

# REMOVAL PROCEDURE



SERVICE  
MANUAL

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

## 2.5/3.5 kW Class

-  Outdoor Unit
-  Inverter
-  Pair Type



# **Service Manual Removal Procedure**

## **Outdoor Unit**

### **Applicable Models**

#### **●Cooling Only**

**RKN25KEVM**

**RKN35KEVM**

# Table of Contents

1. Removal of Outer Panels .....	2
2. Removal of Outdoor Fan / Fan Motor .....	4
3. Removal of Electrical Box / PCB.....	7
4. Removal of Sound Blankets.....	16
5. Removal of Electronic Expansion Valve .....	18
6. Removal of Compressor .....	19



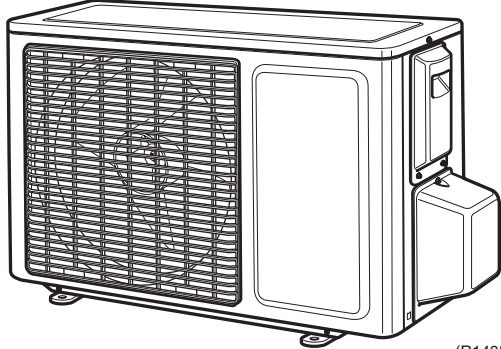
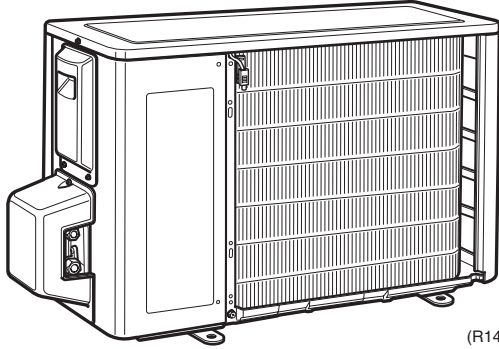
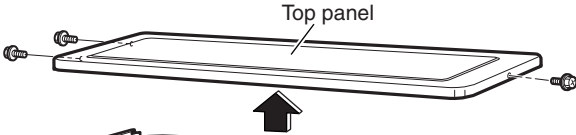
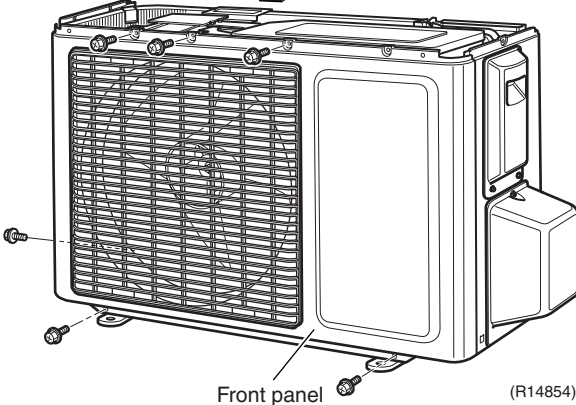
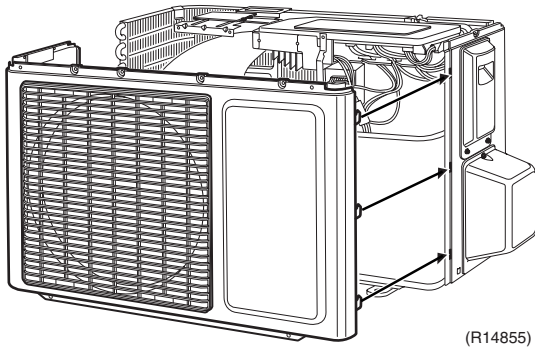
**Note:** ♦ The illustrations may be slightly different depending on the model.

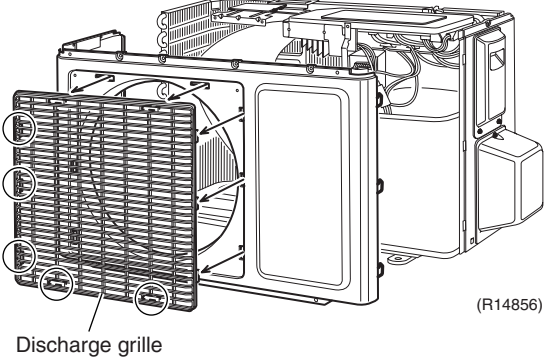
# 1. Removal of Outer Panels

**Procedure**



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

Step	Procedure	Points
1. Appearance features	 <p>(R14852)</p>  <p>(R14853)</p>	<ul style="list-style-type: none"> <li>Take care not to cut your finger by the fins of the outdoor heat exchanger.</li> </ul>
2. Remove the panels.	<p>1 Remove the 3 screws (right: 1 screw, left: 2 screws) and remove the top panel.</p>  <p>2 Remove the 6 screws of the front panel.</p>  <p>(R14854)</p> <p>3 Unfasten the right side hooks and remove the front panel.</p>  <p>(R14855)</p>	

