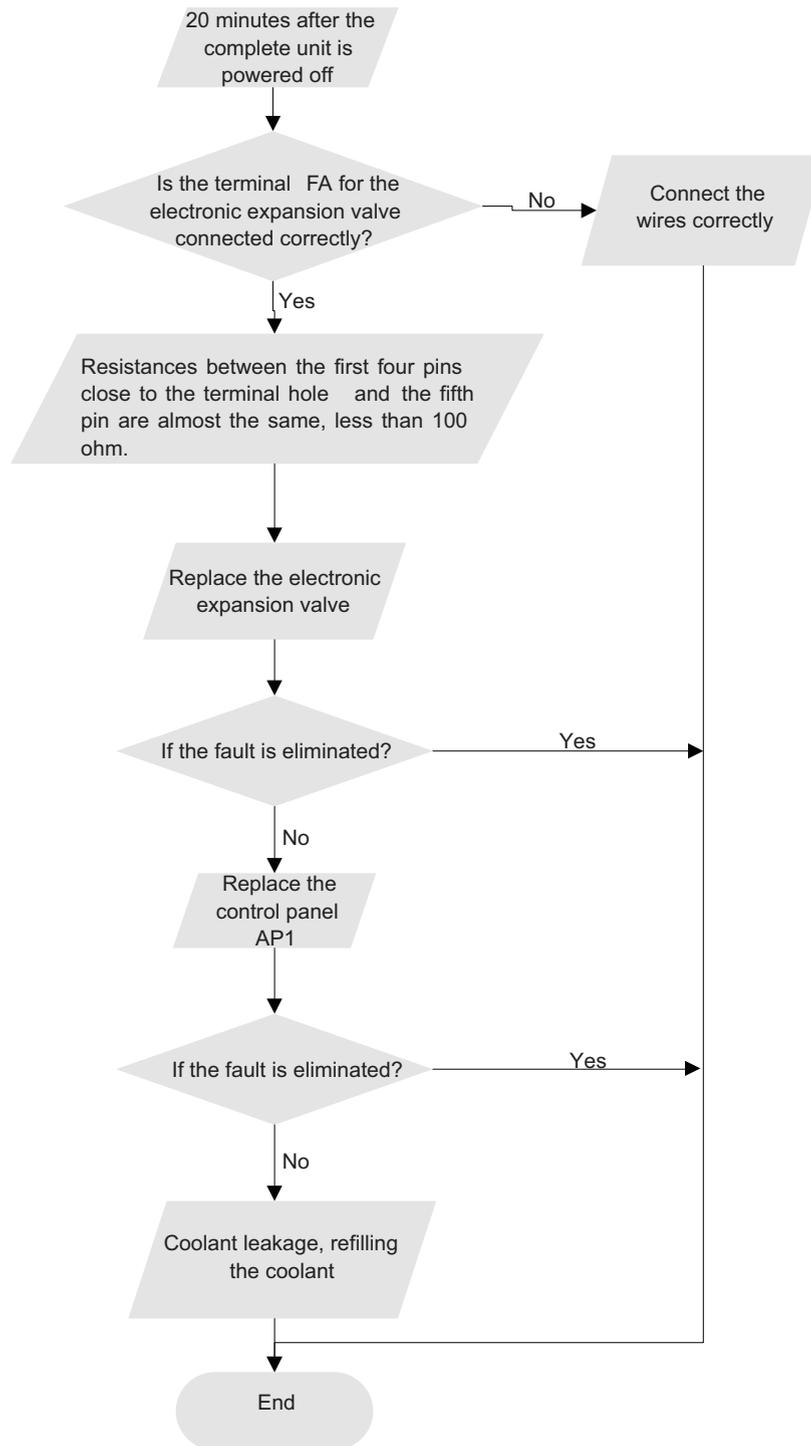
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6. Overload and air exhaust malfunction diagnosis (following AP1 for outdoor unit control board)

Mainly detect:

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

Fault diagnosis process:



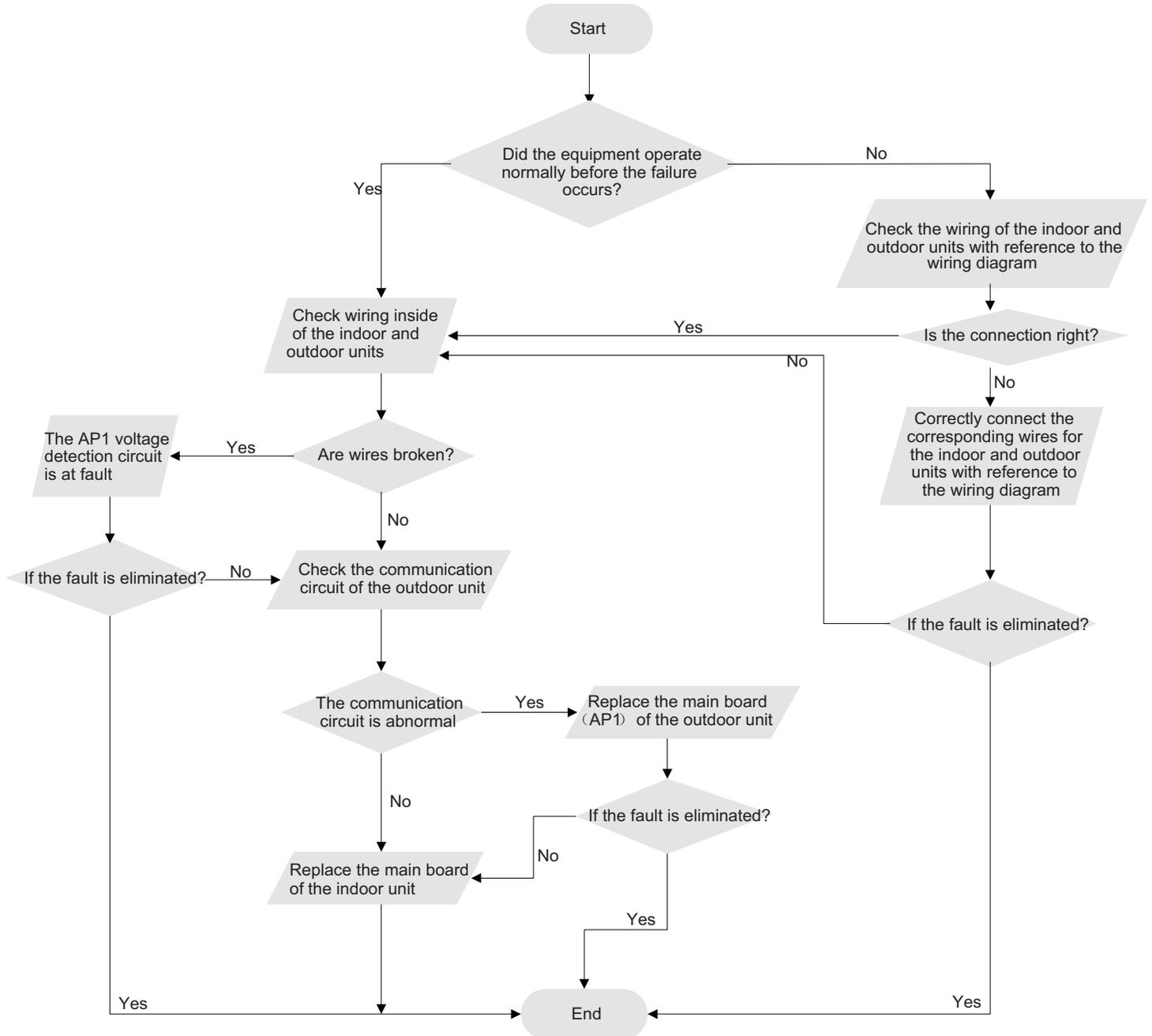
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7. Communication malfunction: (following AP1 for outdoor unit control board)

Mainly detect:

- Is there any damage for the indoor unit mainboard communication circuit? Is communication circuit damaged?
- Detect the indoor and outdoor units connection wire and indoor and outdoor units inside wiring is connect well or not, if is there any damage?

Fault diagnosis process:



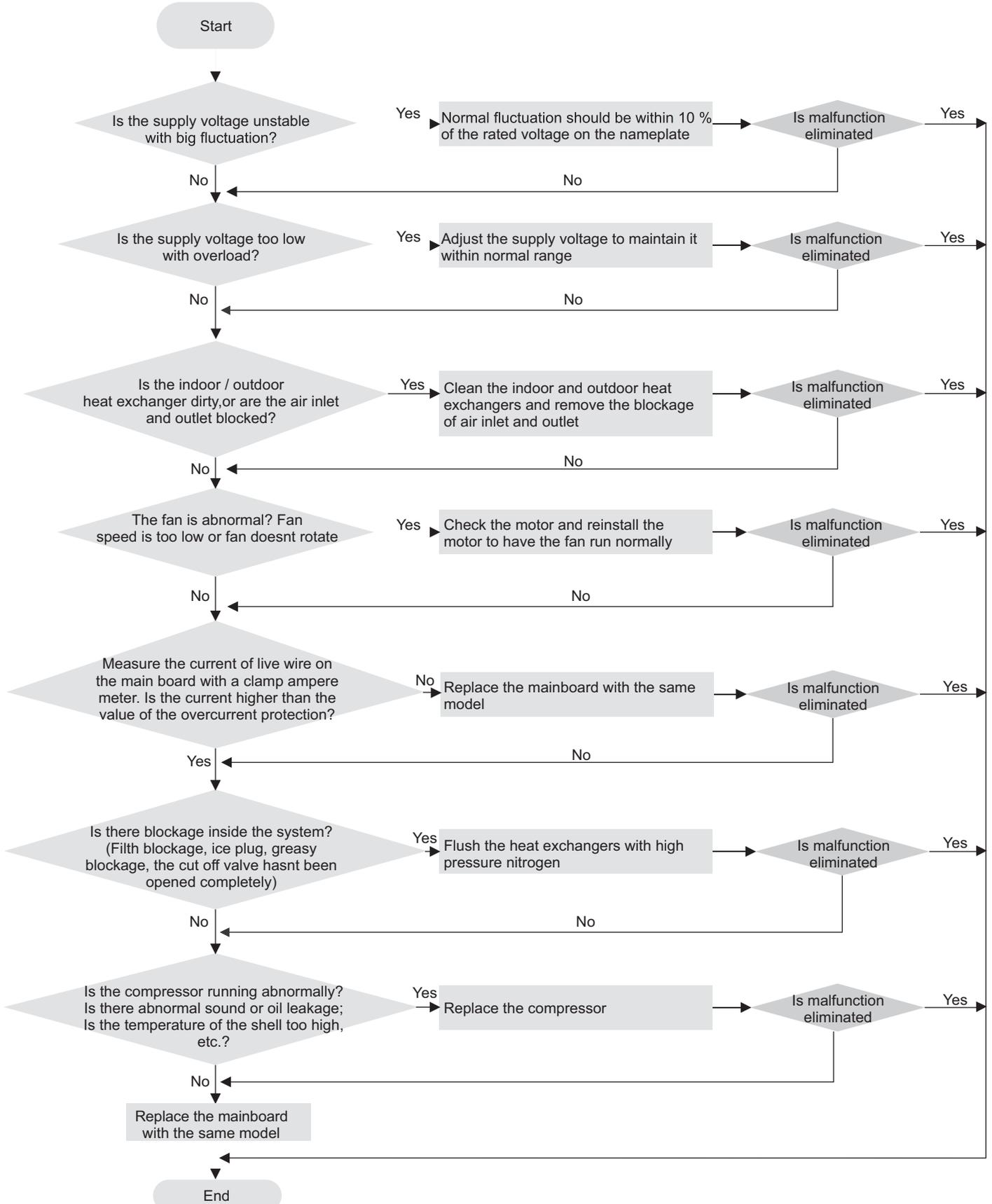
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8. Malfunction of Overcurrent Protection

Main detection points:

- Is the supply voltage unstable with big fluctuation?
- Is the supply voltage too low with overload?
- Hardware trouble?

Malfunction diagnosis process:



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9.3 Troubleshooting for Normal Malfunction

1. Air Conditioner Can't be Started Up

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
No power supply, or poor connection for power plug	After energization, operation indicator isn't bright and the buzzer can't give out sound	Confirm whether it's due to power failure. If yes, wait for power recovery. If not, check power supply circuit and make sure the power plug is connected well.
Wrong wire connection between indoor unit and outdoor unit, or poor connection for wiring terminals	Under normal power supply circumstances, operation indicator isn't bright after energization	Check the circuit according to circuit diagram and connect wires correctly. Make sure all wiring terminals are connected firmly
Electric leakage for air conditioner	After energization, room circuit breaker trips off at once	Make sure the air conditioner is grounded reliably Make sure wires of air conditioner is connected correctly Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord.
Model selection for air switch is improper	After energization, air switch trips off	Select proper air switch
Malfunction of remote controller	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller Repair or replace remote controller

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature
Rotation speed of the IDU fan motor is set too low	Small wind blow	Set the fan speed at high or medium
Filter of indoor unit is blocked	Check the filter to see its blocked	Clean the filter
Installation position for indoor unit and outdoor unit is improper	Check whether the installation position is proper according to installation requirement for air conditioner	Adjust the installation position, and install the rainproof and sunproof for outdoor unit
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Malfunction of 4-way valve	Blow cold wind during heating	Replace the 4-way valve
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unit pressure is much lower than regulated range. If refrigerant isn't leaking, part of capillary is blocked	Replace the capillary
Flow volume of valve is insufficient	The pressure of valves is much lower than that stated in the specification	Open the valve completely
Malfunction of horizontal louver	Horizontal louver can't swing	Refer to point 3 of maintenance method for details
Malfunction of the IDU fan motor	The IDU fan motor can't operate	Refer to troubleshooting for H6 for maintenance method in details
Malfunction of the ODU fan motor	The ODU fan motor can't operate	Refer to point 4 of maintenance method for details
Malfunction of compressor	Compressor can't operate	Refer to point 5 of maintenance method for details

3. Horizontal Louver Can't Swing

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Stepping motor is damaged	Stepping motor can't operate	Repair or replace stepping motor
Main board is damaged	Others are all normal, while horizontal louver can't operate	Replace the main board with the same model

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4. ODU Fan Motor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of the ODU fan motor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the capacity of fan
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Motor of outdoor unit is damaged	When unit is on, cooling/heating performance is bad and ODU compressor generates a lot of noise and heat.	Change compressor oil and refrigerant. If no better, replace the compressor with a new one

5. Compressor Can't Operate

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Wrong wire connection, or poor connection	Check the wiring status according to circuit diagram	Connect wires according to wiring diagram to make sure all wiring terminals are connected firmly
Capacity of compressor is damaged	Measure the capacity of fan capacitor with an universal meter and find that the capacity is out of the deviation range indicated on the nameplate of fan capacitor.	Replace the compressor capacitor
Power voltage is a little low or high	Use universal meter to measure the power supply voltage. The voltage is a little high or low	Suggest to equip with voltage regulator
Coil of compressor is burnt out	Use universal meter to measure the resistance between compressor terminals and it's 0	Repair or replace compressor
Cylinder of compressor is blocked	Compressor can't operate	Repair or replace compressor

6. Air Conditioner is Leaking

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
Drain pipe is blocked	Water leaking from indoor unit	Eliminate the foreign objects inside the drain pipe
Drain pipe is broken	Water leaking from drain pipe	Replace drain pipe
Wrapping is not tight	Water leaking from the pipe connection place of indoor unit	Wrap it again and bundle it tightly

7. Abnormal Sound and Vibration

Possible causes	Discriminating method (air conditioner status)	Troubleshooting
When turn on or turn off the unit, the panel and other parts will expand and theres abnormal sound	Theres the sound of "PAPA"	Normal phenomenon. Abnormal sound will disappear after a few minutes.
When turn on or turn off the unit, theres abnormal sound due to flow of refrigerant inside air conditioner	Water-running sound can be heard	Normal phenomenon. Abnormal sound will disappear after a few minutes.
Foreign objects inside the indoor unit or therere parts touching together inside the indoor unit	Theres abnormal sound fro indoor unit	Remove foreign objects. Adjust all parts position of indoor unit, tighten screws and stick damping plaster between connected parts
Foreign objects inside the outdoor unit or therere parts touching together inside the outdoor unit	Theres abnormal sound fro outdoor unit	Remove foreign objects. Adjust all parts position of outdoor unit, tighten screws and stick damping plaster between connected parts
Short circuit inside the magnetic coil	During heating, the way valve has abnormal electromagnetic sound	Replace magnetic coil
Abnormal shake of compressor	Outdoor unit gives out abnormal sound	Adjust the support foot mat of compressor, tighten the bolts
Abnormal sound inside the compressor	Abnormal sound inside the compressor	If add too much refrigerant during maintenance, please reduce refrigerant properly. Replace compressor for other circumstances.

