




# REMOVAL PROCEDURE



## S E R V I C E M A N U A L

### 11.5 kW Class

-  Outdoor Unit
-  Inverter
-  Multi Type



# **Service Manual Removal Procedure**

## **Outdoor Unit**

●Heat Pump  
4MXS115HV2C

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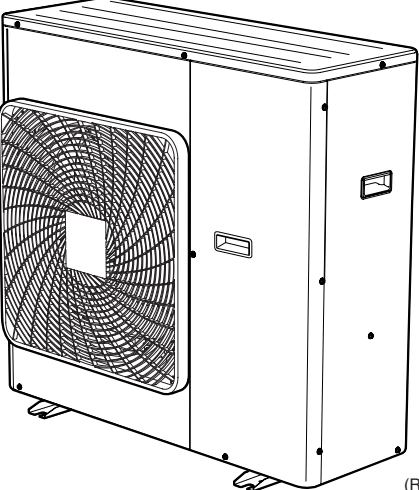
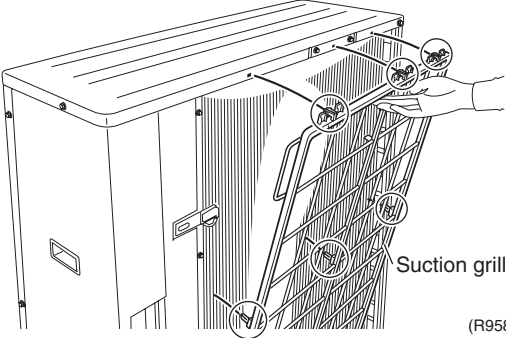
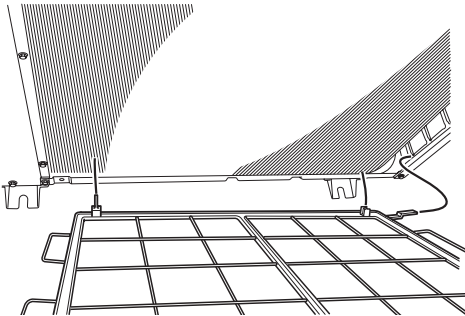
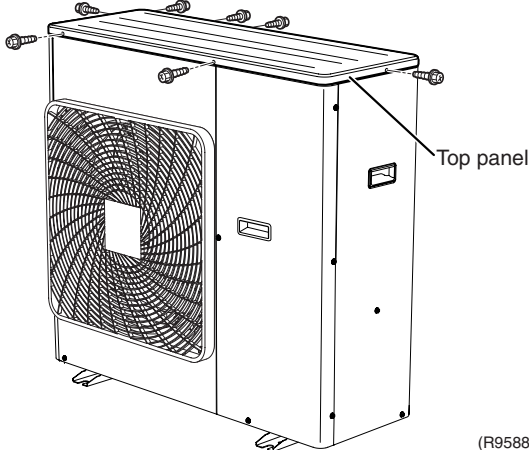
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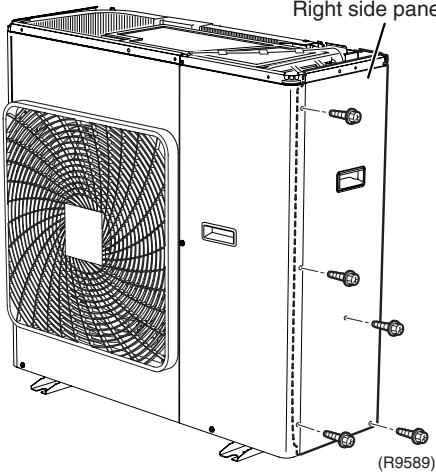
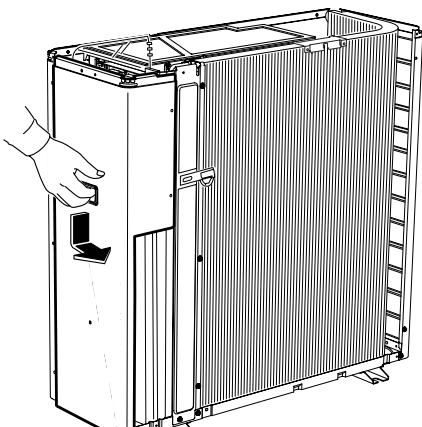
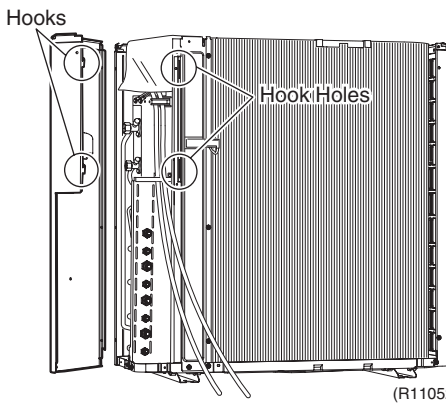
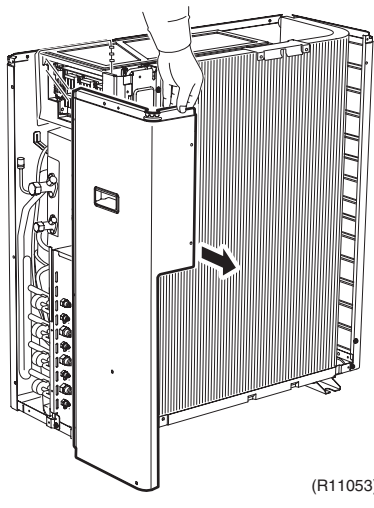
# 1. Removal of Outer Panels

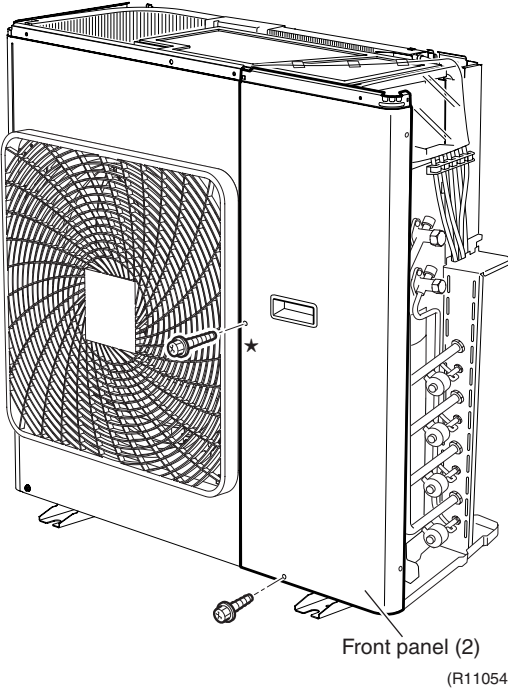
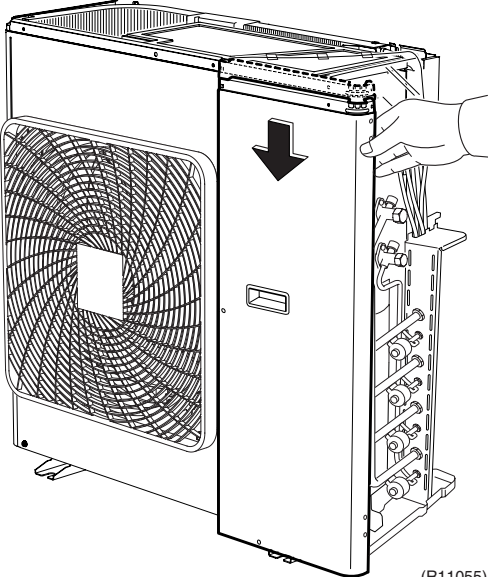
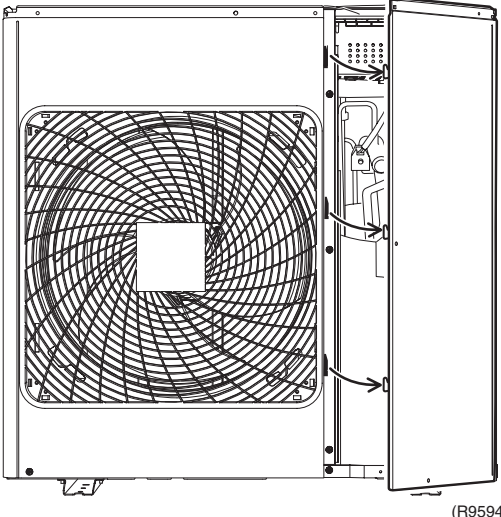
**Procedure**

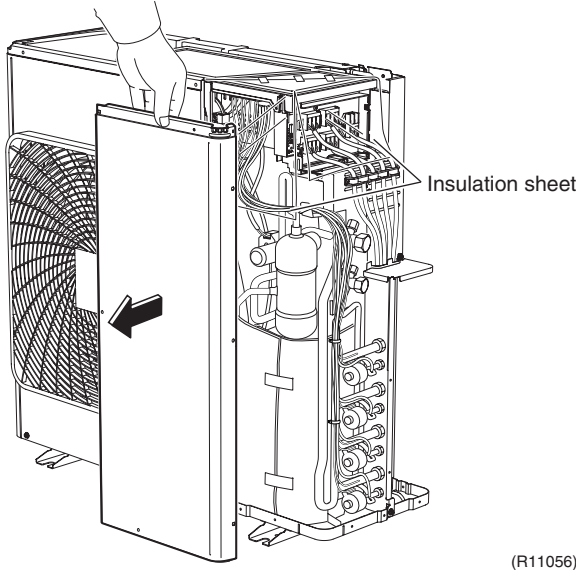
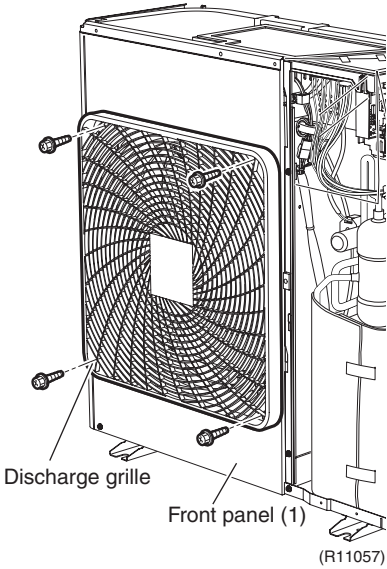
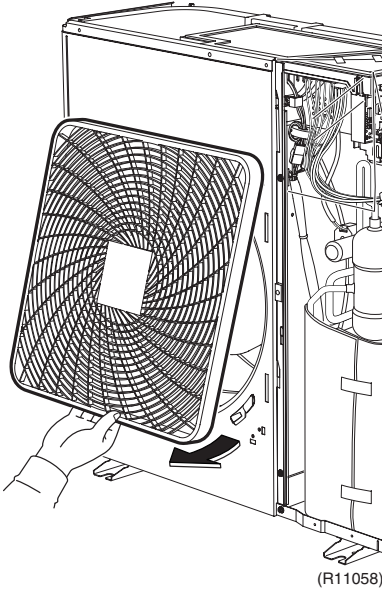


