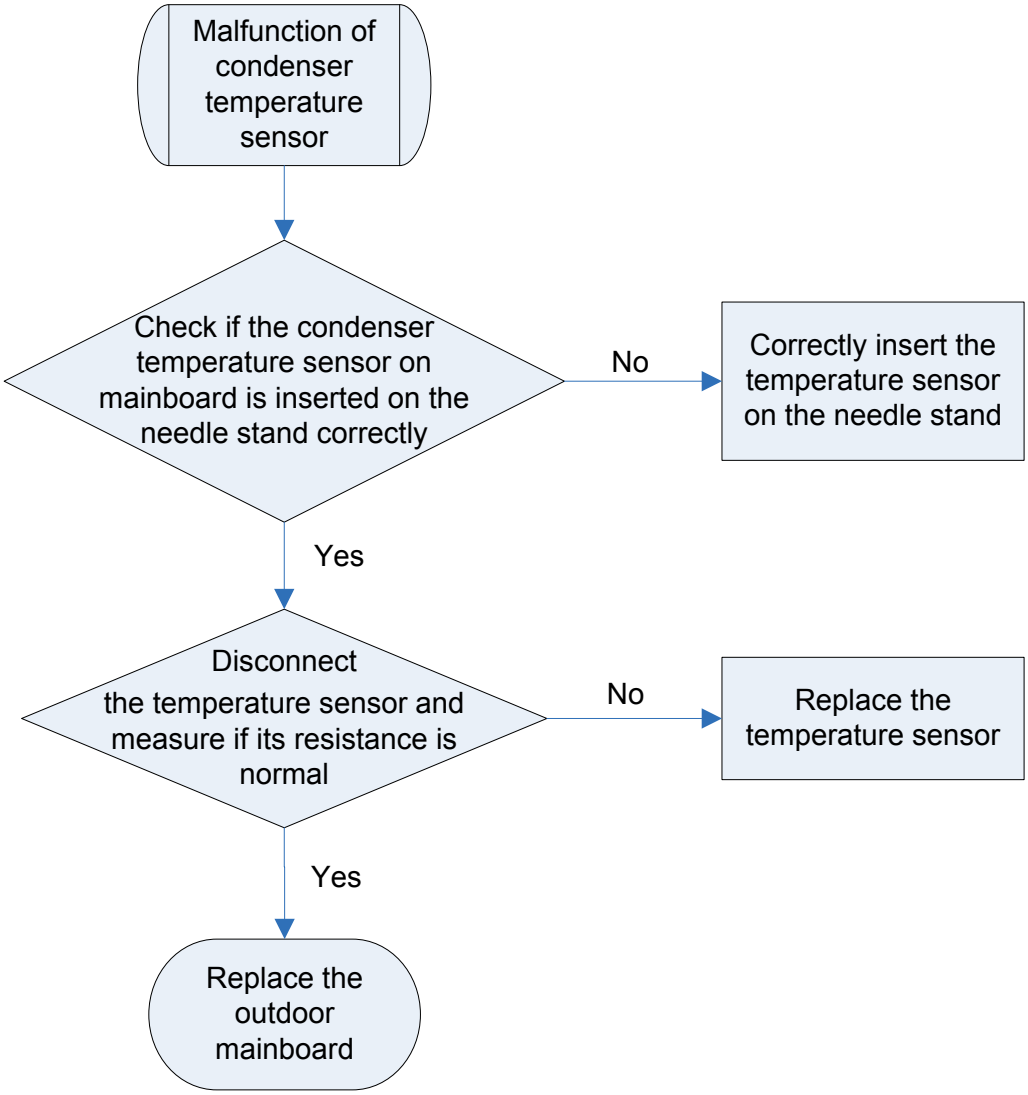
Troubleshooting:



3.4.10 “F3”Outdoor Ambient Temperature Sensor Error

Error display: IDU wired control and IDU receiver light board will display:F3.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

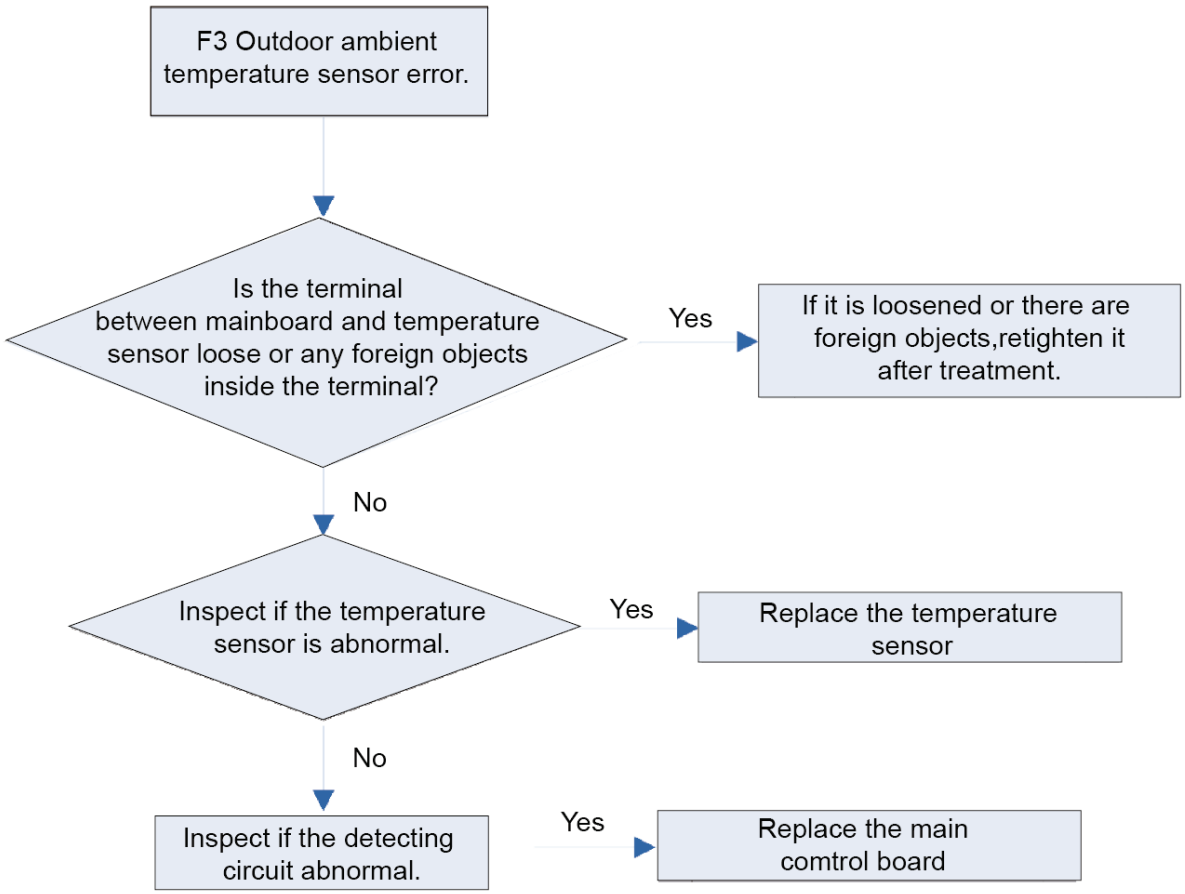
Possible reason:

■Poor contact between ambient temperature sensor and terminal in mainboard interface;

■Ambient temperature sensor is abnormal;

■Detecting circuit is abnormal.

Troubleshooting:



3.4.11 “F4” Discharge Temperature Sensor Error

Error display: IDU wired control and IDU receiver light board will display F4.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

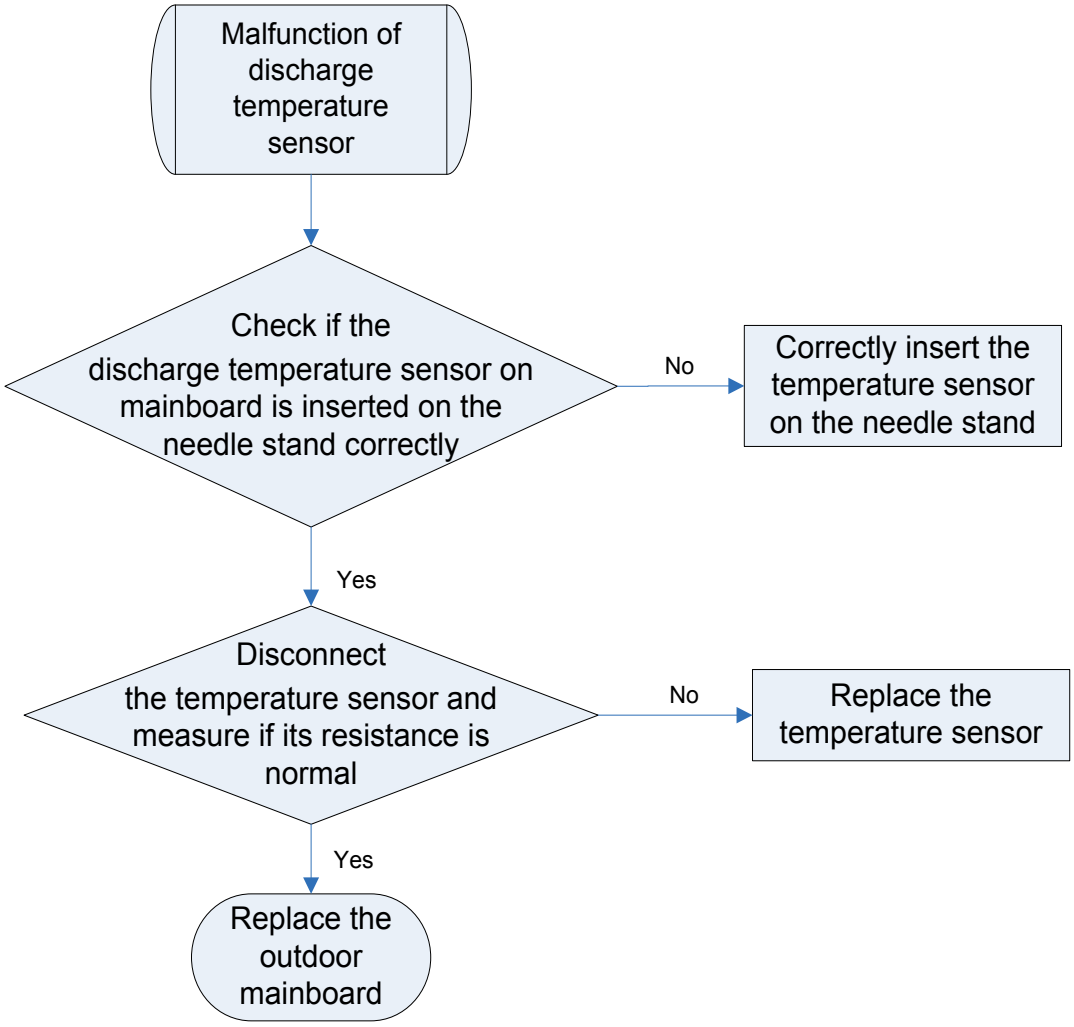
Possible reason:

■Poor contact between temperature sensor and terminal in mainboard interface;

■Temperature sensor is abnormal;

■Detecting circuit is abnormal.

Troubleshooting:



3.4.12 "F5" Wired Control Temperature Sensor Error

Error display : IDU wired control and IDU receiver light board will display F5.

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error.

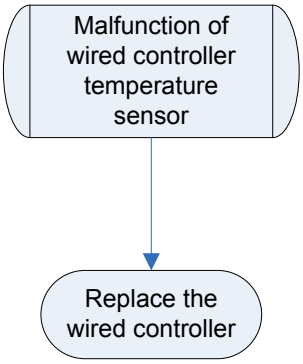
Possible reason:

■Poor contact between temperature sensor and terminal in mainboard interface;

■Temperature sensor is abnormal;

■Detecting circuit is abnormal.

Troubleshooting:



3.4.13 "C5" IDU Jumper Cap Error

Error display: IDU wired control and IDU receiver light board will display C5.

Error judgment condition and method:

If jumper cap model doesn't match with mainboard, this error will be reported.