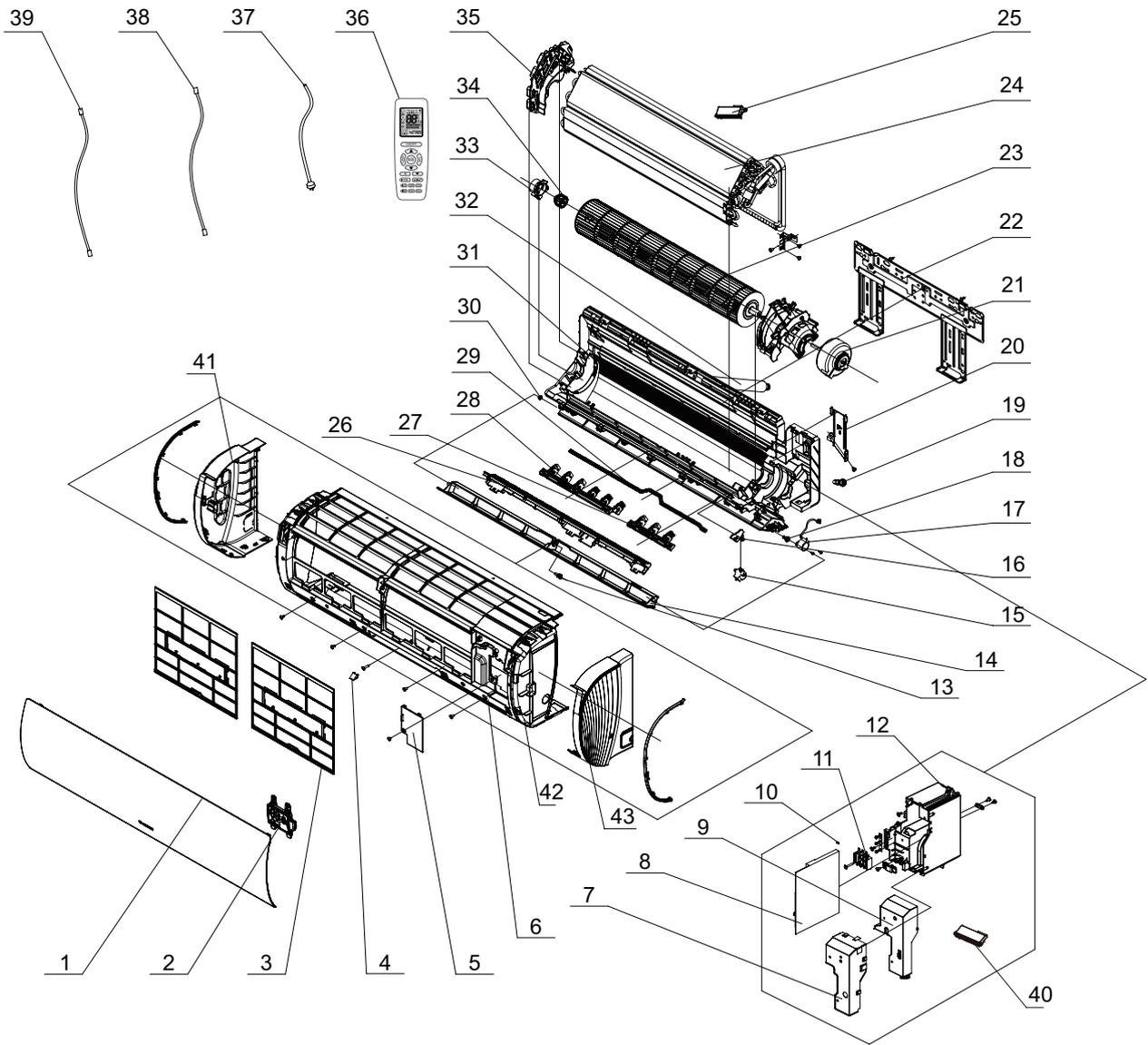
10. Exploded View and Parts List

NO.	Description
1	Front Panel
2	Filter Sub-Assy
3	Screw Cover
4	Left Side Plate
5	Decorative Strip(Left)
6	Front Case
7	Air Louver(Manual)
8	Helicoid Tongue
9	Left Axile Bush
10	Rear Case assy
11	Rubber Plug (Water Tray)
12	Ring of Bearing
13	O-Gasket sub-assy of Bearing
14	Cross Flow Fan
15	Evaporator Support
16	Evaporator Assy
17	Cold Plasma Generator
18	Wall Mounting Frame
19	Motor Press Plate
20	Fan Motor
21	Connecting pipe clamp
22	Drainage Hose

NO.	Description
23	Stepping Motor
24	Crank
25	Swing Lever
26	Air Louver
27	Stepping Motor
28	Guide Louver
29	Axile Bush
30	Right Side Plate
31	Decorative Strip(Right)
32	Shield Cover of Electric Box Cover 2
33	Electric Box Cover2
34	Electric Box
35	Terminal Board
36	Display Board
37	Main Board
38	Electric Box Cover
39	Jumper
40	Electric Box Assy
41	Connecting Cable
42	Remote Controller
43	Detecting Plate

Some models may not contain some parts, please refer to the actual product.

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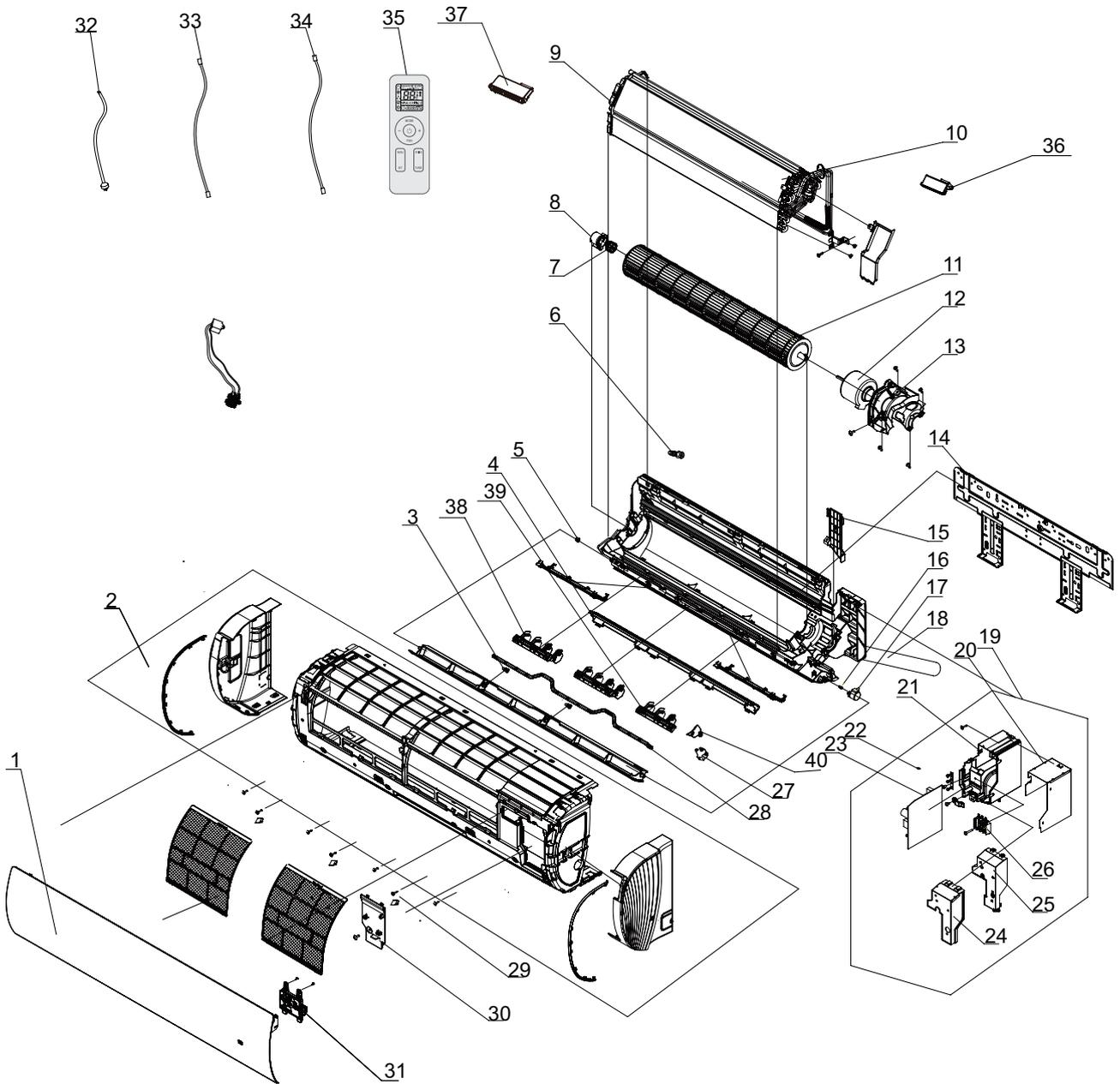


The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Display Board
3	Filter Sub-Assy
4	Screw Cover
5	Electric Box Cover Sub-Assy
6	Front Case Assy
7	Shield Cover of Electric Box Cover
8	Main Board
9	Electric Box Cover
10	Jumper
11	Terminal Board
12	Electric Box Assy
13	Axile Bush
14	Guide Louver
15	Stepping Motor
16	Air Louver (Auto)
17	Stepping Motor
18	Crank
19	Rubber Plug (Water Tray)
20	Connecting pipe clamp
21	Fan Motor
22	Wall Mounting Frame

NO.	Description
23	Cross Flow Fan
24	Evaporator Assy
25	Cold Plasma Generator
26	Helicoid Tongue
27	Air Louver(right)
28	Air Louver (left)
29	Swing Lever
30	Left Axile Bush
31	Rear Case assy
32	Drainage Hose
33	Ring of Bearing
34	O-Gasket sub-assy of Bearing
35	Evaporator Support 2
36	Remote Controller
37	Power Cord
38	Connecting Cable
39	Connecting Cable
40	Detecting plate(WIFI)
41	Left Side Plate
42	Front Case
43	Right Side Plate

Some models may not contain some parts, please refer to the actual product.



The component picture is only for reference; please refer to the actual product.

NO.	Description
1	Front Panel
2	Front Case Assy
3	Axile Bush
4	Helicoid Tongue
5	Left Axile Bush
6	Rubber Plug (Water Tray)
7	O-Gasket sub-assy of Bearing
8	Ring of Bearing
9	Evaporator Support
10	Evaporator Assy
11	Cross Flow Fan
12	Fan Motor
13	Motor Press Plate
14	Wall Mounting Frame
15	Connecting pipe clamp
16	Crank
17	Stepping Motor
18	Drainage hose
19	Electric Box Assy
20	Lower Shield of Electric Box

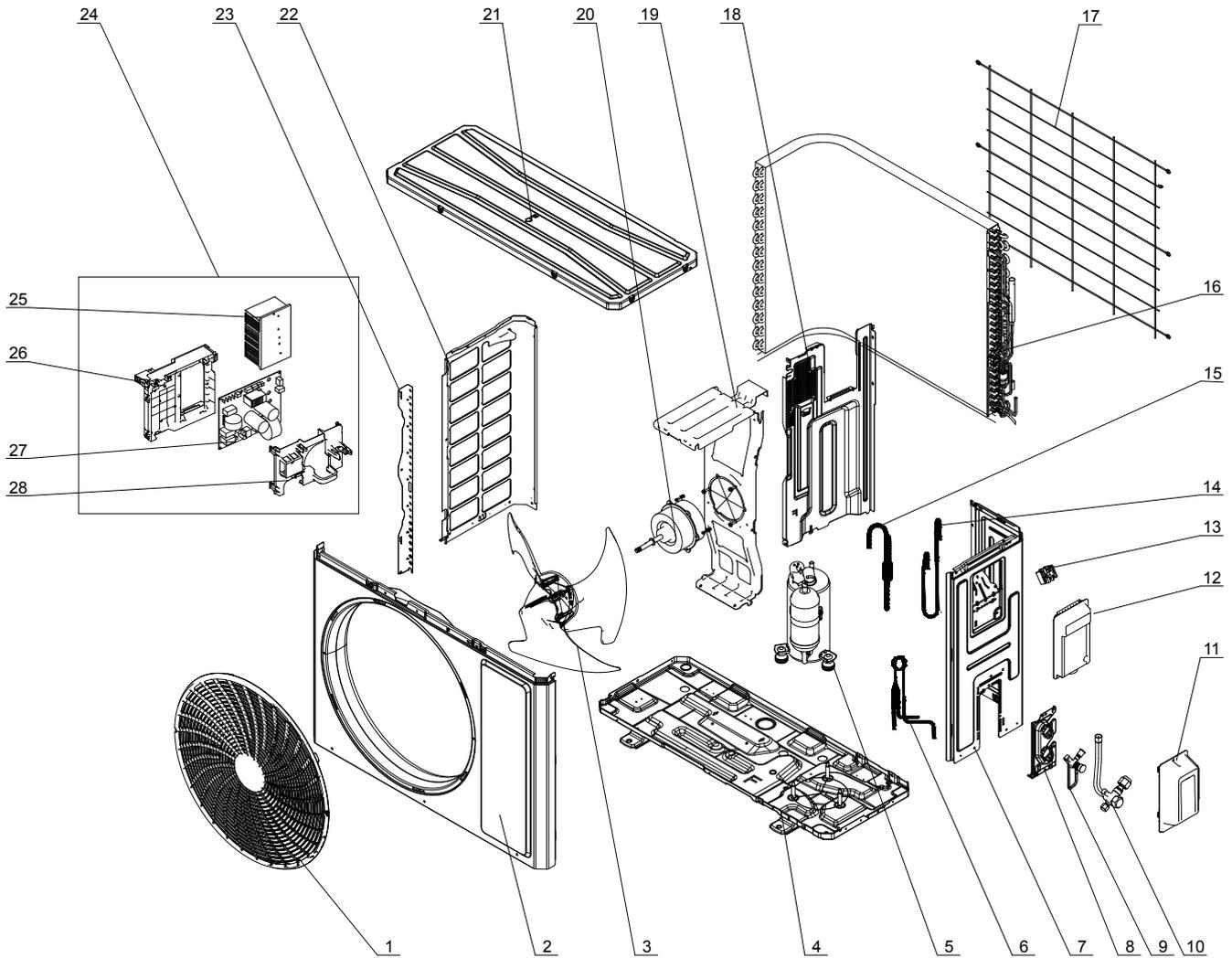
NO.	Description
21	Electric Box
22	Jumper
23	Main Board
24	Shield Cover of Electric Box Cover
25	Electric Box Cover
26	Terminal Board
27	Stepping Motor
28	Swing Lever
29	Screw Cover
30	Electric Box Cover2
31	Display Board
32	Power Cord
33	Connecting Cable
34	Connecting Cable
35	Remote Controller
36	Cold Plasma Generator
37	Detecting Plate
38	Air Louver1 (Auto)
39	Air Louver2 (Auto)
40	Air Louver

Some models may not contain some parts, please refer to the actual product.

10. Exploded View and Parts List

10.2 Outdoor Unit

GWC24ACEXF-D6DNA1A/O GWC30AAEXF-D6DNA1A/O



The component is only for reference; please refer to the actual product

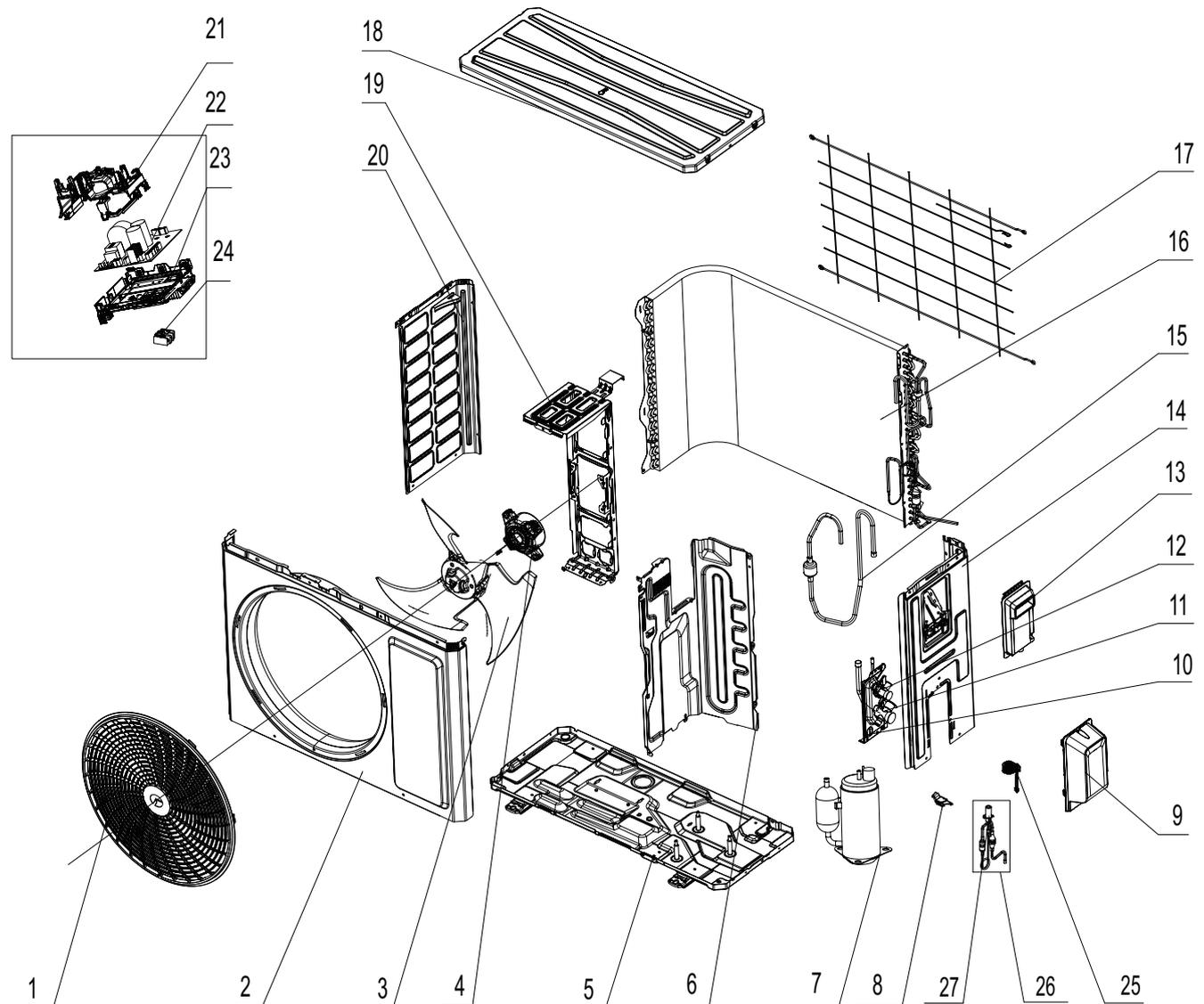
NO.	Description
1	Front Grill
2	Front Panel
3	Axial Flow Fan
4	Chassis Sub-assy
5	Compressor and Fittings
6	Capillary Sub-assy
7	Right Side Plate
8	Valve Support
9	Cut-off valve 1/4(N)
10	Cut-off valve 5/8(N)
11	Valve Cover
12	Handle
13	Terminal Board
14	Inhalation Tube Sub-assy

NO.	Description
15	Discharge Tube
16	Condenser Assy
17	Rear Grill
18	Clapboard Assy
19	Motor Support
20	Brushless DC Motor
21	Top Cover Assy
22	Left Side Plate
23	Condenser Left Border Plate
24	Electric Box Assy
25	Radiator
26	Electric Box
27	Main Board
28	Electric Box Cover

Some models may not contain some parts, please refer to the actual product.