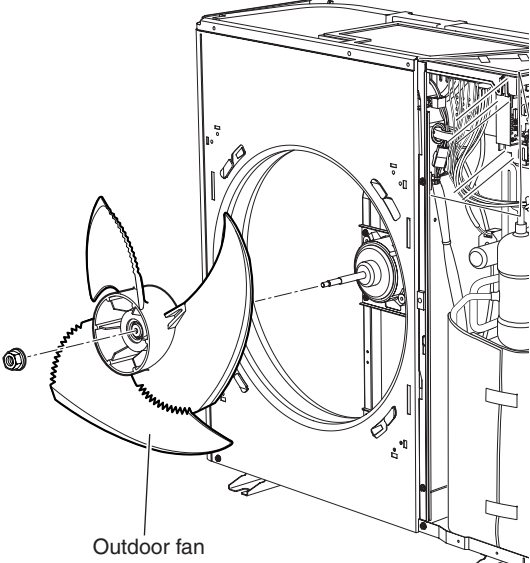
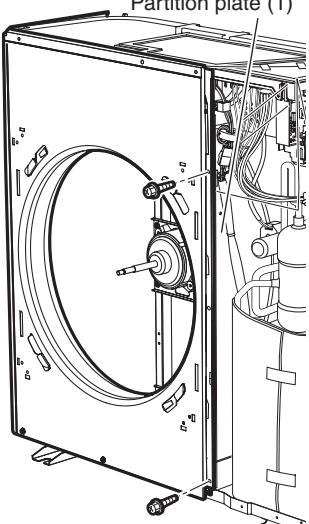
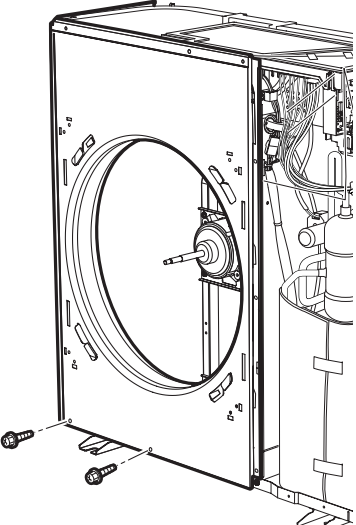
**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
	<p>External appearance</p>  <p style="text-align: right;">(R9585)</p>	
<p>1. Removal of the suction grille</p> <p>1</p>	<p>Release the 3 hooks at the upper first, and then, 3 hooks at the middle.</p>  <p style="text-align: right;">(R9586)</p> <p>2</p> <p>Release the 3 hooks at the bottom.</p>  <p style="text-align: right;">(R9587)</p>	<p>■ The hooks are secured in the clearances of the heat exchanger fins.</p>
<p>2. Removal of the top panel</p> <p>1</p>	<p>Remove the 7 screws and remove the top panel.</p>  <p style="text-align: right;">(R9588)</p>	

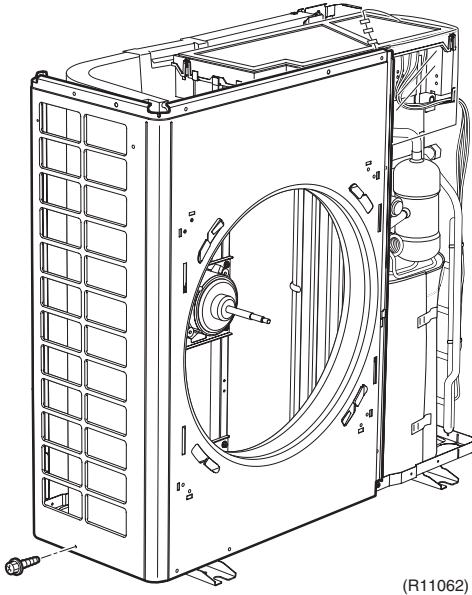
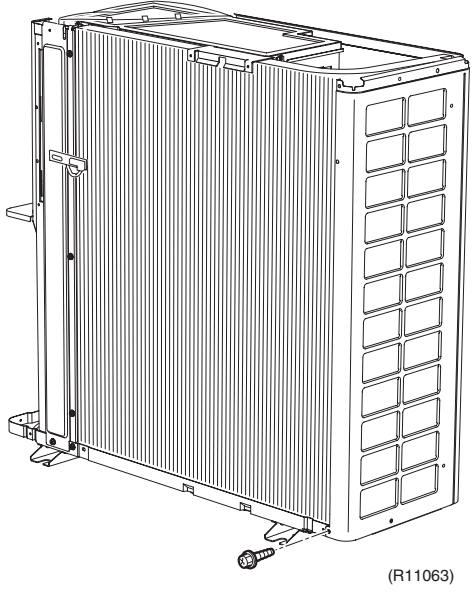
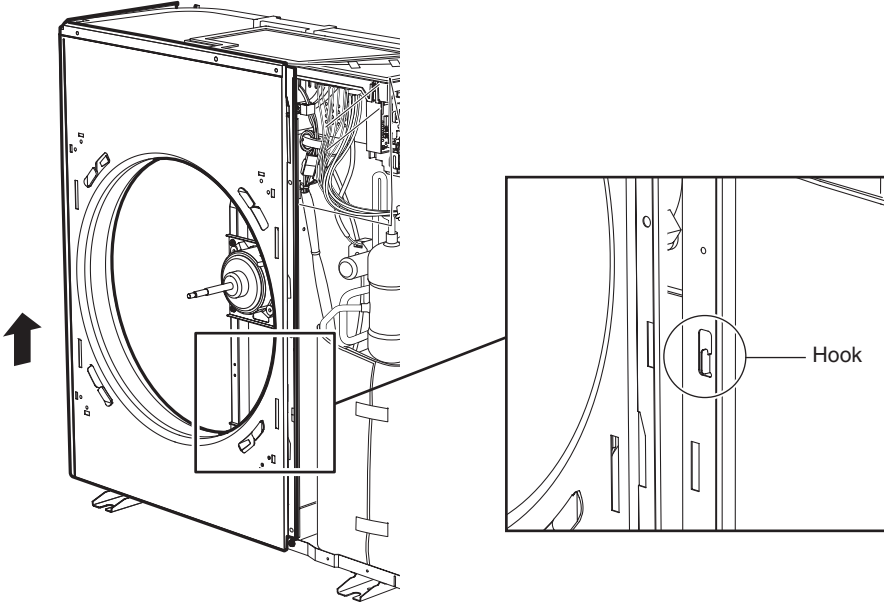
Step	Procedure	Points
3. Removal of the right side panel		
1	Remove the 5 screws.	
	 <p style="text-align: right;">Right side panel</p> <p style="text-align: right;">(R9589)</p>	
2	Slide the right side panel downward to release 2 hooks on the back side.	
	 <p style="text-align: right;">(R11051)</p>	
	 <p>Hooks</p> <p style="text-align: right;">Hook Holes</p> <p style="text-align: right;">(R11052)</p>	
3	Remove the right side panel.	
	 <p style="text-align: right;">(R11053)</p>	

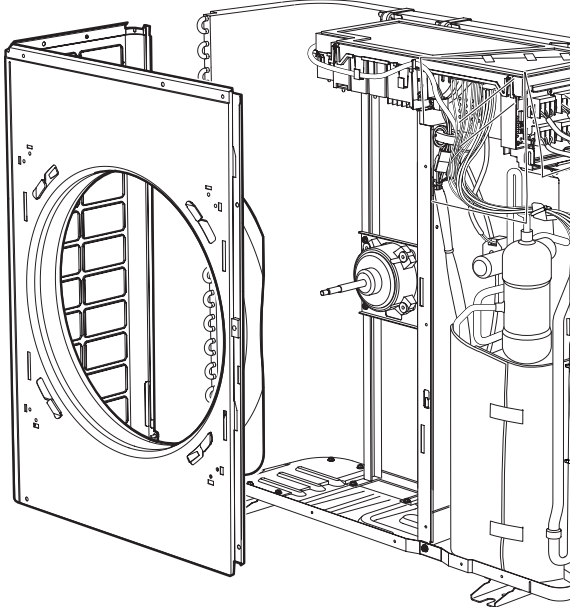
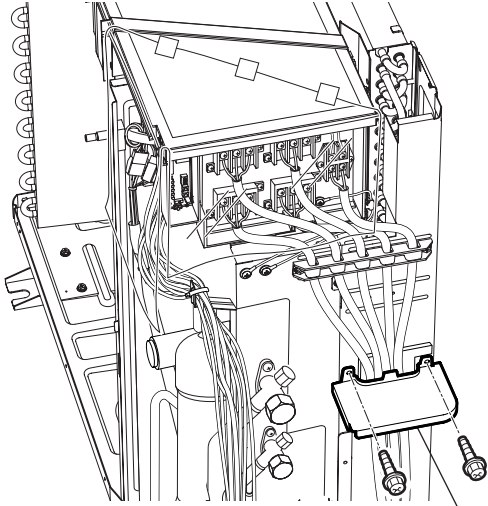
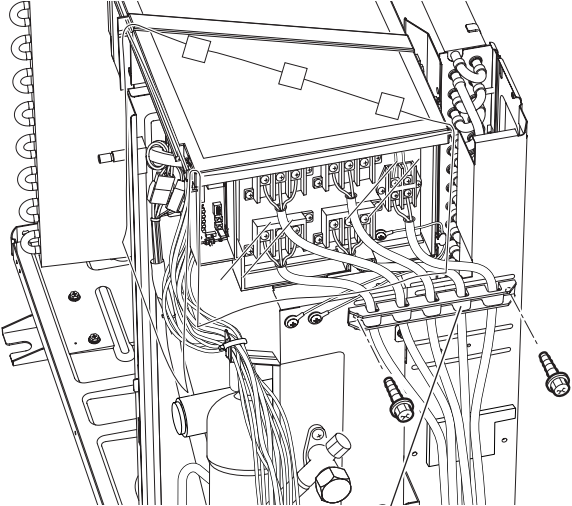
Step	Procedure	Points
4. Removal of the front panel (2)		★ M5×20
1	<p>Remove the 2 screws.</p>  <p>Front panel (2) (R11054)</p>	
2	<p>Slide the front panel (2) downward to release the 3 hooks.</p>  <p>(R11055)</p>  <p>(R9594)</p>	

