




# REMOVAL PROCEDURE



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

### 8.0/9.0/10.0 kW Class

-  Outdoor Unit
-  Inverter
-  Multi Type



# **Service Manual Removal Procedure**

## **Outdoor Unit**

### **●Cooling Only**

**5MKS90E7V3B**

**4MKS80ESG**

**3MKS90EVLT**

**4MKS100EVLT**

**4MKS90EVMA**

### **●Heat Pump**

**4MXS80E7V3B**

**5MXS90E7V3B**

**3MXS90EVLT**

**4MXS100EVLT**

**4MXS80EVMA**

# Table of Contents

1. Removal of Outer Panels .....	2
2. Removal of Electrical Box .....	16
3. Removal of PCBs .....	22
4. Removal of Fan Motor.....	26
5. Removal of Coils / Thermistors .....	27
6. Removal of Sound Blankets.....	32
7. Removal of Compressor .....	35



**Note:**

- The illustrations may be slightly different depending on the model.
- The illustrations are for heat pump models as representative.

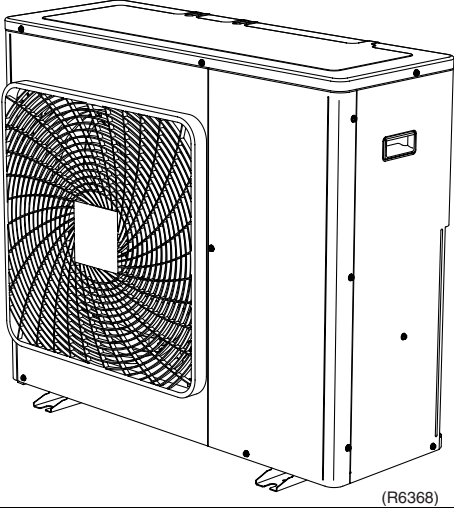
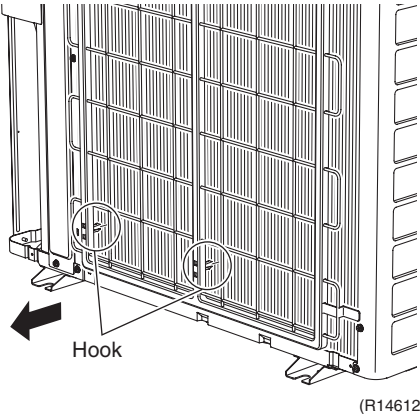
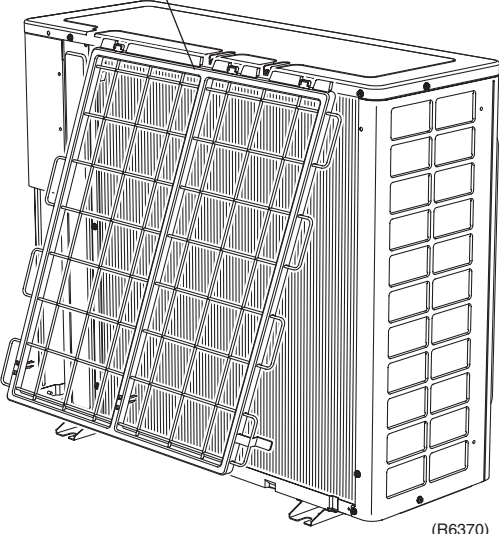
# 1. Removal of Outer Panels

**Procedure**

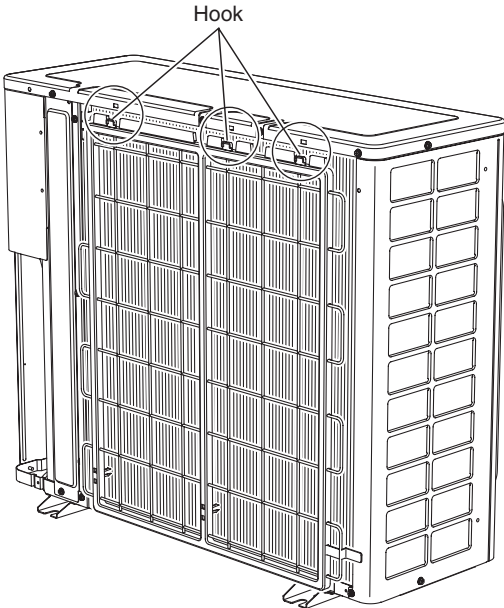
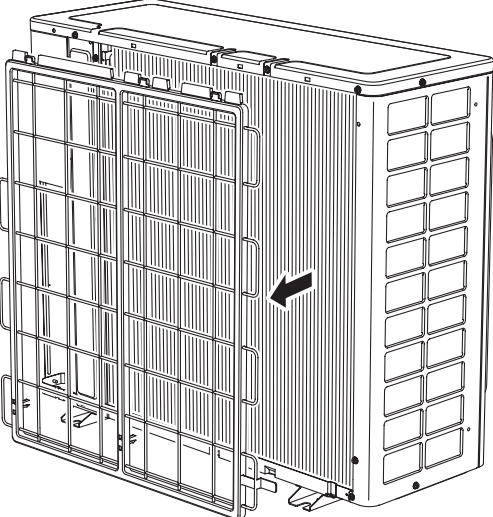
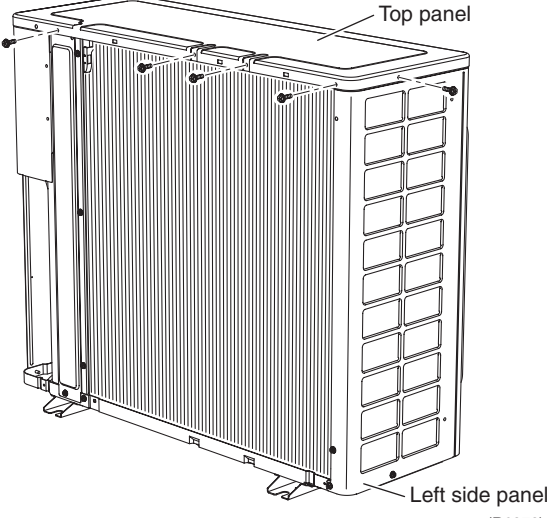


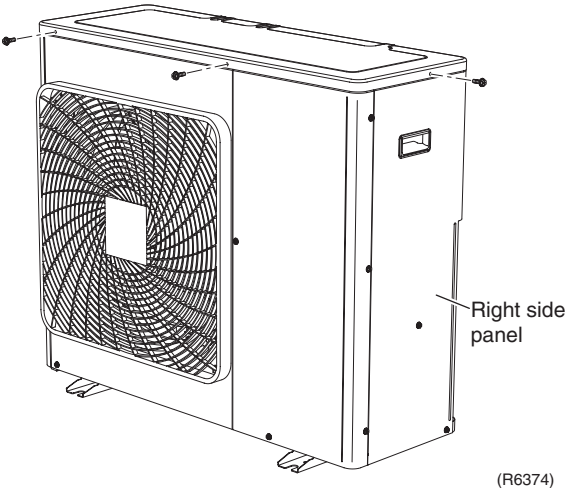
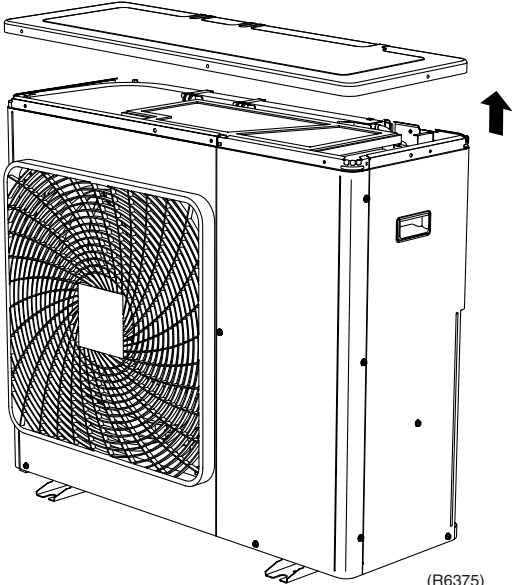
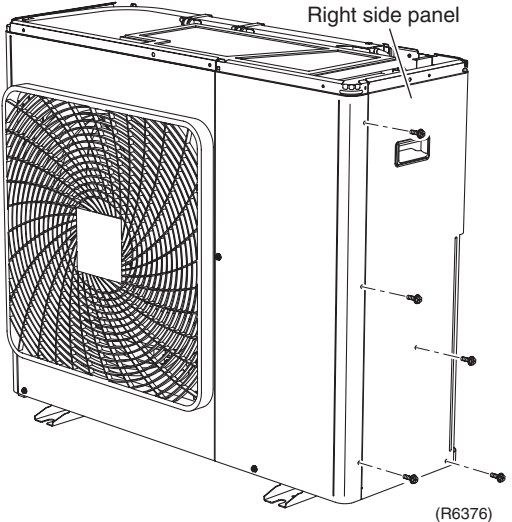
**Warning**

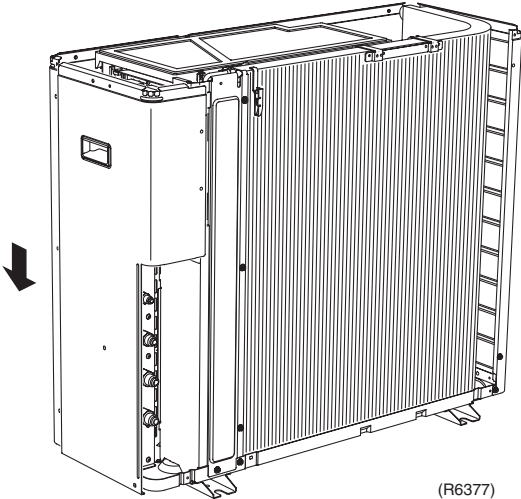
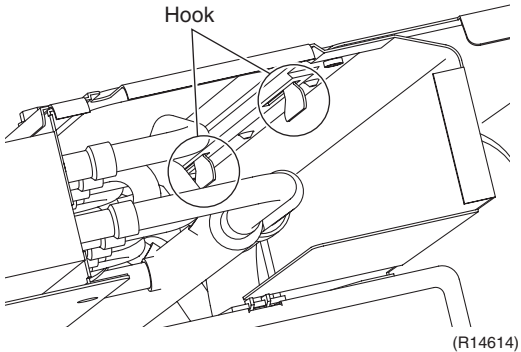
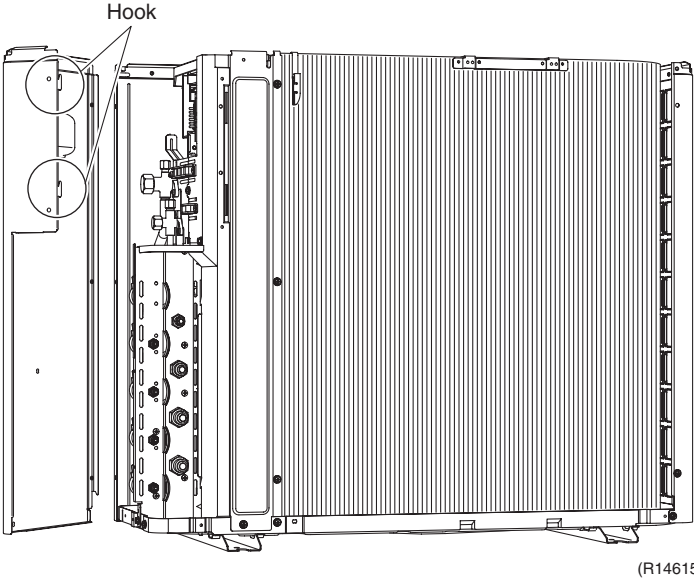
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