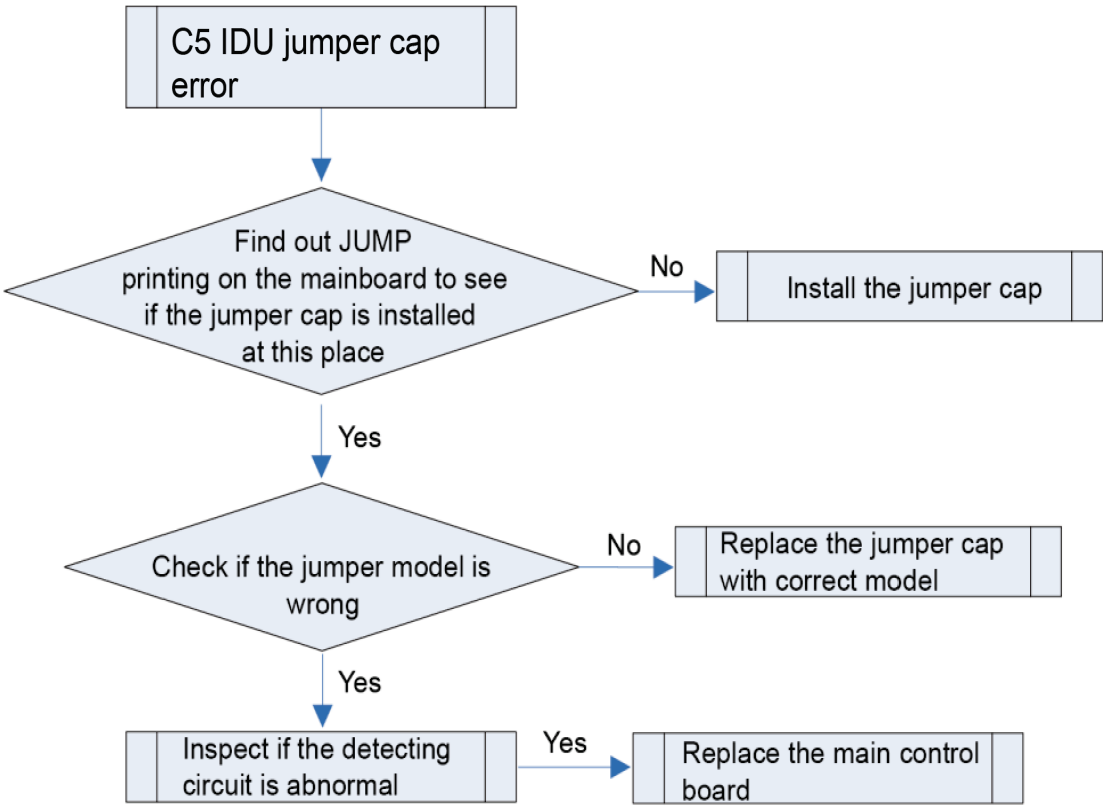
Possible reason:

■Jumper cap is not installed;

■Jumper cap model is wrong;

■Detecting circuit is abnormal.

Troubleshooting:



3.4.14 “EE” IDU or ODU Memory Chip Error

Error display: IDU wired control and IDU receiver light board will display EE.

Error judgment condition and method:

If ODU mainboard cannot read the memory chip, this error will be reported.

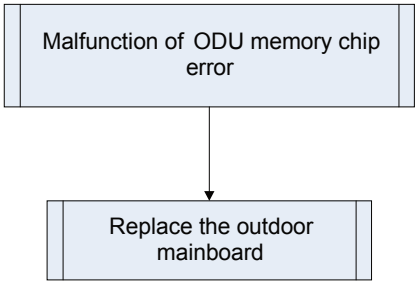
Possible reason:

■ Memory chip on the ODU mainboard is damaged;

■Memory chip is weakly welded;

■Memory chip lead is short-circuited.

Troubleshooting:



3.4.15 “H3” Compressor Overload Protection

Error display: IDU wired control and IDU receiver light board will display H3.

Error judgment condition and method:

When the outdoor unit mainboard’s current sensor interface detects the compressor is over-current, error H3 will be reported.

Possible reason:

■The Outdoor unit mainboard`s capacity jumper is not correct;

■ODU mainboard is damaged;

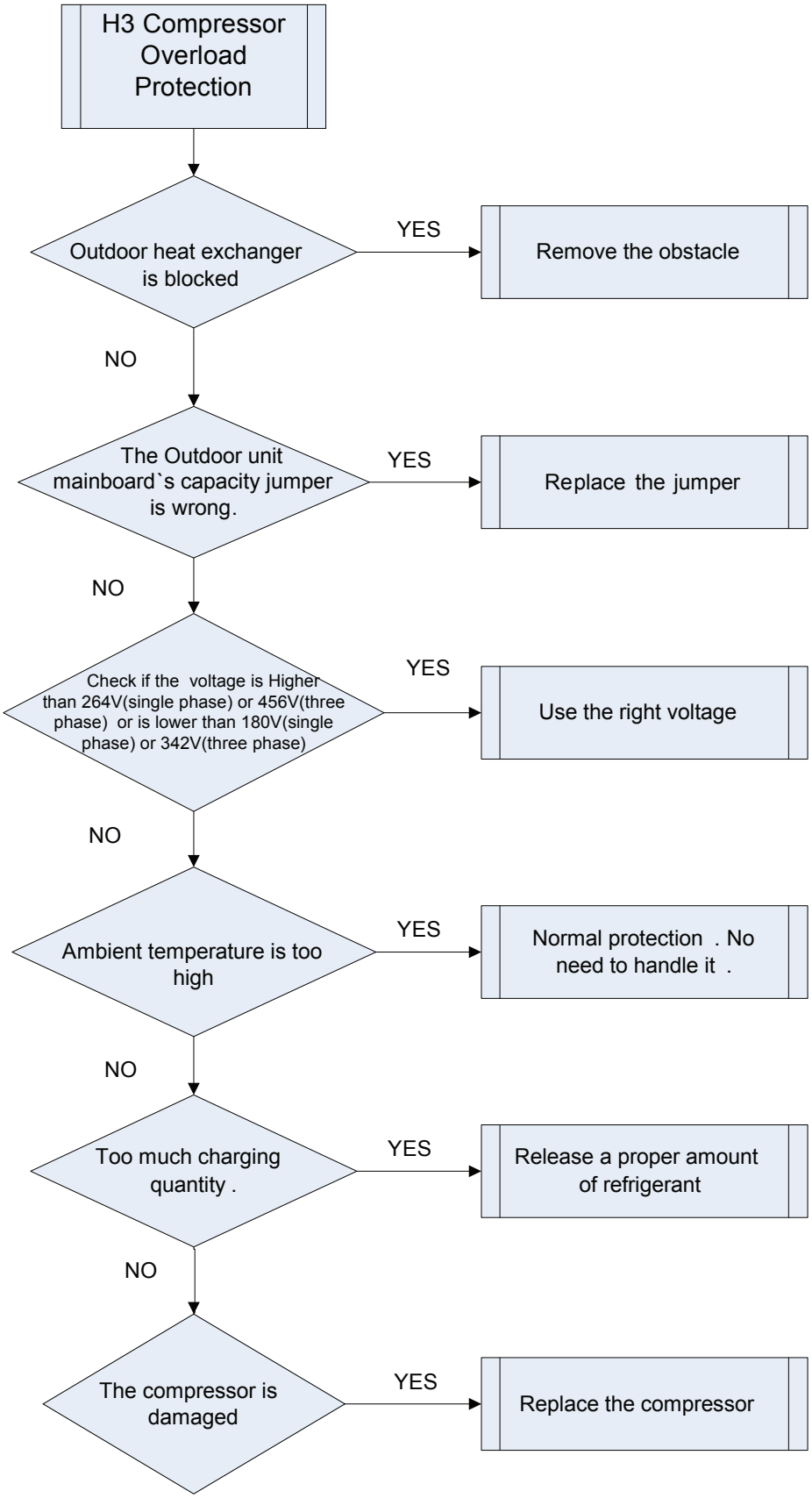
■Power supply voltage is too high or too low;

■Ambient temperature is too high;

■The unit is over-charged;

■Compressor is damaged.

Troubleshooting:



3.4.16 “H4” Overload

Error display: IDU wired control and IDU receiver light board will display H4.

Error judgment condition and method:

When tube temperature is higher than the protection value, system will report overload protection.

Possible reason:

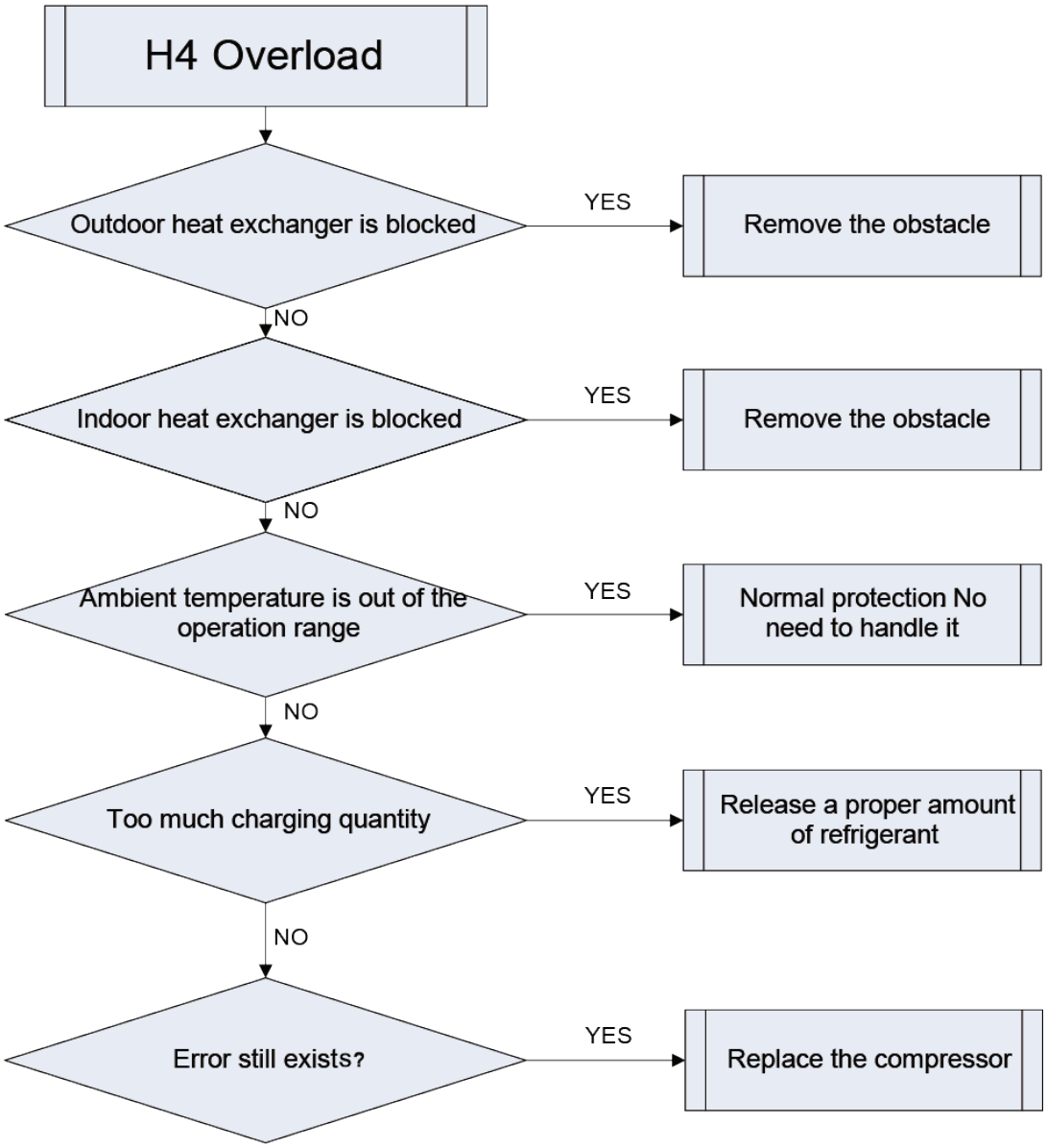
■Cooling ODU heat exchanger is blocked or heat exchange is bad;

■Heating IDU heat exchanger is blocked or heat exchange is bad;

■Operating temperature is too high;

■System charging quantity is too much.

Troubleshooting:



3.4.17 “c4” ODU Jumper Cap Error

Error display: IDU wired control and IDU receiver light board will display c4.

Error judgment condition and method:

If jumper cap model doesn’t match with mainboard, report the error.