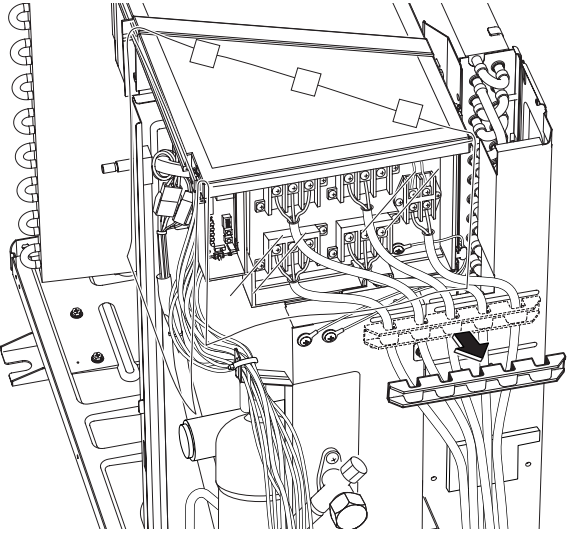
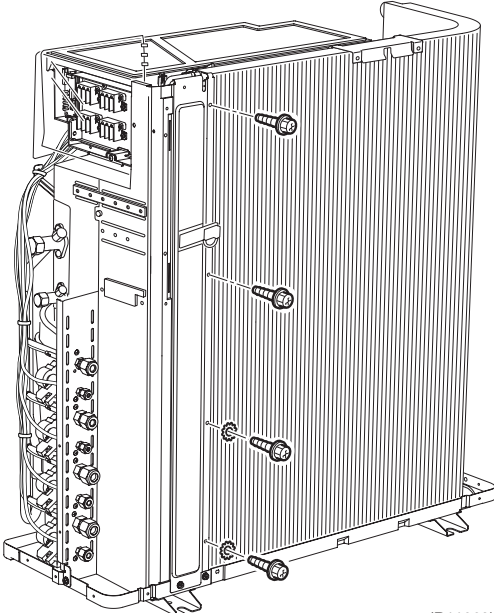
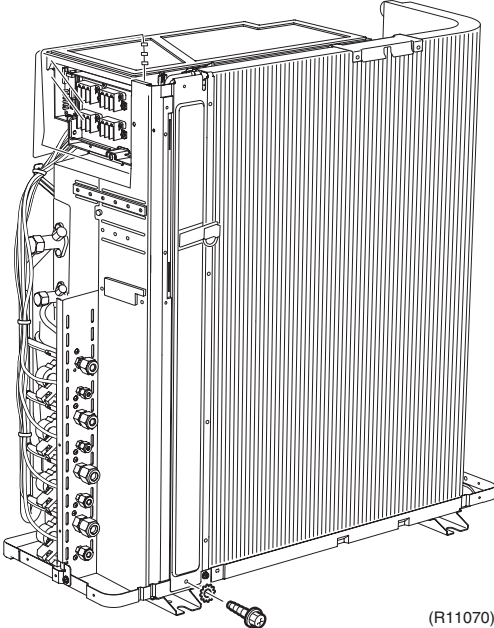
Step	Procedure	Points
3	<p>Remove the front panel (2).</p> 	<ul style="list-style-type: none"> <li>■ The insulation sheet is inserted between the front panel (2) and the electrical box.</li> </ul>
5. Removal of the front panel (1)	<p>1 Remove the 4 screws on the discharge grille.</p>  <p>2 Pull the bottom of the discharge grille toward yourself.</p> 	<ul style="list-style-type: none"> <li>■ Remove the discharge grille and outdoor fan first to remove the front panel (1).</li> </ul>

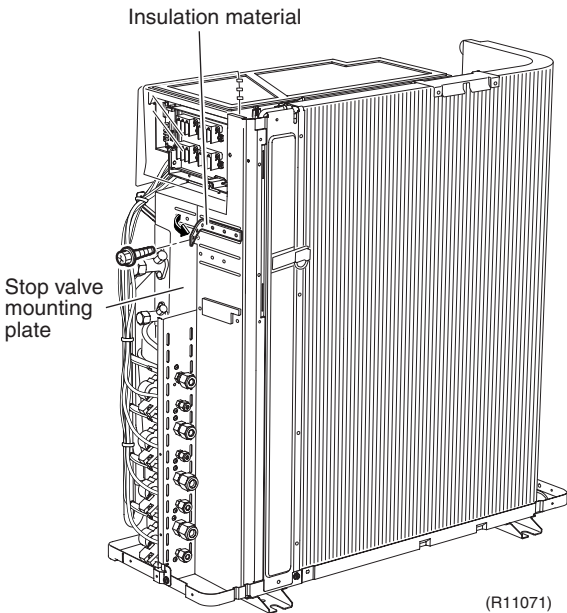
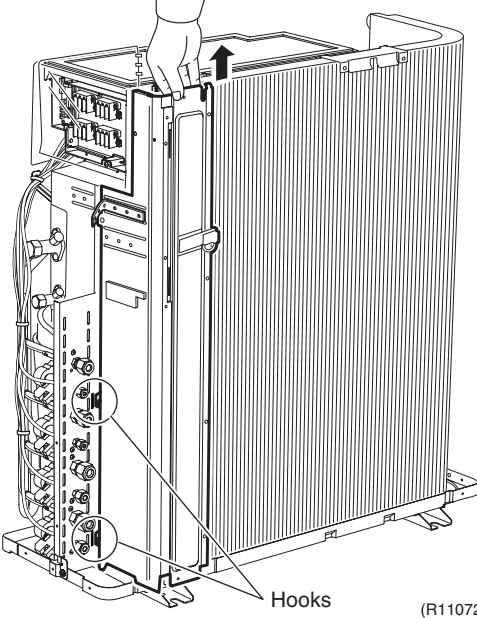
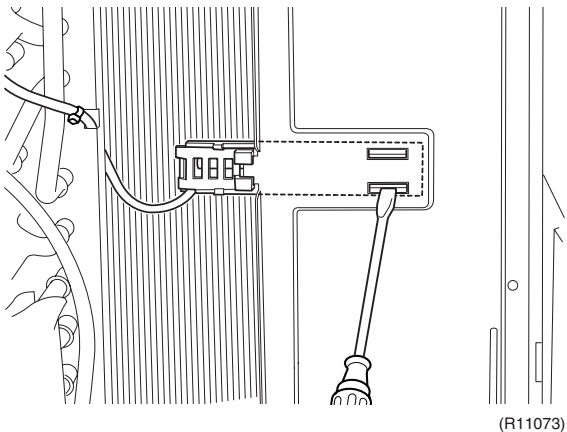
Step	Procedure	Points
3	<p>Remove the fixing nut and remove the outdoor fan.</p>  <p style="text-align: right;">(R11059)</p>	<p>Fan fixing nut : M8</p>
4	<p>Remove the 2 screws on the partition plate (1).</p>  <p style="text-align: right;">(R11060)</p>	
5	<p>Remove the 2 screws at the bottom left of the front.</p>  <p style="text-align: right;">(R11061)</p>	

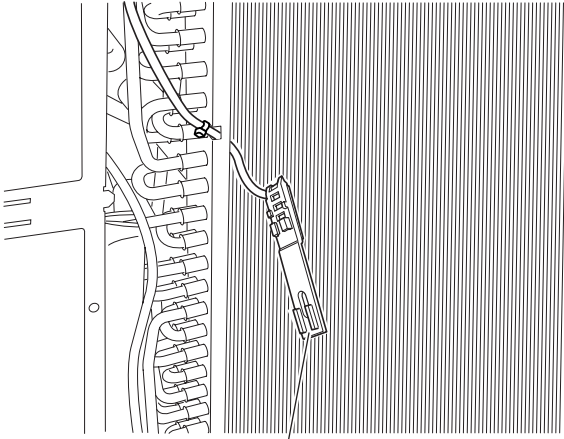
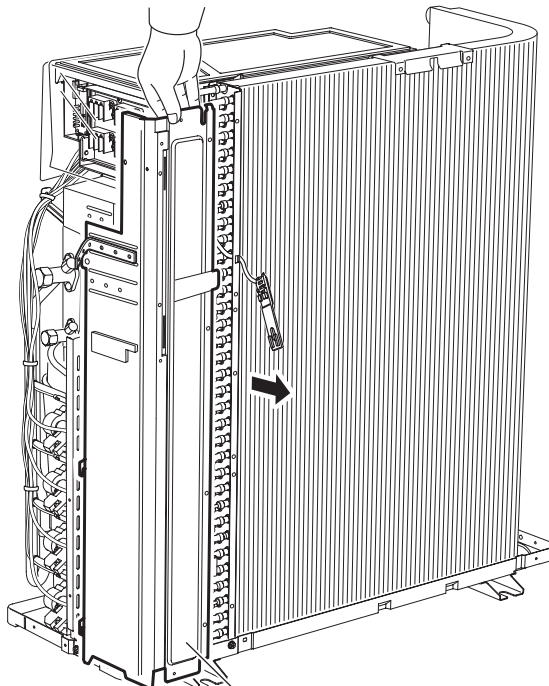


Step	Procedure	Points
6	Remove the screw at the bottom of the left side.	
		
7	Remove the screw at the bottom of the back side.	
		
8	The front panel (1) is provided with a hook on its front. Lift the front panel (1) off position to remove it.	
		

Step	Procedure	Points
9	<p>Remove the front panel (1).</p>  <p>(R11065)</p>	
6. Removal of the rear panel	<p>1 Remove the 2 screws on the partition plate (2).</p> <p>2 Lift up slightly and remove the partition plate (2).</p>  <p>Partition plate (2) (R11066)</p> <p>3 Remove the 2 screws on the wire fixing plate.</p>  <p>Wire fixing plate (R11067)</p>	

Step	Procedure	Points
4	<p data-bbox="199 219 459 277">Remove the wire fixing plate.</p>  <p data-bbox="986 775 1054 797">(R11068)</p>	
5	<p data-bbox="199 804 448 862">Remove the 4 screws on the rear panel.</p>  <p data-bbox="963 1431 1032 1453">(R11069)</p>	
6	<p data-bbox="199 1462 467 1520">Remove the screw from the bottom frame.</p>  <p data-bbox="963 2089 1032 2112">(R11070)</p>	

Step	Procedure	Points
7	<p>Remove the screw from the stop valve mounting plate. Peel off a half of the insulation material.</p>	 <p>Insulation material</p> <p>Stop valve mounting plate</p> <p>(R11071)</p>
8	<p>Lift the rear panel upward to release the 2 hooks.</p>	 <p>Hooks</p> <p>(R11072)</p>
9	<p>Push the hooks of the outdoor temperature thermistor holder from inner-side.</p>	 <p>(R11073)</p>

Step		Procedure	Points
10	The outdoor temperature thermistor holder is now released.	 <p data-bbox="662 716 1061 772">Outdoor temperature thermistor holder (R11074)</p>	
11	Remove the rear panel.	 <p data-bbox="766 1523 1061 1556">Rear panel (R11075)</p>	

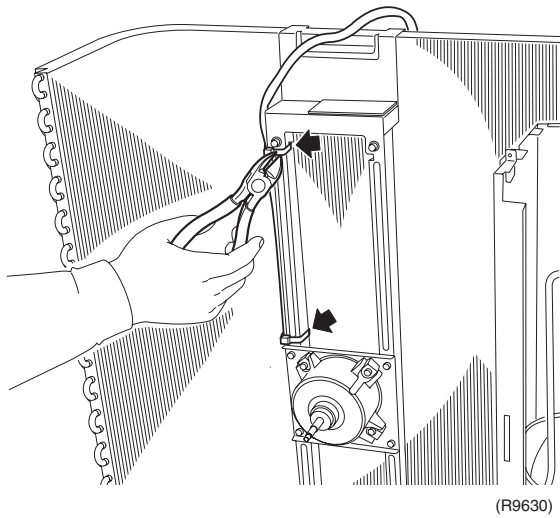
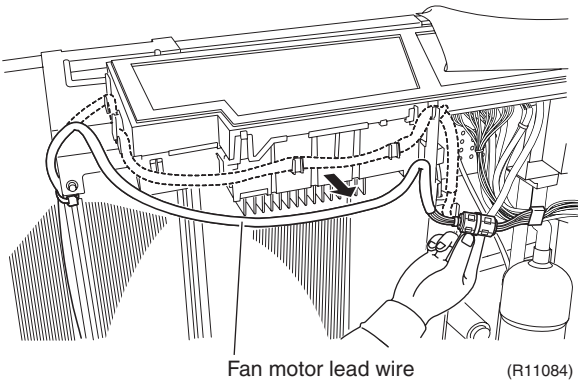
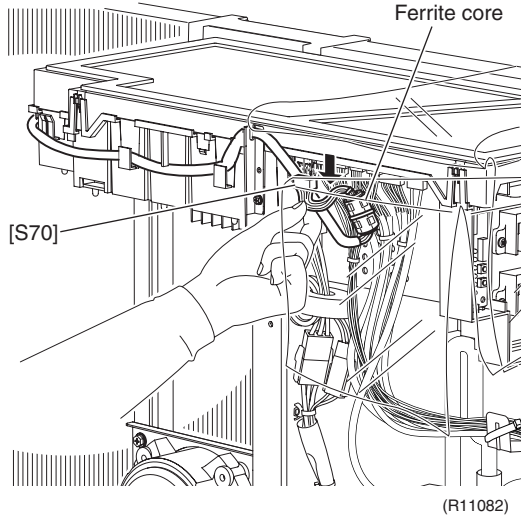
## 2. Removal of Fan Motor