Step	Procedure	Points
4	<p data-bbox="201 215 464 309">Unfasten the 10 hooks and remove the discharge grille.</p>  <p data-bbox="523 595 675 622">Discharge grille</p> <p data-bbox="986 562 1058 584">(R14856)</p>	

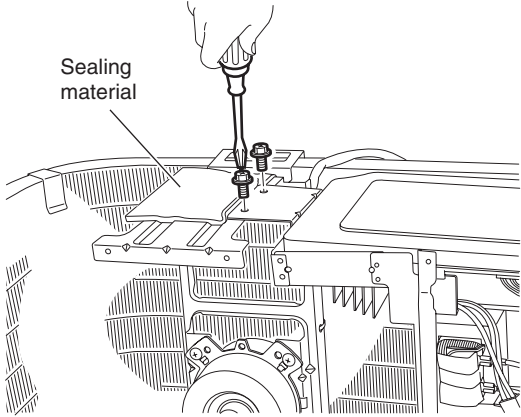
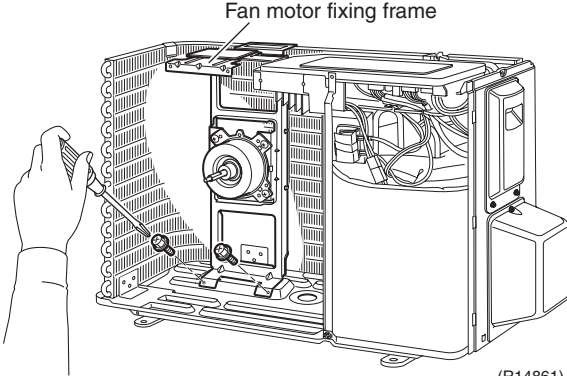
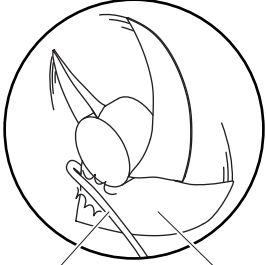
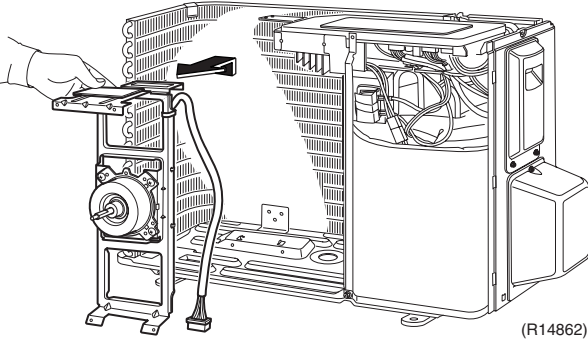
## 2. Removal of Outdoor Fan / Fan Motor