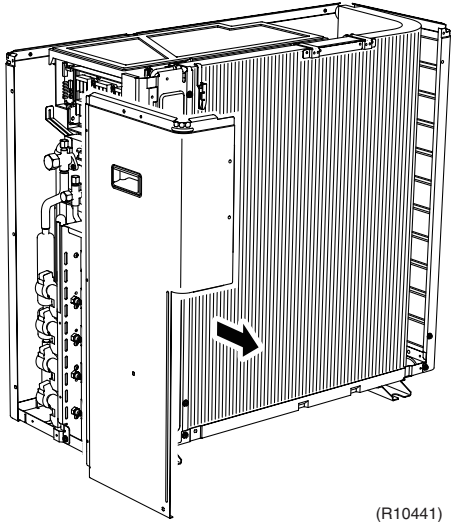
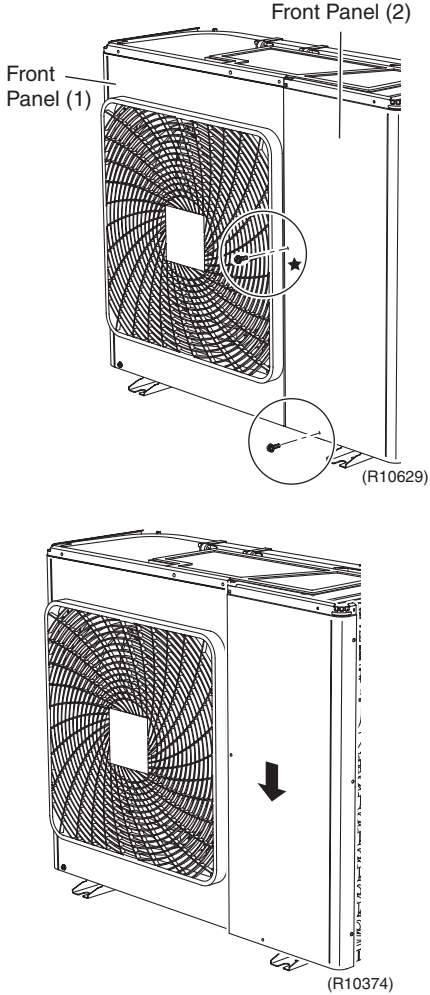
Step	Procedure	Points
	<p>Appearance features</p>  <p>(R6368)</p>	
<p>1. Remove the suction grille.</p> <p>1 Unfasten the 2 hooks at the bottom first.</p>	<p>Rear side</p>  <p>Hook</p> <p>(R14612)</p> <p>Suction grille</p>  <p>(R6370)</p>	<p>■ The hooks are secured in the clearances of the outdoor heat exchanger fins.</p>

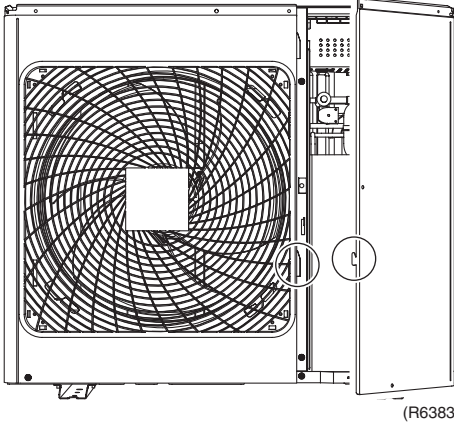
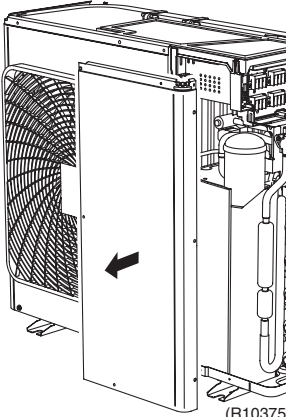
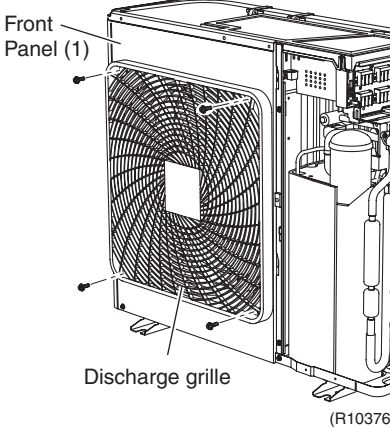
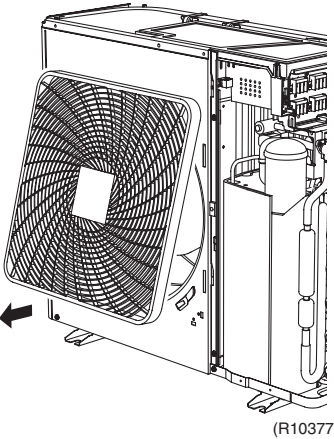


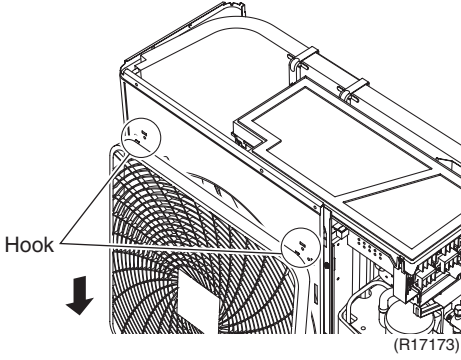
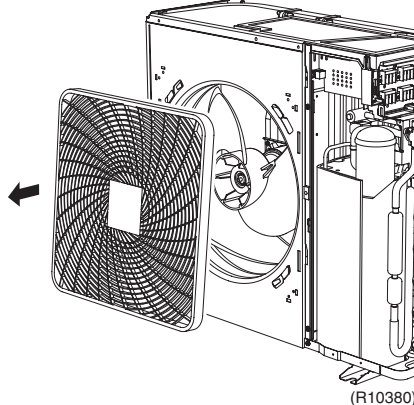
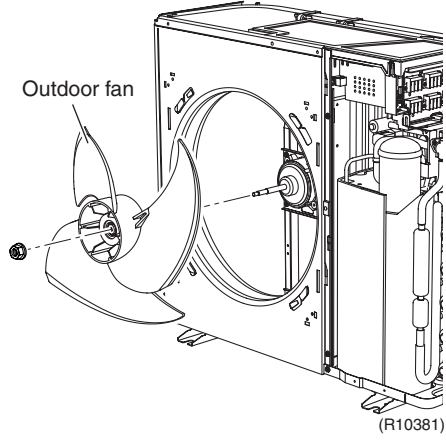
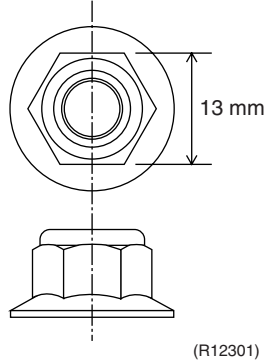
Step	Procedure	Points
2	<p>Slide the suction grille downward to unfasten the 3 top hooks.</p>  <p>(R14613)</p>	
3	<p>Remove the suction grille.</p>  <p>(R6372)</p>	
2. Remove the top panel.	<p>1 Remove the 4 screws on the back and the screw on the left side panel.</p>  <p>(R6373)</p>	

Step	Procedure	Points
2	<p>Remove the 2 screws on the front and the screw on the right side panel.</p>  <p style="text-align: right;">(R6374)</p>	
3	<p>Lift the top panel and remove it.</p>  <p style="text-align: right;">(R6375)</p>	
3.	<p>Remove the right side panel.</p> <p>1 Remove the 5 screws.</p>  <p style="text-align: right;">(R6376)</p>	

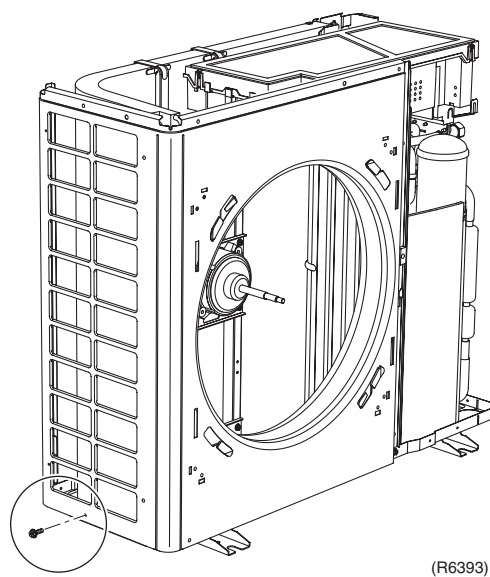
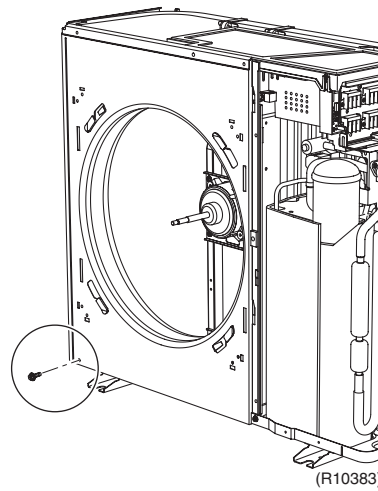
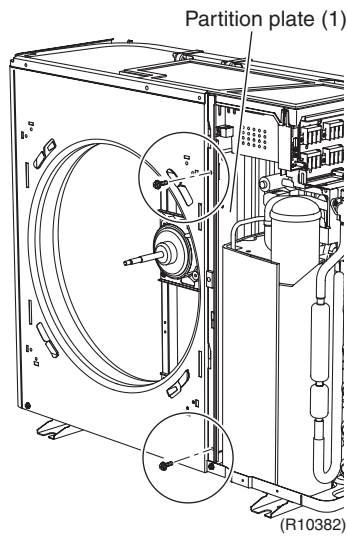
Step	Procedure	Points
2	Slide the right side panel downward to unfasten the 2 hooks on the back side.	
	 <p>(R6377)</p>	
	 <p>Hook</p> <p>(R14614)</p>	
	 <p>Hook</p> <p>(R14615)</p>	

Step	Procedure	Points
3	<p>Remove the right side panel.</p>  <p>(R10441)</p>	
4.	<p>Remove the front panel (2).</p> <p>1 Remove the 2 screws.</p>  <p>(R10629)</p> <p>(R10374)</p> <p>2 Slide the front panel (2) downward to unfasten the hook.</p>	<p>★ This screw is M5 × 16</p>