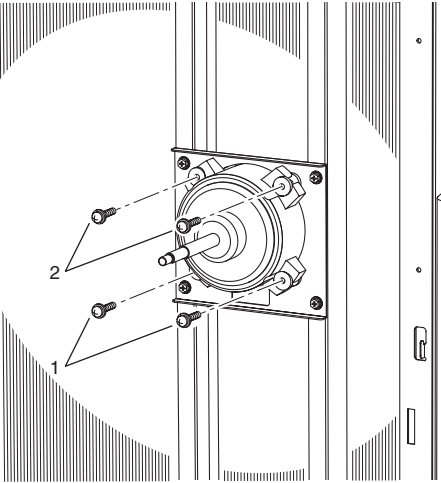
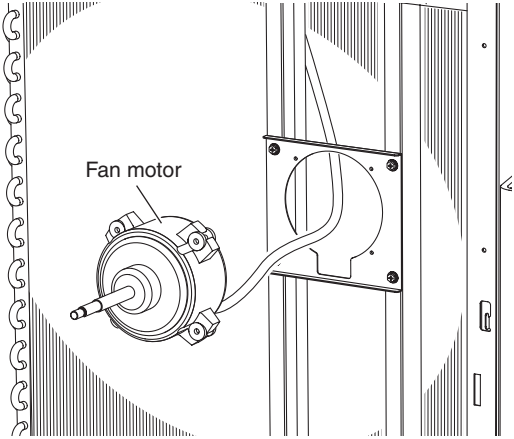
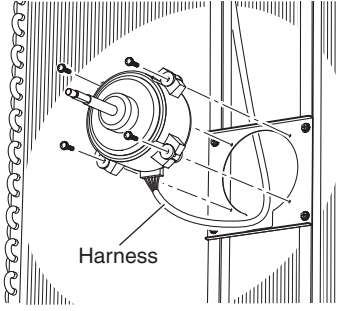
**Procedure**



**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Disconnect the connector for fan motor [S70] and release the ferrite core attached to the electrical box with clamp.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the clamp into the small hole.</li> </ul>
2	The illustration shows arrangement of the fan motor lead wire.	<ul style="list-style-type: none"> <li>■ Fix the ferrite core at where the tension does not pull the PCB ASSY when connecting the connectors.</li> </ul>
3	Cut the clamps at 2 locations.	



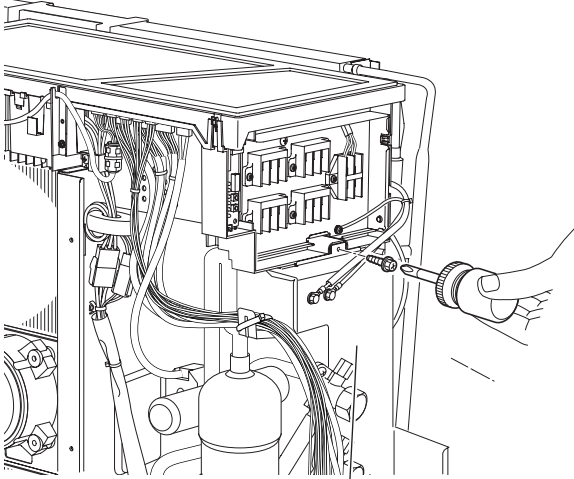
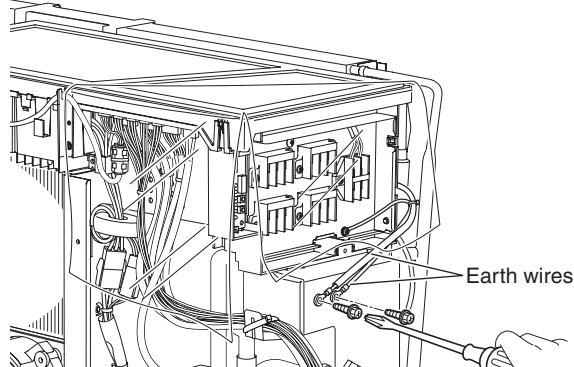
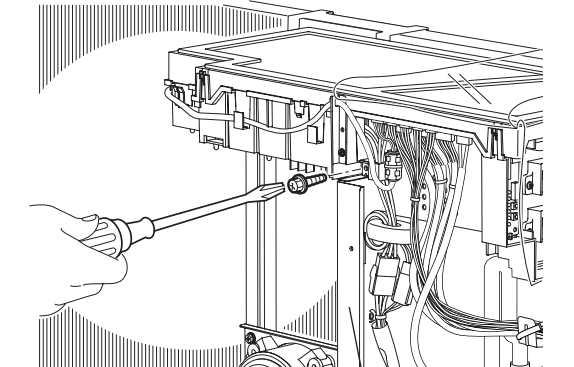
Step		Procedure	Points
4	Remove the 2 screws at the bottom first.	 <p>(R11076)</p>	<ul style="list-style-type: none"> <li>■ Be sure to remove the bottom screws first. If the top screws are removed first, the fan motor, the center of gravity of which is toward the front, may tilt down or fall, getting you injured.</li> </ul>
6	Remove the fan motor.	 <p>(R11077)</p>  <p>(R11078)</p>	<ul style="list-style-type: none"> <li>■ When reassembling, be sure to place the wire harness lower.</li> </ul>

### 3. Removal of Electrical Box

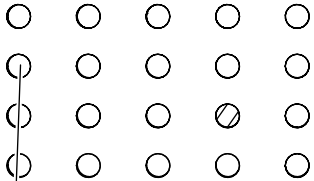
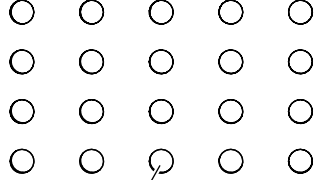
**Procedure**

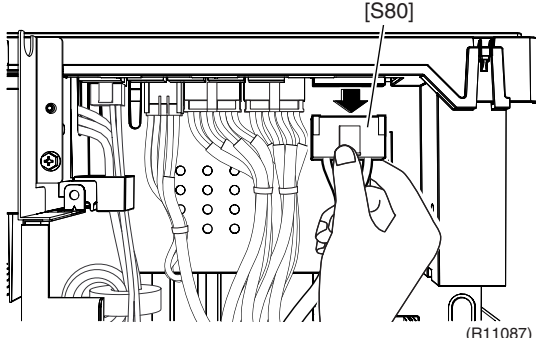
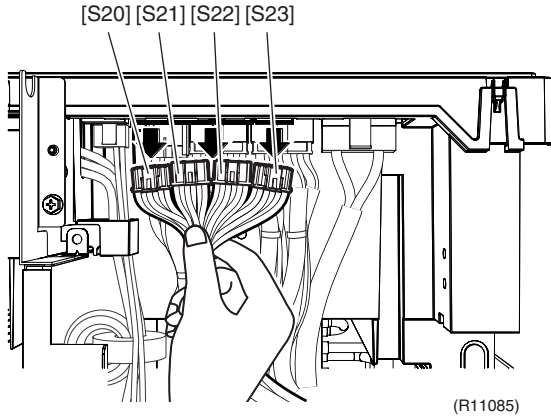
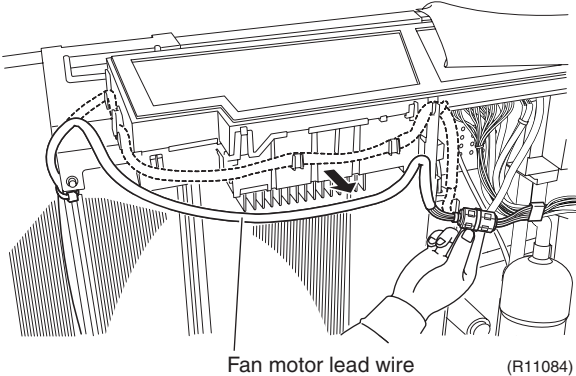
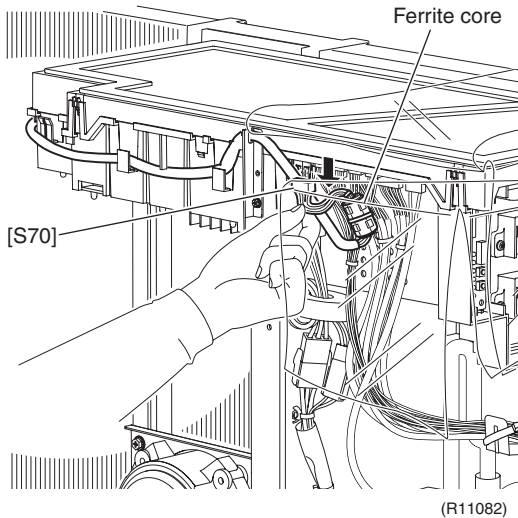