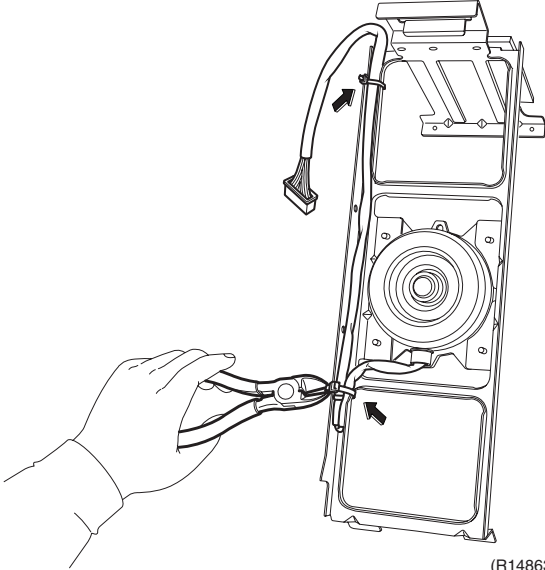
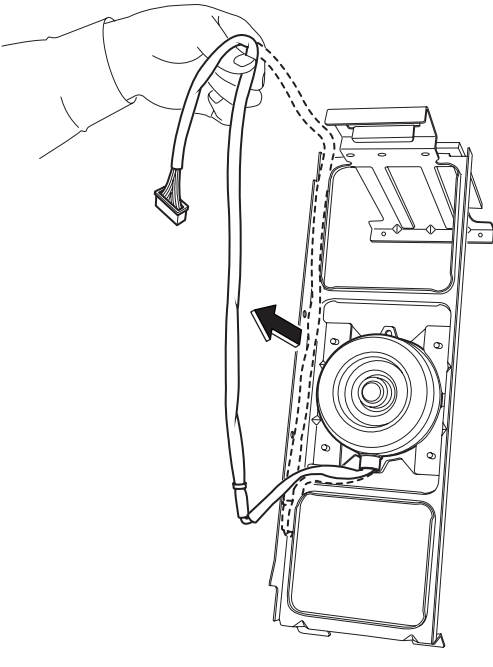
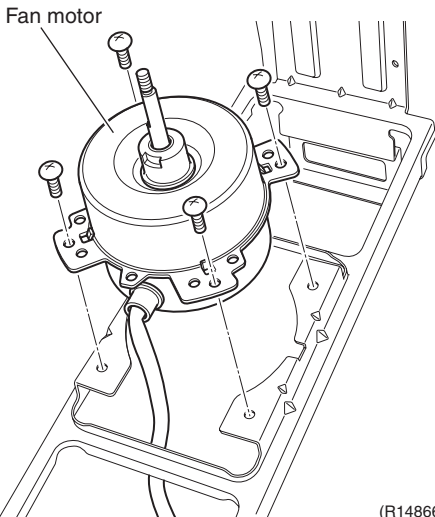
**Procedure**



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

Step	Procedure	Points
<p>1. Remove the outdoor fan.</p> <p>1 Remove the nut of the outdoor fan.</p> <p>2 Remove the outdoor fan.</p>		<p><b>Preparation</b></p> <ul style="list-style-type: none"> <li>Remove the panels according to the "Removal of Outer Panels".</li> <li>Nut size: M8</li> </ul> <p>13 mm</p> <p>(R15266)</p> <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>
<p>2. Remove the fan motor.</p> <p>1 Disconnect the connector for the fan motor [S70]. Release the fan motor lead wire from the hook.</p> <p>2 Release the fan motor lead wire from the hooks.</p>	<p>[S70] Hook</p> <p>(R14858)</p> <p>(R14859)</p>	<ul style="list-style-type: none"> <li>When reassembling, pass the fan motor lead wire along the groove and hooks.</li> </ul>

Step	Procedure	Procedure	Points
3	Peel the sealing material and remove the 2 upper screws.	 <p>(R14860)</p>	
4	Remove the 2 lower screws.	 <p>(R14861)</p>	<p>■ When reassembling, put the fan motor lead wire through the back of the fan motor so as not to be entangled with the outdoor fan.</p>  <p>Lead wire      Outdoor fan</p> <p>(R3249)</p>
5	Remove the fan motor fixing frame.	 <p>(R14862)</p>	

Step	Procedure	Points
6	Turn over the fan motor fixing frame and cut the 2 clamps.	<ul style="list-style-type: none"> <li>Do not cut the clamp <b>A</b>. When reassembling, place the clamp <b>A</b> under the clamp <b>B</b>.</li> </ul>
7	Release the fan motor lead wire.	 <p>(R14863)</p>
8	Remove the 4 screws and remove the fan motor.	 <p>(R14864)</p>
	Remove the 4 screws and remove the fan motor.	 <p>(R14866)</p>