10. Exploded View and Parts List

GWC13AGCXD-D6DNA1A/O

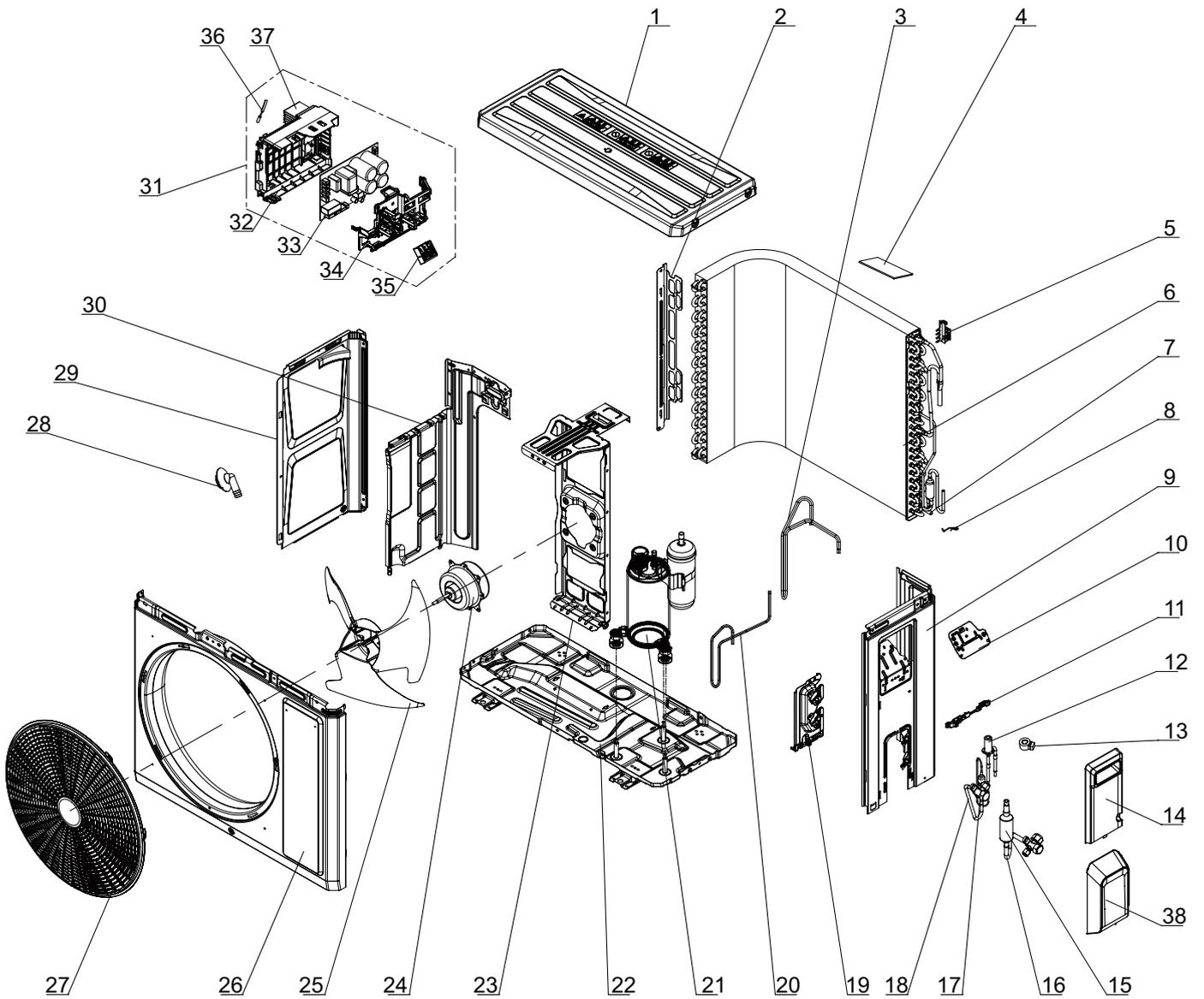


The component is only for reference; please refer to the actual product

NO.	Description
1	Front Grill
2	Front Panel Assy
3	Axial Flow Fan
4	Brushless DC Motor
5	Chassis Sub-assy
6	Clapboard
7	Compressor and Fittings
8	Baffle Plate
9	Valve Cover
10	Valve Support
11	Cut off Valve Sub-Assy
12	Cut off Valve Assy
13	Handle
14	Right Side Plate

NO.	Description
15	Inhalation Tube Sub-assy
16	Condenser Assy
17	Rear Grill
18	Top Cover Assy
19	Valve Support
20	Left Side Plate
21	Electric Box Cover
22	Main Board
23	Electric Box Assy
24	Terminal Board
25	Electric Expand Valve Fitting
26	Electronic Expansion Valve Assy
27	Electronic Expansion Valve

Some models may not contain some parts, please refer to the actual product.



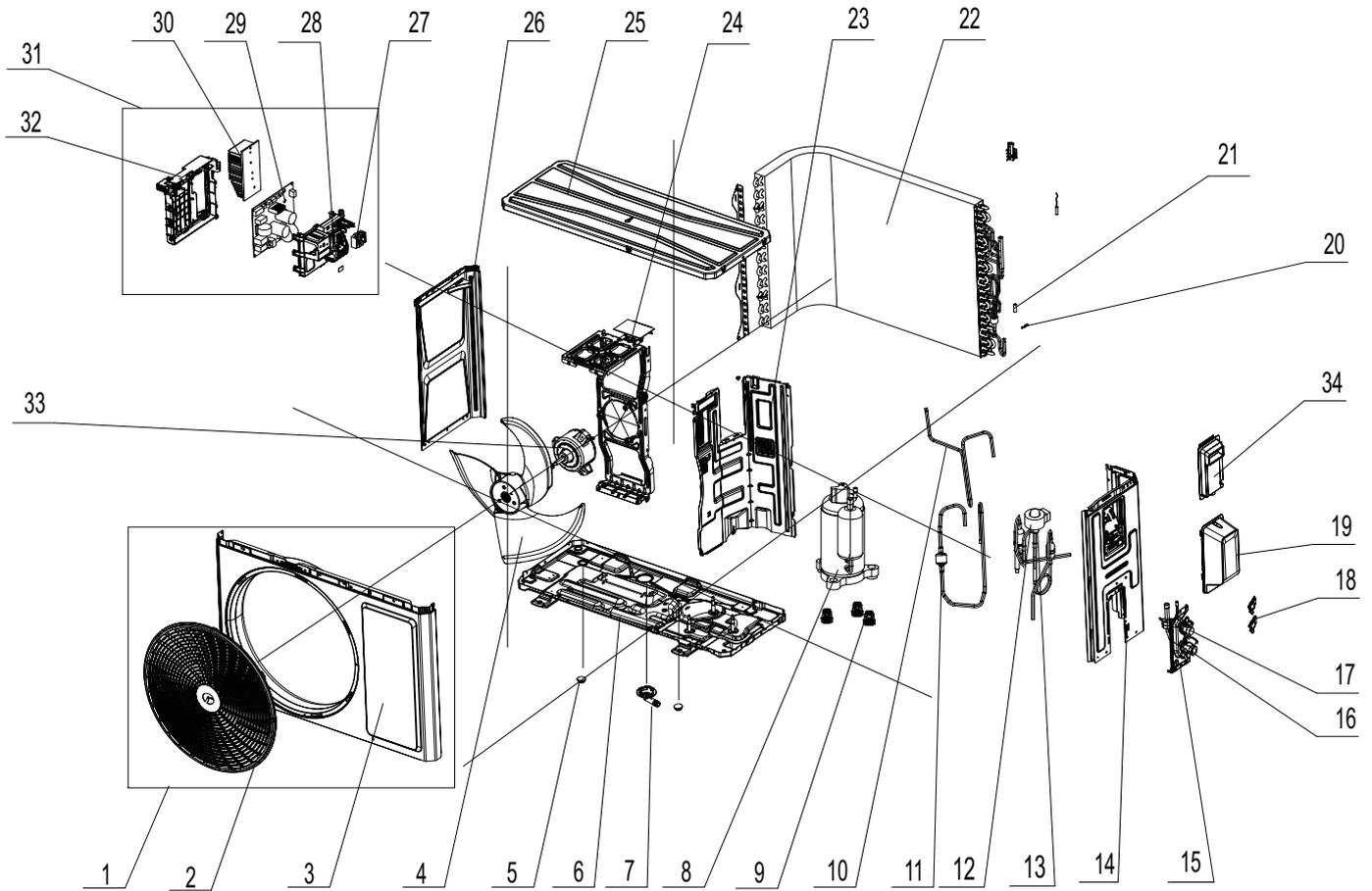
The component is only for reference; please refer to the actual product

NO.	Description
1	Coping
2	Supporting Board(Condenser)
3	Inhalation Tube
4	Sponge(Condenser)
5	Temperature Sensor Support
6	Condenser Assy
7	Temp Sensor Sleevling
8	Sensor Insert
9	Right Side Plate
10	Earthing Plate Sub-assy
11	Wire Clamp
12	Electronic Expansion Valve
13	Electric Expand Valve Fitting

NO.	Description
14	Handle
15	Silencer
16	Cut-off valve 3/8(N)
17	Strainer (fork shape)
18	Cut-off valve 1/4(N)
19	Valve Support
20	Discharge Tube
21	Compressor and Fittings
22	Chassis Sub-assy
23	Motor Support
24	Brushless DC Motor
25	Axial Flow Fan
26	Cabinet

NO.	Description
27	Front Grill
28	Drainage Joint(ODU)
29	Left Side Plate
30	Clapboard
31	Electric Box Assy
32	Electric Box
33	Main Board
34	Electric Box Cover
35	Terminal Board
36	Temperature Sensor
37	Radiator
38	Valve Cover

Some models may not contain some parts, please refer to the actual product.



The component is only for reference; please refer to the actual product

NO.	Description
1	Front Panel Assy
2	Front Grill
3	Front Panel
4	Axial Flow Fan
5	Drainage hole Cap
6	Chassis Sub-assy
7	Drainage Joint
8	Compressor and Fittings
9	Compressor Gasket
10	Discharge Tube
11	Inhalation Tube Sub-assy
12	Electric Expand Valve Fitting
13	Electronic Expansion Valve Assy
14	Right Side Plate Assy
15	Valve Support
16	Cut-off valve
17	Cut-off valve

NO.	Description
18	Valve Support Block
19	Valve Cover
20	Sensor Insert
21	Temp Sensor Sleevling
22	Condenser Assy
23	Clapboard Sub-Assy
24	Motor Support Sub-Assy
25	Top Cover Sub-Assy
26	Left Side Plate
27	Terminal Board
28	Electric Box Cover
29	Main Board
30	Radiator
31	Electric Box Assy
32	Electric Box
33	Brushless DC Motor
34	Handle

Some models may not contain some parts, please refer to the actual product.

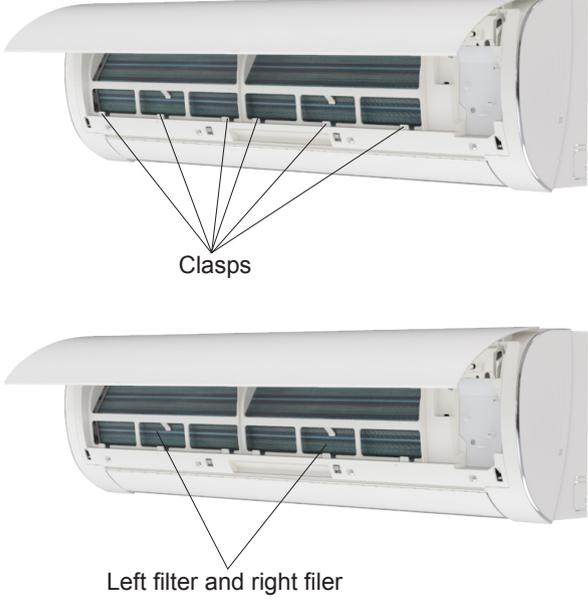
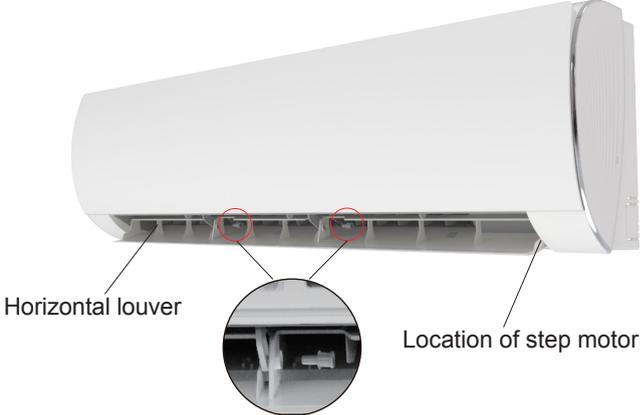
11. Removal Procedure

11.1 Removal Procedure of Indoor Unit

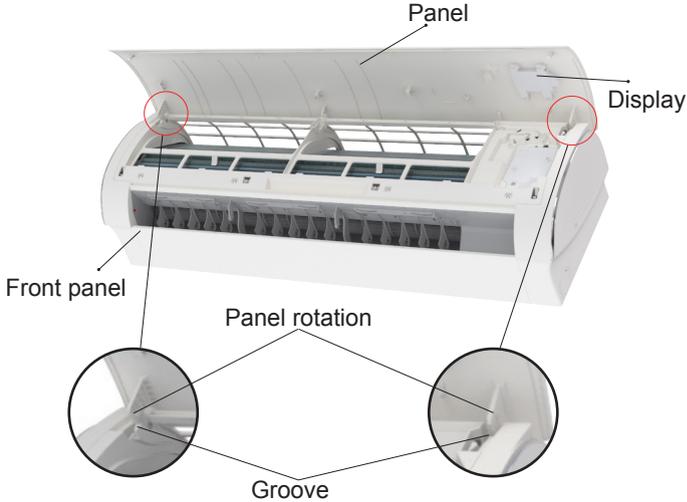
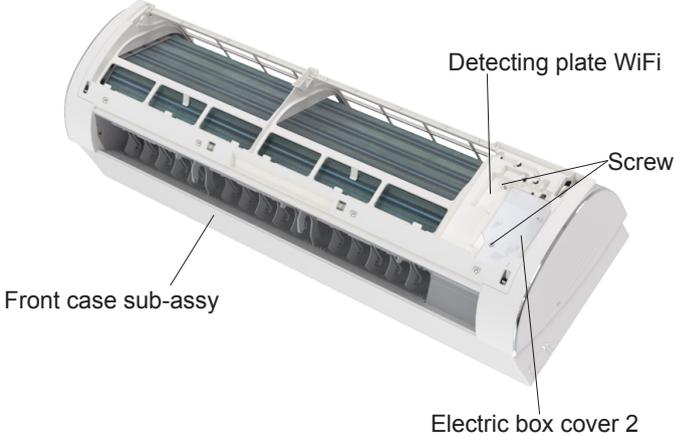
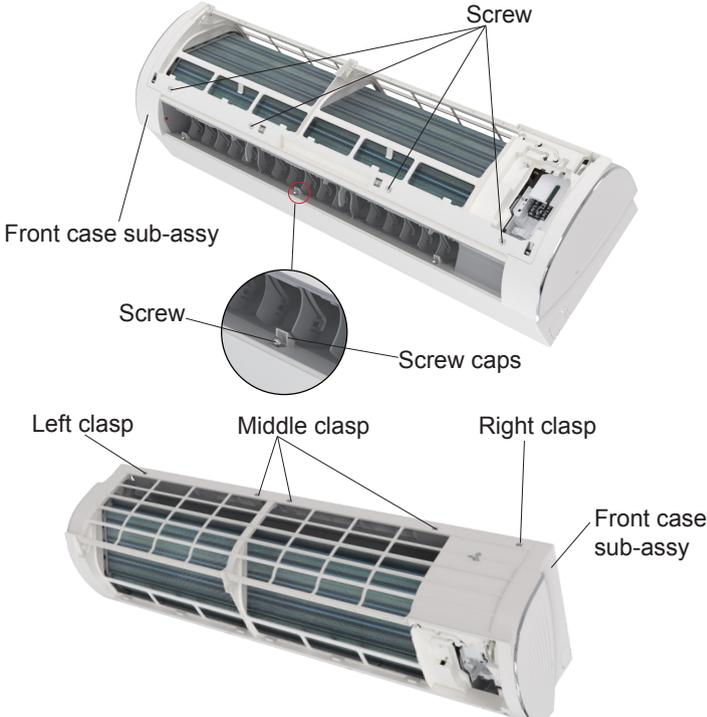


Caution: discharge the refrigerant completely before removal.

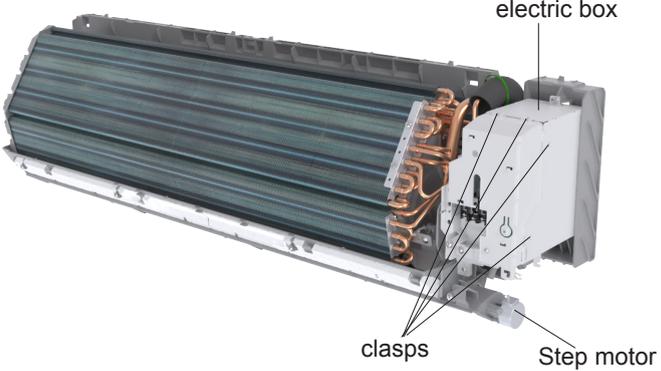
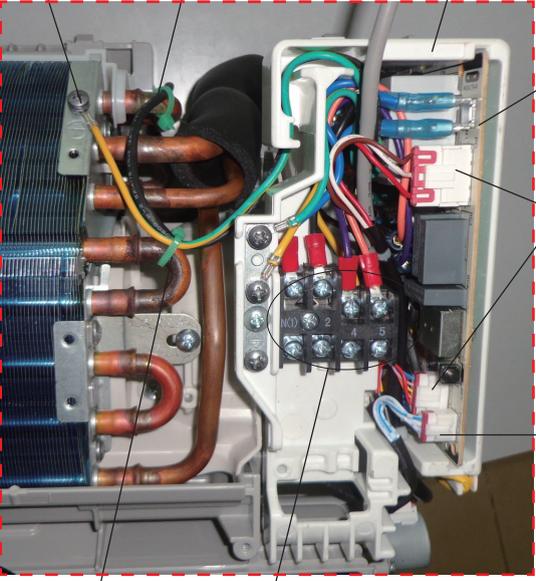
18/24/30K:

Step	Procedure
1.Remove filter	
a	Open the panel. 
b	Loosen the clasp shown in the fig and then pull the left filter and right filter outwards to remove them. 
2.Remove horizontal louver	
	Push out the axle bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal louver from the crankshaft of step motor to remove it. 