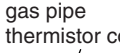
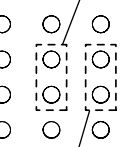
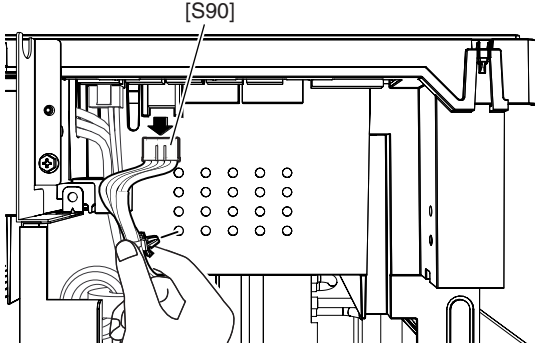
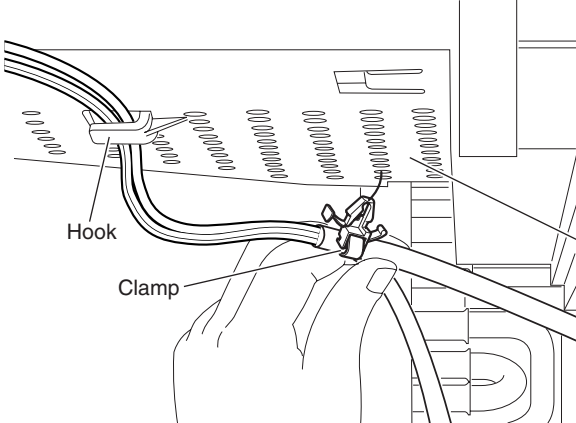
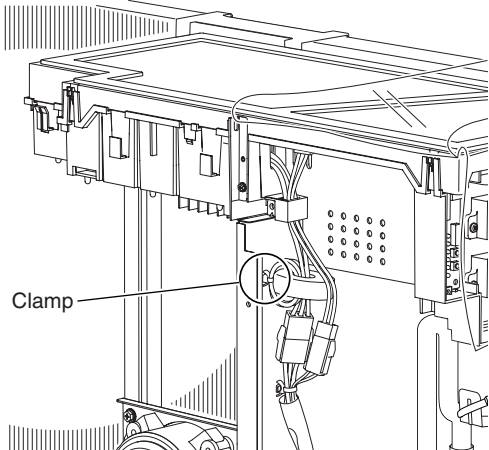
**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Remove the screw from the stop valve mounting plate.	
	 <p style="text-align: center;">Stop valve mounting plate (R11079)</p>	
2	Remove the 2 screws to detach the earth wires.	
	 <p style="text-align: center;">Earth wires (R11081)</p>	
3	Remove the screw on the partition plate.	
	 <p style="text-align: center;">Partition plate (R11080)</p>	

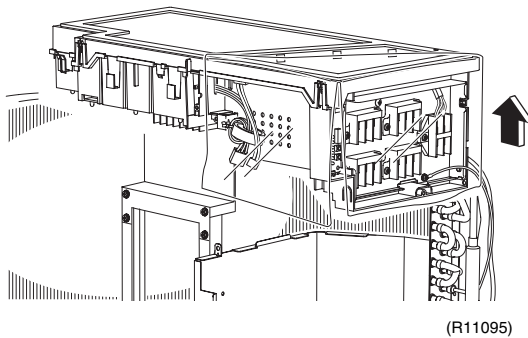
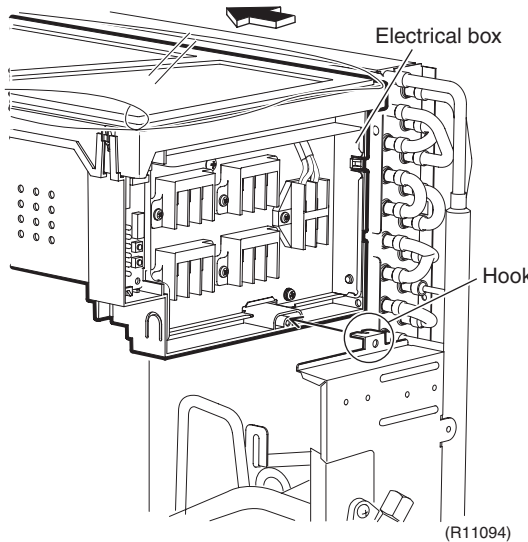
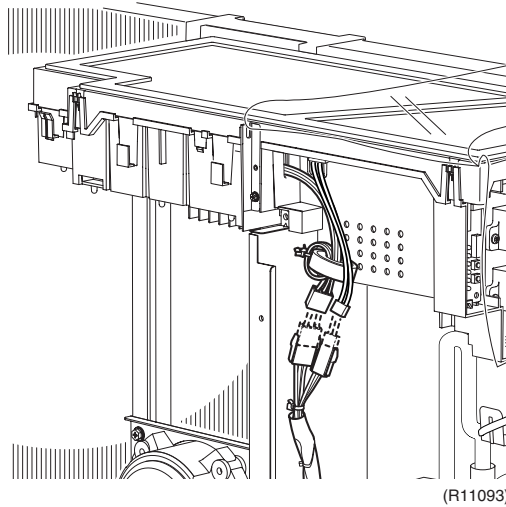
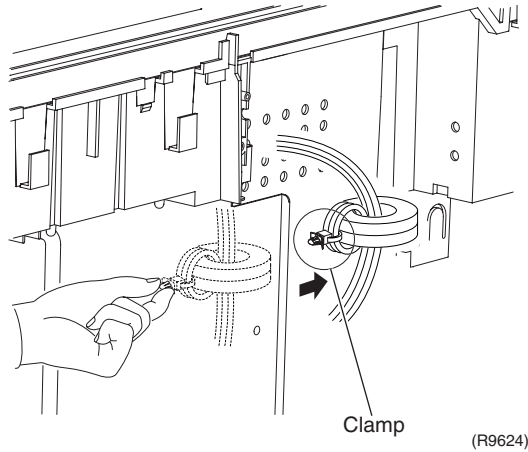


Step	Procedure	Points
4	Disconnect the connector for fan motor [S70] and release the ferrite core attached to the electrical box with clamp.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the clamp into the hole.</li> </ul>  <p style="text-align: right;">(R11083)</p>
5	The illustration shows arrangement of the fan motor lead wire.	<ul style="list-style-type: none"> <li>■ Fix the ferrite core at where the tension does not pull the PCB ASSY when connecting the connectors.</li> </ul>
6	Disconnect the 4 connectors for electronic expansion valve coil and detach the clamp. [S20]: room A (blue) [S21]: room B (yellow) [S22]: room C (white) [S23]: room D (red)	<ul style="list-style-type: none"> <li>■ When reassembling, insert the clamp into the hole.</li> </ul>  <p style="text-align: right;">(R11086)</p>
7	Disconnect the connector for four way valve coil [S80].	



Step	Procedure	Points
8	<p>Disconnect the 2 connectors and detach the 2 clamps.                      [S92]: gas pipe thermistor connector                      [S93]: liquid pipe thermistor connector</p>	<p>■ When reassembling, insert the clamp into the hole.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>gas pipe thermistor connector</p> </div> <div style="text-align: center;">  <p>liquid pipe thermistor connector</p> </div> </div> <p>thermistor connector</p> <p style="text-align: right;">(R11089)</p>
9	<p>Disconnect the connector for thermistor [S90] and detach the clamp.                      [S90]: thermistor connector (outdoor temperature, outdoor heat exchanger, discharge pipe)</p>	 <p style="text-align: center;">(R11090)</p>
10	<p>The wire harness is hooked under the electrical box. Unhook it and pull out the clamp.</p>	<p>■ When reassembling, insert the clamp into the small hole.</p>  <p style="text-align: center;">(R11091)</p>
11	<p>The wire harness for the compressor is attached to the partition plate (1) by the clamp.</p>	 <p style="text-align: center;">(R11092)</p>

Step	Procedure	Points
12	Pull out the clamp.	<ul style="list-style-type: none"> <li>■ Detach the clamp.</li> </ul>
13	Disconnect the relay connector of the overload protector [OL] and the compressor.	
14	Slide the electrical box leftward to release the hook on the right side of the box.	
15	Lift up the electrical box to remove it.	



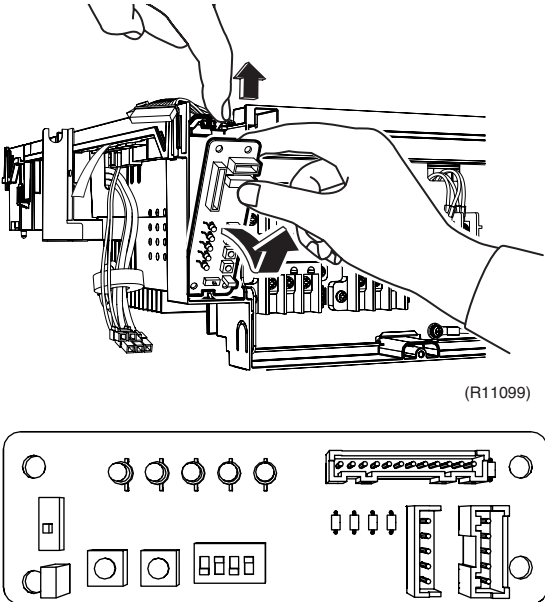
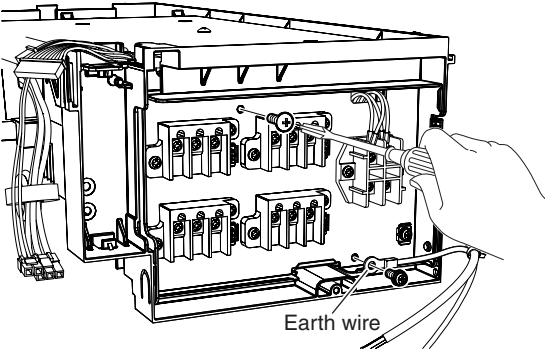
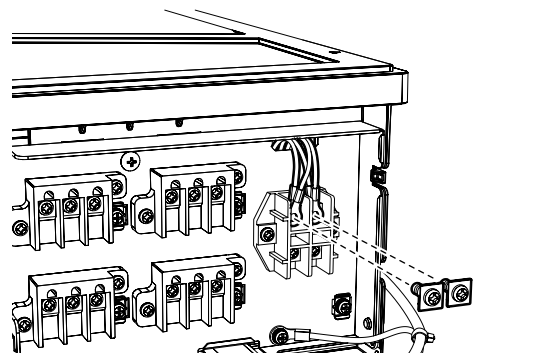
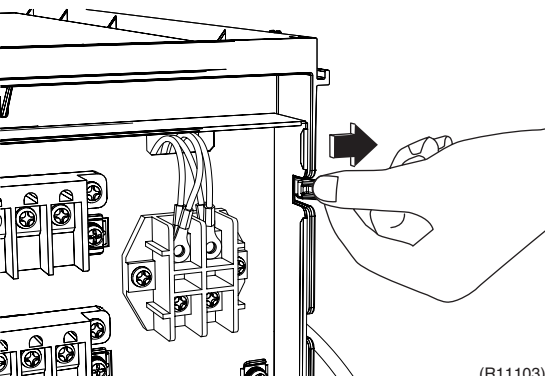
# 4. Removal of PCBs