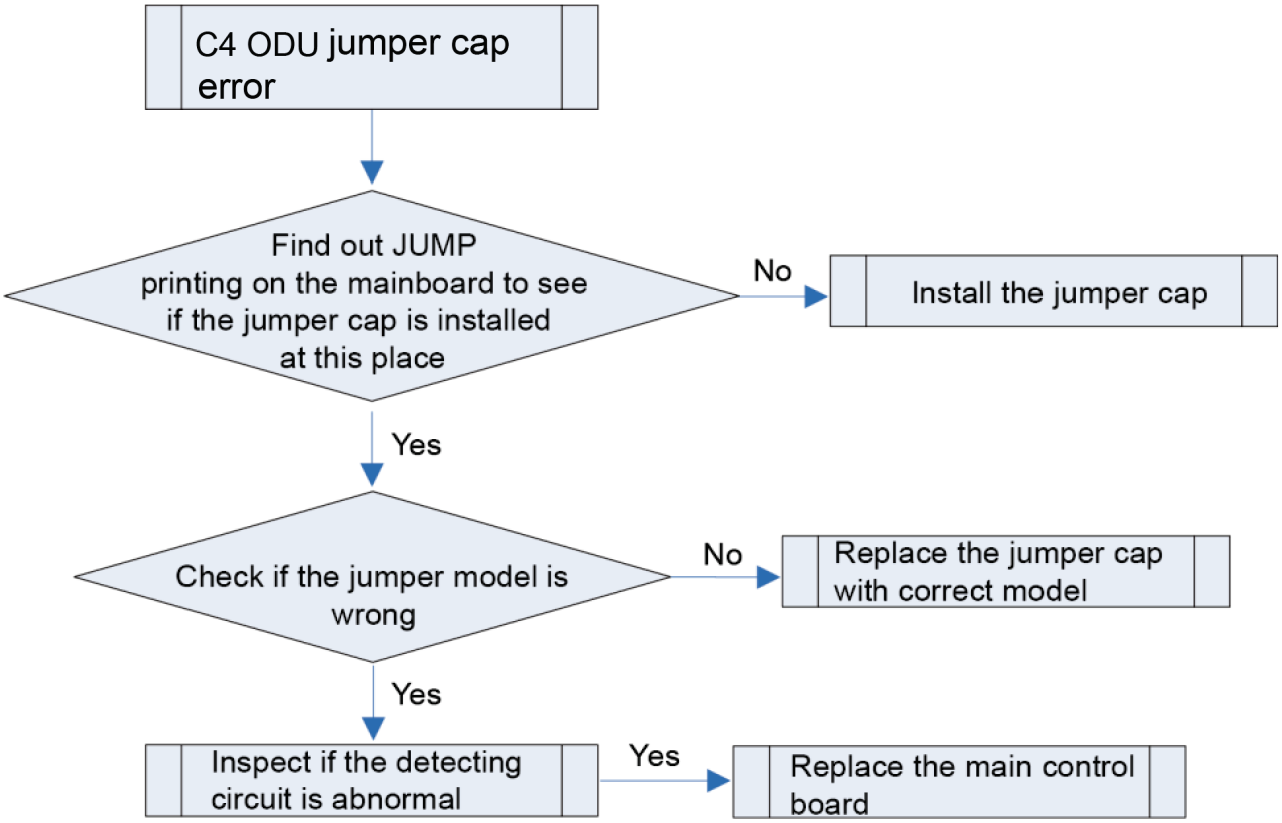
Possible reason:

■Jumper cap is not installed;

■Jumper cap model is wrong;

■Detecting circuit is abnormal.

Troubleshooting:



3.4.18 “EL” Emergency stop (fire alarm)

If fire alarm terminal is enabled after the IDU mainboard connects to function expansion board, error EL will be reported.

3.5 Failures Not Caused by Errors

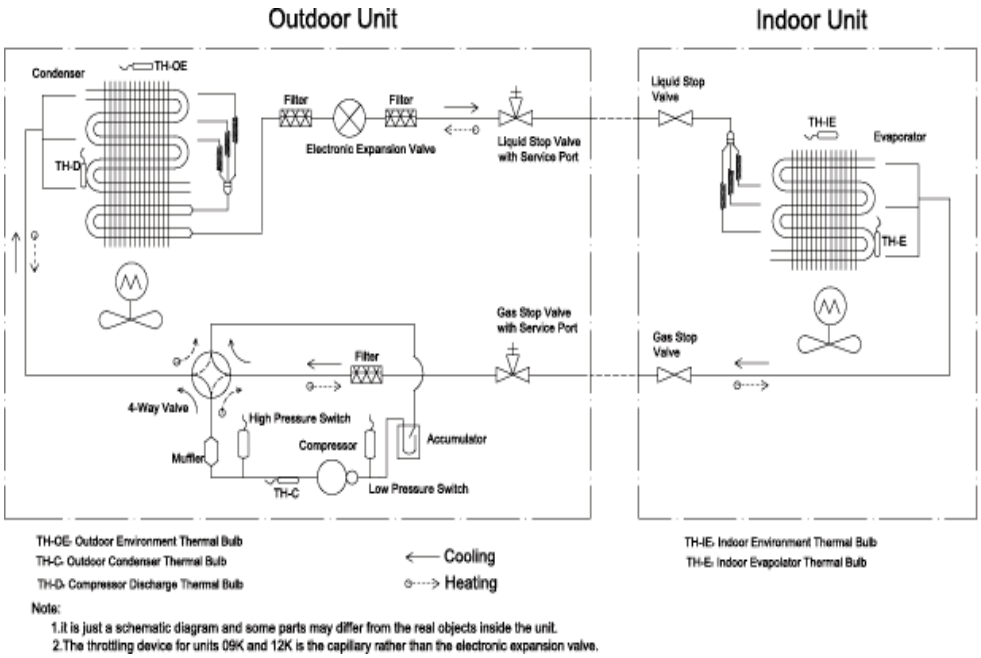
If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

Failure	Possible Reasons
The unit cannot be started.	1) The power supply is not connected. 2) Electrical leakage of air-conditioning unit causes tripping of the leakage switch. 3) The operating keys are locked. 4) The control loop has failure.
The unit operates for a while and then stops.	1) There is obstacle in front of the condenser. 2) The control loop is abnormal.
Poor cooling effect.	1) The air filter is dirty or blocked. 2) There is heat source or too many people inside the room. 3) The door or window is open. 4) There is obstacle at the air intake or outlet. 5) The set temperature is too high. 6) There is refrigerant leakage. 7) The performance of room temperature sensor becomes worse.

NOTICE: Check the above items and adopt the corresponding corrective measures. If the air conditioner continues to function poorly, please stop the air conditioner immediately and contact Gree's authorized local service center. Ask our professional service staff to check and repair the unit.

4. Maintenance

4.1 System Diagram



4.2 Connection Pipe Vacuum Pumping

NOTICE
Make sure the outlet of vacuum pump is away from fire source and is well- ventilated.

(1) Remove the caps of the liquid valve, gas valve and also the service port.

(2) Connect the hose at the low pressure side of the manifold valve assembly to the service port of the unit's gas valve, and meanwhile the gas and liquid valves should be kept closed in case of refrigerant leak.

(3) Connect the hose used for evacuation to the vacuum pump.
Open the switch at the lower pressure side of the manifold valve assembly and start the vacuum pump. Meanwhile, the switch at the high pressure side of the manifold valve assembly should be kept closed, otherwise evacuation would fail.

(4) The evacuation duration depends on the unit's capacity, generally.

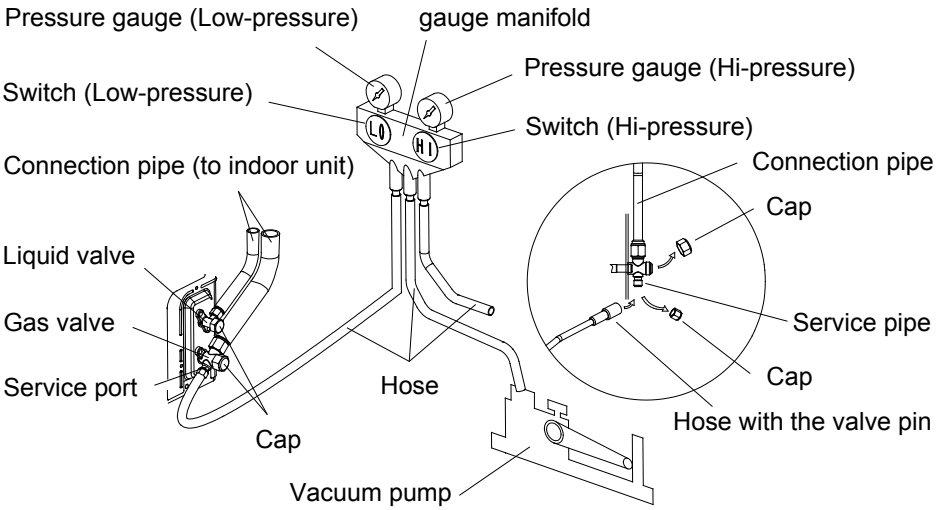
Model	Time(min)
GU50W/A1-K	20
GU71W/A1-K; GU85W/A1-K; GU100W/A1-M	30
GU125W/A1-M; GU140W/A1-M; GU160W/A1-M	45

And verify if the pressure gauge at the low pressure side of the manifold valve assembly reads -1.0Mp (-75cmHg), if not, it indicates there is leak somewhere. Then, close the switch fully and then stop the vacuum pump.

(1) Wait for 10min to see if the system pressure can remain unchanged. During this time, the reading of the pressure gauge at the low pressure side cannot be larger than 0.005Mp (0.38cmHg).

(2) Slightly open the liquid valve and let some refrigerant go to the connection pipe to balance the pressure inside and outside of the connection pipe, so that air will not come into the connection pipe when removing the hose. Note that the gas and liquid valve can be opened fully only after the manifold valve assembly is removed.

(3) Place back the caps of the liquid valve, gas valve and also the service port.



Notice: For large-size units, there are maintenance ports for liquid valve and gas valve. During evacuation, you may connect the two hoses of the branch valve assembly to the maintenance ports to speed up the evacuation.

4.3 Refrigerant Charging

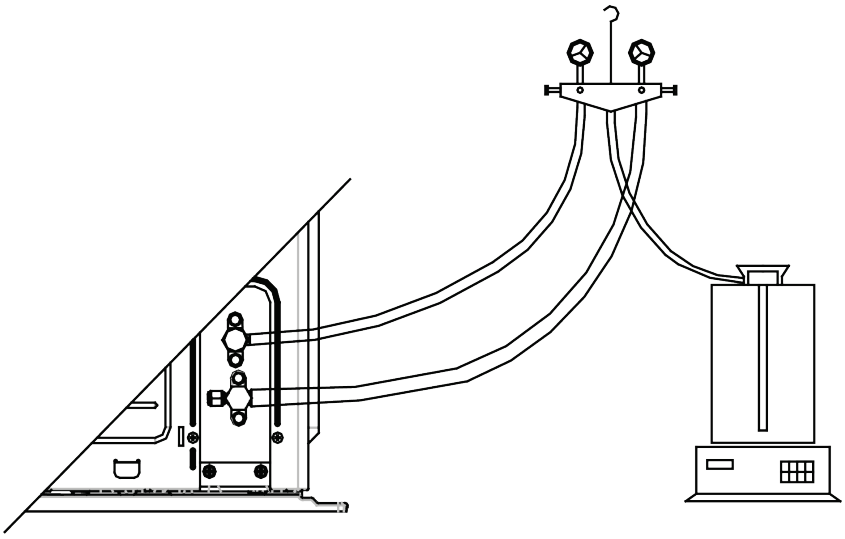
Pre-charging

Step 1: Connect the high pressure gauge line to the valve of liquid pipe and connect the low pressure gauge line to the valve of gas pipe. Connect the middle gauge line to the vacuum pump. Power on the vacuum pump and perform vacuum drying.

Step 2: After vacuum drying, close the high and low pressure gauge valves. Then remove the middle gauge line from the connector of vacuum pump. Then connect to the refrigerant tank.

Step 3: Loosen the middle gauge line from the connector of pressure gauge to a proper extent and slightly open the valve of refrigerant tank. Evacuate the middle gauge line. Then tighten up the connector again and completely open the valve of refrigerant tank at the same time.

Step 4: Keep the refrigerant tank erect and put it on an electronic scale. Record the current weight as m1.



Step 5: Open the high pressure gauge valve (Keep the low pressure gauge valve closed). Then charge refrigerant into the system. Meanwhile, record the weight of refrigerant tank as m2.