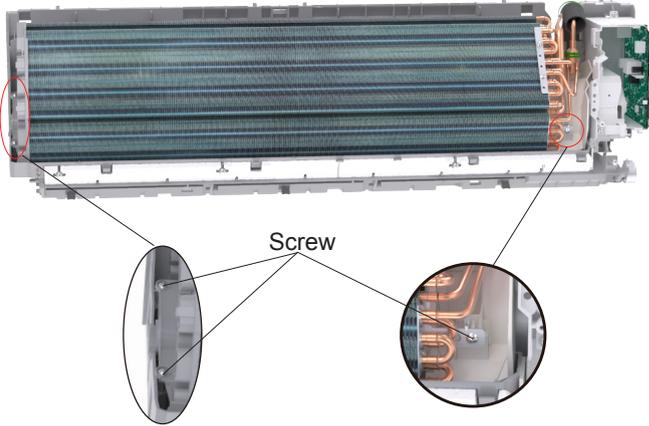
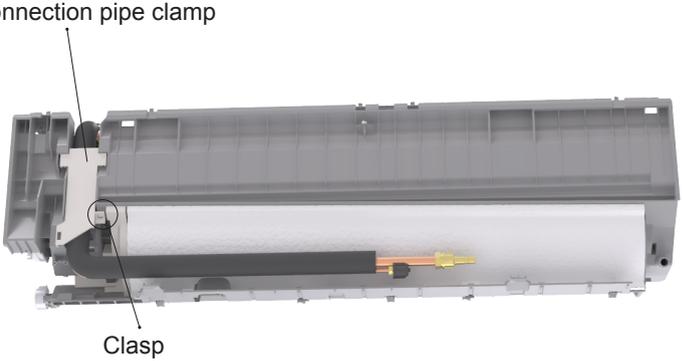
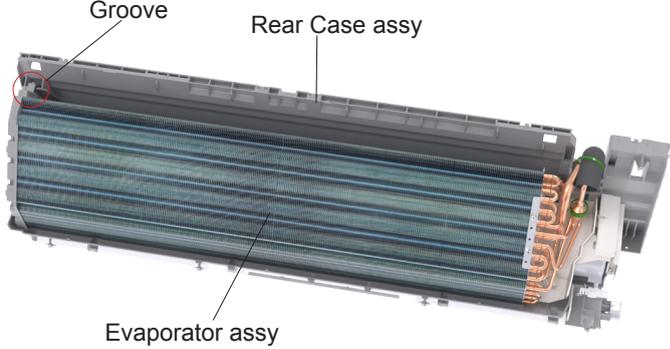
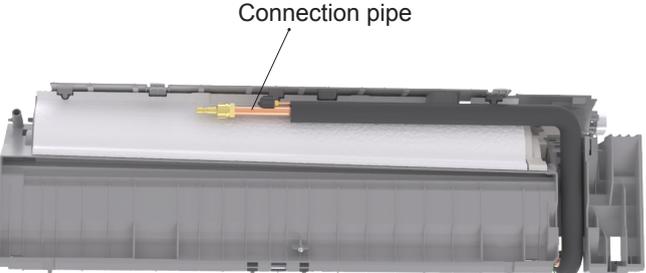
11. Removal Procedure

Step	Procedure
<p>3.Remove panel</p> <p>Open the front panel; separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.</p> <p>Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.</p>	
<p>4.Remove electric box cover 2 and detecting plate(WIFI)</p> <p>Remove the screws on the electric box cover 2 and detecting plate(WIFI), to remove the electric box cover 2 and detecting plate(WIFI).</p>	
<p>5.Remove front case sub-assy</p> <p>Remove the screws fixing front case.</p> <p>Note:</p> <p>a (1) Open the screw caps before removing the screws around the air outlet. (2) The quantity of screws fixing the front case sub-assy is different for different models.</p> <p>b Loosen the clasps at left, middle and right sides of front case. Lift the front case sub-assy upwards to remove it.</p>	

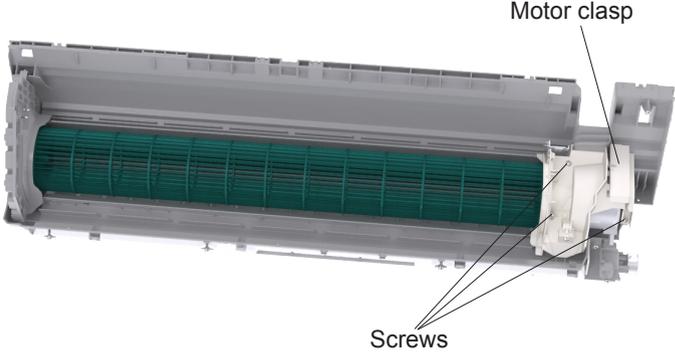
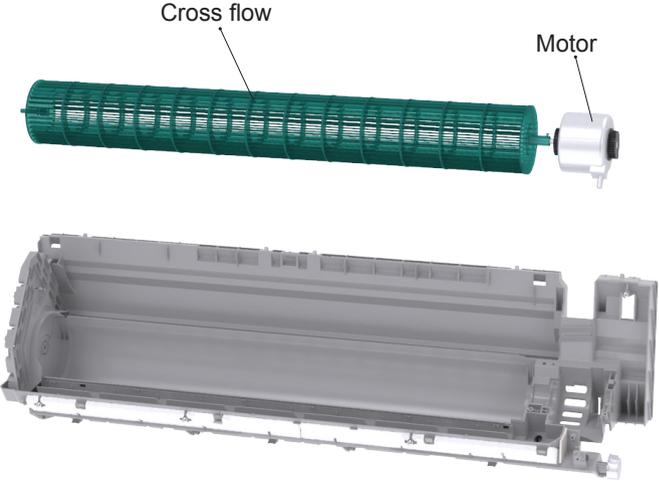
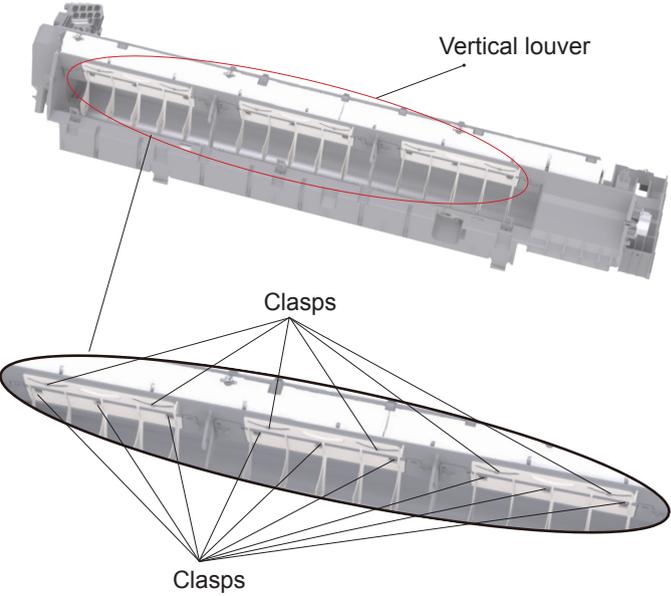
11. Removal Procedure

Step	Procedure
6.Remove electric box assy	
a	<p>Remove the screw fixing electric box assy.</p> 
b	<p>① Cut off the wire binder and pull out the indoor tube temperature sensor. ② Screw off one grounding screw. ③ Remove the wiring terminals of motor, cold plasma generator and stepping motor. ④ Remove the electric box assy. ⑤ Screw off the screws that are locking each.</p> 
c	<p>Rotate the electric box assy. Twist off the screws that are locking the wire clip and loosen the power cord. Remove the wiring terminal of power cord. Lift up the main board and take it off.</p>  <p>Instruction:Some wiring terminal of this products is with lock catch and other devices.The pulling method is as below: 1.Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals, 2.Pull out the holder for some terminals at first(holder is not available for some wiring terminal).hold the connector and then pull the terminal.</p> 

11. Removal Procedure

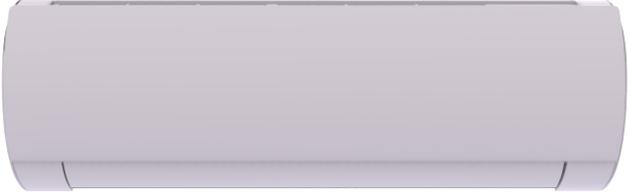
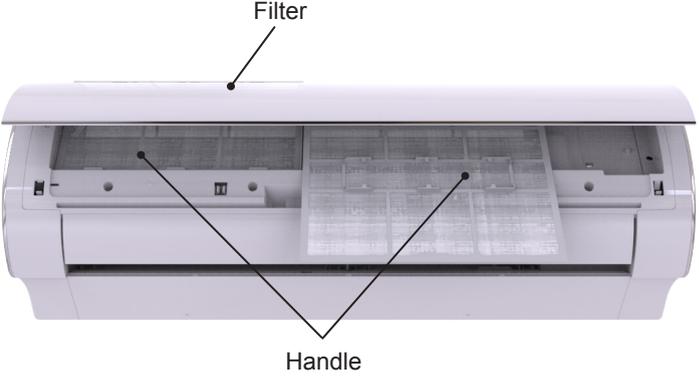
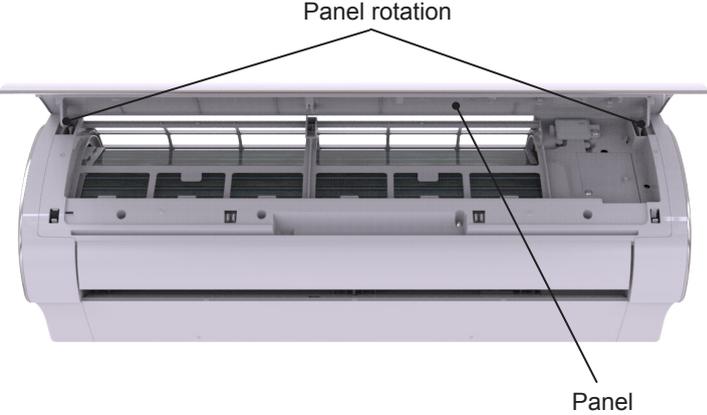
Step	Procedure
7.Remove evaporator assy	
a	<p>Remove 3 screws fixing evaporator assy.</p> 
b	<p>At the back of the unit, Loosen the clasp,connection pipe clamp and then remove the connection pipe clamp.</p> 
c	<p>First remove the left side of evaporator from the groove of bottom shell and then remove the right side from the clasp on the bottom shell.</p> 
d	<p>Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it.</p> 

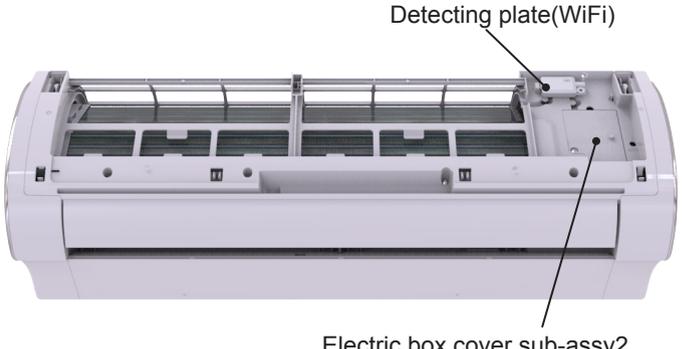
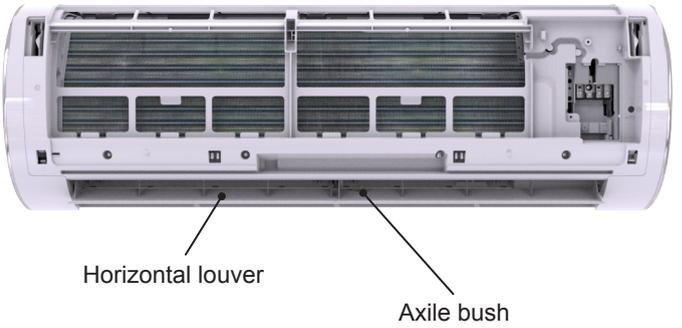
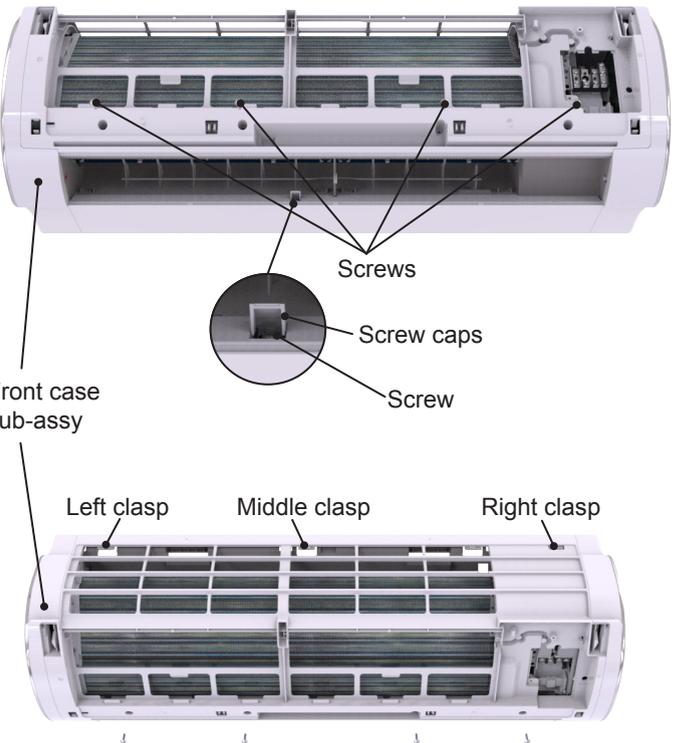
11. Removal Procedure

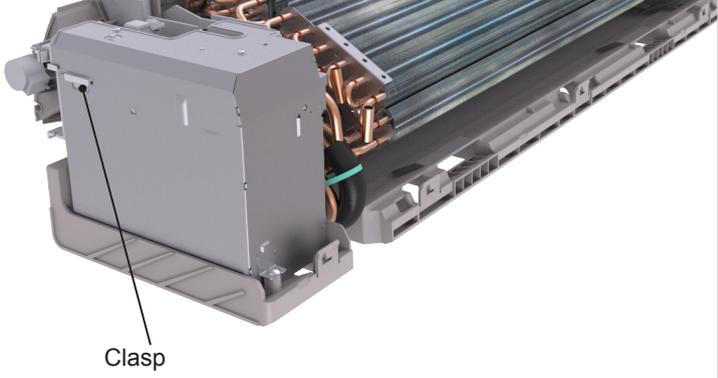
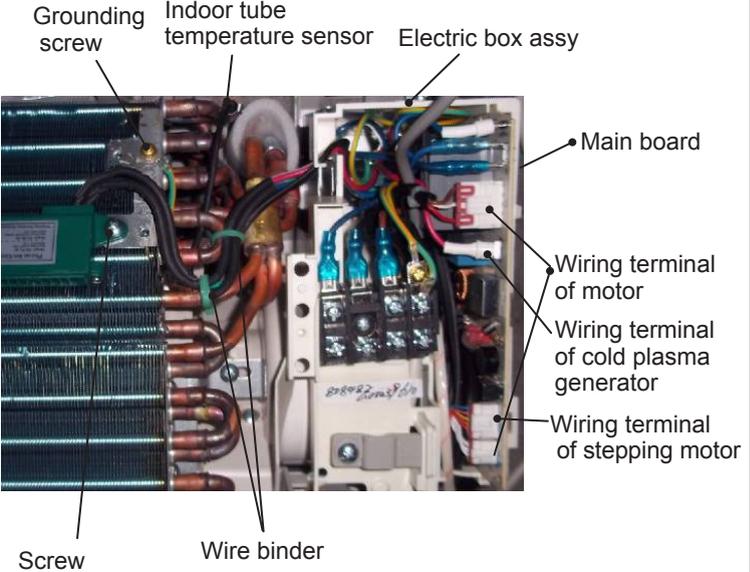
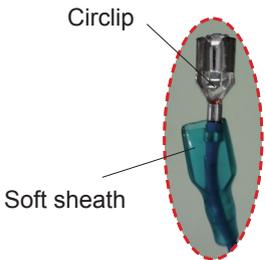
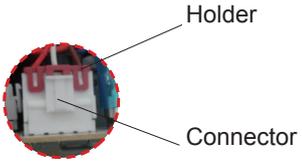
Step	Procedure
8.Remove motor and cross flow blade	
a	<p>Remove 3 screws fixing motor clamp and then remove the motor clamp.</p> 
b	<p>Remove the at the connection place of cross flow blade and motor; lift the motor and cross flow blade upwards to remove them.</p> 
9.Remove vertical louver	
	<p>Loosen the connection clasps between vertical louver and bottom case to remove vertical louver.</p> 

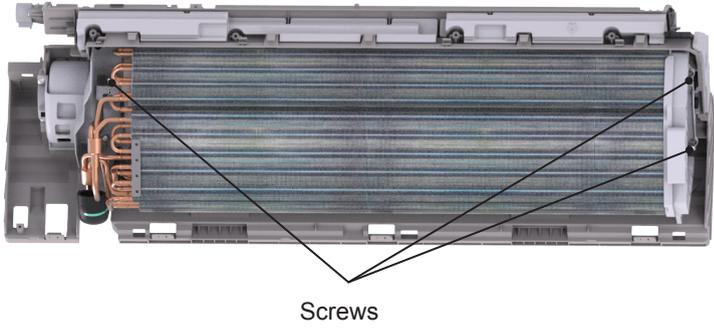
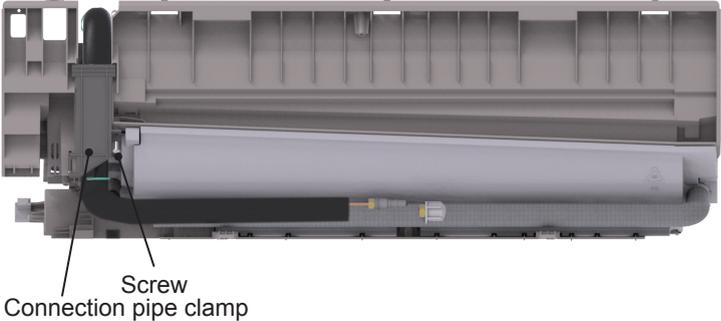
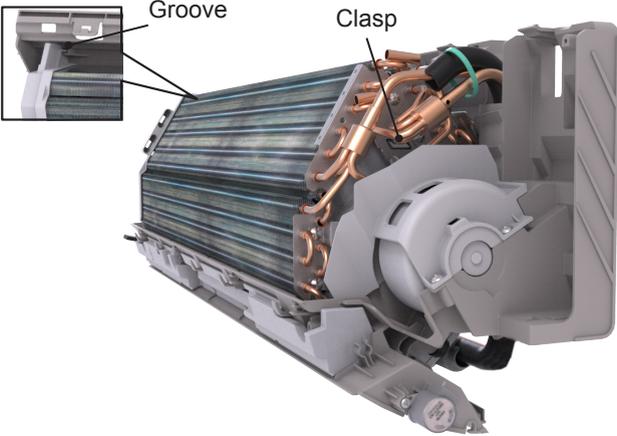
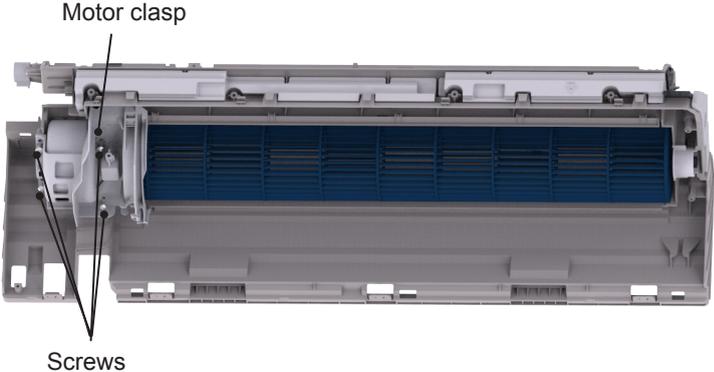


Caution: discharge the refrigerant completely before removal.