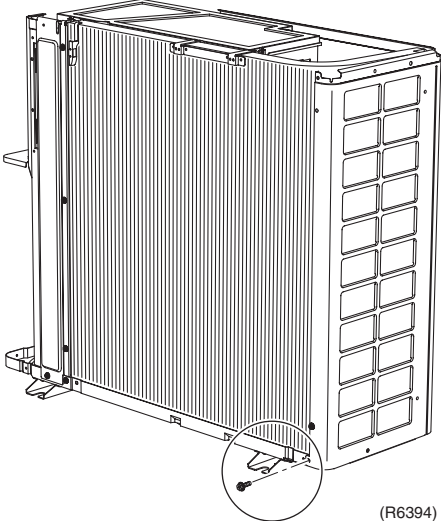
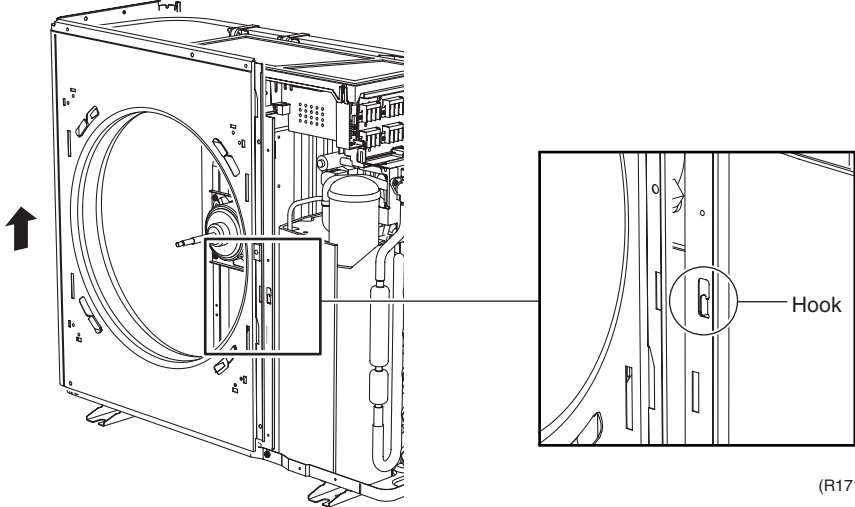
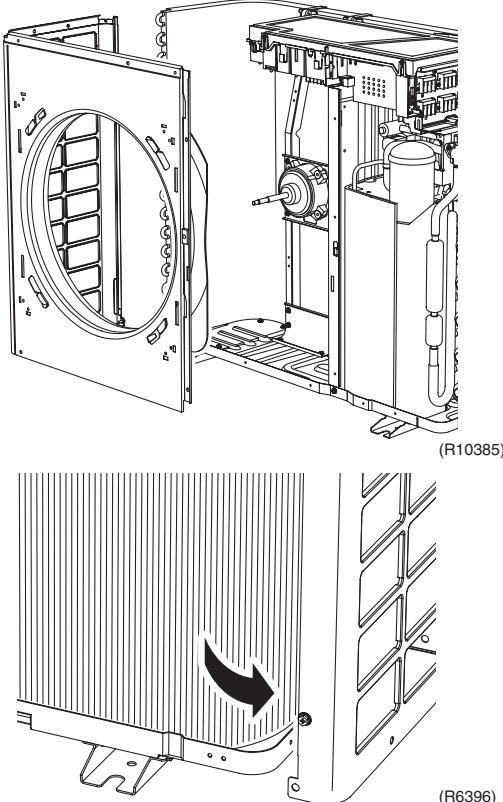
Step	Procedure	Points
3	<p>Remove the front panel (2).</p>  <p>(R6383)</p>  <p>(R10375)</p>	
5.	<p>Remove the front panel (1).</p>	<p>■ Remove the discharge grille and outdoor fan first to remove the front panel (1).</p>
1	<p>Remove the 4 screws on the discharge grille.</p>  <p>(R10376)</p>	
2	<p>Pull the bottom of the discharge grille.</p>  <p>(R10377)</p>	

Step	Procedure	Procedure	Points
3	Slide the discharge grille downward to unfasten the 2 hooks at the top.		
4	Remove the discharge grille.		
5	Remove the nut and remove the outdoor fan.		<ul style="list-style-type: none"> <li>■ Nut size : M8</li> </ul>  <ul style="list-style-type: none"> <li>■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft.</li> </ul>

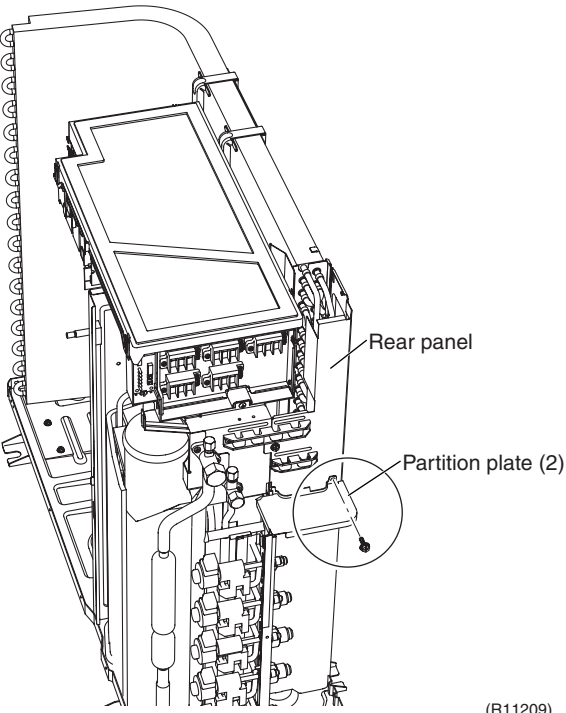
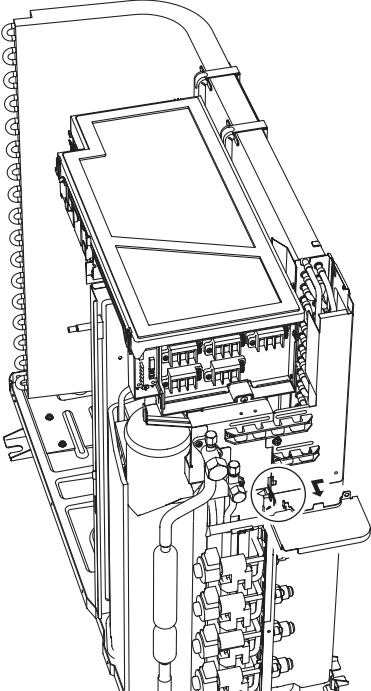
Step	Procedure	Points
6	Remove the 2 screws on the partition plate (1).	
7	Remove the screw at the bottom left of the front panel (1).	
8	Remove the screw at the bottom of the left side.	

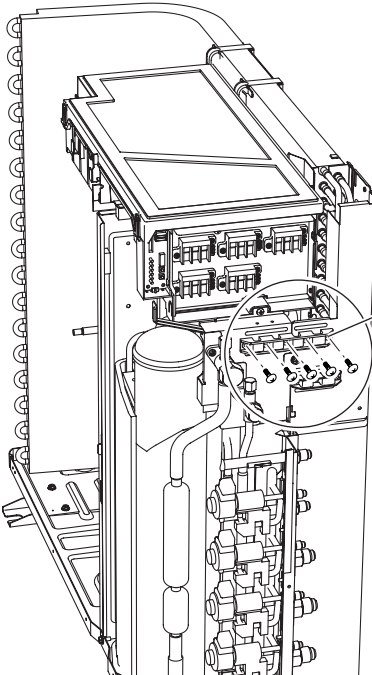
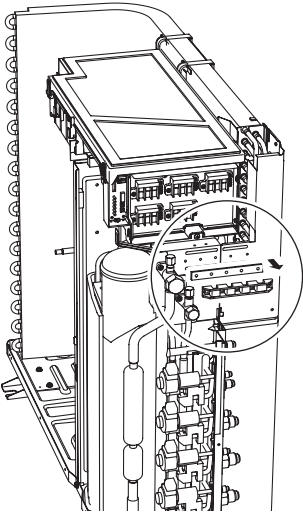
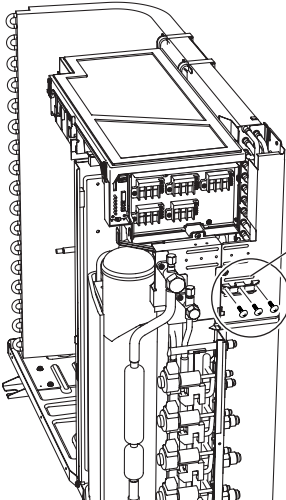


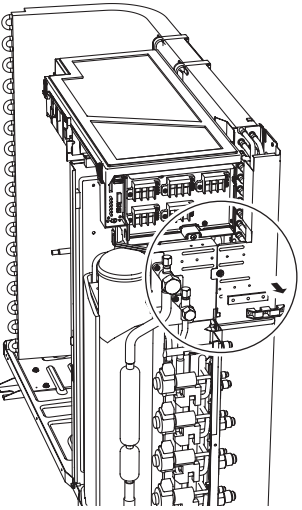
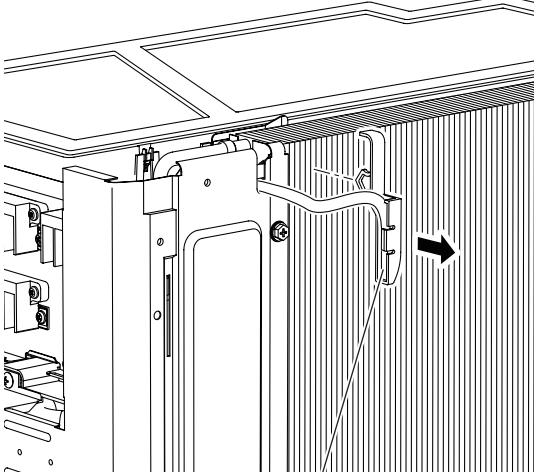
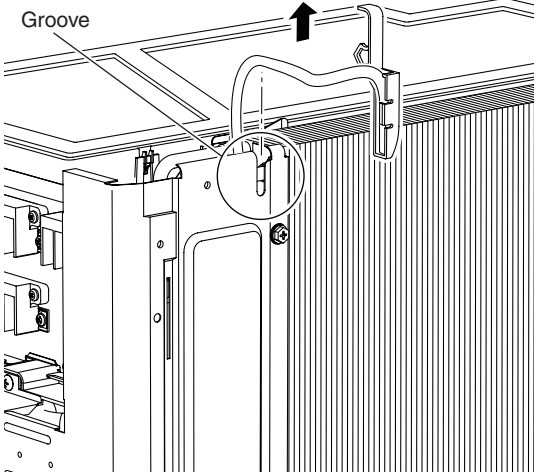