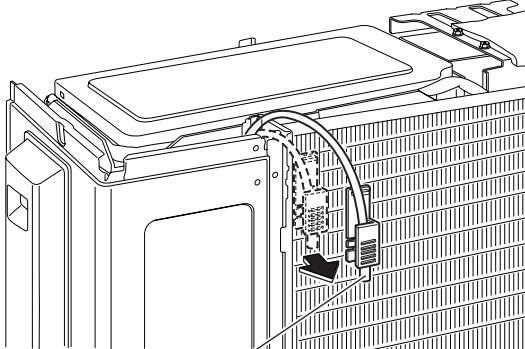

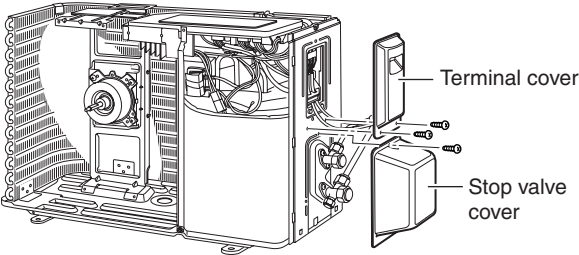
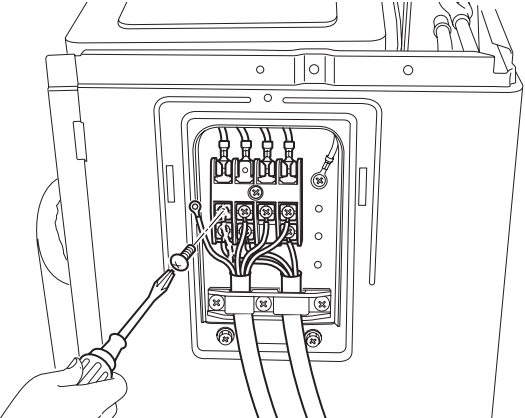
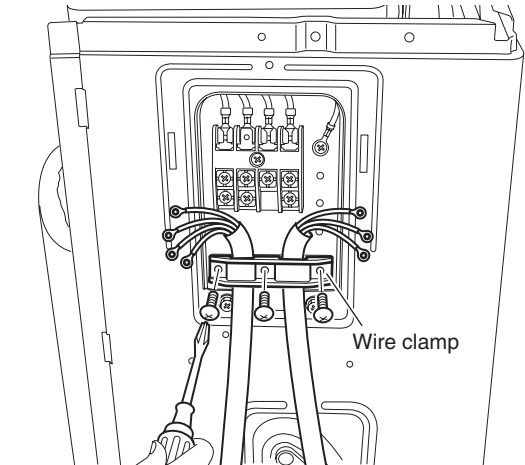


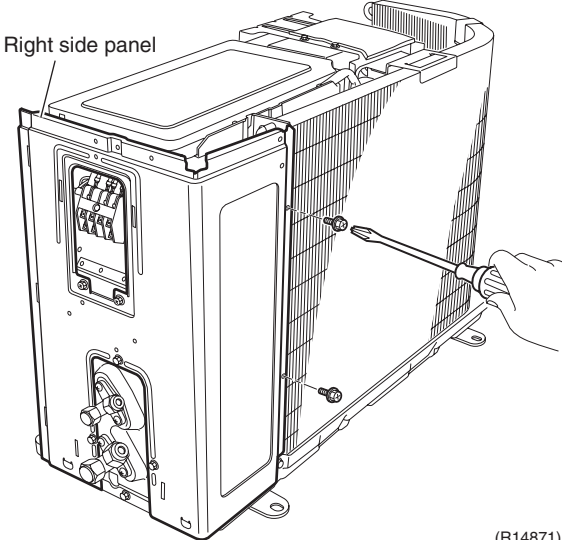
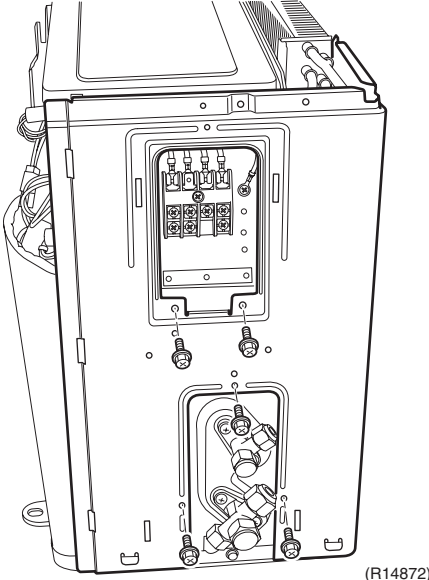
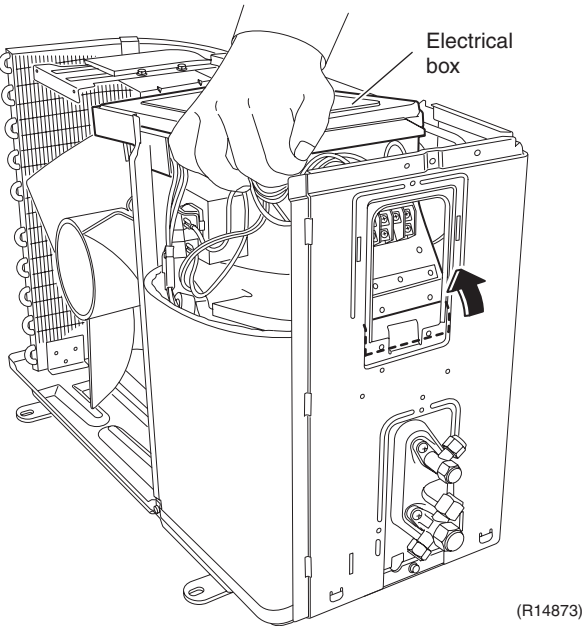
### 3. Removal of Electrical Box / PCB