Step 6: m1-m2=m. If m equals to the required charging quantity M, close the valve of refrigerant tank at once. Then move to step 8.

Step 7: If you can't continue to charge refrigerant into the system and the quantity of charged refrigerant is less than the required charging quantity, then record the current quantity of charged refrigerant:

m=m1-m2

m`=M-m

The remaining charging quantity is: m`=M-m

Step 8: After charging, remove the pressure gauge.

Refrigerant charging when unit is turned on:

Step 1: Close the valve of refrigerant tank. First remove the pressure gauge lines and connect the outdoor unit to the indoor unit. Then reconnect the pressure gauge lines. Connect the low pressure gauge line to the other joint of gas valve and connect the high pressure gauge line to the liquid valve. Connect the middle gauge line to the vacuum pump. Power on the vacuum pump and perform vacuum drying.

Step 2: After vacuum drying, close the high and low pressure gauge valves. Then remove the middle gauge line from the connector of vacuum pump. Then connect to the refrigerant tank.

Step 3: Loosen the middle gauge line from the connector of pressure gauge to a proper extent and slightly open the valve of refrigerant tank. Evacuate the middle gauge line. Then tighten up the connector again and completely open the valve of refrigerant tank at the same time.

Step 4: Turn on the air conditioner and let it run for a while.

Step 5: Open the low pressure gauge valve (Keep the high pressure gauge valve closed).

Then charge in the remaining charging quantity m`.

Step 6: After all, required refrigerant is charged in, close the valve of refrigerant tank.

Step 7: Remove the pressure gauge to finish the refrigerant charging work.

Procedure of refrigerant charging

Following is the supplementary requirement for refrigerant charging on the basis of normal procedure:

1) Make sure that when charging refrigerant into the system, no other types of refrigerant will be mixed. The pipeline for refrigerant charging should be as short as possible to reduce the amount of refrigerant left in it.

2) The refrigerant tank should stand erect.

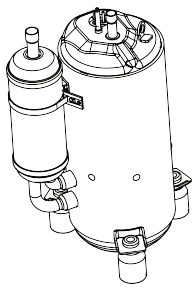
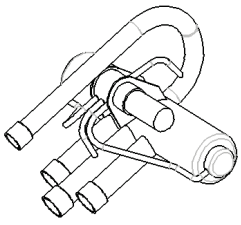
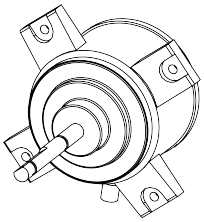
3) Make sure the refrigerating system is already grounded before refrigerant charging.

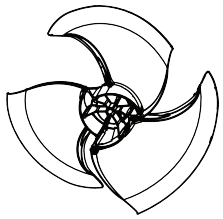
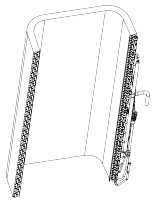
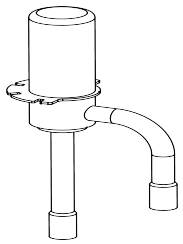
4) When charging is completed (or not yet completed), stick a label on the system.

5) Before re-charging refrigerant into the system, use oxygen-free nitrogen to perform pressure test. When charging is completed, perform leak test before trial running. Before leaving the workplace, perform a leak test again.

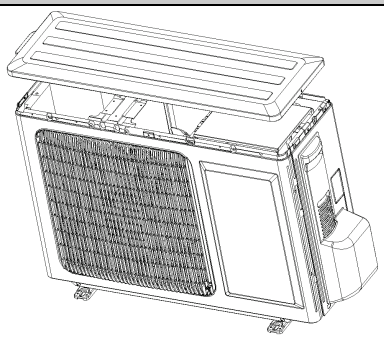
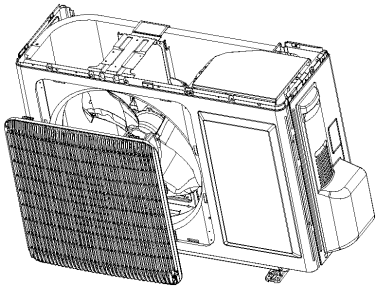
4.4 Removal of Major Components

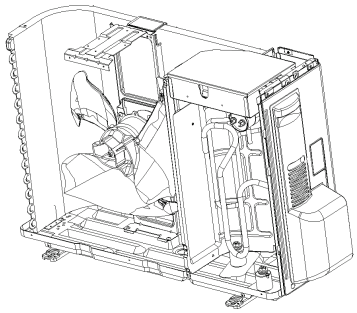
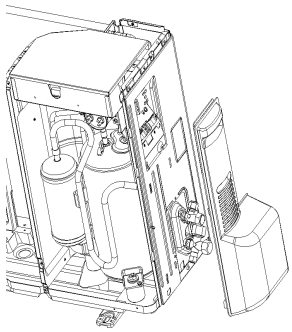
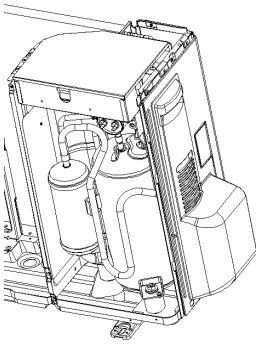
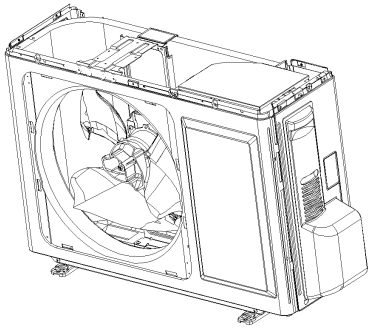
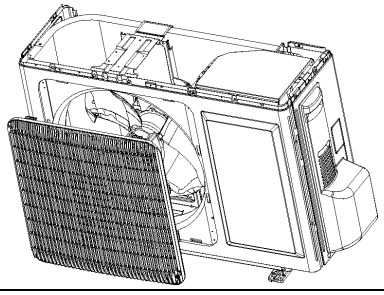
4.4.1 Removal of ODU Major Components

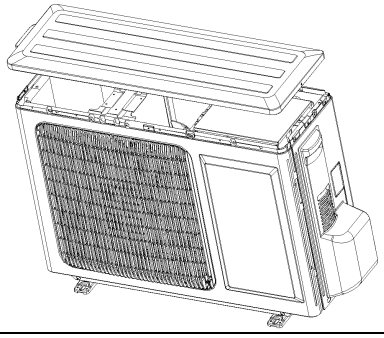
Picture	Name	Function
	Compressor	Through compression, the low pressure refrigerant occupies a less space. As its pressure and temperature both rise, it becomes high pressure and high temperature refrigerant. It is the power drive of the system.
	4-way valve	It is used to change directions, the flow of refrigerant in cooling/heating.
	Motor	The power drive of the fan. It enables the fan to run so as to provide smooth currents of air for forced convection and heat exchange of condenser and evaporator.

Picture	Name	Function
	Fan	It is used to provide smooth currents of air for forced convection and heat exchange of condenser and evaporator.
	Condenser	It is used to transfer partial heat of the hot flow to the cold flow so that the flow temperature can reach the specified index. It is an energy exchanging device.
	Electronic expansion valve	It is used to lower the pressure and temperature of liquefied refrigerant and adjust the flow of refrigerant entering the evaporator.

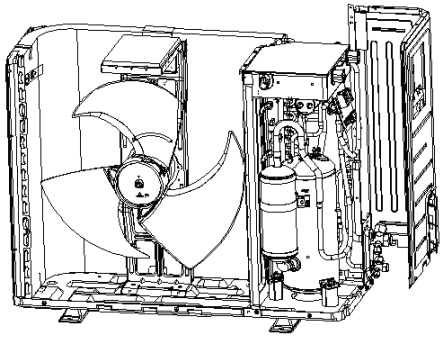
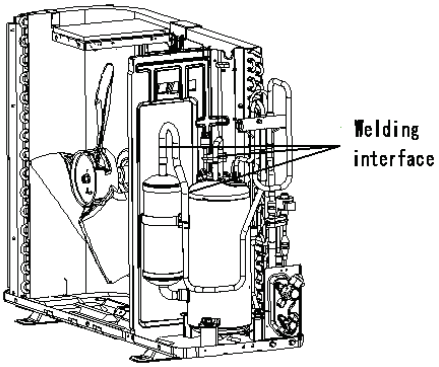
Model: GU50W/A1-K; GU71W/A1-K; GU85W/A1-K

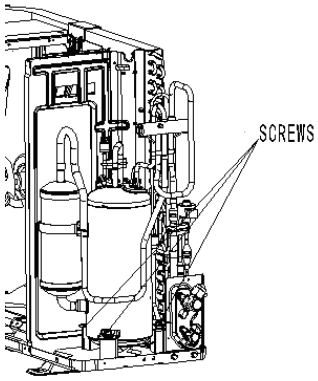
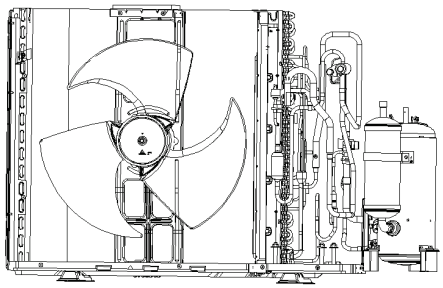
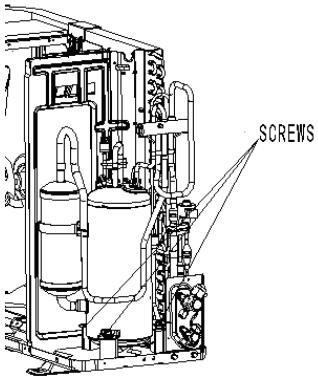
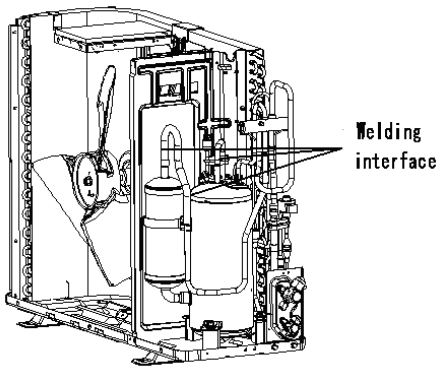
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the upper cover plate.		Unscrew the screws of the upper cover plate with a screwdriver.
2.Remove the front grill.		Unscrew the screws of the front grill with a screwdriver.

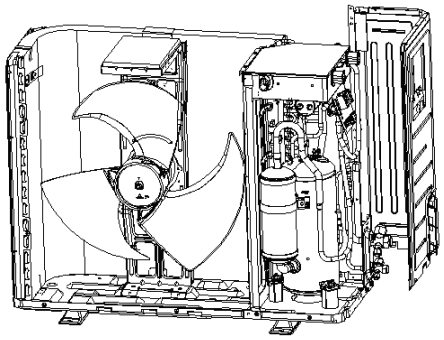
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
3.Remove the front panel.		Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
4.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
5.Install the right side plate		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.
6.Install the front side plate.		Tighten up the screws around the front side plate.
7.Install the grill.		Attach the grill back in place and tighten up the screws.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
8.Install the upper cover plate.		Tighten up the screws around the upper cover plate.

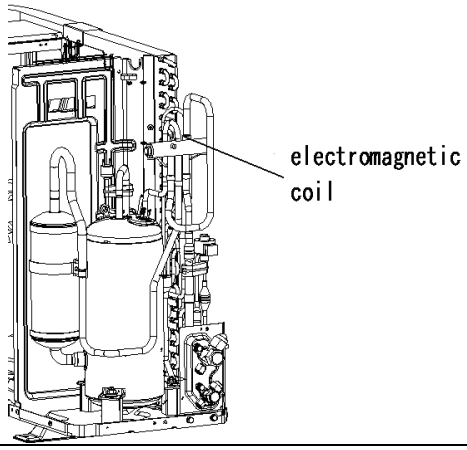
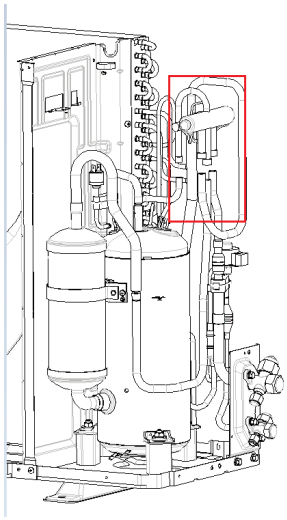
Model: GU50W/A1-K;GU71W/A1-K;GU85W/A1-K

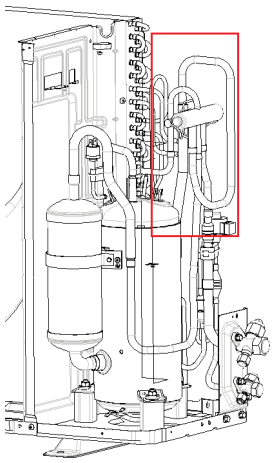
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Remove wires.		Loosen the securing screws of the wires with a screwdriver. Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.
2.Break off the pipes that connecting to the compressor.		Weld the pipes that are connected to the compressor. Then remove the pipes. Note: When welding the pipes, do not let the flame burn the other components.

Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Loosen the securing screws at the foot of compressor.		Use a wrench to twist off the screws at the foot of compressor.
4.Remove the compressor from the chassis.		Take out the compressor and replace it. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
5.Fix the new compressor back onto the chassis.		After replacing the compressor, tighten up the screws at the foot of compressor.
6.Connect the compressor suction port and exhaust port with the pipes.		Weld the compressor connection pipes and connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.

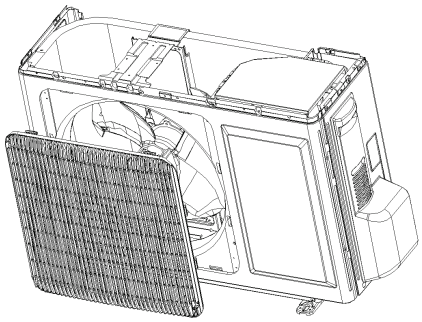
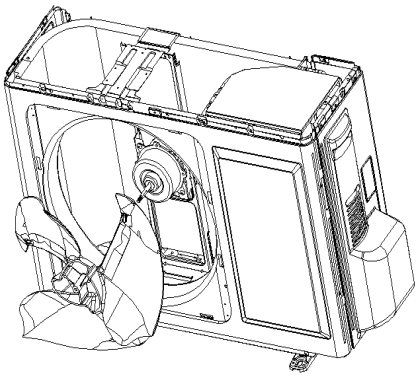
Removal of compressor		
Note: Before removing the compressor, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
7.Connect the compressor wires.		Connect the compressor wires to the wire terminals on the top of compressor. Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.

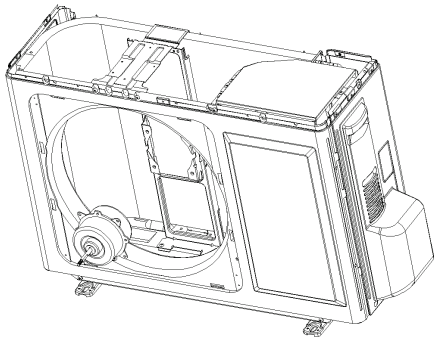
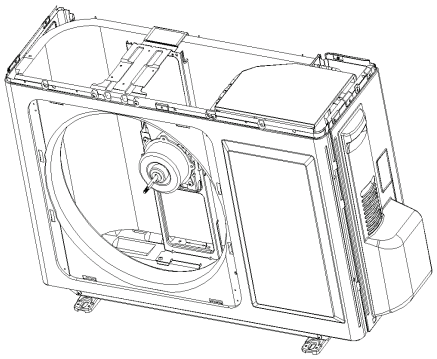
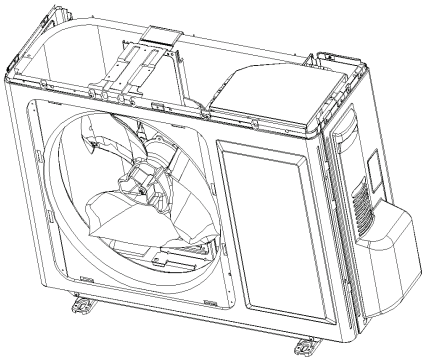
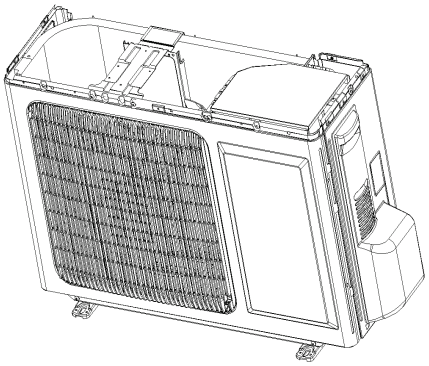
Model: GU50W/A1-K; GU71W/A1-K; GU85W/A1-K

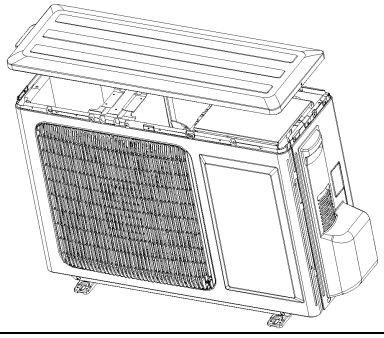
Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
1.Take off the electromagnetic coil of the 4-way valve.		Carefully unscrew the screws of electromagnetic coil with a screwdriver.
2.Break off the connection pipes from the 4-way valve.		Use a soldering gun to loosen the 4 joints on the 4-way valve and then remove the connection pipes. Note: When welding the pipes, the 4-way valve should be wrapped with wet cloth for cooling. Do not let the flame burn the other components.

Removal of 4-way valve		
Note: Before removing the 4-way valve, make sure refrigerant is fully discharged from the unit and power is cut off.		
Step	Picture	Work instruction
3.Replace the 4-way valve and connect it to the connection pipes.		Replace the 4-way valve and then use a soldering gun to weld the 4joints of the 4-way valve. Tighten up the screws of electromagnetic coil with a screwdriver. Note: When welding the pipes, the 4-way valve should be wrapped with wet cloth for cooling. Do not let the flame burn the other components.

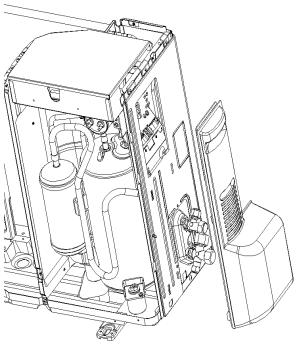
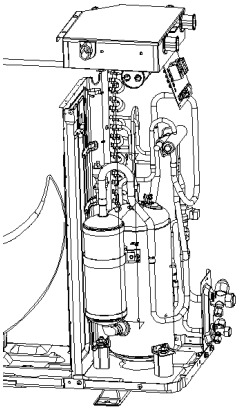
Model: GU50W/A1-K；GU71W/A1-K；GU85W/A1-K

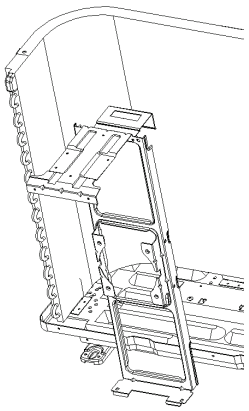
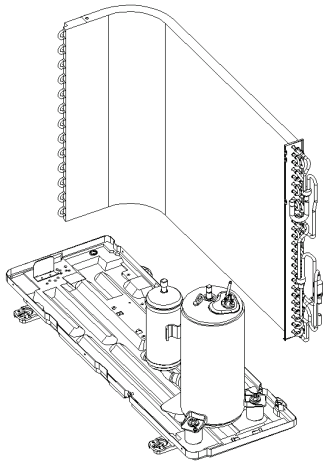
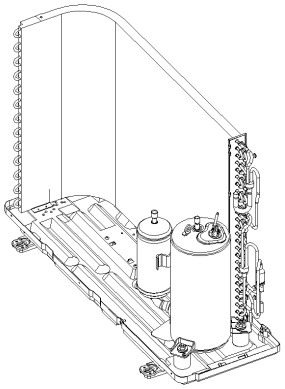
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the grill.		Use a screwdriver to unscrew the two screws on the upper left and lower right corners.
2.Remove the fan.		Use a wrench to remove the specialized nut and gasket of the fan. Note: Please keep the nut and gasket safe after removing them from the fan.

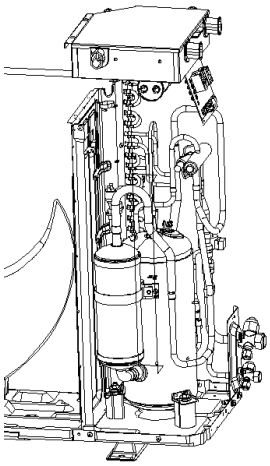
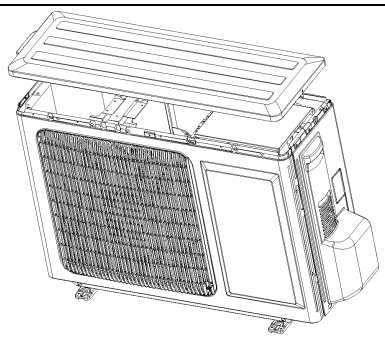
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
3.Remove motor.		Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4.Install the motor.		Replace with a new motor. Then tighten up the screw bolt.
5.Install the fan.		Install the fan in place. Put on the gasket and use a wrench to secure the screw nut. Note: After installing the fan, turn the fan by hand to see if it can run normally. If not, please check for the reason.
6.Install the grill.		Attach the grill back in place and tighten up the screws.

Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
7.Install the upper cover plate.		Tighten up the screws around the upper cover plate.

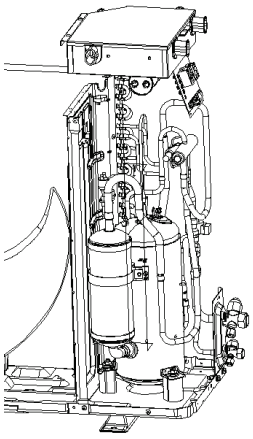
Model: GU50W/A1-K; GU71W/A1-K ; GU85W/A1-K

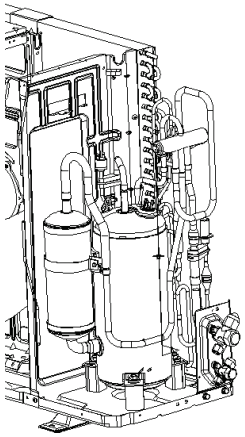
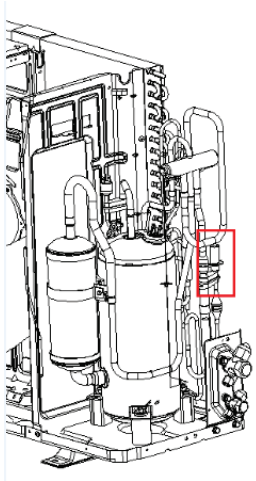
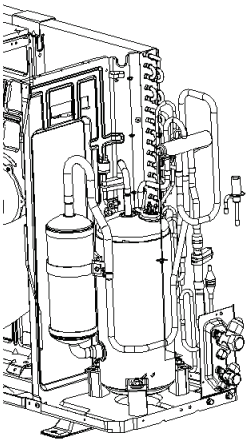
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Remove the panels.		Remove the upper, lower and front panels.
2.Remove the electric box.		Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box. The connection wires inside and outside the electric box should be removed.

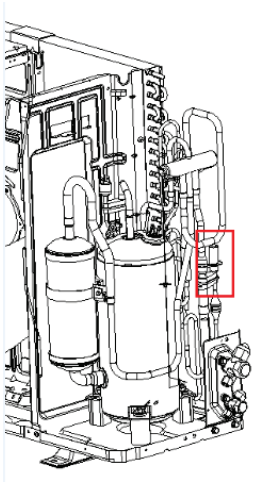
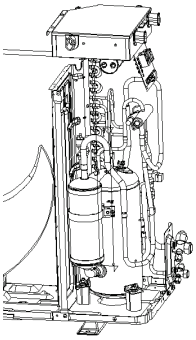
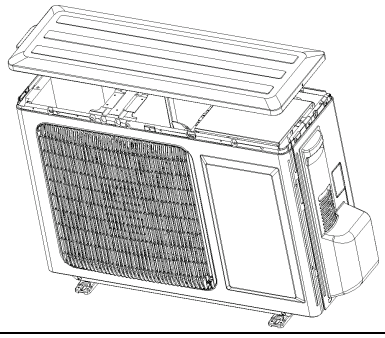
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove motor support.		When removing the motor support, be careful to protect the components.
4.Remove the condenser.		Heat up the welding points of connection pipes through gas welding until the pipes break off. Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole. Note: When welding the pipes, do not let the flame burn the other components. The welding points of condenser are steel and copper welding points. Be sure to maintain the welding quality.
5.Install the new condenser.		Secure the screws of condenser and support. Then fix them together on the chassis. Install the condenser by referring to the positions of entering and leaving pipes. Weld the connection pipes. Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/cm ² (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.

Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
6.Secure the electric box and arrange the wires according to the requirement.		Put the electric box in place and tighten up the screws of electric box. Arrange and secure the wires as original.
7.Check and open the upper and side panels.		Check whether each component and connection wire is well connected. If everything is OK, place back the upper, left and right side panels.

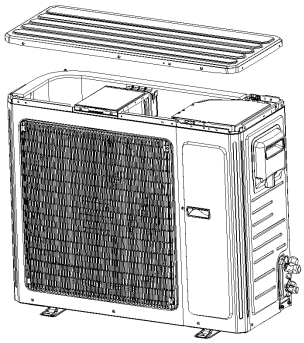
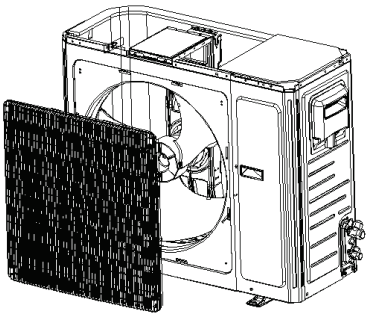
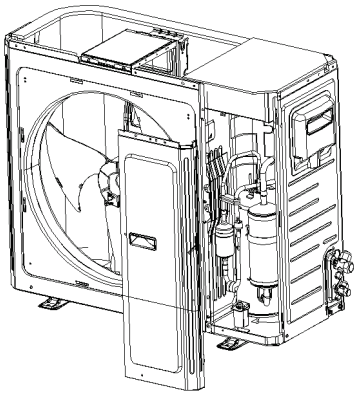
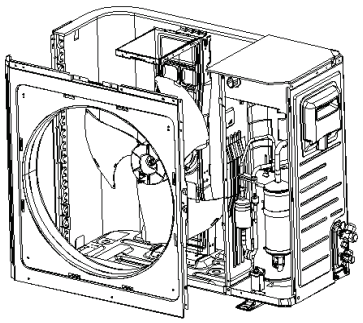
Model: GU50W/A1-K; GU71W/A1-K;GU85W/A1-K

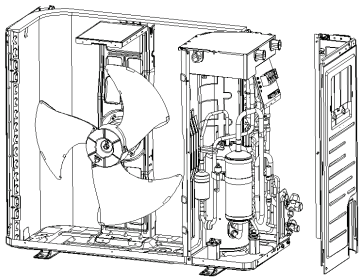
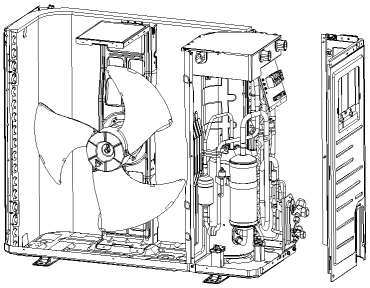
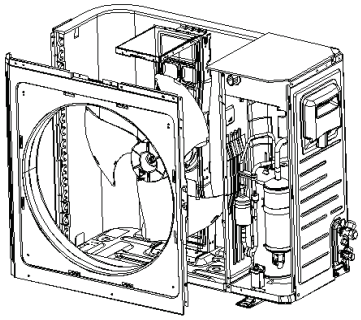
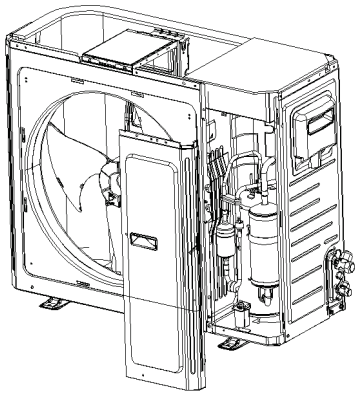
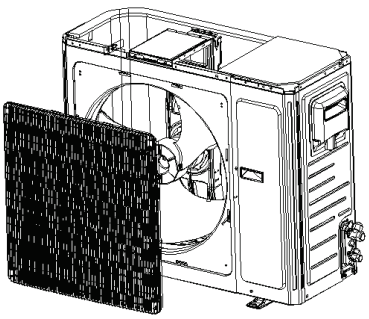
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		Remove the upper, lower and front panels. Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box.

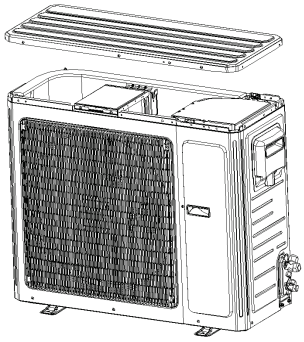
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
2.Remove the electric box.		The connection wires inside and outside the electric box should be removed. When removing the electric box, be careful to protect the components.
3.Remove the electronic expansion valve.		Take off the coil of electronic expansion valve. Loosen the connection pipe of electronic expansion valve by welding. Then remove the connection pipe. Note: When welding the pipe, do not let the flame burn the other components.
4.Take out the electronic expansion valve.		Take out the electronic expansion valve

Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
5.Install the new electronic expansion valve.		Weld the connection pipe of electronic expansion valve. When welding the electronic expansion valve, the valve should be wrapped with wet cloth. Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/ cm² (relative pressure). Note: When welding the pipes, do not let the flame burn the other components. Install the coil of electronic expansion valve.
6.Secure the electric box and arrange the wires as required.		Put the electric box back in place and tighten up the screws. Arrange the wires as original.
7.Check and install the panels.		Check whether each component and connection wire is well connected. If everything is OK, install the upper, left and right panels. Tighten up the screws.

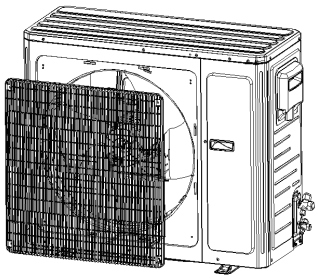
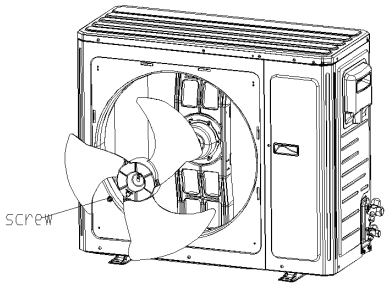
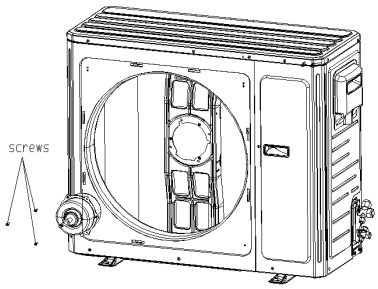
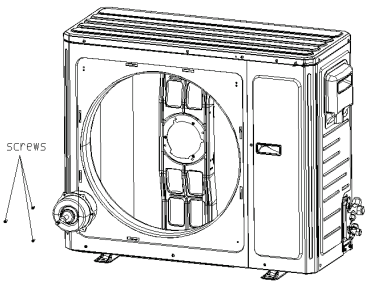
Model: GU100W/A1-M

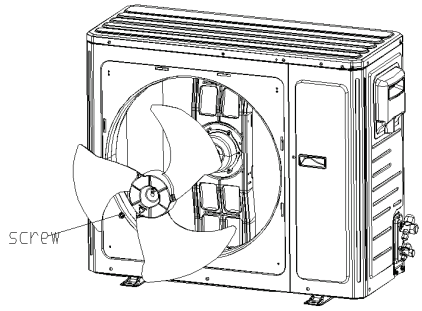
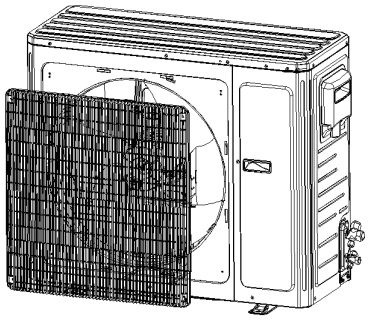
<table>
<tr><td colspan="3">Removal of front panel</td></tr>
<tr><td colspan="3">Note: Before removing the front panel, make sure power is cut off.</td></tr>
<tr><td>Step</td><td>Picture</td><td>Work instruction</td></tr>
<tr><td>1.Remove the upper cover plate.</td><td>  </td><td>Unscrew the screws of the upper cover plate with a screwdriver.</td></tr>
<tr><td>2.Remove the front grill.</td><td>  </td><td>Unscrew the screws of the front grill with a screwdriver.</td></tr>
<tr><td rowspan="2">3.Remove the front panel.</td><td>  </td><td rowspan="2">Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.</td></tr>
<tr><td>  </td></tr>
</table>

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
5.Install the right side plate		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.
6.Install the front side plate.	 	Tighten up the screws around the front side plate.
7.Install the grill.		Attach the grill back in place and tighten up the screws.

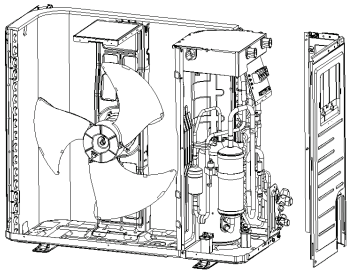
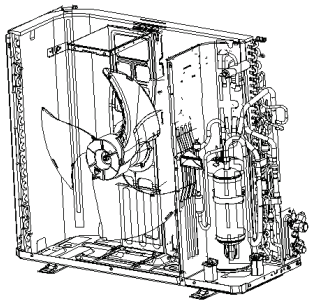
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
8.Install the upper cover plate.		Tighten up the screws around the upper cover plate.

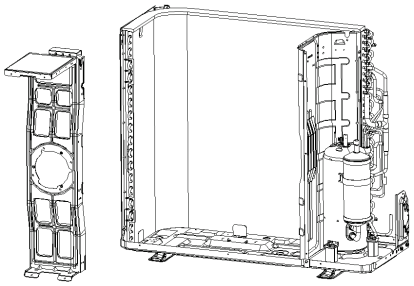
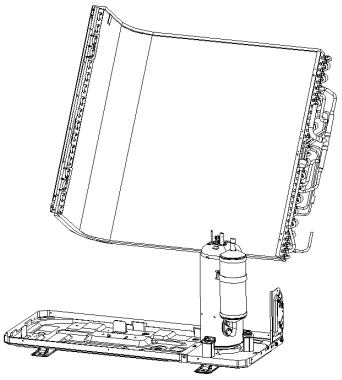
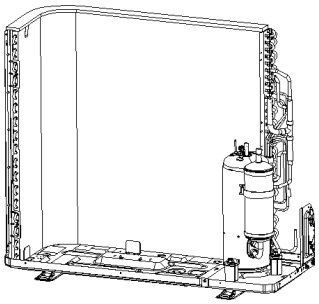
Model: GU100W/A1-M

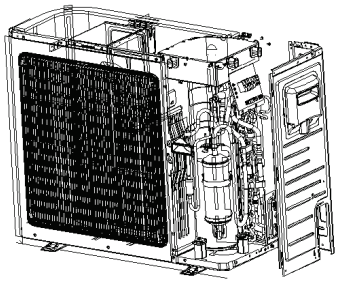
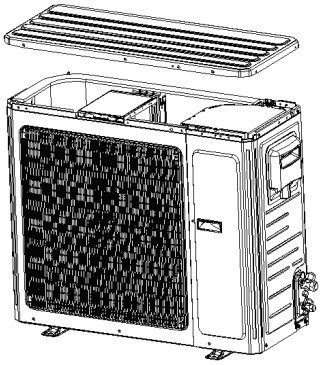
Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the grill.		Use a screwdriver to unscrew the two screws on the upper left and lower right corners.
2.Remove the fan.		Use a wrench to remove the specialized nut and gasket of the fan. Note: Please keep the nut and gasket safe after removing them from the fan.
3.Remove motor.		Use a screwdriver to unscrew the bolt of motor. Note: Motor wire should be first removed from the electric box.
4.Install a new motor.		Replace with a new motor. Then tighten up the screw bolt.

Removal of fan and motor		
Note: Before removing the fan, make sure power is cut off.		
Step	Picture	Work instruction
5.Install the fan.		Install the fan in place. Put on the gasket and use a wrench to secure the screw nut. Note: After installing the fan, turn the fan by hand to see if it can run normally. If not, please check for the reason.
6.Install the grill.		After replacing the motor, use a screwdriver to tighten up the screw bolt that secures the motor.