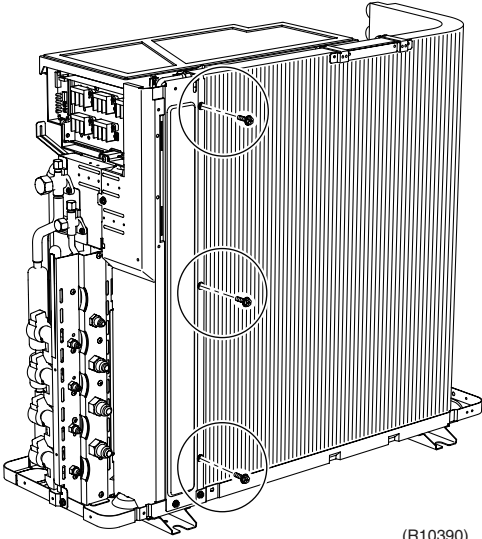
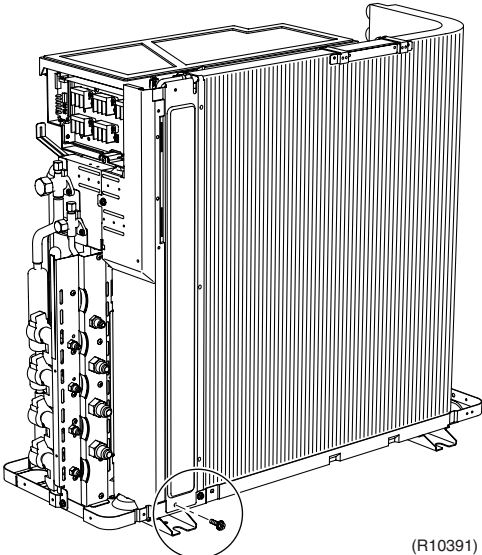
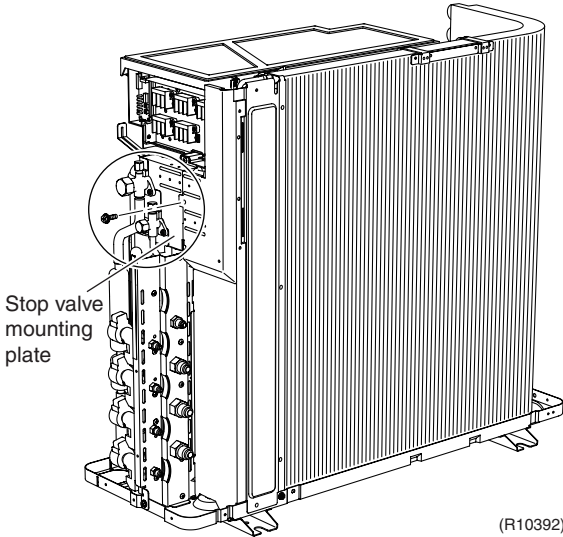
Step	Procedure	Procedure	Points
9	Remove the screw at the bottom of the back side.	 <p>(R6394)</p>	
10	The front panel (1) has a hook. Lift the front panel (1).	 <p>(R17174)</p>	
11	Remove the front panel (1).	 <p>(R10385)</p> <p>(R6396)</p>	<ul style="list-style-type: none"> <li>■ Be sure to detach the front panel (1) carefully so as not to deform it.</li> </ul>



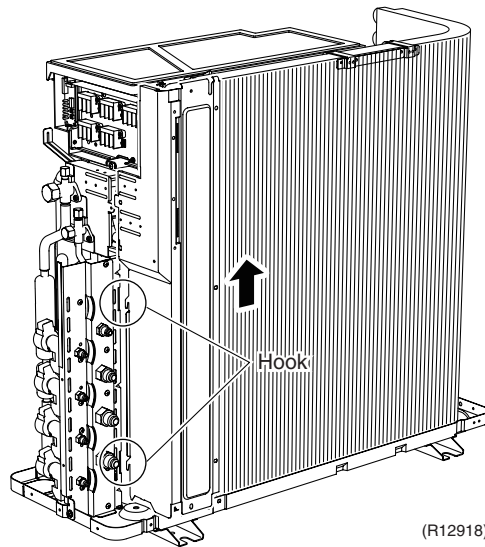
Step	Procedure	Points
<p>6. Remove the rear panel.</p>	<p>1 Remove the screw on the partition plate (2).</p>  <p>(R11209)</p> <p>2 Slide the partition plate (2) to the left and remove it.</p>  <p>(R11211)</p>	

Step	Procedure	Points
3	Remove the 5 screws on the wire fixing plate (upper).	
	 <p data-bbox="935 528 1059 577">Wire fixing plate (upper)</p> <p data-bbox="970 913 1037 936">(R11210)</p>	
4	Remove the wire fixing plate (upper).	
	 <p data-bbox="874 1496 941 1518">(R11213)</p>	
5	Remove the 3 screws on the wire fixing plate (lower).	
	 <p data-bbox="877 1805 999 1854">Wire fixing plate (lower)</p> <p data-bbox="912 2074 979 2096">(R11214)</p>	

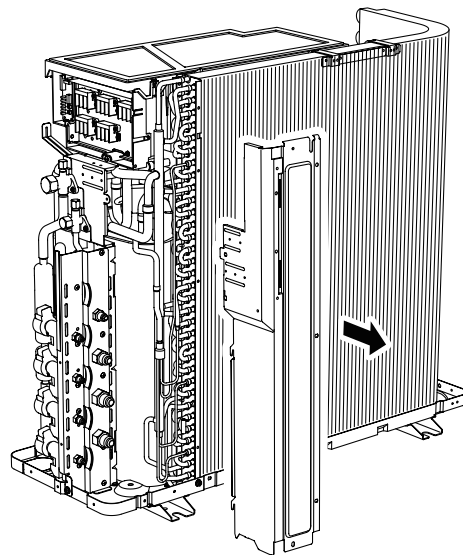
Step	Procedure	Points
6	Remove the wire fixing plate (lower).  <p style="text-align: right;">(R11215)</p>	
7	Pull out the holder of the outdoor temperature thermistor.  <p style="text-align: center;">Outdoor temperature thermistor (R10388)</p>	<ul style="list-style-type: none"> <li>■ The holder is secured in the clearances of the outdoor heat exchanger fins.</li> </ul>
8	Release the thermistor wire from the groove  <p style="text-align: center;">Groove</p> <p style="text-align: right;">(R10389)</p>	

Step	Procedure	Procedure	Points
9	Remove the 3 screws on the rear panel.	 <p>(R10390)</p>	
10	Remove the screw on the bottom frame.	 <p>(R10391)</p>	
11	Remove the screw on the stop valve mounting plate.	 <p>(R10392)</p>	

Step	Procedure	Points
12	Lift the rear panel upward to unfasten the 2 hooks.	
13	Remove the rear panel.	



(R12918)



(R10394)

## 2. Removal of Electrical Box

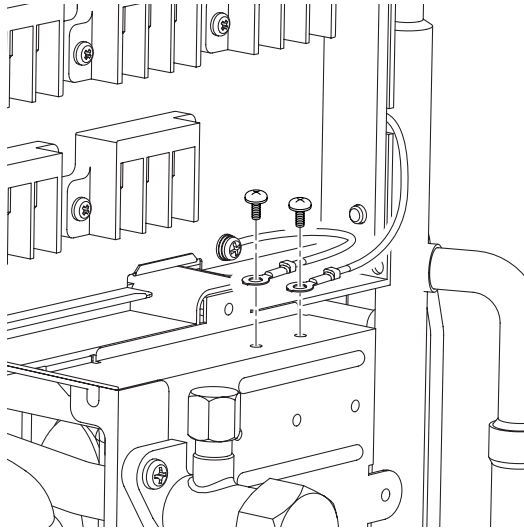
**Procedure**



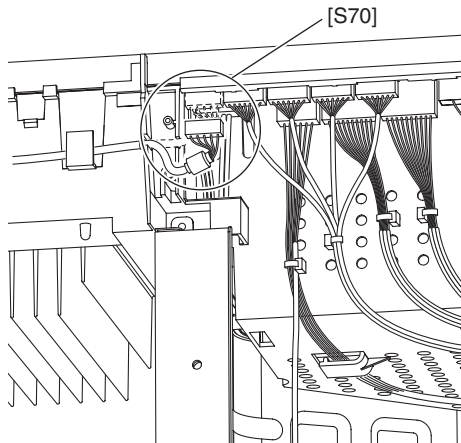
**Warning**

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

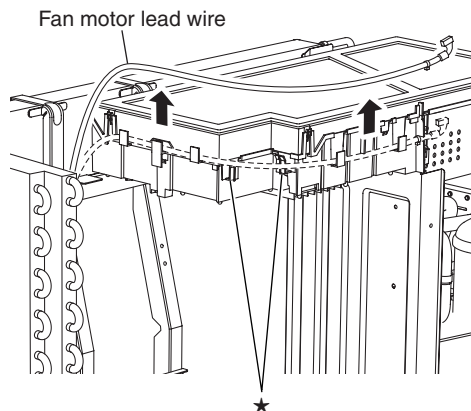
Step	Procedure	Points
1	Remove the 2 screws to detach the earth wires.	
2	Disconnect the connector for the fan motor [S70].	
3	Release the fan motor lead wire.	★: When reassembling, do not use these 2 hooks.



(R10396)

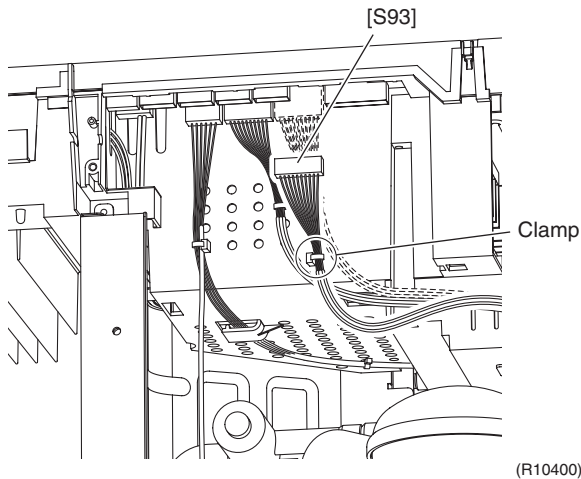
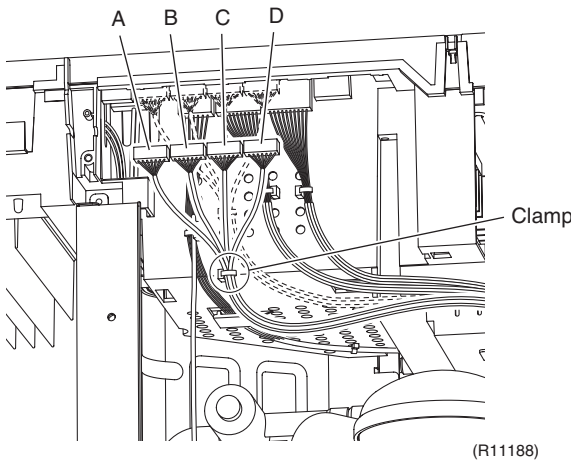
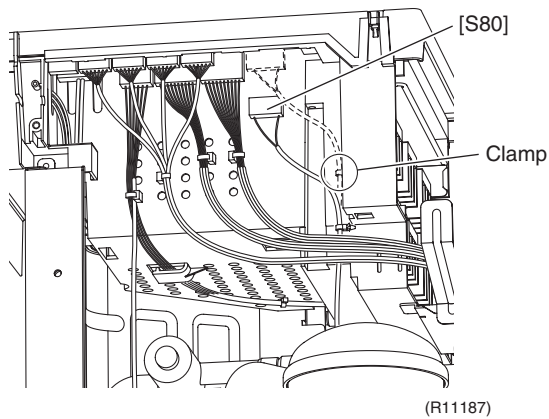


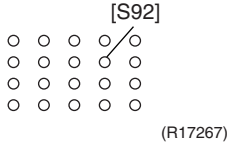
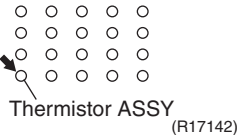
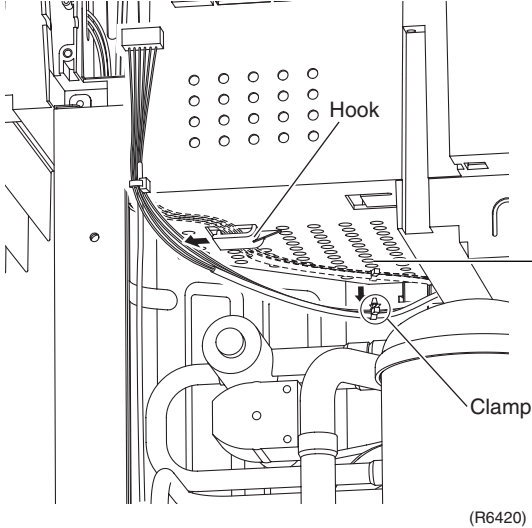
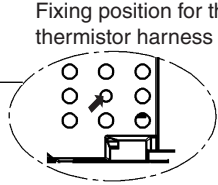
(R10397)