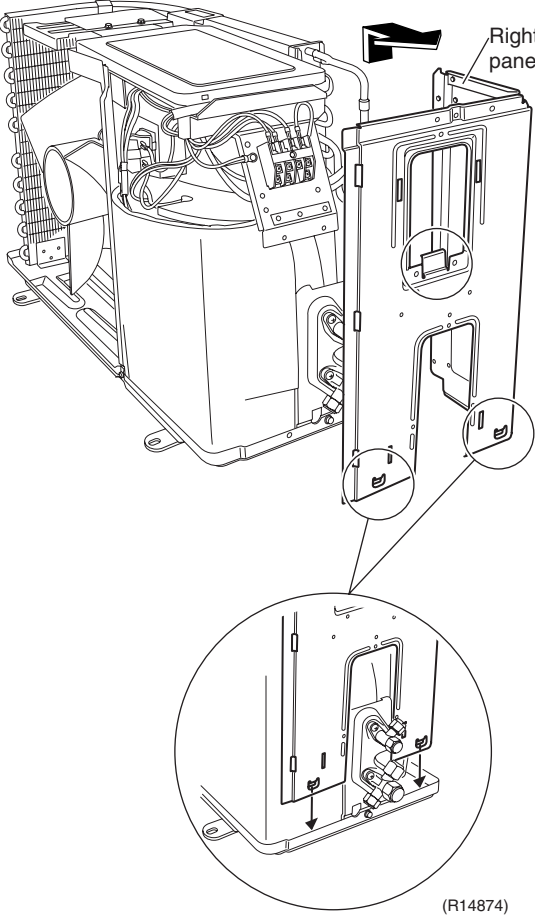
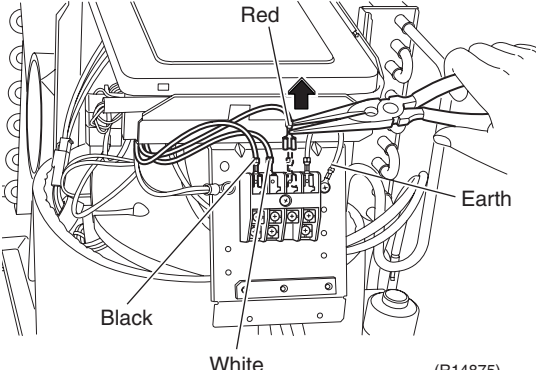
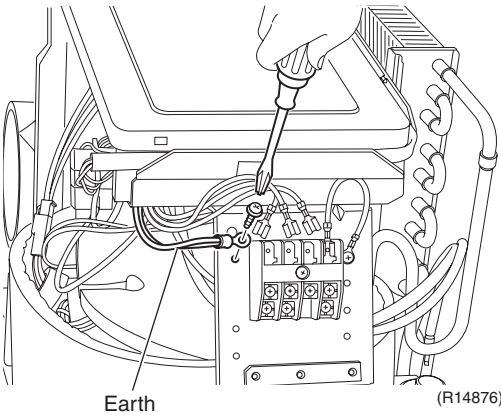
#### Procedure