Step	Procedure
<p>Before disassemble</p>	<p>Turn off the air conditioner and disconnect the power before disassemble the air conditioner.</p> 
<p>1. Remove filter</p>	<p>Open the front panel; Push the filter upwards to loosen the clasp and then pull the left filter and right filter outwards to remove them.</p> 
<p>2.Remove front panel</p>	<p>Separate the panel rotation shaft from the groove fixing the front panel and then removes the front panel.</p> <p>Note: The display of some models is fixed on the panel; unscrew the screws fixing the display on the panel before removing the panel.</p> 

Step	Procedure	Image
3.Remove electric box cover sub-assy2 and detecting plate(wifi)	<p>Remove the screws on the electric box cover sub-assy2 and detecting plate(WIFI), to remove the electric box cover 2 and detecting plate(WIFI).</p>	
4.Remove horizontal louver	<p>Push out the axile bush on horizontal louver. Bend the horizontal louver with hand and then separate the horizontal louver from the crankshaft of step motor to remove it.</p>	
5.Remove front case sub-assy	<p>a Remove the screws fixing front case.</p> <p>Note: (1) Open the screw caps before removing the screws around the air outlet. (2) The quantity of screws fixing the front case sub-assy is different for different models.</p> <p>b Loosen the clasps at left, middle and right sides of front case. Life the front case sub-assy upwards to remove it.</p>	

Step	Procedure	Image
6.Remove electric box cover sub-assy	Loosen the clasps and remove the electric box cover sub-assy.	
7.Remove electric box assy	<p>a Remove the screw fixing electric box assy.</p> <p>b</p> <ol style="list-style-type: none"> ① Cut off the wire binder and pull out the indoor tube temperature sensor. ② Screw off one grounding screw. ③ Remove the wiring terminals of motor, cold plasma generator and stepping motor. ④ Remove the electric box assy. ⑤ Screw off the screws that are locking each. <p>Remove the wiring terminal of power cord. Lift up the main board and take it off.</p> <p>c</p> <p>Instruction:Some wiring terminal of this products is with lock catch and other devices.The pulling method is as below: 1.Remove the soft sheath for some terminals at first, hold the circlip and then pull out the terminals, 2.Pull out the holder for some terminals at first(holder is not available for some wiring terminal).hold the connector and then pull the terminal.</p>	   

Step	Procedure
8.Remove evaporator assy	
a	<p>Remove 3 screws fixing evaporator assy.</p> 
b	<p>At the back of the unit, remove the screw of the connection pipe clamp and then remove the connection pipe clamp.</p> 
c	<p>First remove the left side of evaporator from the groove of bottom shell and then remove the right side from the clasp on the bottom shell. Adjust the position of connection pipe on evaporator slightly and then lift the evaporator upwards to remove it.</p> 
9.Remove motor and cross flow blade	
a	<p>Remove the screws fixing motor clamp and then remove the motor clamp.</p> 

Step	Procedure	Procedure
b	Loose the screws (2-3 circles) used for fixing the cross flow fan, pull right to pull out the motor.	 <p data-bbox="1333 508 1403 532">Screw</p>

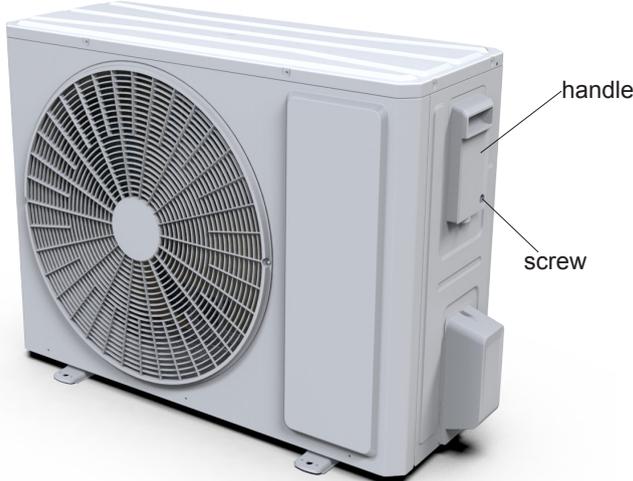
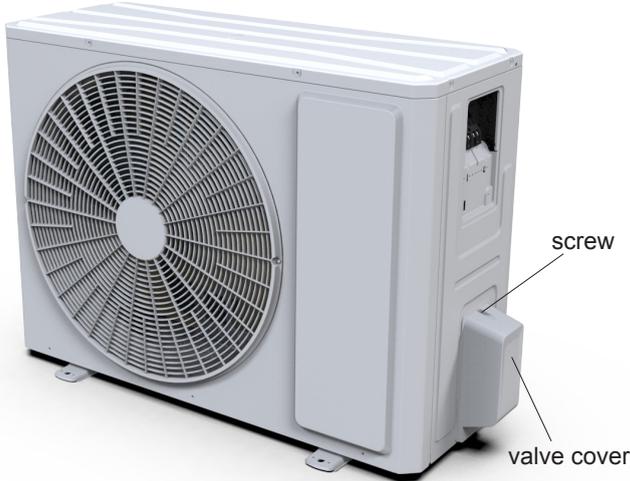
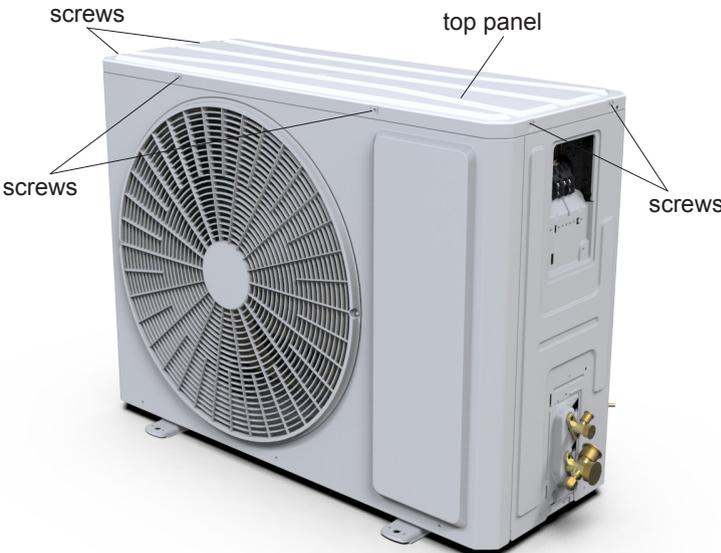
11. Removal Procedure

11.2 Removal Procedure of Outdoor Unit

GWC24ACEXF-D6DNA1A/O GWC30AAEXF-D6DNA1A/O



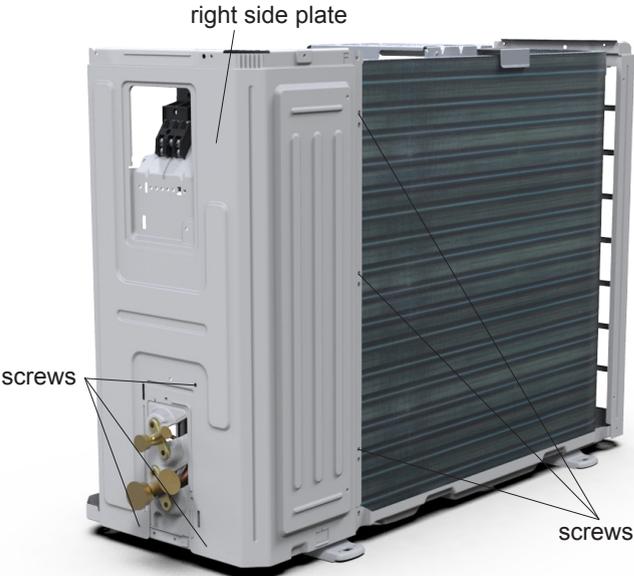
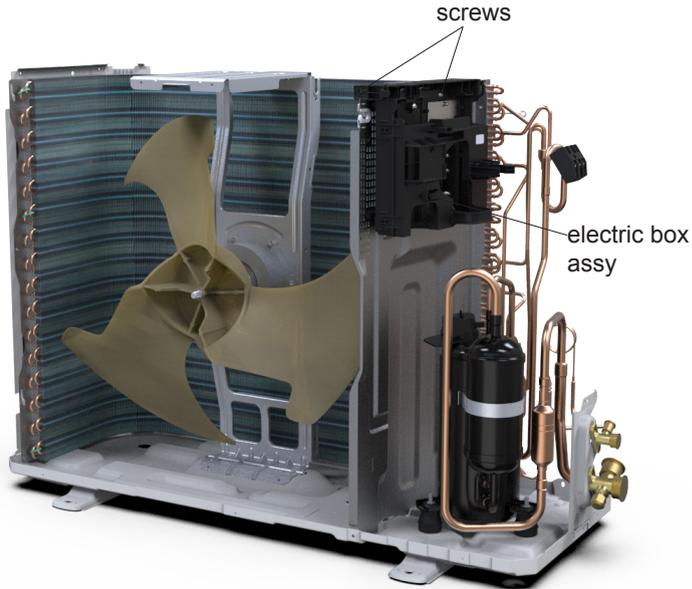
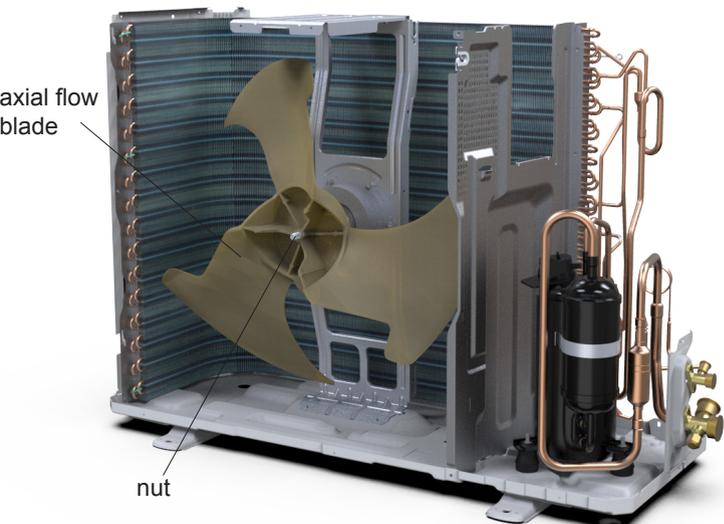
Caution: discharge the refrigerant completely before removal.

Step	Procedure
1. Remove handle	 <p>Remove the screw fixing the handle and then remove the handle.</p>
2. Remove valve cover	 <p>Remove the screw fixing the valve cover and then remove the valve cover.</p>
3. Remove top panel	 <p>Remove the screws fixing the top panel and then remove the top panel.</p>

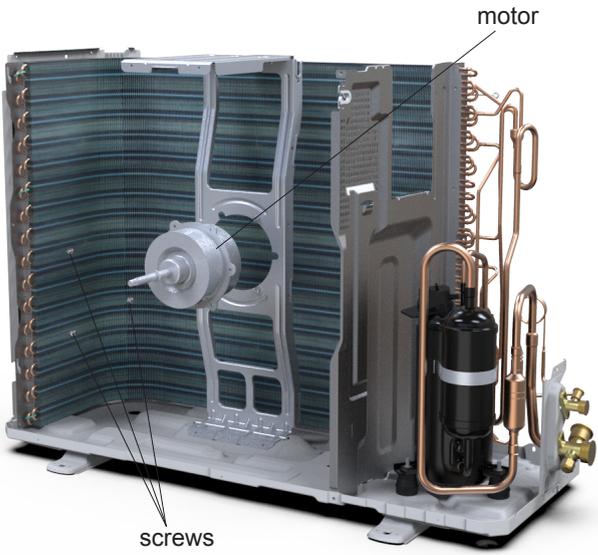
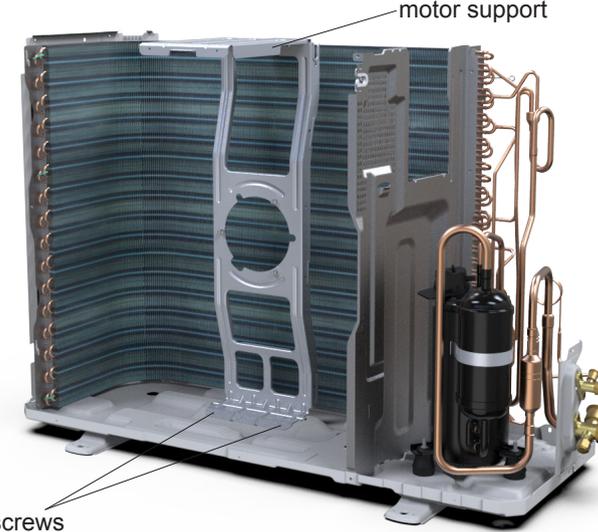
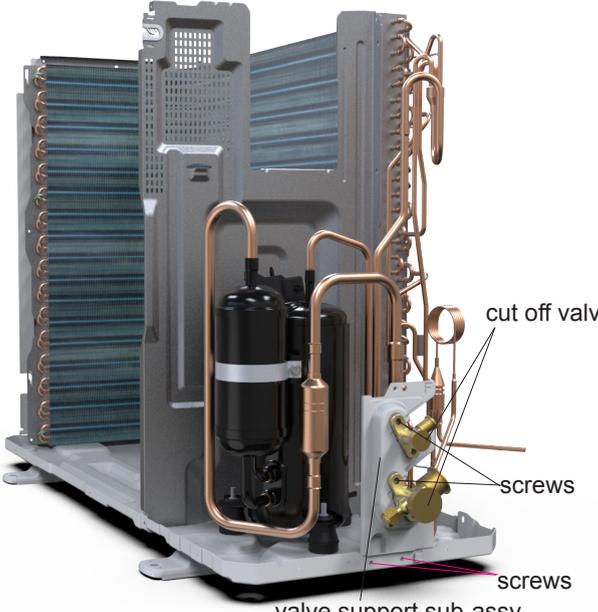
11. Removal Procedure

Step	Procedure
4. Remove grille	<p>Remove the screws fixing the grille and then remove the panel grille.</p>  <p>The diagram shows the outdoor unit from a front-three-quarter perspective. A large circular grille is being detached from the front. Two lines labeled 'grille' point to the circular mesh. Two lines labeled 'screws' point to the screws on the bottom edge of the grille.</p>
5. Remove front panel	<p>Remove screws fixing the front panel and then remove the front panel.</p>  <p>The diagram shows the outdoor unit with the front grille removed. The front panel is being detached. Two lines labeled 'front panel' point to the panel on the right side. Two lines labeled 'screws' point to the screws on the left side of the panel.</p>
6. Remove Rear Grill	<p>Remove screws fixing the Rear Grill, and then remove the Rear Grill.</p>  <p>The diagram shows the outdoor unit from a rear-three-quarter perspective. The rear grill is being detached. Two lines labeled 'screws' point to the screws on the bottom edge of the grill.</p>

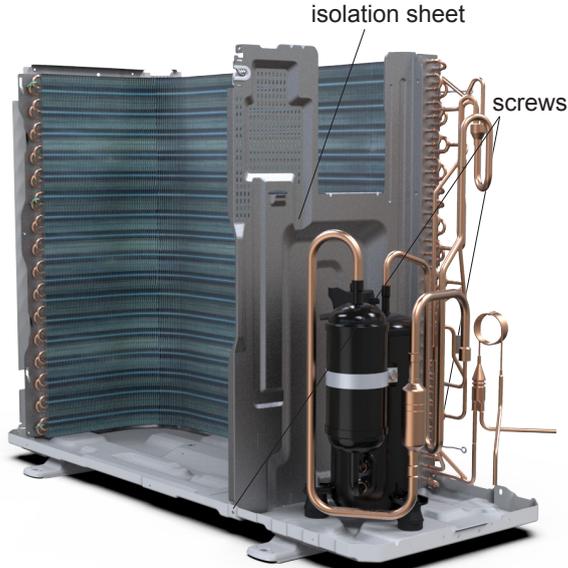
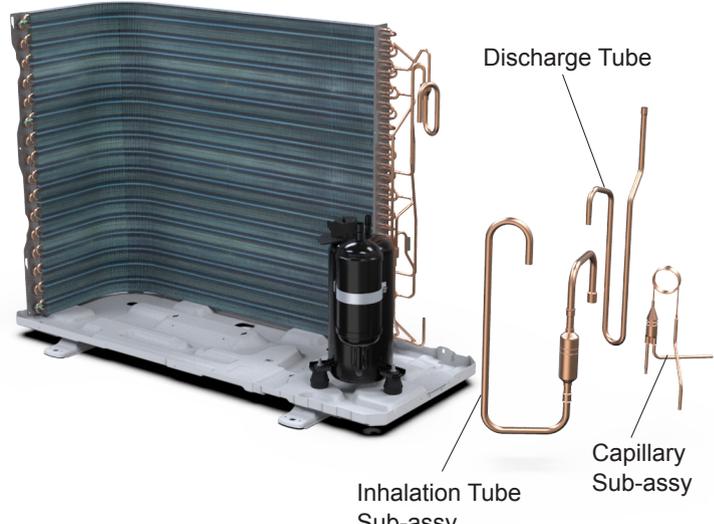
11. Removal Procedure