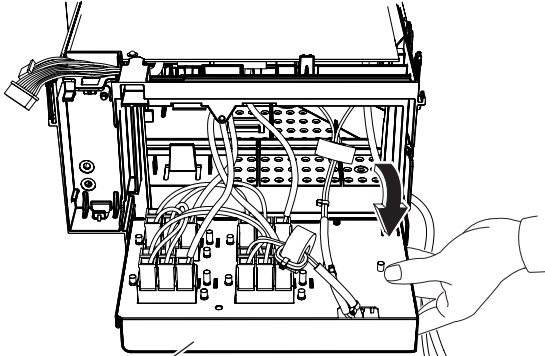
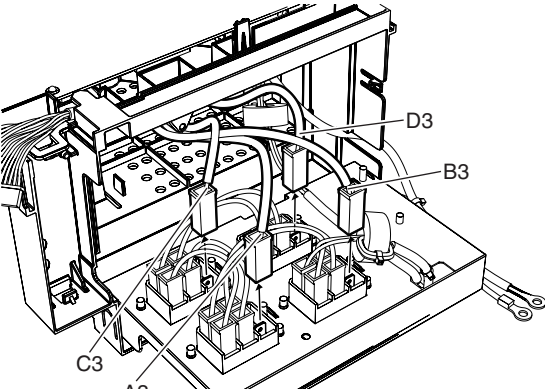
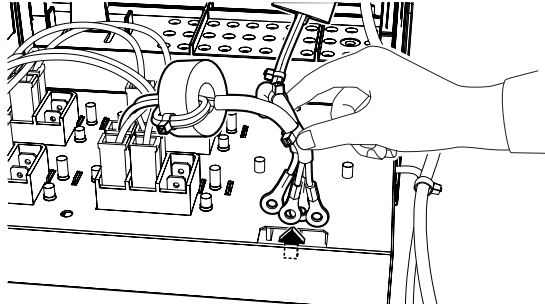
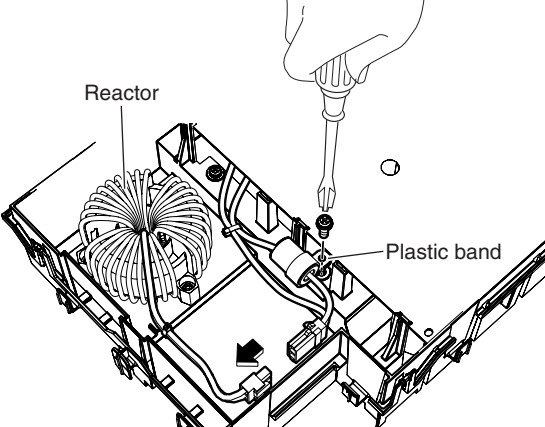
**Procedure**



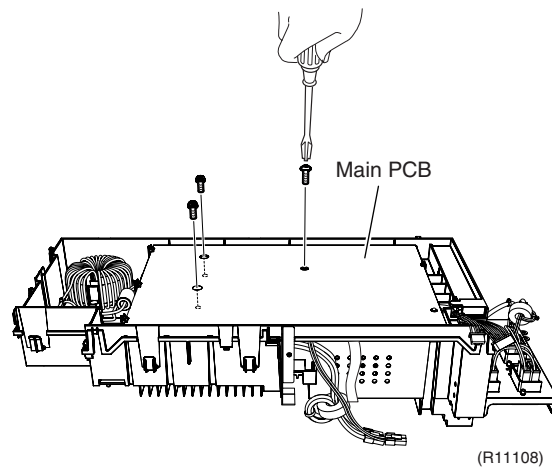
**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
<p>■ Remove the electrical box.</p>	<p style="text-align: right;">(R11096)</p> <p style="text-align: right;">(R11097)</p> <p style="text-align: right;">(R11098)</p>	
<p>1. Removal of the PCB</p>		
<p>1 Turn over the insulation sheet. Peel off the filament tape.</p>		
<p>2 Unhook the 4 hooks and remove the electrical box cover.</p>		
<p>3 Disconnect the connectors [S52] [S102] from the service monitor PCB.</p>		

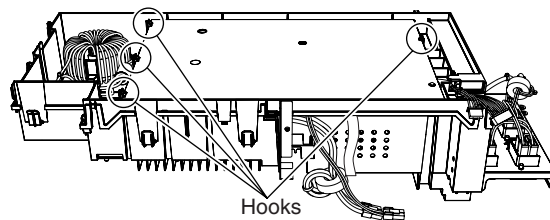
Step	Procedure	Points
4	Release the hooks and remove the service monitor PCB.	
	 <p>(R11099)</p> <p>(R11100)</p>	
5	Remove the 2 screws of the terminal board and the earth wire.	
	 <p>Earth wire</p> <p>(R11101)</p>	
6	Remove the 2 screws of the power supply terminal.	
	 <p>(R11102)</p>	
7	Release the hook on the right.	
	 <p>(R11103)</p>	

Step	Procedure	Points
8	Open the terminal board.	
	 <p>Terminal board</p> <p>(R11104)</p>	
9	Disconnect the 4 connectors.	<p>A3: Red                      B3: Yellow                      C3: Blue                      D3: Orange</p>
	 <p>(R11105)</p>	
10	Release the 2 wire harnesses from the terminal board.	
	 <p>(R11106)</p>	
11	Disconnect the relay connector for the reactor. Remove the screw and remove the plastic band.	
	 <p>Reactor</p> <p>Plastic band</p> <p>(R11107)</p>	

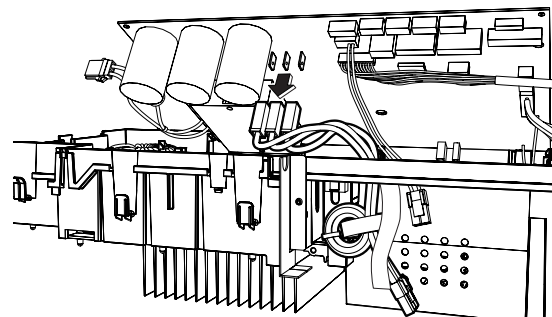
Step	Procedure	Points
12	Remove the 3 screws of the main PCB.	
13	Release the 4 hooks.	
14	Disconnect the 3 connectors for the compressor harnesses.	
15	Lift up and remove the main PCB.	



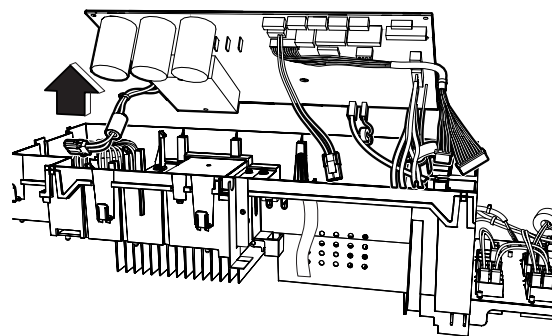
(R11108)



(R11109)

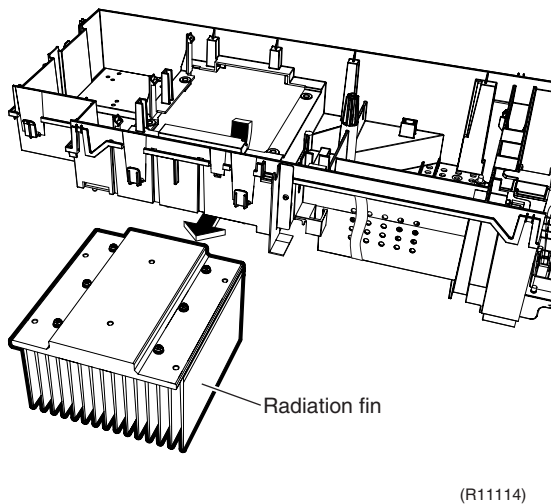
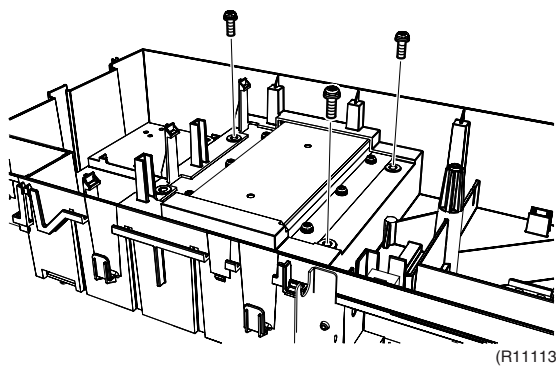
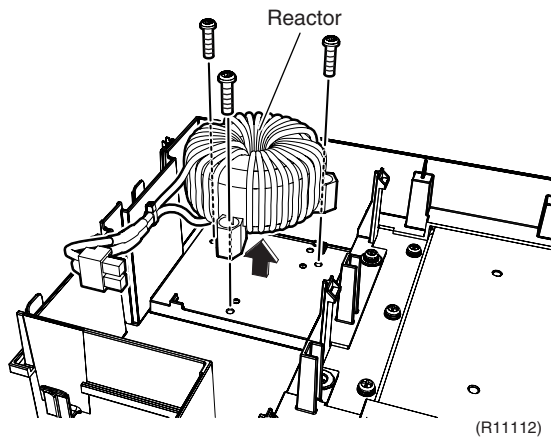


(R11110)



(R11111)

Step	Procedure	Points
16	Remove the 3 screws of the reactor and remove it.	
17	Remove the 3 screws of the radiation fin and remove it.	



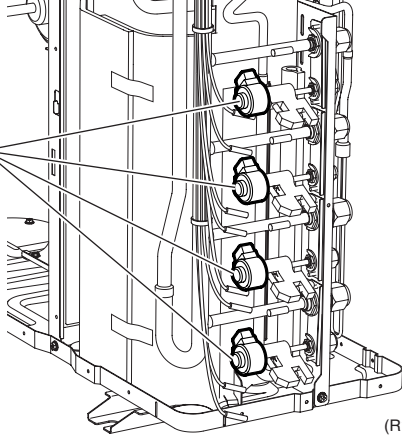
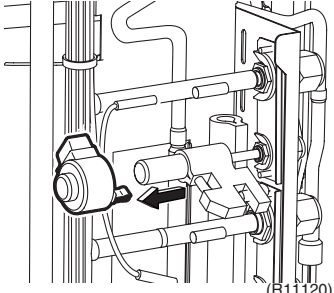
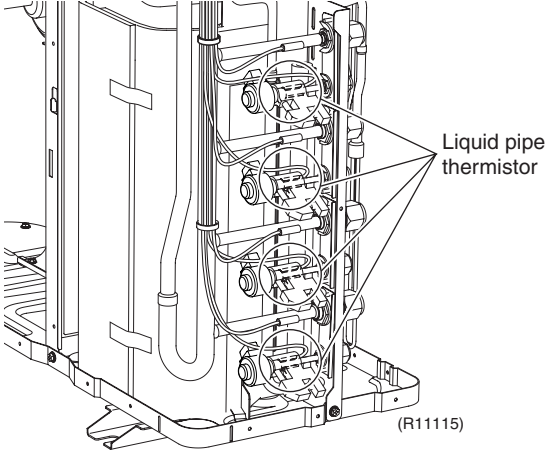
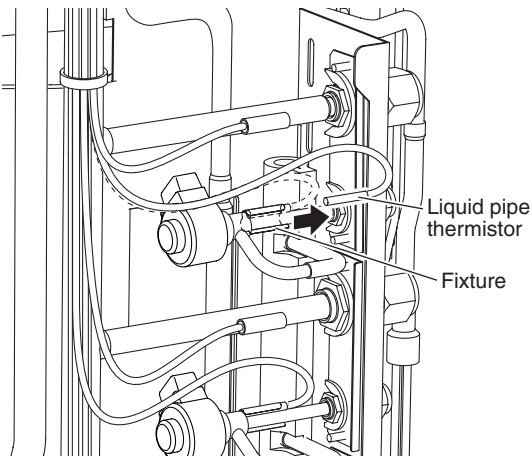