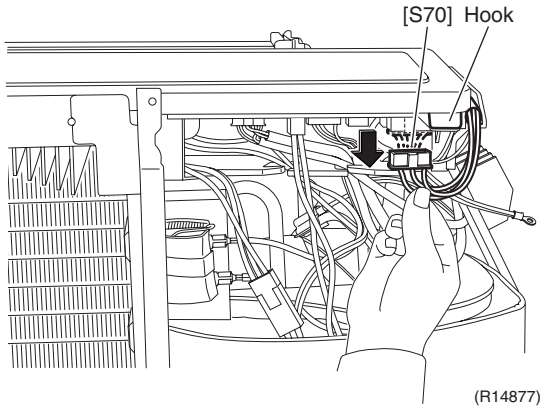
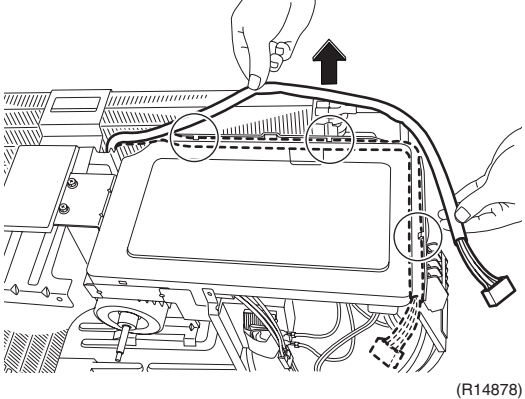
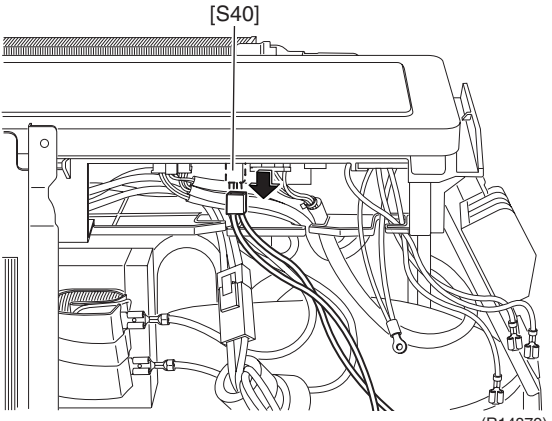
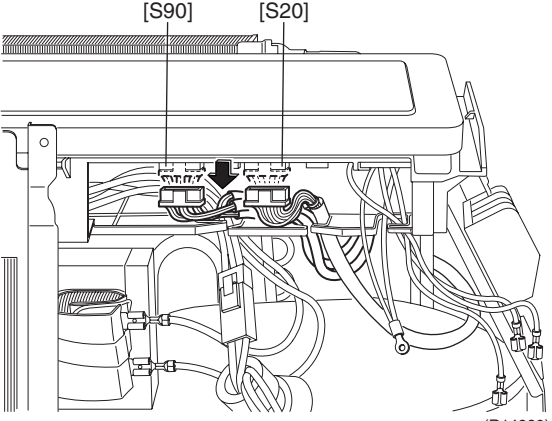