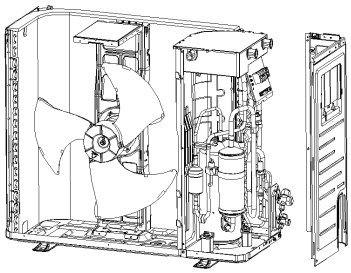
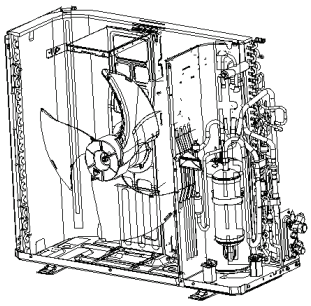
Model: GU100W/A1-M

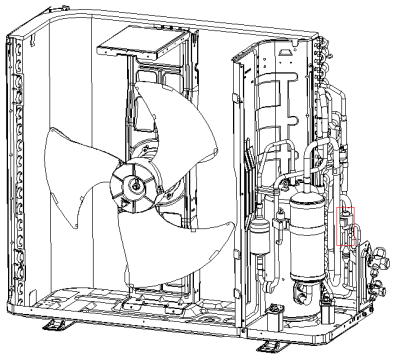
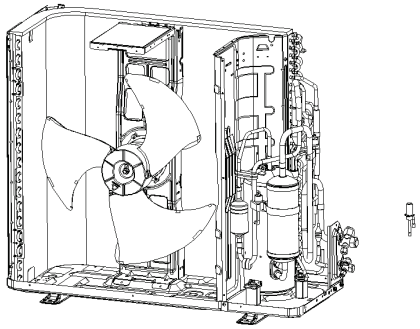
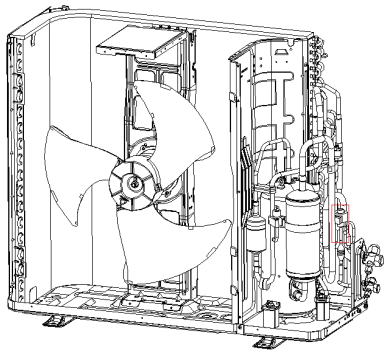
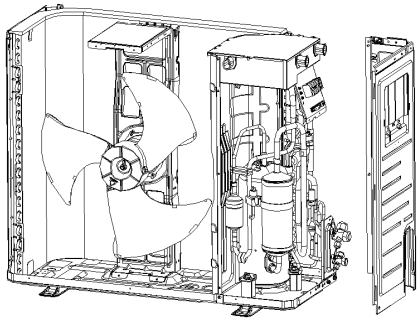
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Remove the panels.		Remove the upper, lower and front panels.
2.Remove the electric box.		Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box. The connection wires inside and outside the electric box should be removed.

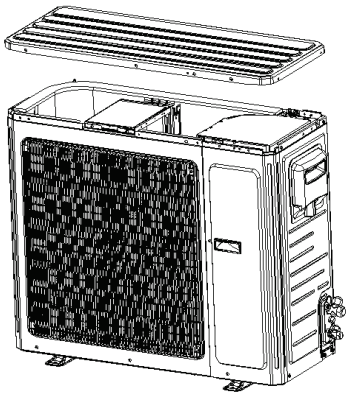
Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove motor support.		When removing the motor support, be careful to protect the components.
4.Remove the condenser.		Heat up the welding points of connection pipes through gas welding until the pipes break off. Loosen the securing screws of condenser support. Take off the plate type heat exchanger and the support as a whole. Note: When welding the pipes, do not let the flame burn the other components. The welding points of condenser are steel and copper welding points. Be sure to maintain the welding quality.
5.Install the new condenser.		Secure the screws of condenser and support. Then fix them together on the chassis. Install the condenser by referring to the positions of entering and leaving pipes. Weld the connection pipes. Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/ cm² (relative pressure). Note: When welding the pipes, do not let the flame burn the other components.

Removal of condenser		
Note: Before removing the condenser, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
6.Secure the electric box and arrange the wires according to the requirement.		Put the electric box in place and tighten up the screws of electric box. Arrange and secure the wires as original.
7.Check and back the upper and side panels.		Check whether each component and connection wire is well connected. If everything is OK, place back the upper, left and right side panels.

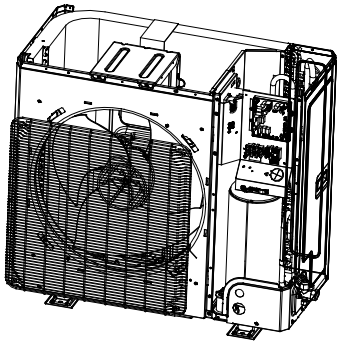
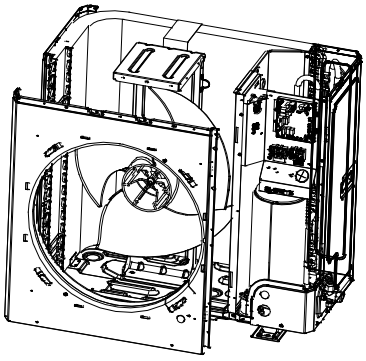
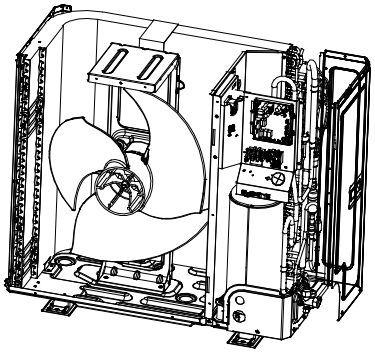
Model: GU100W/A1-M

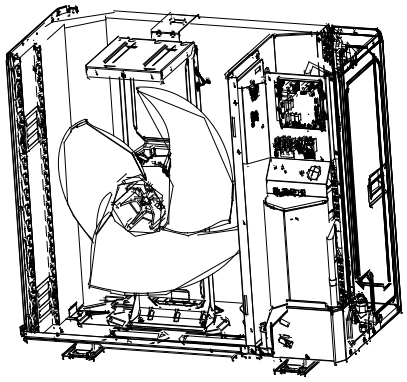
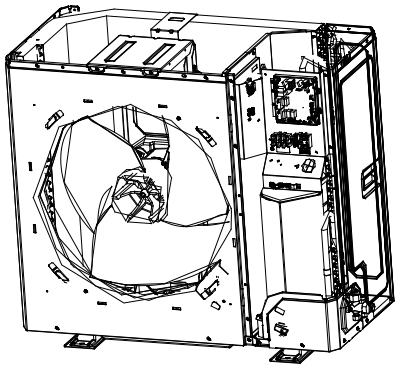
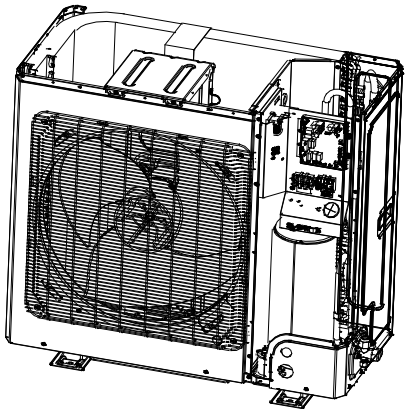
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Loosen the wire clamp at the bottom of the electric box and the screws of electric box.		Remove the upper, lower and front panels. Loosen the wire clamp at the bottom of the electric box. Unscrew the screws of electric box.
2.Remove the electric box.		The connection wires inside and outside the electric box should be removed. When removing the electric box, be careful to protect the components.

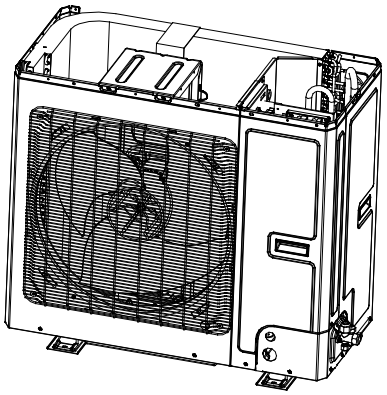
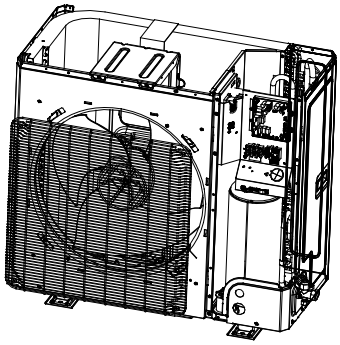
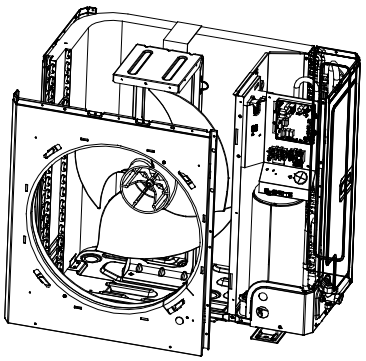
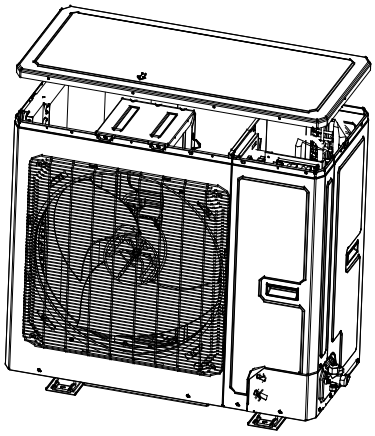
Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
3.Remove the electronic expansion valve.		Take off the coil of electronic expansion valve. Loosen the connection pipe of electronic expansion valve by welding. Then remove the connection pipe. Note: When welding the pipe, do not let the flame burn the other components.
4.Take out the electronic expansion valve.		Take out the electronic expansion valve.
5.Install the new electronic expansion valve.		Weld the connection pipe of electronic expansion valve. When welding the electronic expansion valve, the valve should be wrapped with wet cloth. Nitrogen welding: the pressure of nitrogen is 0.5±0.1kgf/ cm² (relative pressure). Note: When welding the pipes, do not let the flame burn the other components. Install the coil of electronic expansion valve.
6.Secure the electric box and arrange the wires as required.		Put the electric box back in place and tighten up the screws. Arrange the wires as original.

Removal of electronic expansion valve		
Note: Before removing the electronic expansion valve, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
7.Check and install the panels.		Check whether each component and connection wire is well connected. If everything is OK, install the upper, left and right panels. Tighten up the screws.

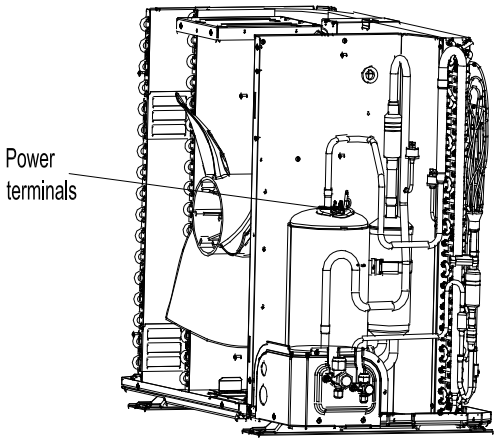
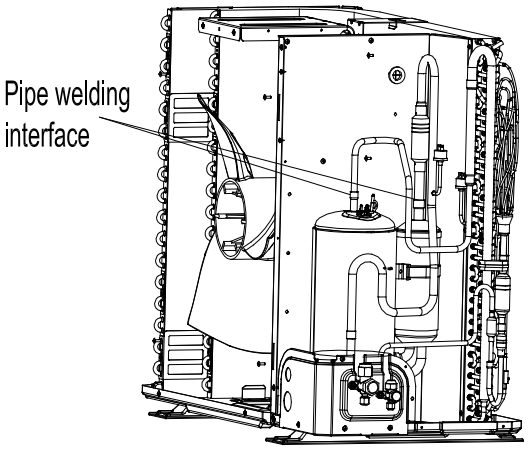
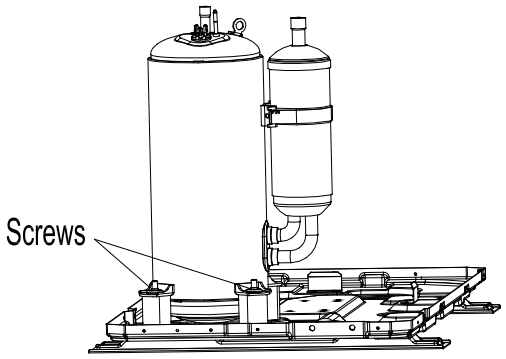
Model: GU125W/A1-M;GU140W/A1-M;GU160W/A1-M