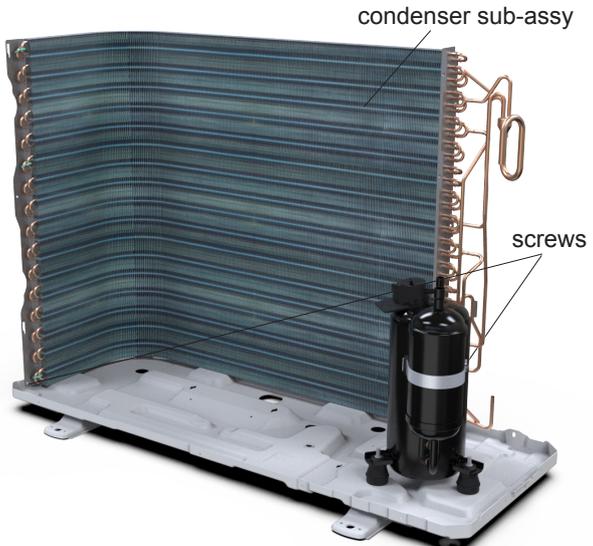
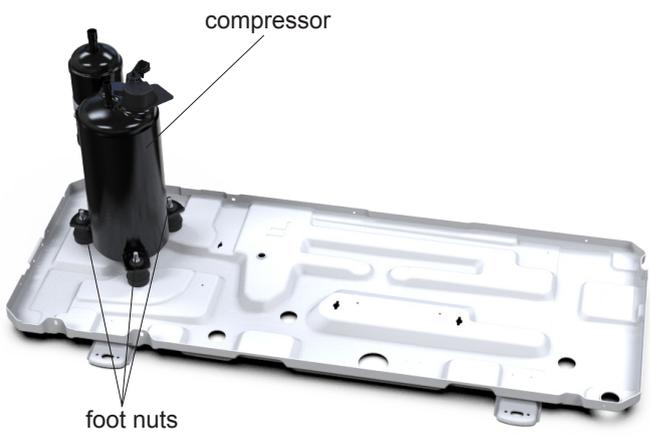
Step	Procedure
7. Remove right side plate	<p>Remove screws fixing connecting the front panel with the chassis and the motor support, and then remove the right side plate.</p> 
8. Remove electric box assy	<p>Remove the screws fixing the electric box; loosen the wire bundle; pull out the wiring terminals and then pull electric box upwards to remove it.</p> 
9. Remove axial flow blade	<p>Remove nut fixing the blade and then remove the blade.</p> 

11. Removal Procedure

Step	Procedure
10. Remove motor	<p>Remove screws fixing the motor and then remove the motor.</p> 
11. Remove motor support	<p>Remove screws fixing the motor support and then remove the motor support.</p> 
12. Remove cut off valve and valve support sub-assy	<p>Remove screws fixing the cut off valve and then remove the cut off valve; Remove screws fixing the valve support subassy and then remove the valve support subassy.</p> <p>Note: When pulling out the wiring terminal, pay attention to loose the clasp and don't pull it so hard.</p> 

11. Removal Procedure

Step	Procedure
<p>13. Remove isolation sheet</p>	<p>Remove the screws fixing the isolation sheet and then remove the isolation sheet.</p> 
<p>14. Remove left side plate</p>	<p>Remove the screws fixing the left side plate and the chassis, and then remove the left side plate.</p> 
<p>15. Remove Inhalation Tube Sub-assy, Discharge Tube and Capillary Sub-assy</p>	<p>Unsolder the welding joints connecting Inhalation Tube Sub-assy, Discharge Tube and Capillary Sub-assy, then remove the Inhalation Tube Sub-assy, Discharge Tube and Capillary Sub-assy,.</p> <p>Note: Before unsoldering the welding joint, wrap the Inhalation Tube Sub-assy, Discharge Tube and Capillary Sub-assy, with a wet cloth completely to avoid damage to the valve caused by high temperature.</p> 

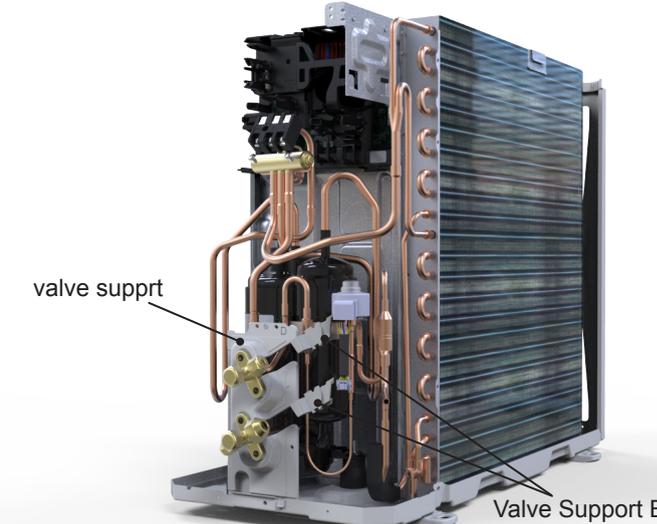
Step	Procedure
<p>16. Remove condenser sub-assy</p>	<p>Remove the screws fixing the condenser and chassis, and then lift the condenser upwards to remove it.</p>  <p>The diagram shows a condenser sub-assembly consisting of a blue finned coil and a black compressor mounted on a white metal chassis. The condenser is held in place by several screws. Labels include 'condenser sub-assy' pointing to the coil, and 'screws' pointing to the fasteners.</p>
<p>17. Remove compressor</p>	<p>Remove the 3 foot nuts on the compressor and then remove the compressor.</p>  <p>The diagram shows the compressor mounted on the white metal chassis. Three foot nuts are visible at the base of the compressor. Labels include 'compressor' pointing to the unit and 'foot nuts' pointing to the three mounting points.</p>

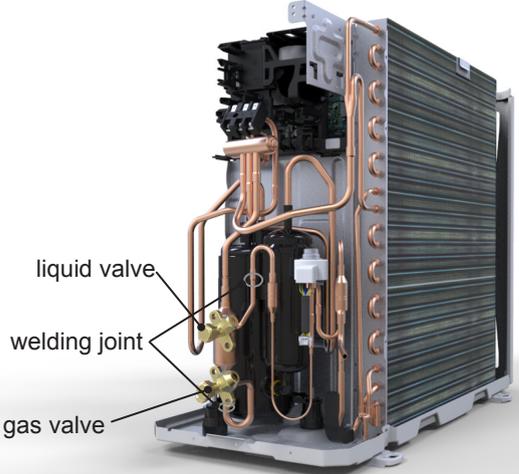
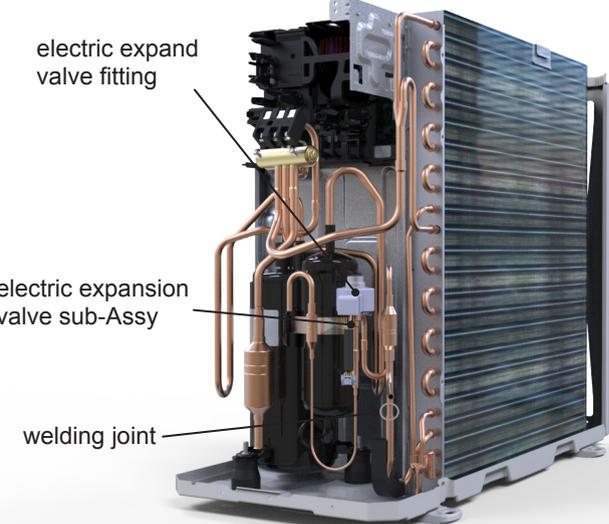
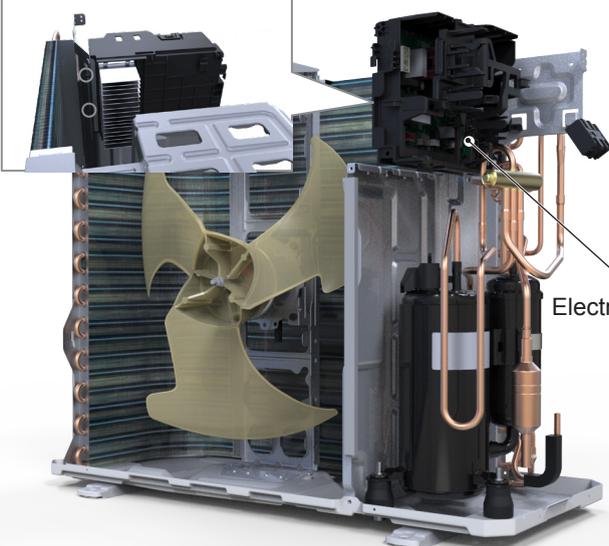


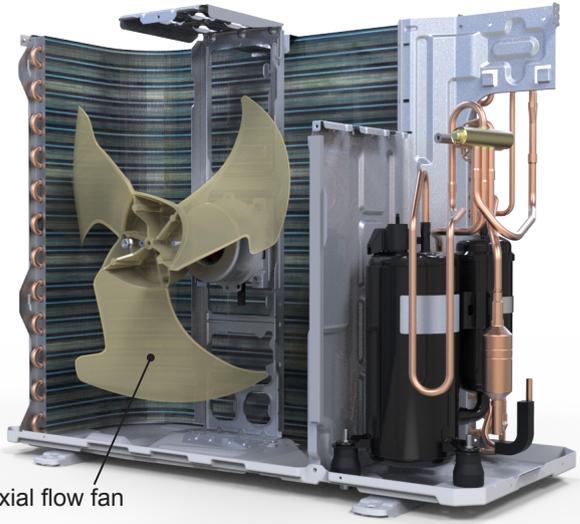
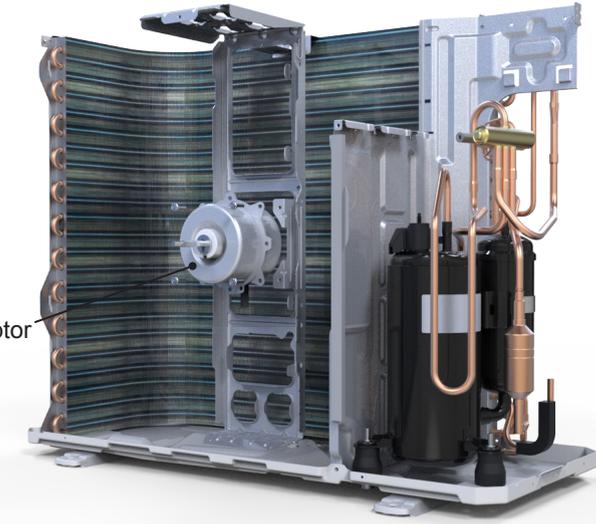
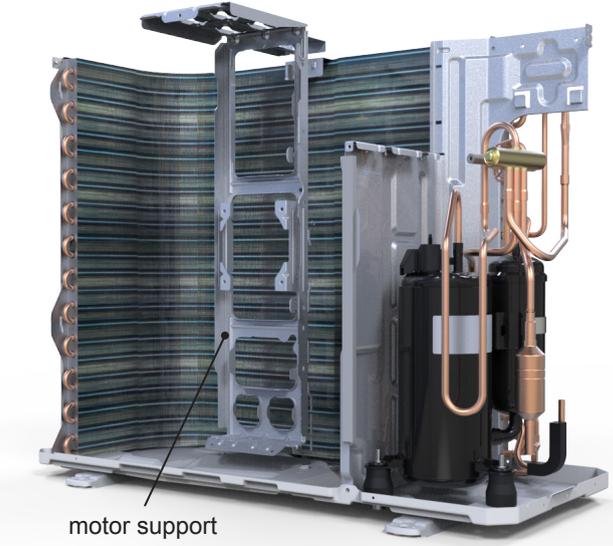
Caution: discharge the refrigerant completely before removal.

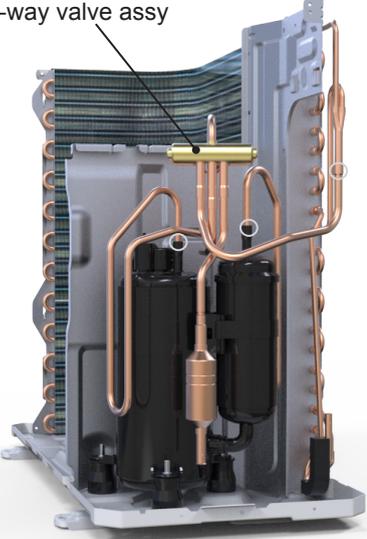
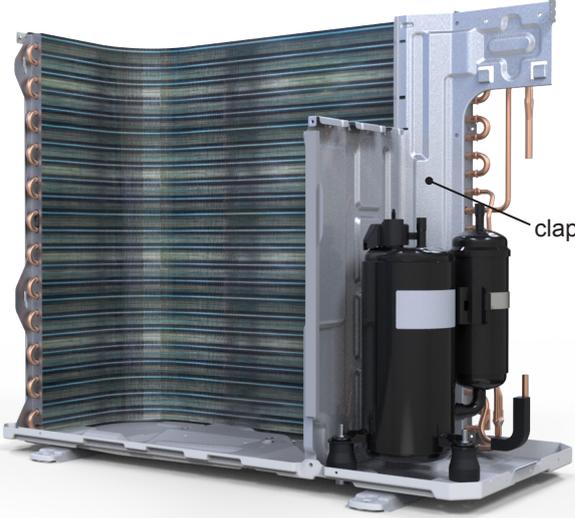
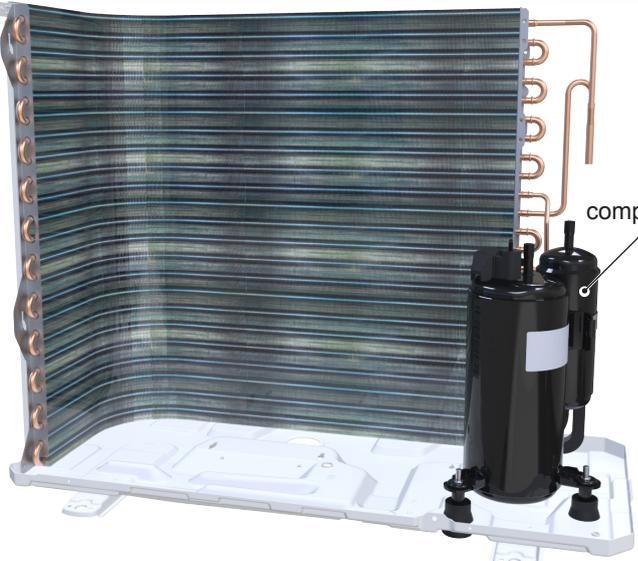
NOTE: Take heat pump unit for example.

Step	Procedure
<p>1. Before disassembly</p>	
<p>2. Remove top cover</p>	<p>Remove the screws fixing top cover and then remove the top cover.</p> 
<p>3. Remove big handle and valve cover</p>	<p>Remove the screws fixing big handle, valve cover and then remove them.</p> 

Step	Procedure
<p>4. Remove front panel assy</p>	<p>Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.</p> 
<p>5. Remove right side plate assy</p>	<p>Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.</p> 
<p>6. Remove valve support</p>	<p>Remove the valve support bolck, remove the screws fixing valve support, remove the screws fixing the liquid valve and gas valve then remove the valve support.</p> 

Step	Procedure
<p>7. Remove gas valve and liquid valve</p> <p>Unsolder the welding joint connecting the gas valve and the liquid valve, remove them.</p> <p>Note: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p>	 <p>liquid valve</p> <p>welding joint</p> <p>gas valve</p>
<p>8. Remove electronic expansion valve</p> <p>Remove the terminals of the electric expand valve fitting and rotate to remove the electric expand valve fitting.</p> <p>Unsolder the welding joint connecting the electronic expansion Valve and then remove the electronic expansion valve.</p>	 <p>electric expand valve fitting</p> <p>electric expansion valve sub-assy</p> <p>welding joint</p>
<p>9. Remove electric box assy</p> <p>Unplug the terminals, unscrew 1 screw that secures the electrical box assy, release the two snaps on the electrical box assy (in the clapboard and condenser angle), pull outwards, and remove the electrical box assy.</p>	 <p>Electric Box Assy</p>

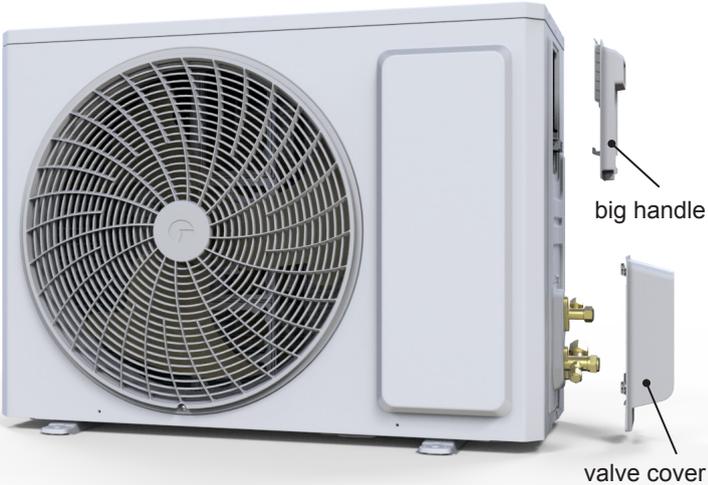
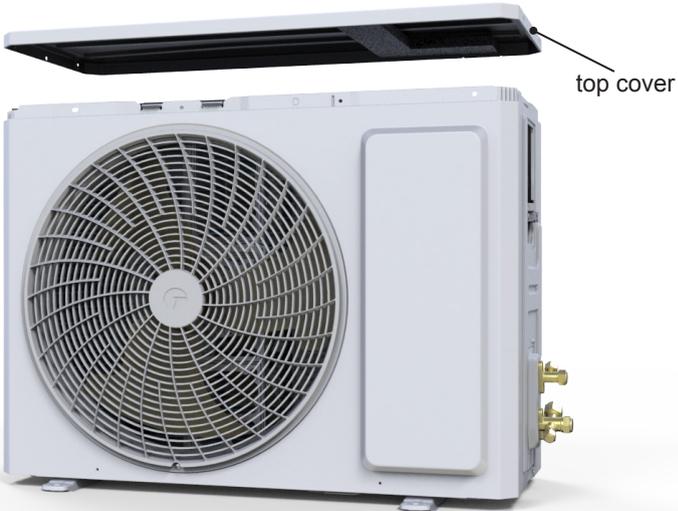
Step	Procedure
<p>10. Remove axial flow fan</p>	<p>Remove the nut on the fan and then remove the axial flow fan.</p> 
<p>11. Remove motor</p>	<p>Remove the screws fixing the motor and then remove the motor.</p> 
<p>12. Remove motor support</p>	<p>Remove the screws fixing the motor support and lift the motor support to remove it.</p> 