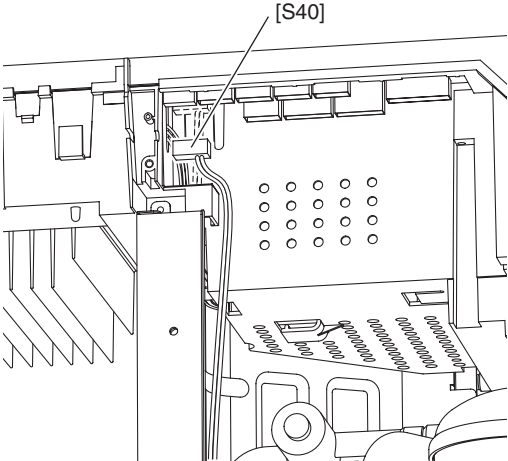
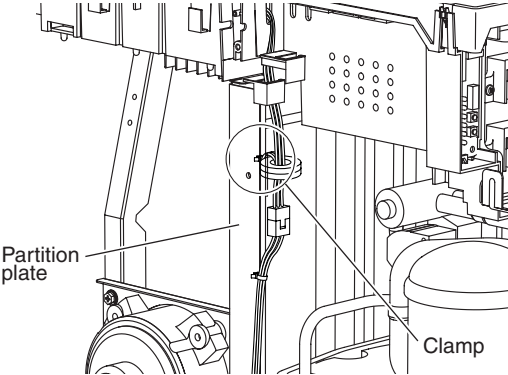
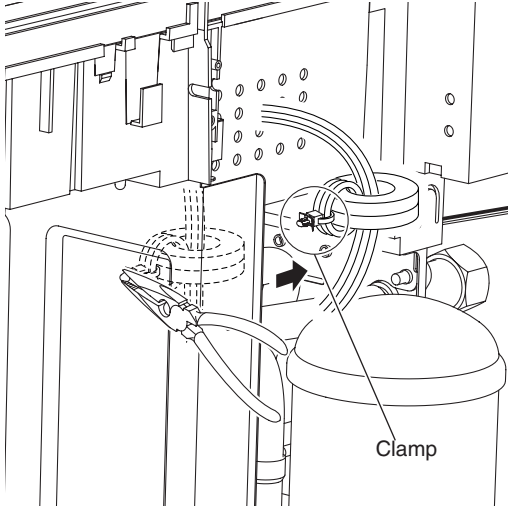
(R17268)

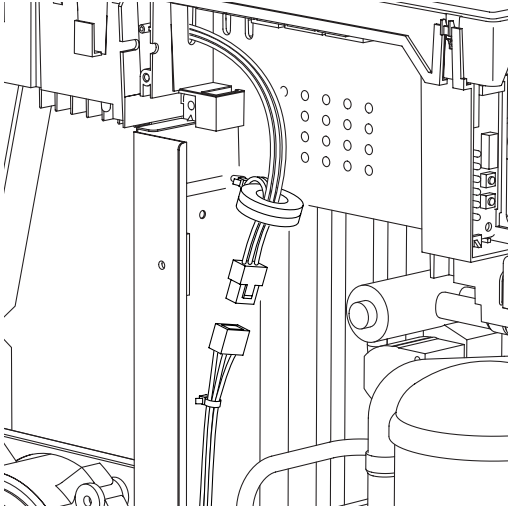
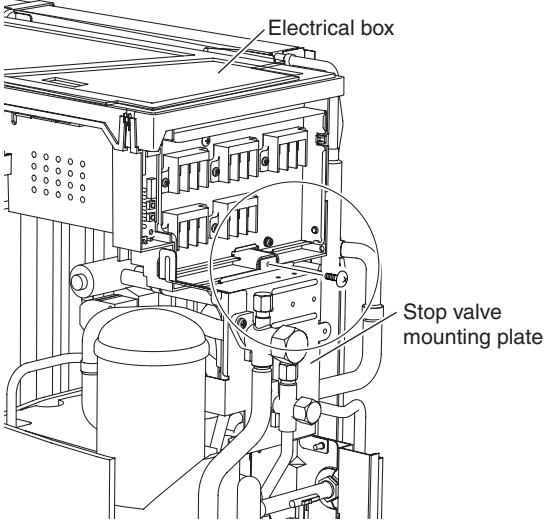
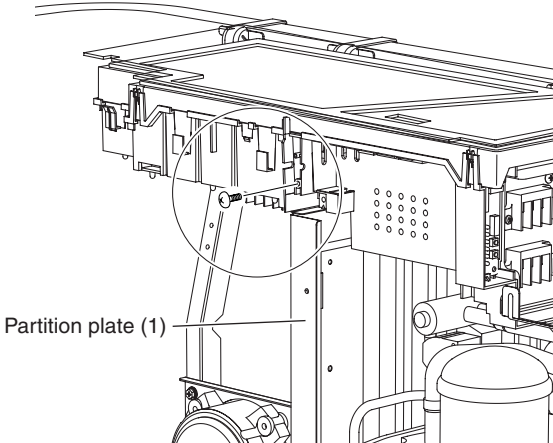
Step	Procedure	Points
4	Disconnect the connector for the four way valve coil [S80].	<ul style="list-style-type: none"> <li>■ The cooling only models do not have the harness for [S80].</li> <li>■ Pull out the clamp.</li> </ul>
5	Disconnect the connectors for the electronic expansion valve coil. [S20] (white): room A [S21] (red): room B [S22] (blue): room C [S23] (yellow): room D	<ul style="list-style-type: none"> <li>■ Pull out the clamp.</li> <li>■ The 3-room models have no harness for [S23].</li> <li>■ The 5-room models have [S24] (green) for room E.</li> <li>■ When reassembling, insert each clamp into the small hole.</li> </ul> <p data-bbox="1121 1010 1315 1059">For the electronic expansion valve coil</p> <div data-bbox="1121 1064 1353 1149" style="display: flex; align-items: center;"> <div style="display: flex; flex-direction: column; gap: 2px;"> <span>○ ○ / ○ ○ ○</span> <span>○ ○ / ○ ○ ○</span> <span>○ ○ ○ ○ ○ ○</span> <span>○ ○ ○ ○ ○ ○</span> </div> <div style="margin-left: 10px;"> <span>— [S93]</span> </div> </div> <p data-bbox="1353 1167 1425 1189" style="text-align: right;">(R17266)</p>
6	Disconnect the connector for the liquid pipe thermistor [S93].	<ul style="list-style-type: none"> <li>■ Pull out the clamp.</li> </ul>

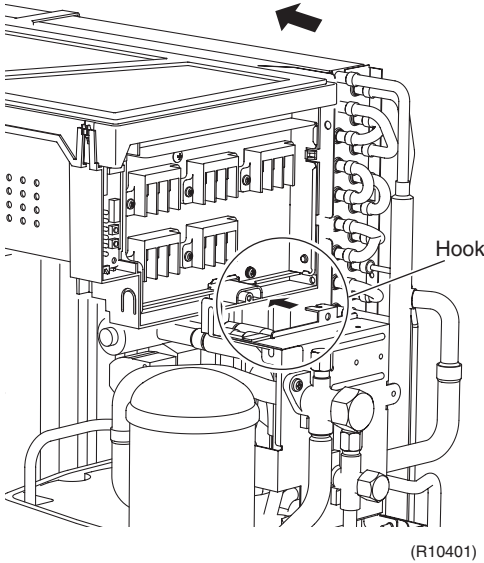
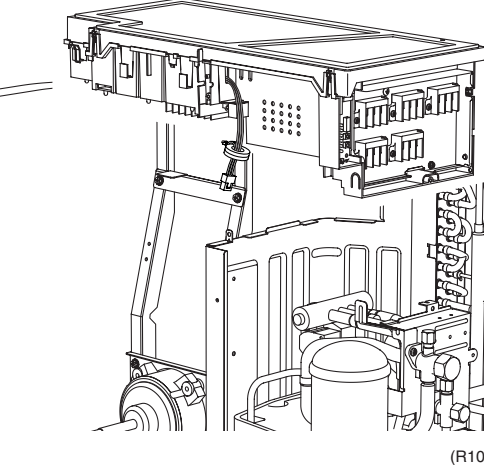


Step	Procedure	Points
7	Disconnect the connector for the gas pipe thermistor [S92].	<ul style="list-style-type: none"> <li>■ Pull out the clamp.</li> <li>■ When reassembling, insert the clamp into the small hole.</li> </ul> 
8	Disconnect the connector for the thermistors [S90].	<ul style="list-style-type: none"> <li>■ Pull out the clamp.</li> <li>■ When reassembling, insert the clamp of the thermistor ASSY into the hole as below.</li> </ul> 
9	The wire harness of the thermistor is hooked under the electrical box. Unhook it and pull out the clamp.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the clamp into the small hole.</li> </ul>  



Step	Procedure	Points
10	Disconnect the connector for the overload protector [S40].	 <p data-bbox="975 725 1038 741">(R10539)</p>
11	The wire harness for the compressor is attached to the partition plate (1) by the clamp.	 <p data-bbox="975 1182 1038 1198">(R12904)</p>
12	Pull out the clamp with pliers.	 <p data-bbox="975 1758 1038 1774">(R6423)</p>

Step	Procedure	Points
13	Disconnect the relay connector of the compressor.	
	 <p>(R6469)</p>	
14	Remove the screw on the stop valve mounting plate.	
	 <p>(R10395)</p>	
15	Remove the screw on the partition plate (1).	
	 <p>(R6411)</p>	

Step	Procedure	Points
16	Slide the electrical box leftward to unfasten the hook on the right side of the electrical box.	
 <p>(R10401)</p>		
17	Lift up the electrical box and remove it.	
 <p>(R10402)</p>		