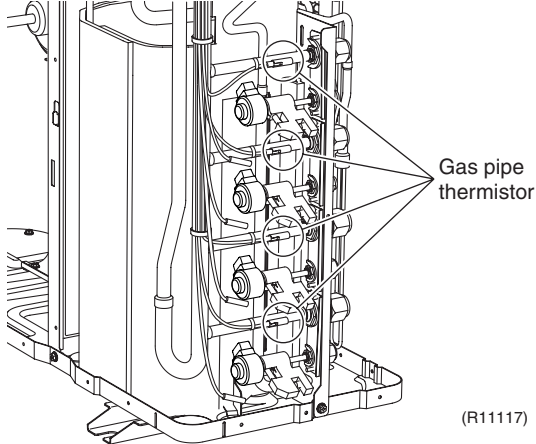
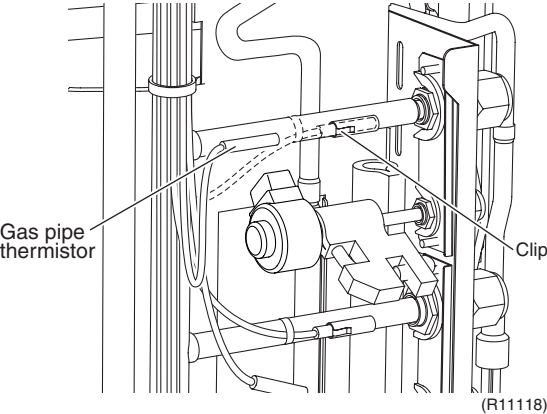
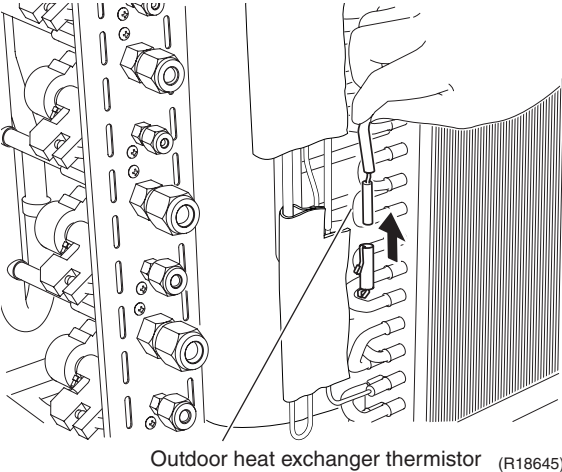
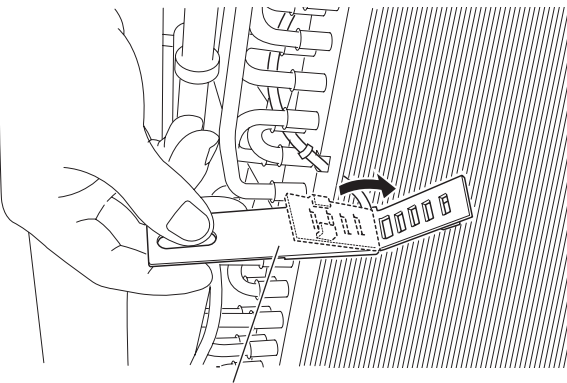
# 5. Removal of Coils / Thermistors

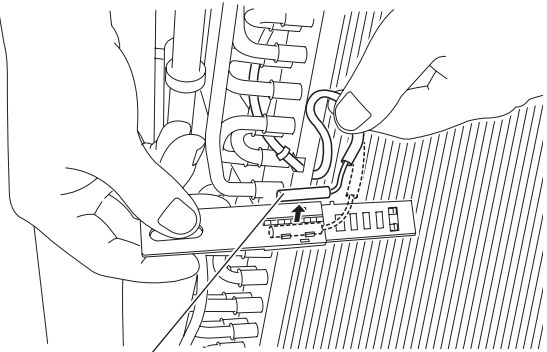
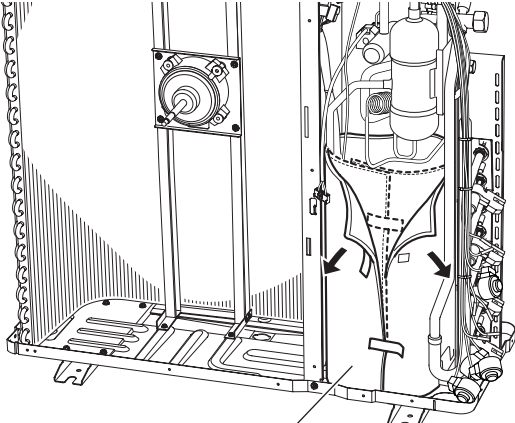
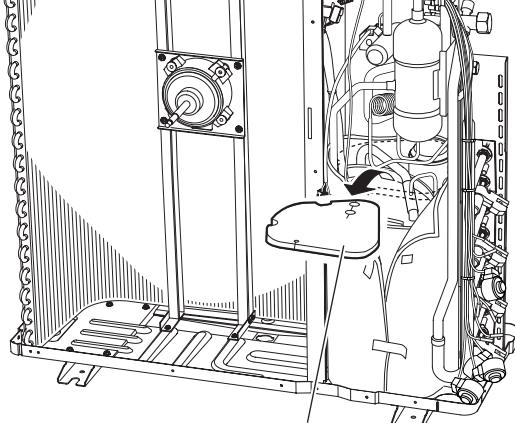
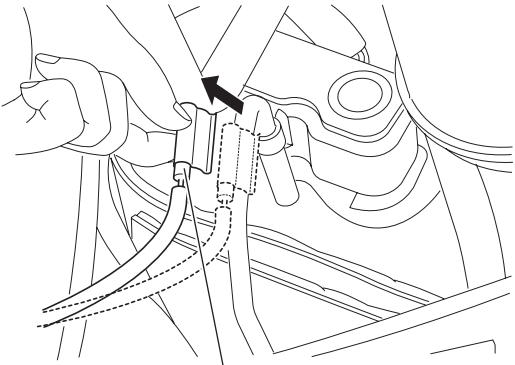
**Procedure**

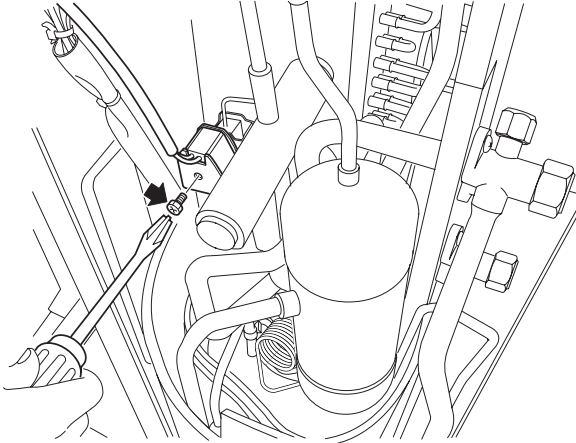
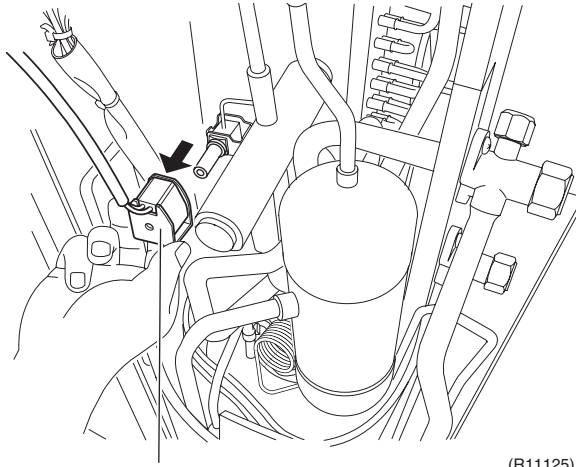


**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
<p>1. Removal of the electronic expansion valve coils</p> <p>1 Pull out the electronic expansion valve coils.</p>	 <p>(R11119)</p>  <p>(R11120)</p>	
<p>2. Removal of the thermistors</p> <p>1 Peel off the putty and pull out the liquid pipe thermistors.</p>	 <p>(R11115)</p>  <p>(R11116)</p>	<p>■ Be careful not to lose the fixtures.</p>

Step	Procedure	Points
2	<p>Pull out the gas pipe thermistors.</p>  	<ul style="list-style-type: none"> <li>■ Be careful not to lose the clips.</li> </ul>
3	<p>Pull out the outdoor heat exchanger thermistor.</p> 	
4	<p>At the back side, open the outdoor temperature thermistor holder.</p> 	

Step	Procedure	Procedure	Points
5	Release the outdoor temperature thermistor.	 <p style="text-align: center;">Outdoor temperature thermistor (R11271)</p>	
6	Slightly open the sound blanket (outer).	 <p style="text-align: center;">Sound blanket (outer) (R11122)</p>	
7	Remove the sound blanket (top upper).	 <p style="text-align: center;">Sound blanket (top upper) (R11123)</p>	
8	Remove the discharge pipe thermistor.	 <p style="text-align: center;">Discharge pipe thermistor (R9635)</p>	

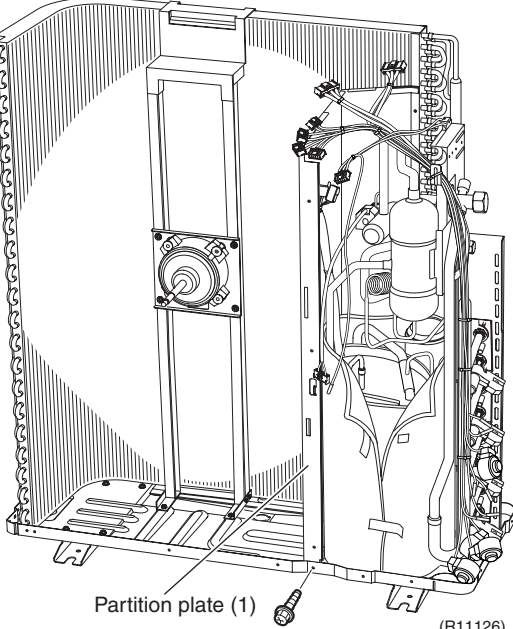
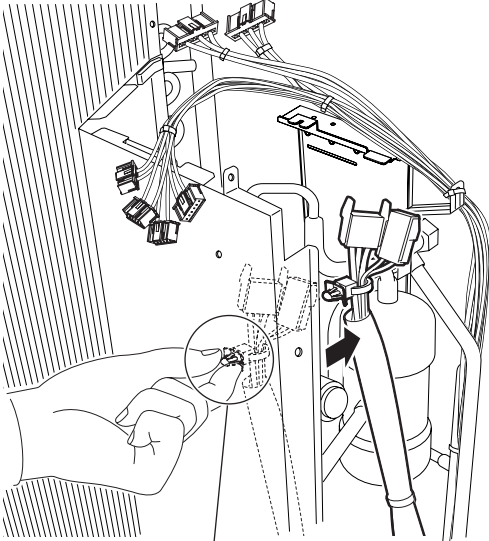
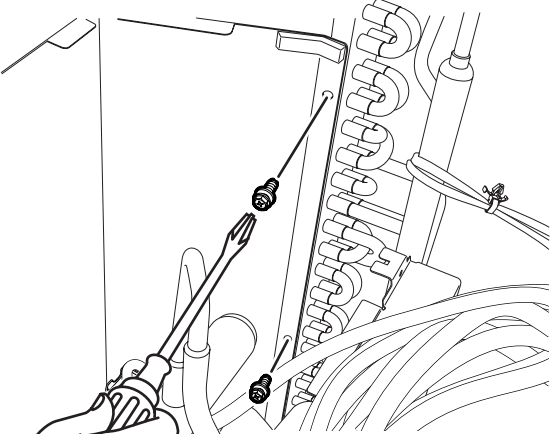
Step	Procedure	Points
3.	Removal of the four way valve coil	
1	Remove the screw.  <p style="text-align: right;">(R11124)</p>	
2	Remove the four way valve coil.  <p style="text-align: center;">Four way valve coil</p> <p style="text-align: right;">(R11125)</p>	