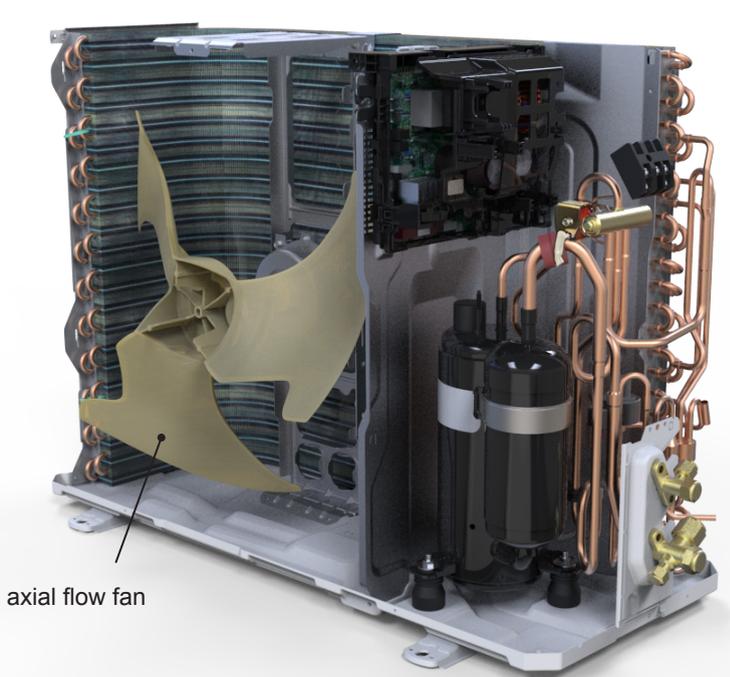
Step	Procedure
<p>13. Remove 4-way valve assy</p>	<p>Unsolder the welding joints connecting the 4-way valve assy, remove the 4-way valve.</p> <p>Note: Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p> 
<p>14. Remove clapboard assy</p>	<p>Remove the screws fixing the clapboard assy and then remove the clapboard assy.</p> 
<p>15. Remove compressor</p>	<p>Remove the 3 foot nuts on the compressor and then remove the compressor.</p> 

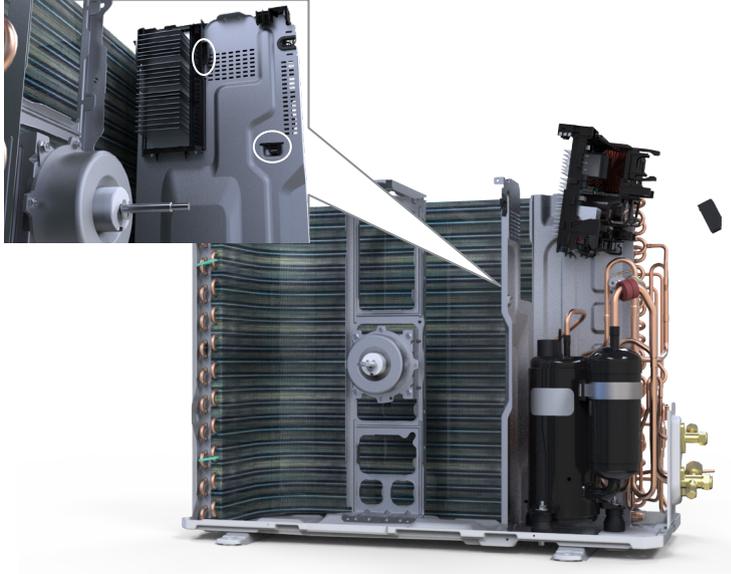
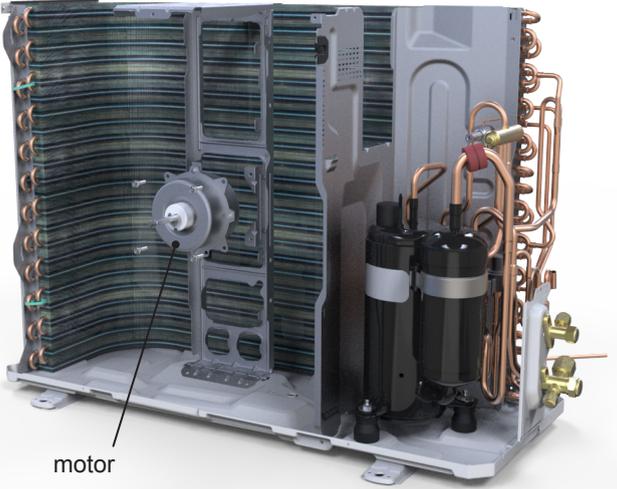


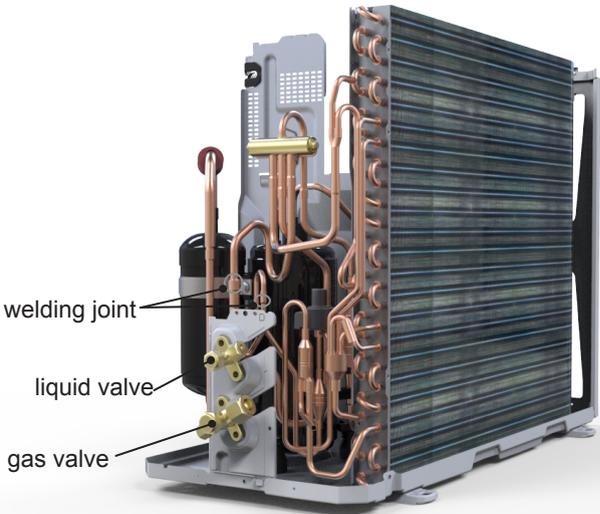
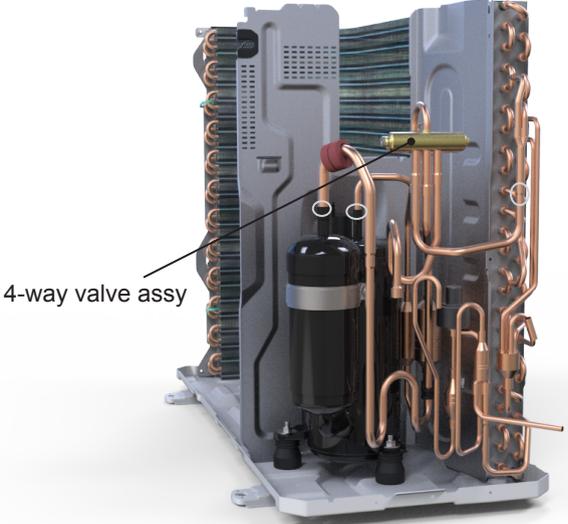
Caution: discharge the refrigerant completely before removal.

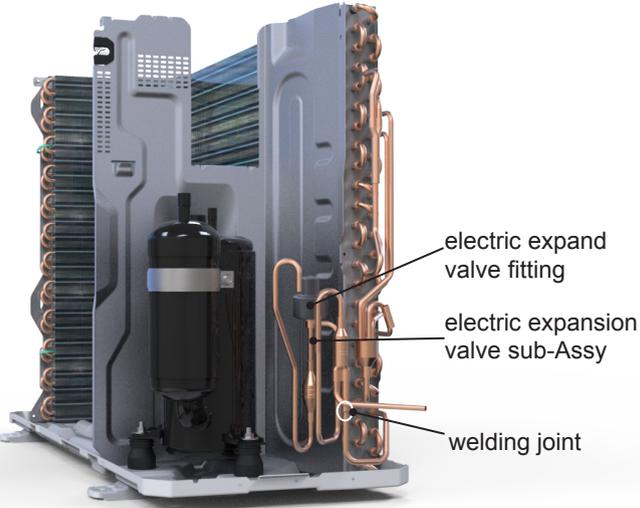
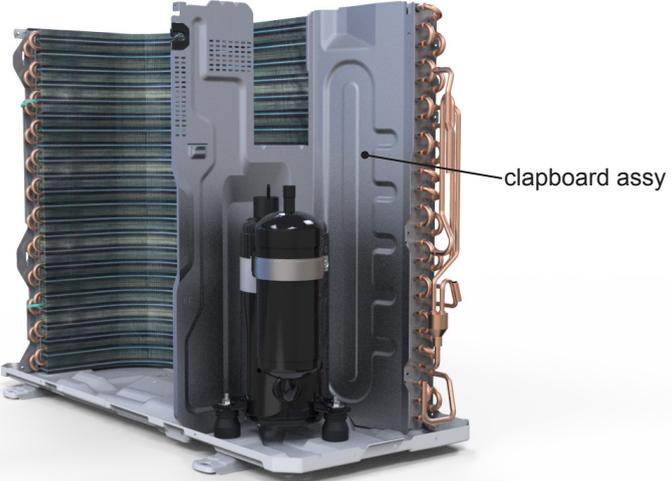
NOTE: Take heat pump unit for example.

Step	Procedure
<p>1. Before disassembly</p>	
<p>2. Remove big handle and valve cover</p>	<p>Remove the screws fixing big handle, valve cover and then remove them.</p> 
<p>3. Remove top cover</p>	<p>Remove the screws fixing top panel and then remove the top panel.</p> 

Step	Procedure
<p>4. Remove front panel assy</p>	<p>Remove connection screws connecting the front panel assy with the chassis and the motor support, and then remove the front panel assy.</p> 
<p>5. Remove right side plate assy</p>	<p>Rescrew the ground screws, remove the ground wires, loosen the screws fixing terminal board, remove the terminal board, rescrew the screws fixing the right plate, and remove the right side plate assy.</p> 
<p>6. Remove axial flow fan</p>	<p>Remove the nut on the fan and then remove the axial flow fan.</p> 

Step	Procedure
<p>7. Remove electric box assy</p>	<p>Remove the terminals, lift up and rotate the electrical box assy to the right so that the snaps on the clapboard are removed and the electrical box assy are removed.</p> 
<p>8. Remove motor</p>	<p>Remove the screws fixing the motor and then remove the motor.</p>  <p style="text-align: center;">motor</p>
<p>9. Remove motor support</p>	<p>Remove the screws fixing the motor support and lift the motor support to remove it.</p>  <p style="text-align: center;">motor support</p>

Step	Procedure
<p>10. Remove gas valve and liquid valve</p> <p>Remove the valve support block, remove the screws fixing the gas valve and the liquid valve, unsolder the welding joint connecting the gas valve and the liquid valve, remove them.</p> <p>Note: Discharge the refrigerant completely before unsoldering; when unsoldering, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p>	 <p>welding joint</p> <p>liquid valve</p> <p>gas valve</p>
<p>11. Remove valve support</p> <p>Remove the screws fixing valve support, then remove the valve support.</p>	 <p>valve support</p>
<p>12. Remove 4-way valve assy</p> <p>Unsolder the welding joints connecting the 4-way valve assy, remove the 4-way valve.</p> <p>Note: Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p>	 <p>4-way valve assy</p>

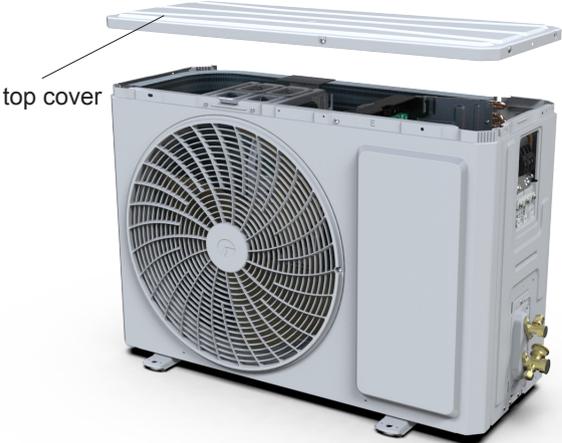
Step	Procedure
<p>13. Remove isolation sheet</p>	<p>Remove the screws fixing the isolation sheet and then remove the isolation sheet.</p> 
<p>14. Remove clapboard assy</p>	<p>Remove the screws fixing the clapboard assy and then remove the clapboard assy.</p> 
<p>15. Remove compressor</p>	<p>Remove the 3 foot nuts on the compressor and then remove the compressor.</p> 

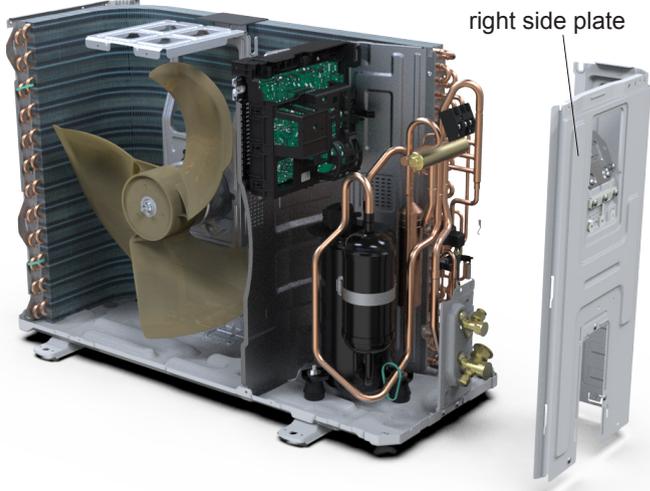
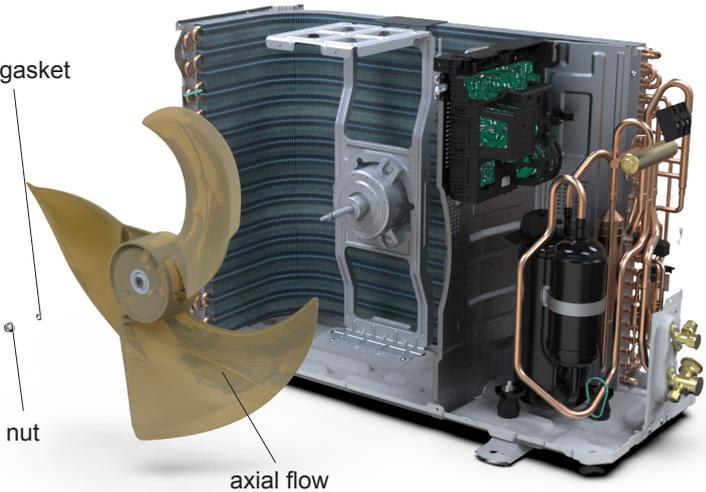
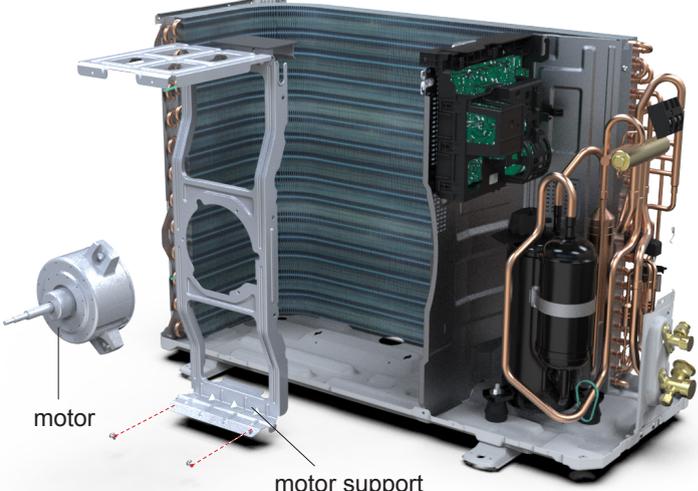


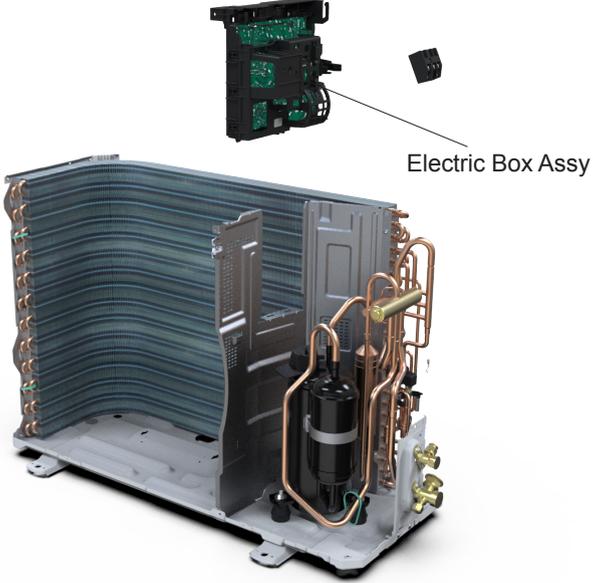
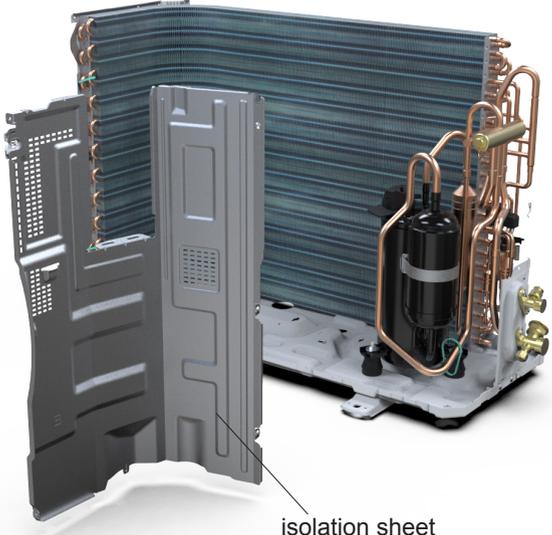
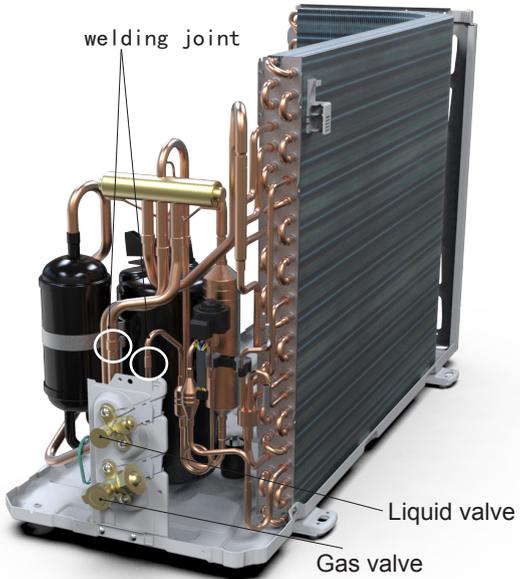
Caution: discharge the refrigerant completely before removal.