# 3. Removal of PCBs

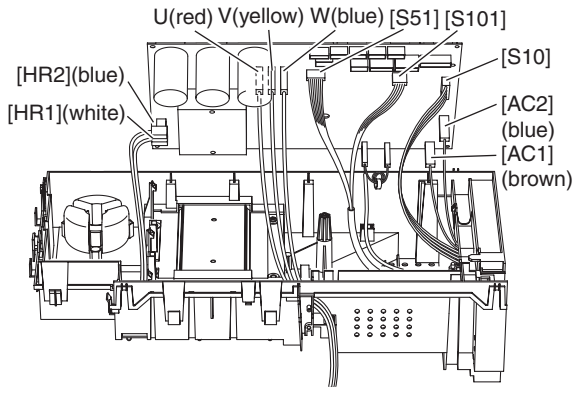
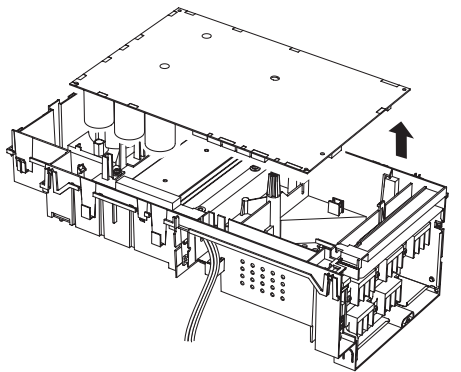
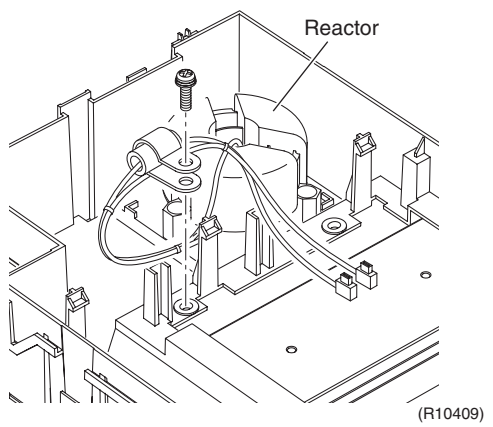
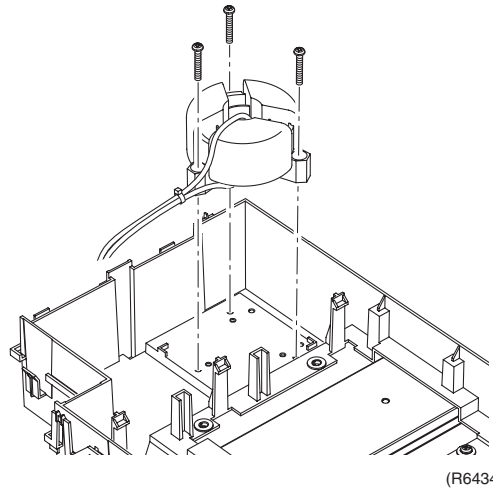
**Procedure**

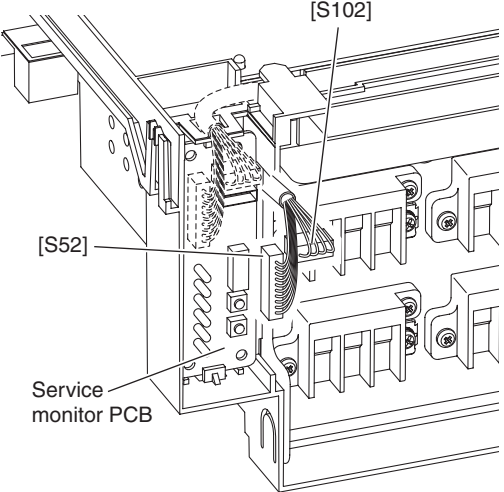
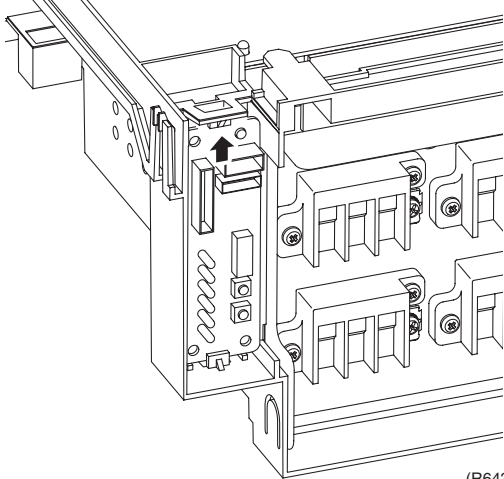
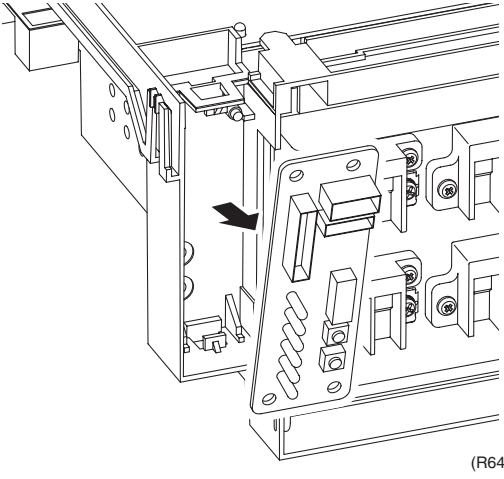


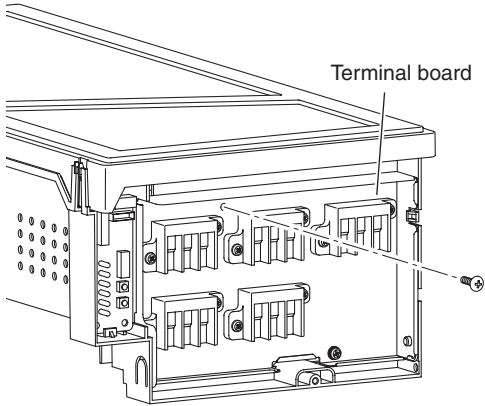
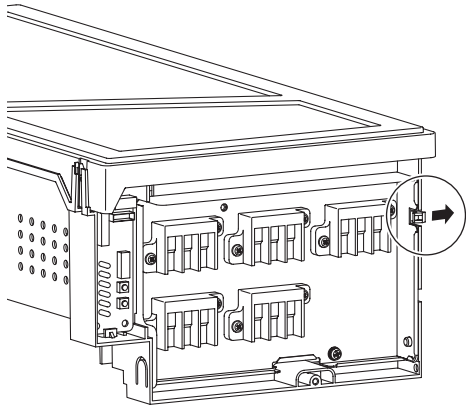
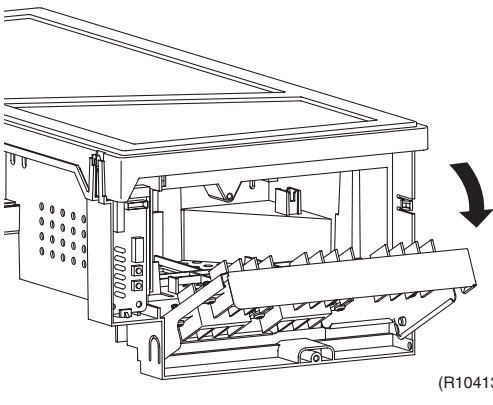
**Warning**

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

Step	Procedure	Points
1. Remove the main PCB.		
1 Remove the cover of the electrical box.	<p>(R14617)</p>	<p>■ Release the 4 hooks. The hooks are marked with ▼.</p> <p>(R6427)</p>
2 Remove the 3 screws.	<p>Main PCB</p> <p>(R10404)</p>	
3 Unfasten the 4 hooks.	<p>(R10405)</p>	
4 Lift up the main PCB.	<p>(R10406)</p>	

Step		Procedure	Points
5	Disconnect the connectors.	 <p>(R10407)</p>	<p>[S51] [S101] : service monitor PCB                  [S10] : terminal board (transmission)                  [HR1] [HR2] : reactor                  [AC1] [AC2] : terminal board (power supply)                  [U] [V] [W] : compressor</p>
6	Remove the main PCB.	 <p>(R10408)</p>	
2.	Remove the reactor.	<p>1 Remove the screw.</p>  <p>(R10409)</p> <p>2 Remove the 3 screws and lift the reactor upward to remove it.</p>  <p>(R6434)</p>	

Step	Procedure	Points
3.	Remove the service monitor PCB.	
1	<p>Disconnect the connectors [S52] [S102] from the service monitor PCB.</p>  <p>(R10410)</p>	
2	<p>Slightly lift the top hook to detach.</p>  <p>(R6436)</p>	
3	<p>Unfasten the bottom hook and remove the service monitor PCB.</p>  <p>(R6437)</p>	

Step	Procedure	Points
4. Remove the terminal board.		
1	Remove the screw.	
	 <p style="text-align: right;">Terminal board</p> <p style="text-align: right;">(R10411)</p>	
2	Unfasten the hook.	
	 <p style="text-align: right;">(R10412)</p>	
3	Remove the terminal board.	
	 <p style="text-align: right;">(R10413)</p>	

# 4. Removal of Fan Motor

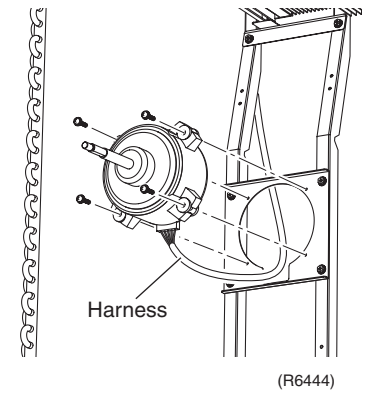
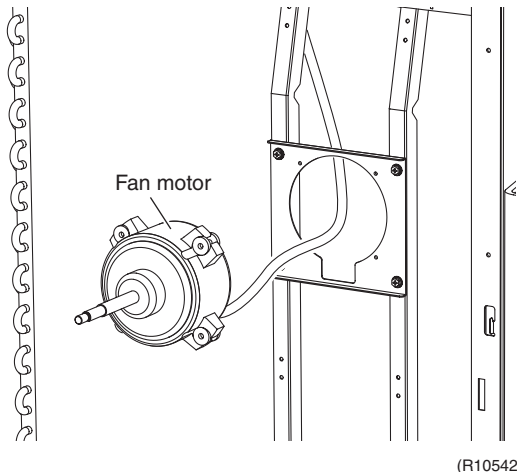
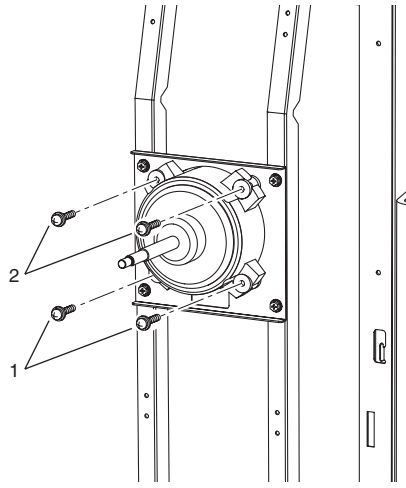
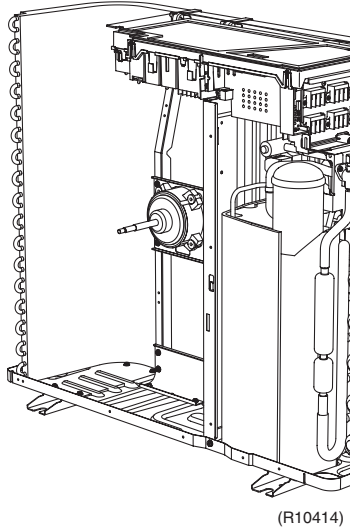
**Procedure**



**Warning**

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

Step	Procedure	Points
1	Remove the 2 lower screws of the fan motor.	<ul style="list-style-type: none"> <li>Be sure to remove the lower screws first. If the upper screws are removed first, the fan motor may tilt or fall because the center of its gravity is toward the front. It may cause injuries.</li> </ul>
2	Remove the 2 upper screws.	
3	Remove the fan motor.	<ul style="list-style-type: none"> <li>When reassembling, be sure to place the wire harness lower.</li> </ul>