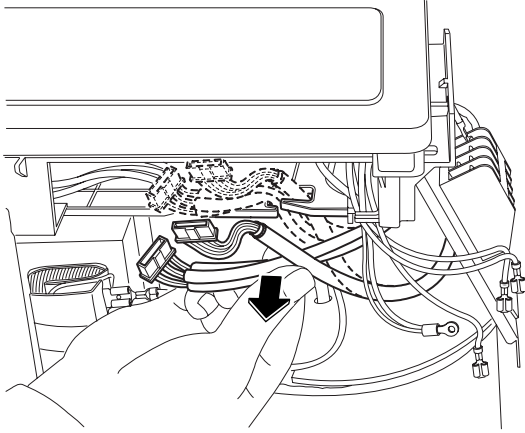
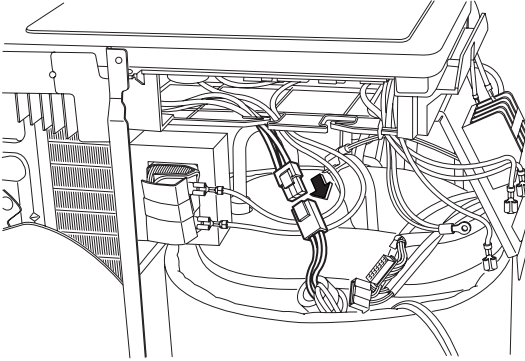
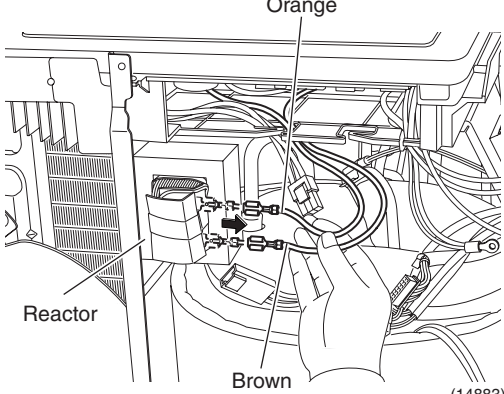
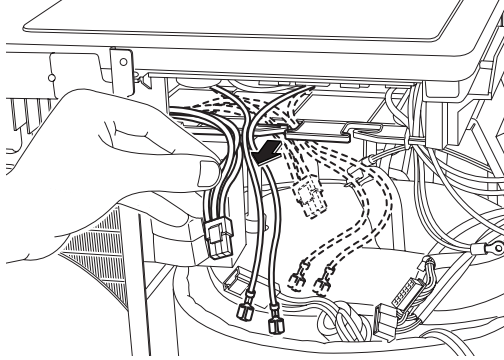
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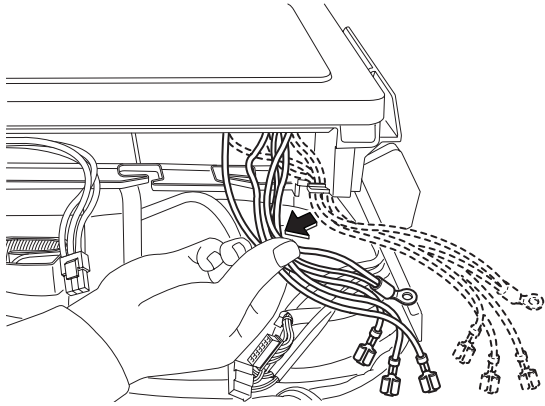
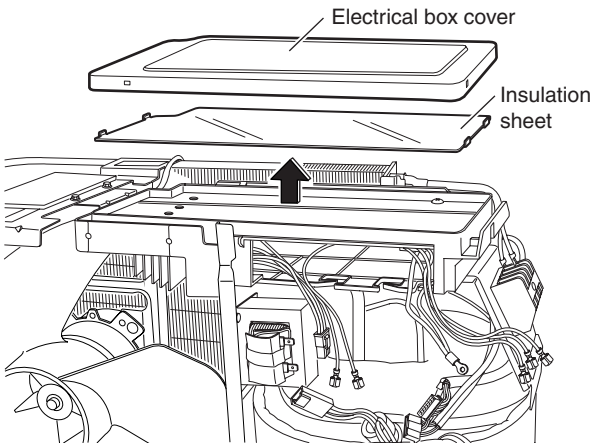
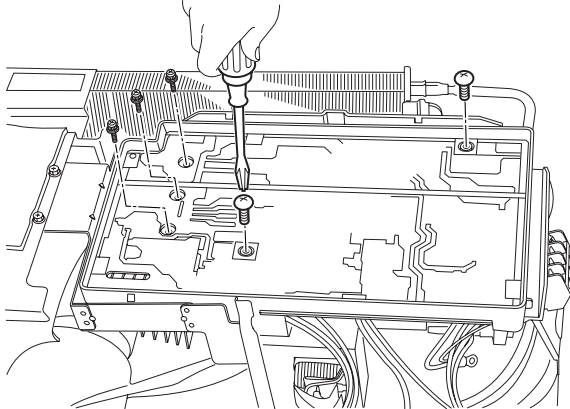
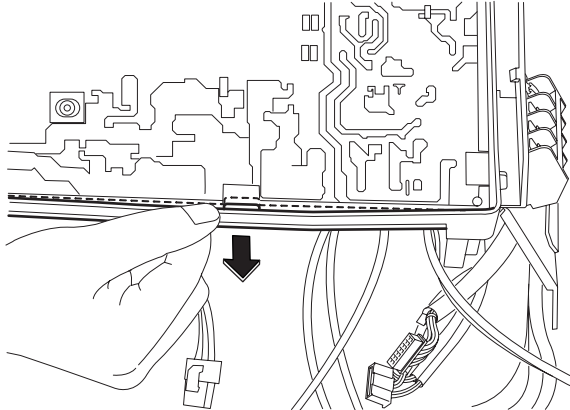
Step	Procedure	Points
1. Remove the right side panel.		<b>Preparation</b> ■ Remove the panels according to the "Removal of Outer Panels".
1 Unhook the outdoor temperature thermistor.	 <p style="text-align: center;">Outdoor temperature thermistor (R14867)</p>	
2 Remove the 2 screws and remove the terminal cover.	 <p style="text-align: right;">Terminal cover Stop valve cover</p> <p style="text-align: center;">(R14868)</p>	
3 Remove the screw and remove the stop valve cover.	 <p style="text-align: right;">(R14869)</p>	
4 Remove the screws and disconnect the connecting wires.	 <p style="text-align: right;">Wire clamp</p> <p style="text-align: center;">(R14870)</p>	
5 Remove the 3 screws and remove the wire clamp.		