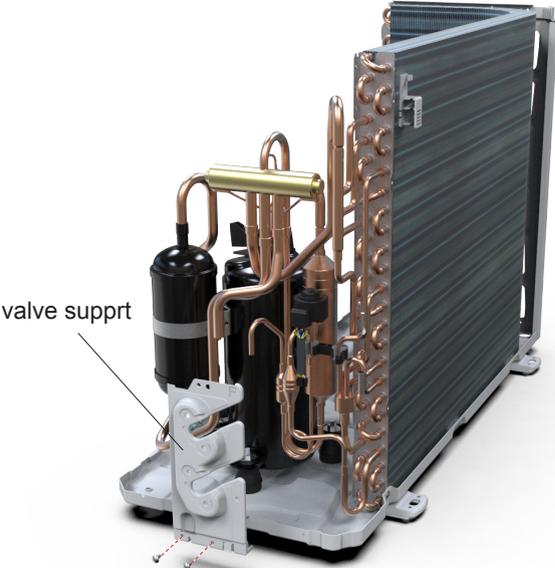
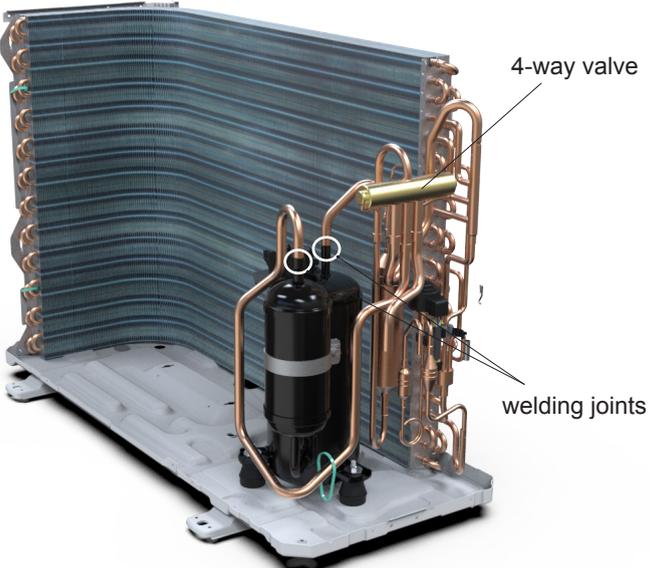
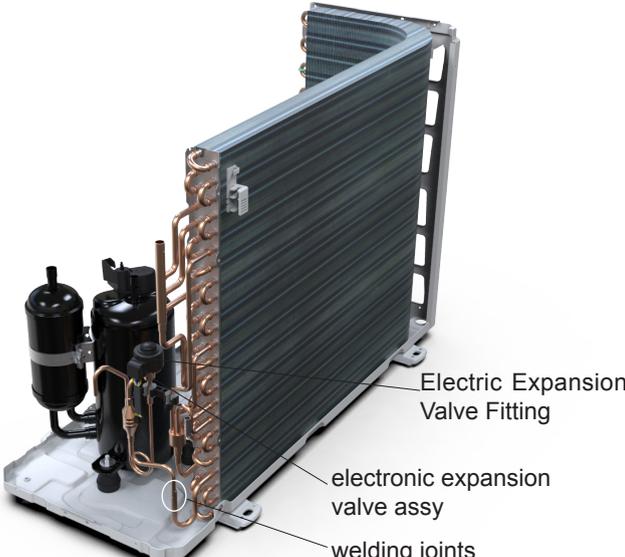
NOTE: Take heat pump unit for example.

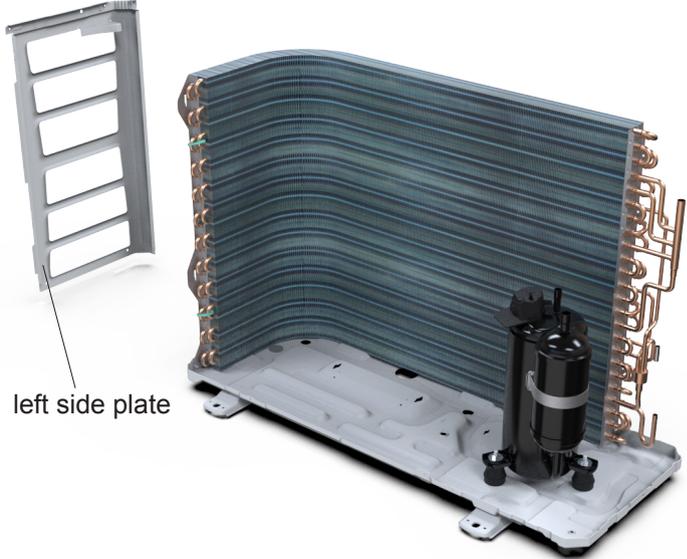
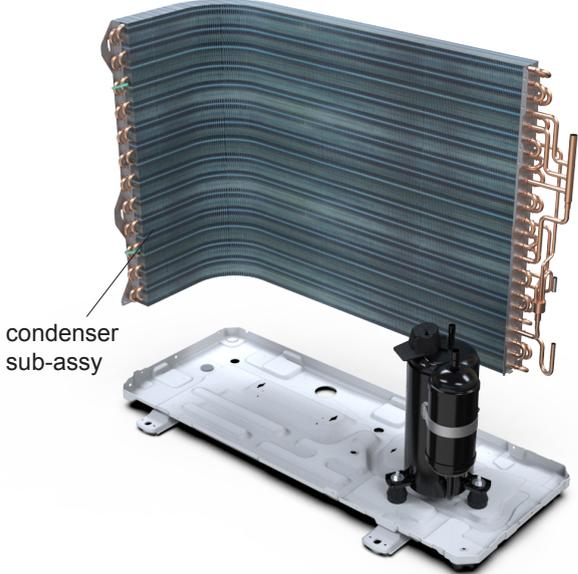
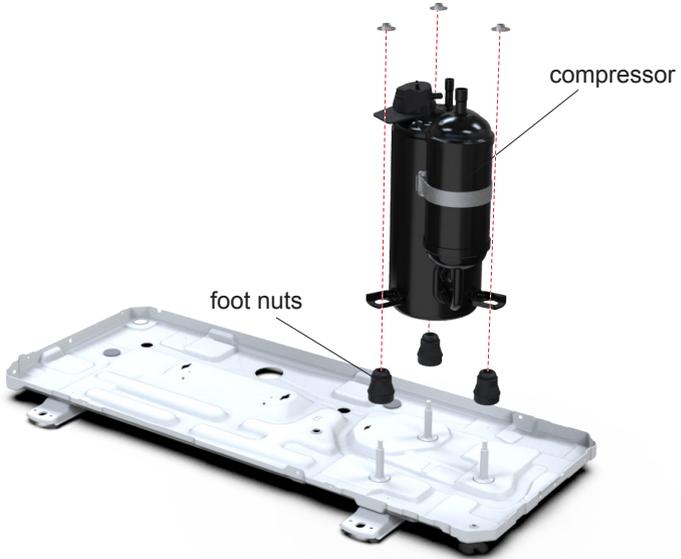
Step	Procedure
<p>1. Before disassembly</p>	
<p>2. Remove valve cover</p> <p>Remove the connection screw and then remove the valve cover.</p>	
<p>3. Remove big handle</p> <p>Remove the connection screw and then remove the big handle.</p>	

Step	Procedure
<p data-bbox="110 214 358 242">4. Remove top cover</p>	<p data-bbox="191 449 789 532">Remove connection screws connecting the top panel with the front panel and the right side plate, and then remove the top panel.</p>  <p data-bbox="841 329 943 358">top cover</p>
<p data-bbox="110 744 298 773">5. Remove grille</p>	<p data-bbox="191 1024 789 1076">Remove connection screws between the front grille and the front panel. Then remove the grille.</p>  <p data-bbox="1052 1240 1105 1268">grille</p>
<p data-bbox="110 1327 375 1356">6. Remove front panel</p>	<p data-bbox="191 1672 789 1755">Remove connection screws connecting the front panel with the chassis and the motor support and then remove the front panel.</p>  <p data-bbox="1230 1989 1349 2018">front panel</p>

Step	Procedure
<p>7. Remove right side plate</p>	<p>Remove connection screws connecting the right side plate with the valve support and the electric box. Then remove the right side plate.</p> 
<p>8. Remove the nut and gasket on the blade and then remove the axial flow blade</p>	<p>Remove the nut and gasket on the blade and then remove the axial flow blade.</p> 
<p>9. Remove motor and motor support</p>	<p>Remove the tapping screws fixing the motor and disconnect the leading wire insert of the motor. Then remove the motor. Remove the tapping screws fixing the motor support and lift the motor support to remove it.</p> 

Step	Procedure
<p>10. Remove Electric Box Assy</p>	<p>Remove screws fixing the electric box subassembly; loosen the wire bundle and unplug the wiring terminals. Then lift the electric box to remove it.</p>  <p>Electric Box Assy</p>
<p>11. Remove isolation sheet</p>	<p>Remove the screws fixing the isolation sheet and then remove the isolation sheet.</p>  <p>isolation sheet</p>
<p>12. Remove liquid valve and gas valve</p>	<p>Unsolder the welding joint connecting the valve with capillary and condenser; unsolder the welding joint connecting the gas valve and air-return pipe; remove the 2 screws fixing the gas valve to remove the gas valve.</p> <p>Unsolder the welding joint connecting the liquid valve and Y-shaped pipe; remove the 2 screws fixing the liquid valve to remove the liquid valve.</p> <p>Note: Before unsoldering the welding joint, wrap the gas valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p>  <p>welding joint</p> <p>Liquid valve</p> <p>Gas valve</p>

Step	Procedure
<p>13. Remove valve support</p>	<p>Remove the screws fixing valve support, then remove the valve support.</p> 
<p>14. Remove 4-way valve assy and cut-off valve</p>	<p>Unsolder the welding joints connecting the 4-way valve assy and cut-off valve, remove the 4-way valve and cutoff valve. Note: Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p> 
<p>15. Remove electronic expansion valve assy</p>	<p>Unsolder the welding joints connecting electronic expansion valve assy then remove the electronic expansion valve assy and 4-way valve. Note: Before unsoldering the welding joint, wrap the 4-way valve with a wet cloth completely to avoid damage to the valve caused by high temperature.</p> 

Step	Procedure
<p>16. Remove left side plate</p>	<p>Remove connection screws connecting the left side plate. Then remove the right side plate.</p>  <p>left side plate</p>
<p>17. Remove condenser sub-assy</p>	<p>Remove the screws fixing the condenser sub-assy and then remove the condenser sub-assy.</p>  <p>condenser sub-assy</p>
<p>18. Remove compressor</p>	<p>Remove the 3 foot nuts on the compressor and then remove the compressor.</p>  <p>compressor</p> <p>foot nuts</p>

Appendix

Appendix 1: Reference Sheet of Celsius and Fahrenheit

Conversion formula for Fahrenheit degree and Celsius degree: $T_f = T_c \times 1.8 + 32$

Set temperature

Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)
61	60.8	16	69/70	69.8	21	78/79	78.8	26
62/63	62.6	17	71/72	71.6	22	80/81	80.6	27
64/65	64.4	18	73/74	73.4	23	82/83	82.4	28
66/67	66.2	19	75/76	75.2	24	84/85	84.2	29
68	68	20	77	77	25	86	86	30

Ambient temperature

Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)	Fahrenheit display temperature (°F)	Fahrenheit (°F)	Celsius (°C)
32/33	32	0	55/56	55.4	13	79/80	78.8	26
34/35	33.8	1	57/58	57.2	14	81	80.6	27
36	35.6	2	59/60	59	15	82/83	82.4	28
37/38	37.4	3	61/62	60.8	16	84/85	84.2	29
39/40	39.2	4	63	62.6	17	86/87	86	30
41/42	41	5	64/65	64.4	18	88/89	87.8	31
43/44	42.8	6	66/67	66.2	19	90	89.6	32
45	44.6	7	68/69	68	20	91/92	91.4	33
46/47	46.4	8	70/71	69.8	21	93/94	93.2	34
48/49	48.2	9	72	71.6	22	95/96	95	35
50/51	50	10	73/74	73.4	23	97/98	96.8	36
52/53	51.8	11	75/76	75.2	24	99	98.6	37
54	53.6	12	77/78	77	25			

Appendix 2: Configuration of Connection Pipe

- Standard length of connection pipe (More details please refer to the specifications.)
- Min length of connection pipe for the unit with standard connection pipe of 5m, there is no limitation for the min length of connection pipe. For the unit with standard connection pipe of 7.5m and 8m, the min length of connection pipe is 3m.
- Max. length of connection pipe and max. high difference. (More details please refer to the specifications.)
- The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
 - After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
 - The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):
 - Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.
 - Additional refrigerant charging amount = prolonged length of liquid pipe X additional refrigerant charging amount per meter

Additional refrigerant charging amount for R32

Piping size		Indoor unit throttle	Outdoor unit throttle	
Liquid pipe	Gas pipe	Cooling only, cooling and heating (g / m)	Cooling only(g/m)	Cooling and heating(g/m)
1/4"	3/8" or 1/2"	16	12	16
1/4" or 3/8"	5/8" or 3/4"	40	12	40
1/2"	3/4" or 7/8"	80	24	96
5/8"	1" or 1 1/4"	136	48	96
3/4"	/	200	200	200
7/8"	/	280	280	280

Appendix

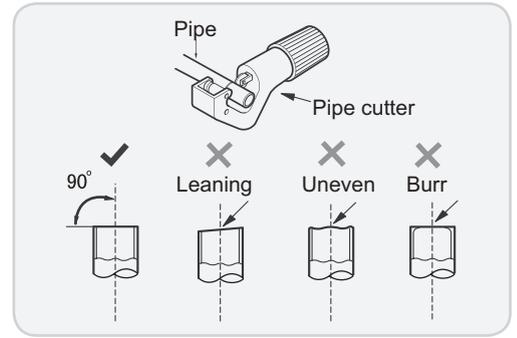
Appendix 3: Pipe Expanding Method

⚠ Note:

Improper pipe expanding is the main cause of refrigerant leakage. Please expand the pipe according to the following steps:

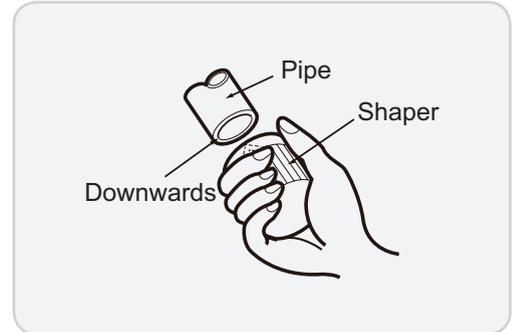
A: Cut the pipe

- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.



B: Remove the burrs

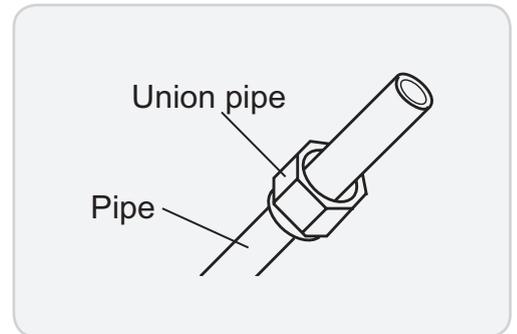
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe.

D: Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.



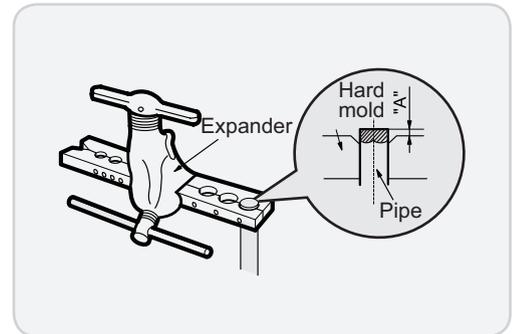
E: Expand the port

- Expand the port with expander.

⚠ Note:

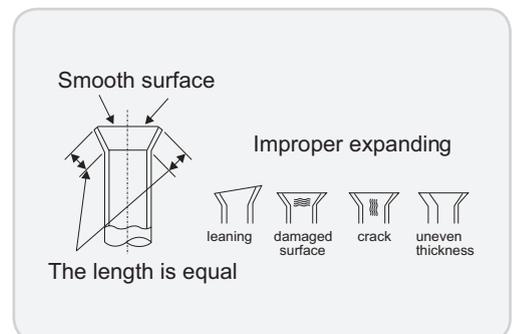
- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter(mm)	A(mm)	
	Max	Min
Φ6 - 6.35 (1/4")	1.3	0.7
Φ9 - Φ9.52 (3/8")	1.6	1.0
Φ12 - 12.70 (1/2")	1.8	1.0
Φ16 - 15.88 (5/8")	2.4	2.2



F: Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.



Appendix

Appendix 4: List of Resistance for Temperature Sensor

Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units(15K)

Temp(°C)	Resistance(kΩ)
-19	138.10
-18	128.60
-16	115.00
-14	102.90
-12	92.22
-10	82.75
-8	74.35
-6	66.88
-4	60.23
-2	54.31

Temp(°C)	Resistance(kΩ)
0	49.02
2	44.31
4	40.09
6	36.32
8	32.94
10	29.90
12	27.18
14	24.73
16	22.53
18	20.54

Temp(°C)	Resistance(kΩ)
20	18.75
22	17.14
24	15.68
26	14.36
28	13.16
30	12.07
32	11.09
34	10.20
36	9.38
38	8.64

Temp(°C)	Resistance(kΩ)
40	7.97
42	7.35
44	6.79
46	6.28
48	5.81
50	5.38
52	4.99
54	4.63
56	4.29
58	3.99

Resistance Table of Tube Temperature Sensors for Indoor and Outdoor (20K)

Temp(°C)	Resistance(kΩ)
-19	181.40
-15	145.00
-10	110.30
-5	84.61
0	65.37
5	50.87
10	39.87
15	31.47

Temp(°C)	Resistance(kΩ)
20	25.01
25	20.00
30	16.10
35	13.04
40	10.62
45	8.71
50	7.17
55	5.94

Temp(°C)	Resistance(kΩ)
60	4.95
65	4.14
70	3.48
75	2.94
80	2.50
85	2.13
90	1.82
95	1.56

Temp(°C)	Resistance(kΩ)
100	1.35
105	1.16
110	1.01
115	0.88
120	0.77
125	0.67
130	0.59
135	0.52

Resistance Table of Discharge Temperature Sensor for Outdoor(50K)

Temp(°C)	Resistance(kΩ)
-30	911.400
-25	660.8
-20	486.5
-15	362.9
-10	274
-5	209
0	161
5	125.1

Temp(°C)	Resistance(kΩ)
10	98
15	77.35
20	61.48
25	49.19
30	39.61
35	32.09
40	26.15
45	21.43

Temp(°C)	Resistance(kΩ)
50	17.65
55	14.62
60	12.17
65	10.18
70	8.555
75	7.224
80	6.129
85	5.222

Temp(°C)	Resistance(kΩ)
90	4.469
95	3.841
100	3.315
105	2.872
110	2.498
115	2.182
120	1.912
125	1.682

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For product improvement, specifications and appearance in this manual are subject to change without prior notice.