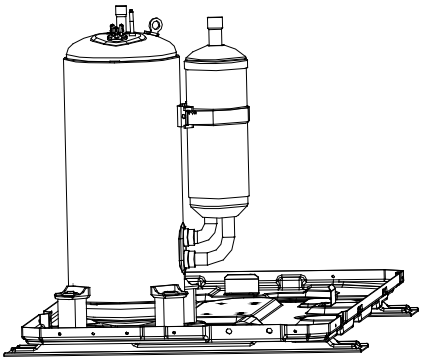
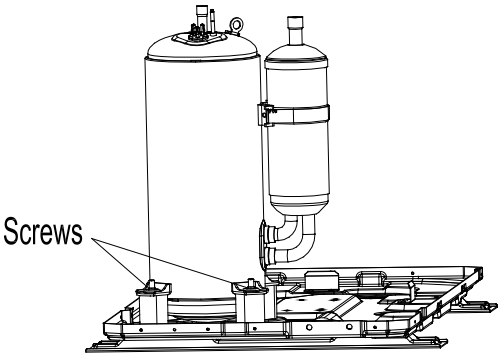
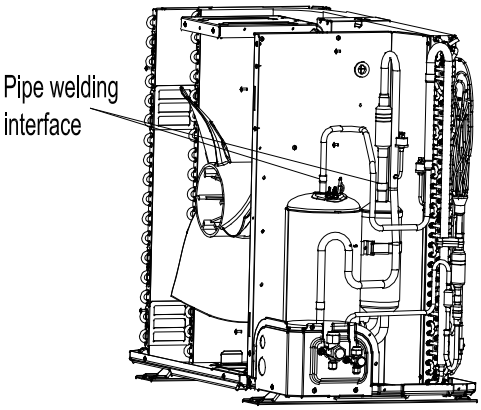
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the upper cover plate.		Unscrew the screws of the upper cover plate with a screwdriver.
2.Remove the front side plate.		Unscrew the screws of the upper and front side plate with a screwdriver.
3.Remove the front grill.		Unscrew the screws of the front grill with a screwdriver.

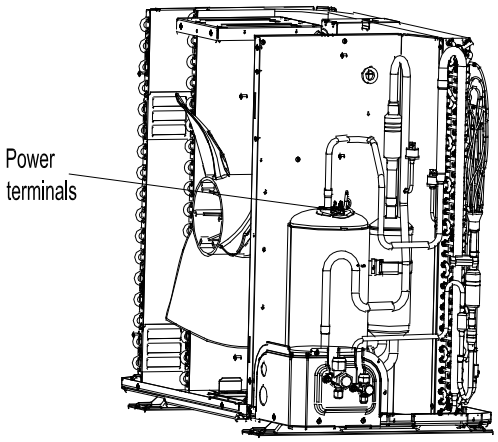
Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the front panel.		Unscrew the screws that connect the front panel to the middle insulating board and screws around the front panel.
5.Remove the right side plate.		Unscrew the screws that connect the right side plate to the electric box and the screws around the right side plate.
6.Install the right side plate.		Screw up the screws around the right side plate. Be careful to handle well the clasps at the bottom of the right side plate.

Removal of front panel		
Note: Before removing the front panel, make sure power is cut off.		
Step	Picture	Work instruction
7.Install the front panel.		Install the front panel by mounting on 6 clasps on its both sides. Please note that there is one screw on the lower right side.
8.Install the grill.		Attach the grill back in place and tighten up the screws.
9.Install the front side plate.		Fix the clasps on both sides of the plate and tighten up the screws.
10.Install the upper cover plate.		Tighten up the screws around the upper cover plate.

Model: GU125W/A1-M;GU140W/A1-M;GU160W/A1-M

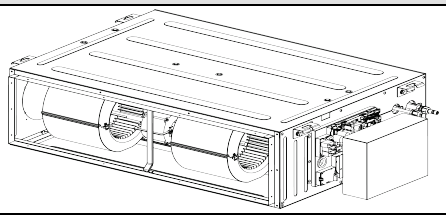
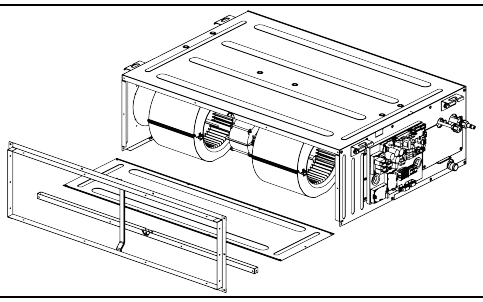
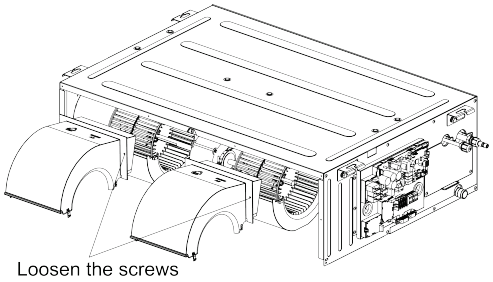
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
1.Remove wires.		Loosen the securing screws of the wires with a screwdriver. Remove the wires. Note: When removing the wires, mark the wire terminals corresponding to their color so as to avoid misconnection.
2.Break off the pipes that connecting to the compressor/gas liquid separator.		Weld the pipes that are connected to the compressor. Then remove the pipes. Note: When welding the pipes, do not let the flame burn the other components.
3.Loosen the compressor's base connectors base nuts.		Use a wrench to twist off the compressor base nuts.

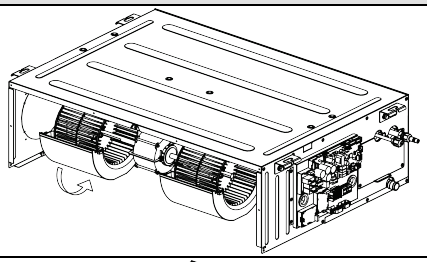
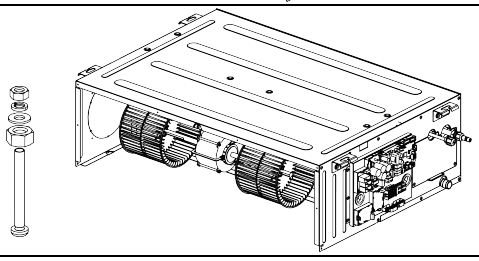
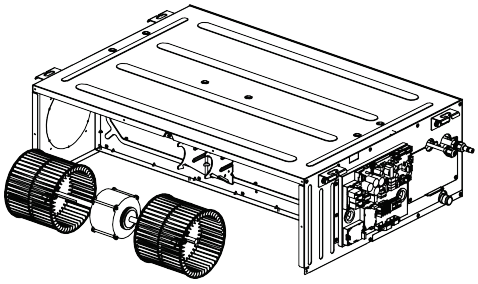
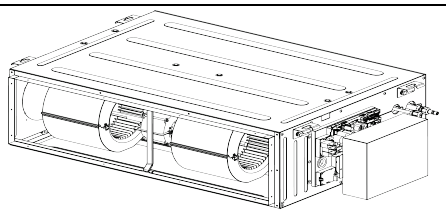
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
4.Remove the compressor from the chassis.		Take away the compressor and replace with a new one. Note: When replacing the compressor, avoid touching the nearby pipeline and components.
5.Install the new compressor onto the chassis.		After replacing the compressor, tighten up the base screw nuts.
6.Connect the welding interfaces of compressor to the pipeline.		Weld the connection pipes of compressor so as to connect them to the compressor. Note: When replacing the compressor, avoid touching the nearby pipeline and components.

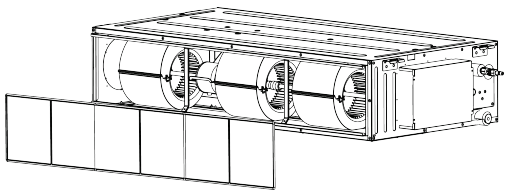
Removal of compressor/gas liquid separator		
Note: Before removing the compressor/gas liquid separator, make sure there is no refrigerant in the pipeline and power is cut off.		
Step	Picture	Work instruction
7.Connect the compressor wires.		Connect the compressor wires to the wire terminals on the top of compressor. Note: When connecting the wires, be sure to match the colors with the corresponding wire terminals.

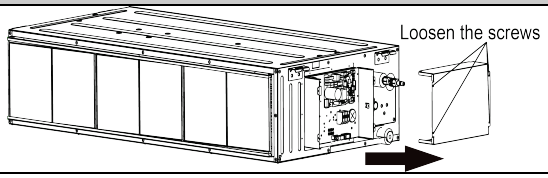
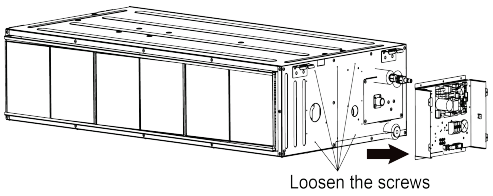
4.4.2 Removal of IDU Major Components

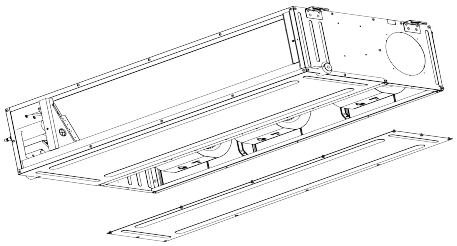
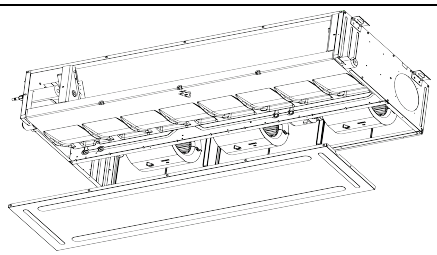
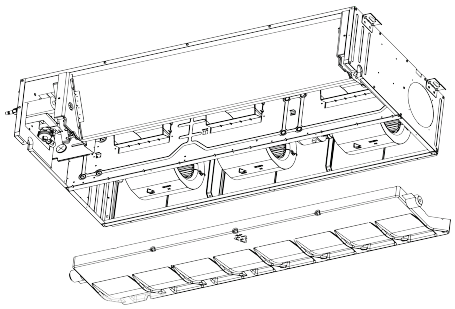
4.4.2.1 Duct Type Unit

Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
1.Remove the cover of electric box.		Turn off the power supply of indoor unit. Use a screwdriver to remove the cover of electric box. Disconnect the motor wire inside the electric box.
2.Remove air return plate, the longitudinal component and air return frame.		Use a hex wrench to loosen the screws of fan. Order of removal: air return plate, air return frame, longitudinal component, cross beam.
3.Remove the upper volute.		Loosen the screws of upper volute and then pull out the upper volute.

Removal of fan and motor		
Note: Before removing the motor, make sure power is cut off.		
Step	Picture	Work instruction
4.Remove the lower volute.		Loosen the screws of lower volute and then rotate in the direction shown by the arrow.
5.Remove the motor and fan.		Use a screwdriver to remove the clamping band of motor. Then remove the motor and fan as a whole.
6.Replace the motor.		Remove the motor from the motor support. Use a hexwrench to loosen the screws of fan. Remove the fan from the motor. Replace with a new motor.
7.Re-install the device in a reverse order of the removal procedure.		Re-install the device in a reverse order of the removal procedure. Then connect power and test it.

Removal of air return filter		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components. Do not place the filter near any heat source.		
Step	Picture	Work instruction
Remove air return filter.		Press the air return filters on the guideway sponge. There are 2 or 3 air return filters.

Removal of the cover of electric box and the electric box		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components, especially the electric components. Do not hit or beat.		
Step	Picture	Work instruction
1.Remove the cover of electric box.		Loosen the screws as shown by the circle and the box. Remove the box in the direction shown by the arrow.
2.Remove the electric box.		Loosen the securing screws and remove the electric box.

Removal of water tray		
Note: Before removal, make sure power is cut off. During the removal procedure, take good care of all the components.		
Step	Picture	Work instruction
1.Remove the cover plate.	 	Loosen the screws of cover plate and then remove the cover plate. (As shown in the picture, the circle indicates 6 screws of the cover plate.
2.Remove the water tray.		Loosen the screws of water trap. Pull it up and remove it. The removed water tray is as shown in the picture.