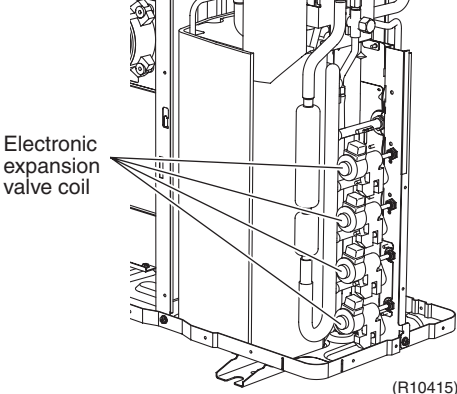
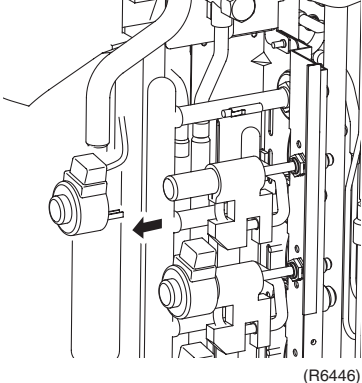
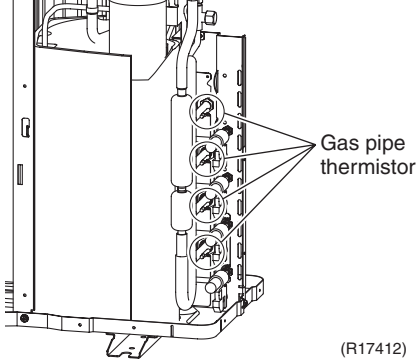
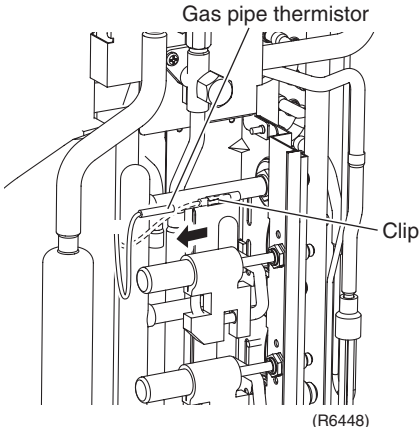
## 5. Removal of Coils / Thermistors

### Procedure

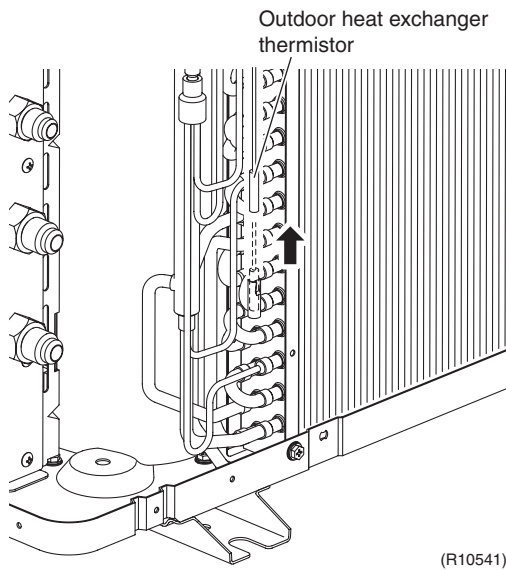
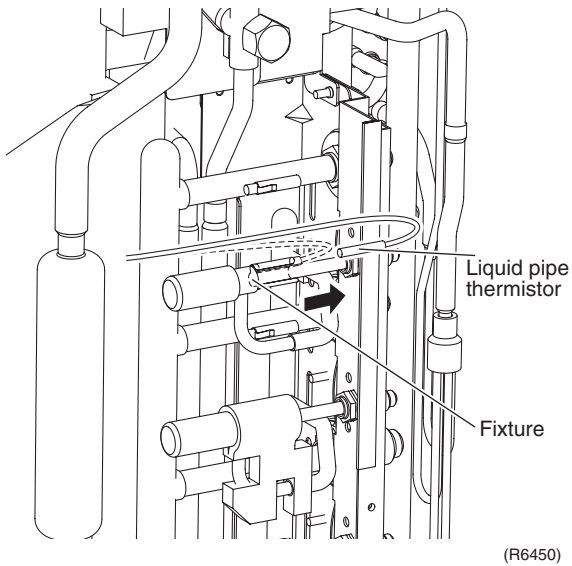
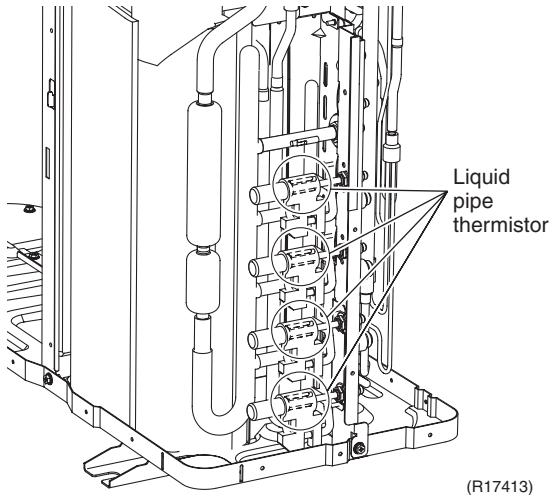


### Warning

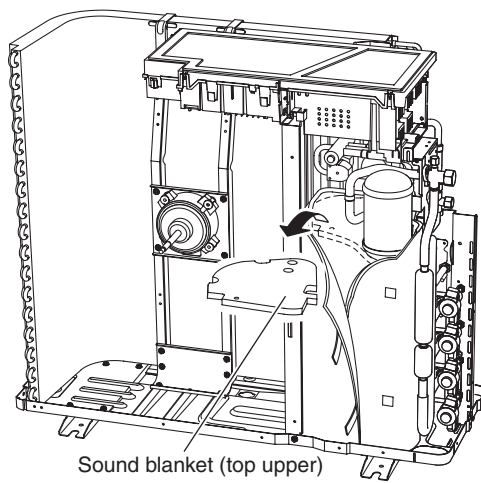
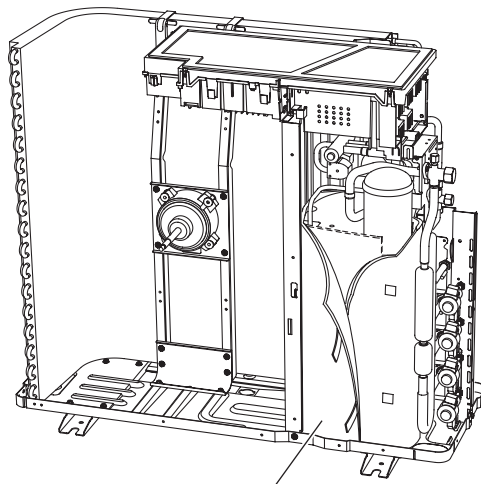
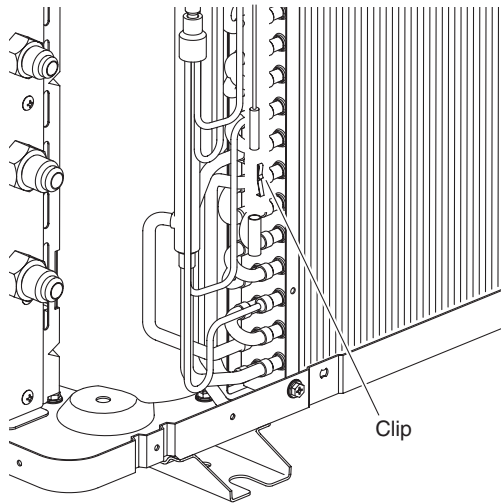
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

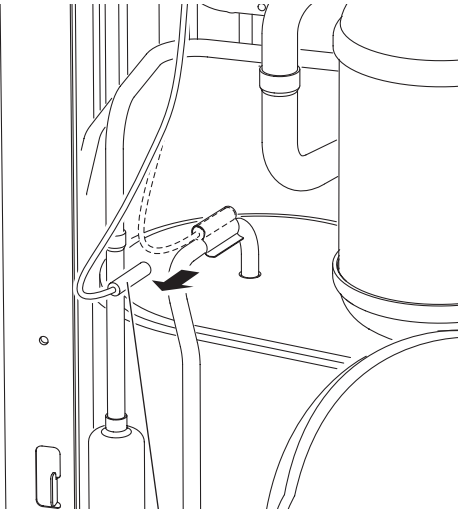
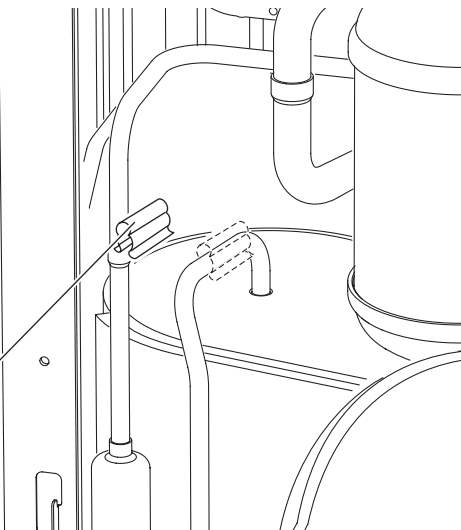
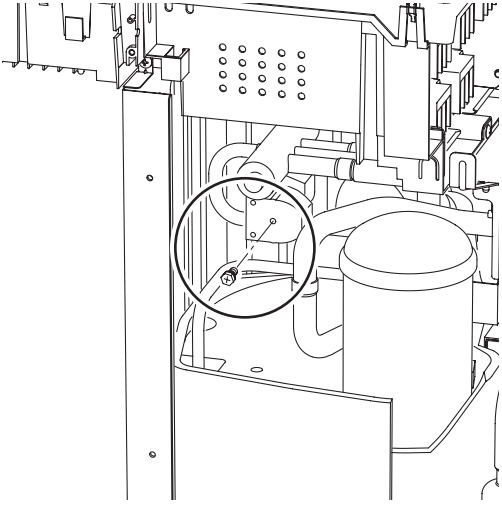
Step	Procedure	Points
1. Remove the electronic expansion valve coils.  1 Pull out the electronic expansion valve coils.	 <p>Electronic expansion valve coil</p> <p>(R10415)</p>  <p>(R6446)</p>	
2. Remove the thermistors.  1 Pull out the gas pipe thermistors.	 <p>Gas pipe thermistor</p> <p>(R17412)</p>  <p>Gas pipe thermistor</p> <p>Clip</p> <p>(R6448)</p>	<ul style="list-style-type: none"> <li>■ Place the thermistor so that its edge comes up to the edge of the fixture.</li> <li>■ Be careful not to lose the clips for the thermistors.</li> </ul>

Step	Procedure	Points
2	Peel off the putty and pull out the liquid pipe thermistors.	<ul style="list-style-type: none"> <li>■ Be careful not to lose the fixtures for the thermistors.</li> </ul>
3	Pull out the outdoor heat exchanger thermistor.	

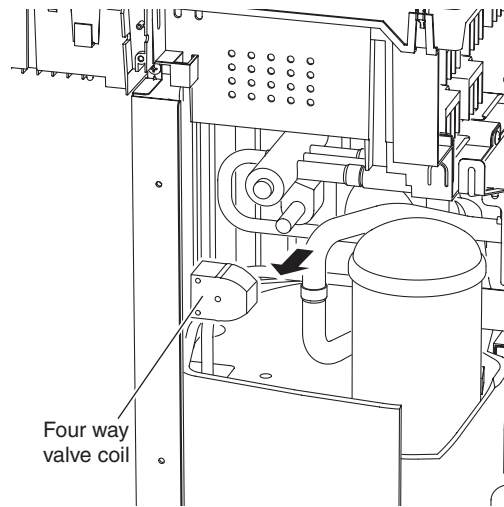


Step	Procedure	Points
4	Remove the clip from the outdoor heat exchanger thermistor.	<ul style="list-style-type: none"> <li>Be careful not to lose the clip.</li> </ul>
5	Slightly open the sound blanket (outer).	
6	Remove the sound blanket (top upper).	