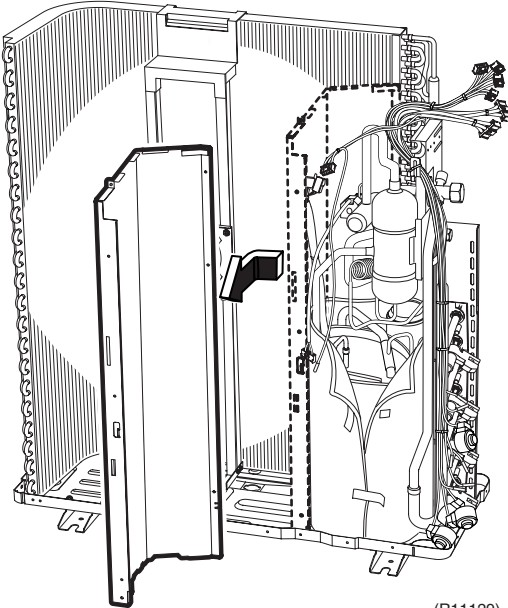
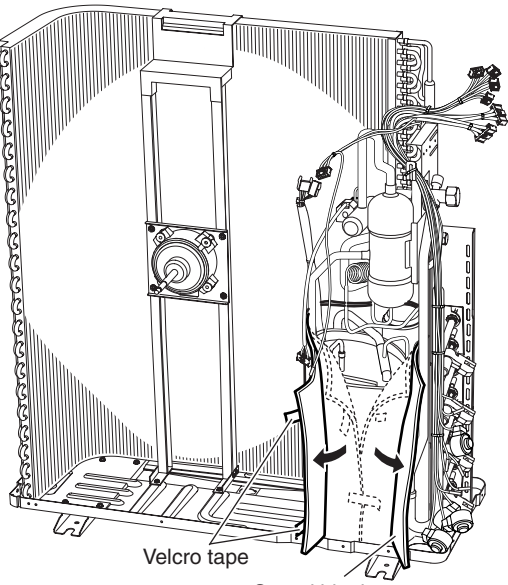
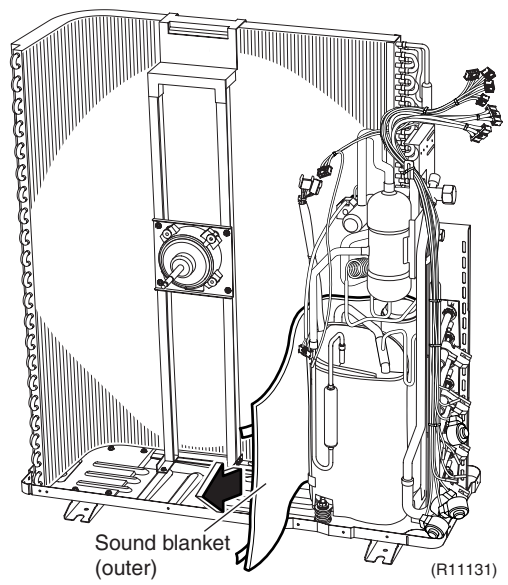
## 6. Removal of Sound Blanket

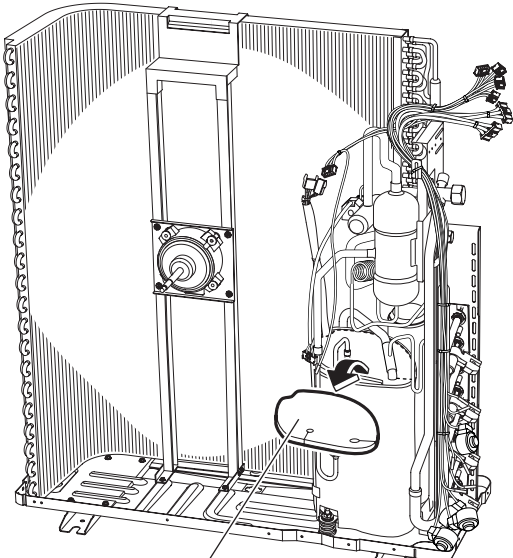
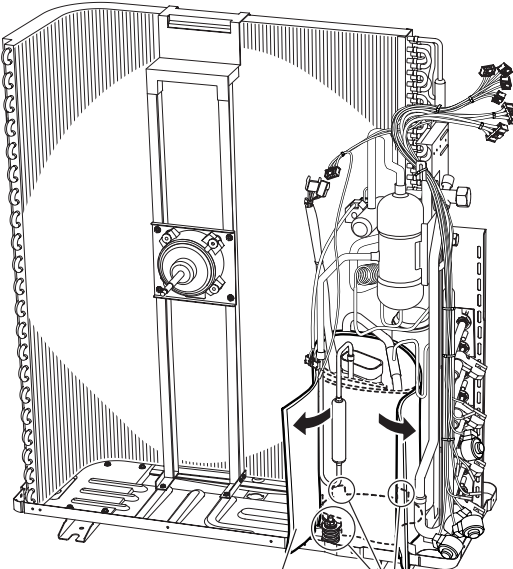
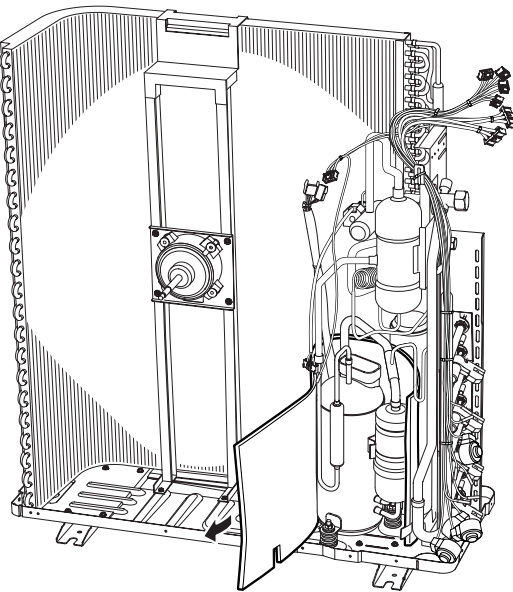
### Procedure



**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	<p>Remove the screw from the partition plate (1).</p> 	
2	<p>Release the clamp.</p> 	
3	<p>Remove the 2 screws.</p> 	

Step	Procedure	Points
4	<p>Remove the partition plate (1).</p>  <p style="text-align: right;">(R11129)</p>	
5	<p>Open the sound blanket (outer).</p>  <p style="text-align: center;">Velcro tape</p> <p style="text-align: center;">Sound blanket (outer)</p> <p style="text-align: right;">(R11130)</p>	
6	<p>Remove the sound blanket (outer).</p>  <p style="text-align: center;">Sound blanket (outer)</p> <p style="text-align: right;">(R11131)</p>	<p>■ The sound blanket is fragile.</p>

Step	Procedure	Points
7	Remove the sound blanket (top inner).	 <p data-bbox="611 786 1034 815">Sound blanket (top inner) (R11168)</p>
8	Open the sound blanket (inner).	 <p data-bbox="683 1413 1034 1487">Sound blanket (inner) Compressor mount (R11169)</p>
9	Remove the sound blanket (inner).	 <p data-bbox="954 2107 1023 2134">(R11170)</p>

■ The sound blanket is fragile. Be careful of the notches of the compressor mount (3 locations).

# 7. Removal of Compressor

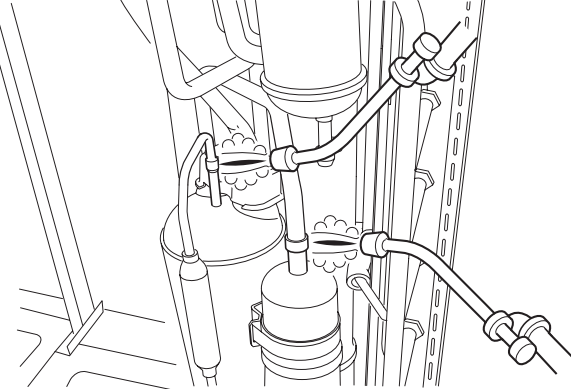
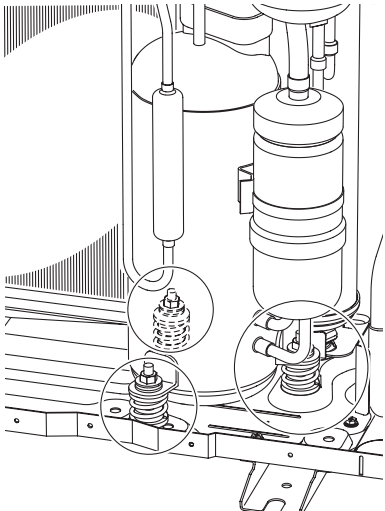
**Procedure**



**Warning** Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Remove the terminal cover.	<p>(R11171)</p>
2	Pull out the 3 lead wires with pliers.	<p>■ U:red, V:yellow, W:blue</p>
3	Remove the overload protector (OL).	<p>(R9471)</p>



Step	Procedure	Points
4	<p>Heat up the brazed part and withdraw the piping with pliers.</p>  <p>(R11172)</p>	<p><b>Caution</b> Be careful not to burn yourself with the pipes and other parts that are heated by the gas welding rod.</p> <p><b>Caution</b> From the viewpoint of global environment protection, do not discharge the refrigerant gas in the atmosphere. Make sure to recover the refrigerant gas with the recovery system.</p>
5	<p><b>Warning</b> If refrigerant gas leaks during the work, ventilate the room. (If the refrigerant gas is exposed to flame, noxious gas may be generated.)</p> <p>Remove the 3 nuts.</p>  <p>(R11173)</p>	<p><b>Reassembling precautions</b></p> <ol style="list-style-type: none"> <li>1. Use non-oxidizing brazing method. If nitrogen gas is not available, braze the parts quickly.</li> <li>2. Avoid deterioration of the gaskets due to carbonization of oil inside the four way valve or thermal influence. For this purpose, wrap the four way valve with wet cloth. Splash water over the cloth against becoming too hot (keep it below 120°C).</li> </ol> <p>■ In pulling the pipes, be careful not to over-tighten them with pliers. The pipes may get deformed.</p> <p>If the gas welding machine fails to remove the four way valve, take the steps below.</p> <ol style="list-style-type: none"> <li>1. Disconnect the brazed pipe sections that are easy to separate and join together later.</li> <li>2. With a tube cutter, cut off the internal pipes to easily take out the four way valve.</li> </ol> <p><b>Note:</b> Never use a metal saw. The sawdust may come into the circuit.</p> <p>■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries.</p>

# Revision History

Month / Year	Version	Revised contents
02 / 2013	Si12-996	First edition

Warning



- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

### Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

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