Step	Procedure	Points
7	<p>Remove the discharge pipe thermistor.</p>  <p>Discharge pipe thermistor (R10420)</p>	
8	<p>Remove the fixture.</p>  <p>Fixture (R10430)</p>	
3.	<p>Remove the four way valve coil.</p>	<p>■ The cooling only models do not have a four way valve coil.</p>
1	<p>Remove the screw.</p>  <p>(R10431)</p>	

Step	Procedure	Points
2	Remove the four way valve coil.	



(R10432)

# 6. Removal of Sound Blankets

**Procedure**

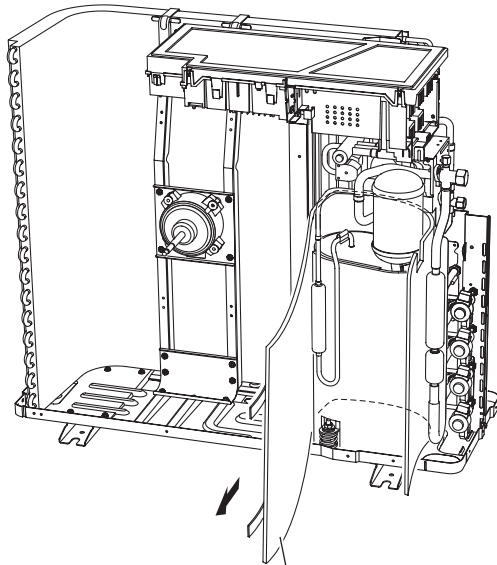


**Warning**

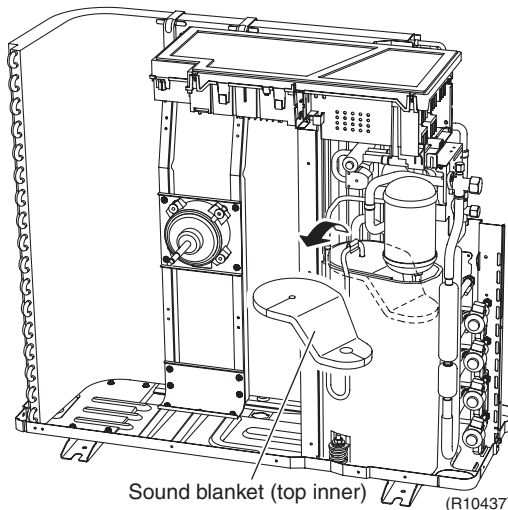
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Open the sound blanket (outer).	
	<p style="text-align: center;">Sound blanket (outer) (R10433)</p>	
2	Remove the sound blanket (top upper).	<ul style="list-style-type: none"> <li>■ The sound blanket is fragile. Carefully pass the blanket through the discharge pipe.</li> </ul>
	<p style="text-align: center;">Sound blanket (top upper) (R10434)</p>	
3	Remove the screw from the partition plate (1) and push the plate to the left slightly for easy work.	
	<p style="text-align: center;">Partition plate (1) (R10435)</p>	

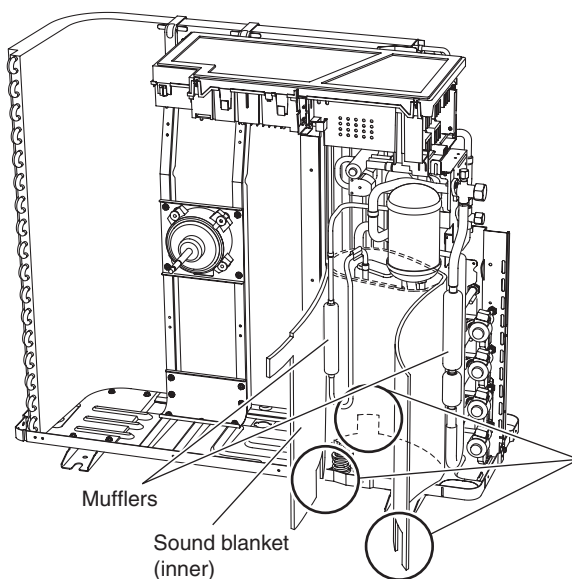
Step	Procedure	Points
4	Remove the sound blanket (outer).	<ul style="list-style-type: none"> <li>■ The sound blanket is fragile. Carefully pass the blanket through the discharge pipe.</li> </ul>
5	Remove the sound blanket (top inner).	
6	Open the sound blanket (inner) and pass it through the part of the mufflers.	<ul style="list-style-type: none"> <li>■ The sound blanket is fragile. Be careful of the notches of the compressor mount (3 locations).</li> </ul>



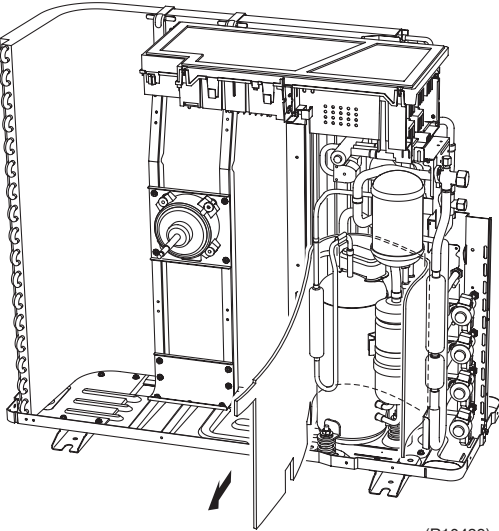
Sound blanket (outer) (R10436)



Sound blanket (top inner) (R10437)



(R10438)

Step	Procedure	Points
7	Remove the sound blanket (inner).	
 A technical line drawing of a piece of equipment, possibly a generator or engine, with its outer casing partially removed. The drawing shows the internal components, including a large cylindrical tank, various pipes, and electrical connections. A dashed line indicates the position of a sound blanket that is being removed. An arrow points to the bottom edge of the sound blanket, indicating the direction of removal. The drawing is labeled with the reference number (R10439) at the bottom right.		



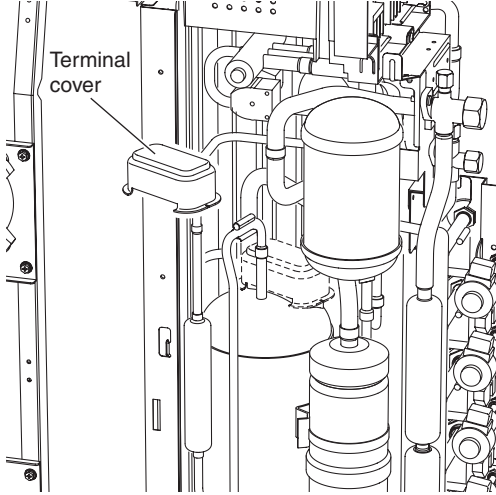
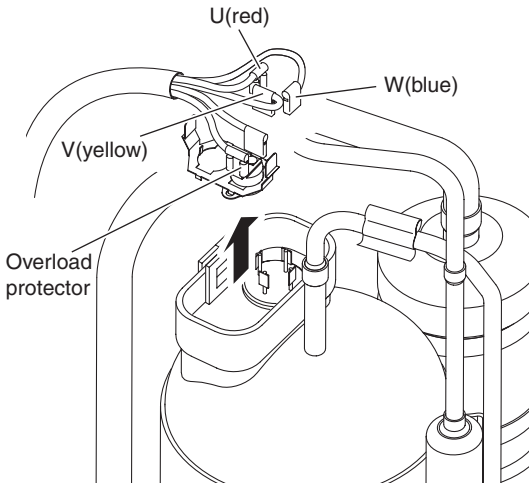
# 7. Removal of Compressor

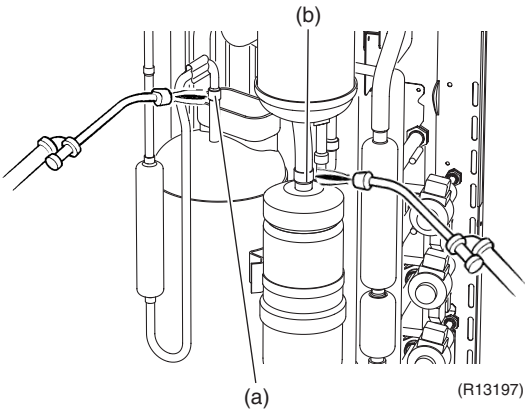
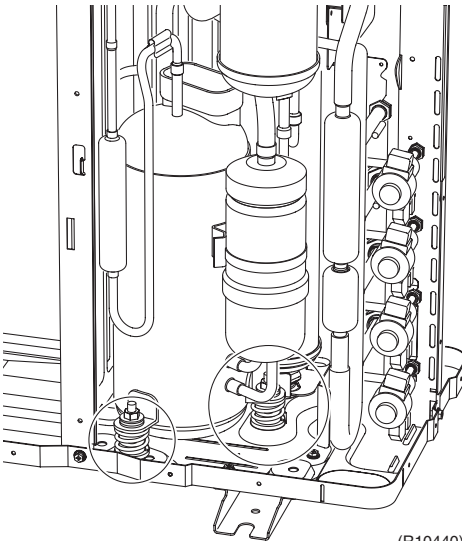
## Procedure



### Warning

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

Step	Procedure	Procedure	Points
1	Remove the terminal cover.	 <p>Terminal cover</p> <p>(R6466)</p>	
2	Disconnect the compressor lead wires.	 <p>U(red)</p> <p>W(blue)</p> <p>V(yellow)</p> <p>Overload protector</p> <p>(R9471)</p>	<p>■ U : red, V : yellow, W : blue</p>
3	Remove the overload protector.		

Step	Procedure	Points
<ul style="list-style-type: none"> <li>■ Before working, make sure that the refrigerant gas is empty in the circuit.</li> <li>■ Be sure to apply nitrogen replacement when heating up the brazed part.</li> </ul>	 <p style="text-align: right;">(R13197)</p>	<p><b>Warning</b>                  Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</p> <p><b>Warning</b>                  If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)</p> <p><b>Warning</b>                  Since it may happen that the refrigerant oil in the compressor catches fire, prepare wet cloth so as to extinguish fire immediately.</p> <p><b>Caution</b>                  From the viewpoint of global environment protection, do not discharge the refrigerant gas in the atmosphere. Make sure to collect all the refrigerant gas.</p> <p><b>Cautions for restoration</b></p> <ol style="list-style-type: none"> <li>1. Restore the piping by non-oxidation brazing.</li> <li>2. It is required to prevent the carbonization of the oil inside the four way valve and the deterioration of the gaskets affected by heat. (Keep below 120°C.) For the sake of this, wrap the four way valve with wet cloth and provide water so that the cloth does not dry.</li> </ol>
<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit.</li> <li>■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed.</li> <li>■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries.</li> <li>■ Be careful so as not to burn the compressor terminals, the name plate, the heat exchanger fin.</li> </ul>		 <p style="text-align: right;">(R10440)</p>
<ol style="list-style-type: none"> <li>6 Remove the 3 nuts.</li> <li>7 Lift the compressor up to remove it.</li> </ol>		

# Revision History

Month / Year	Version	Revised contents
07 / 2013	Si12-794	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.

### Dealer

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