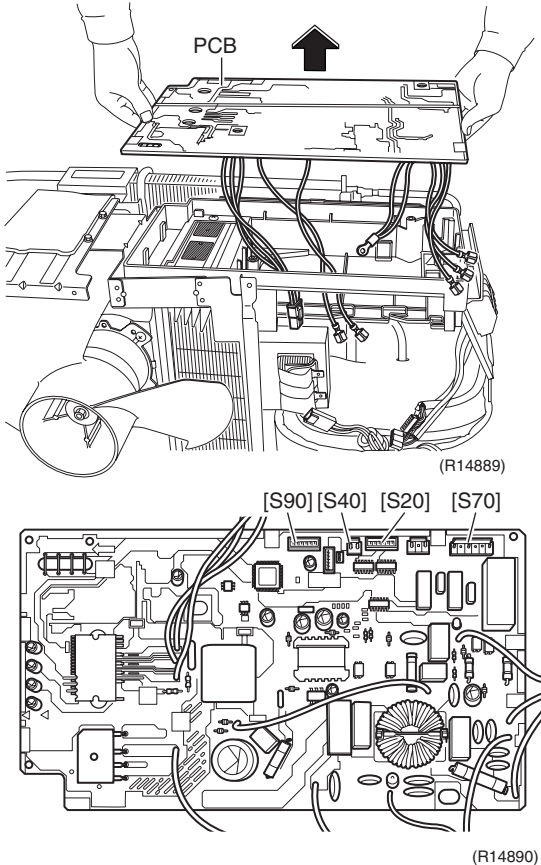
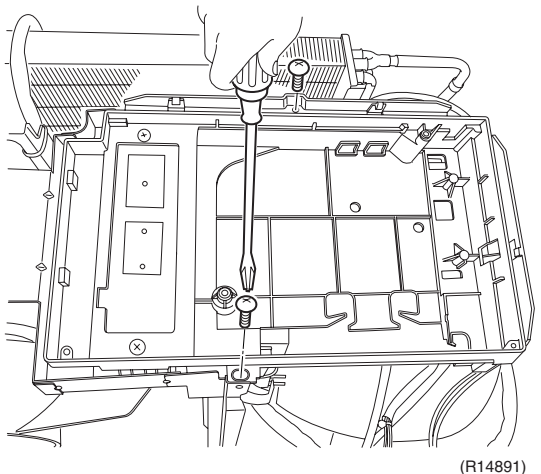
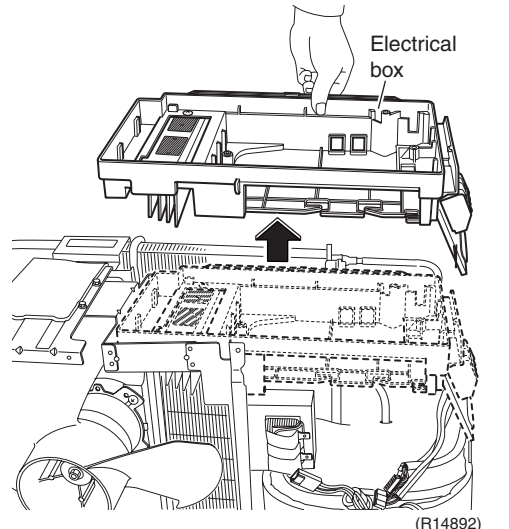
Step	Procedure	Points
6	Remove the 2 screws on the rear side of the right side panel.	
	 <p>Right side panel</p> <p>(R14871)</p>	
7	Remove the 5 screws on the right side panel.	
	 <p>(R14872)</p>	
8	Lift the electrical box.	
	 <p>Electrical box</p> <p>(R14873)</p>	

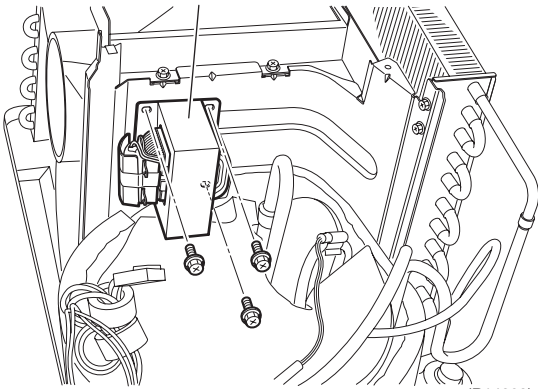
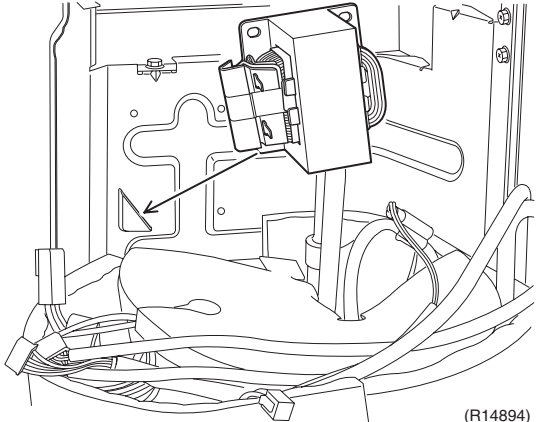
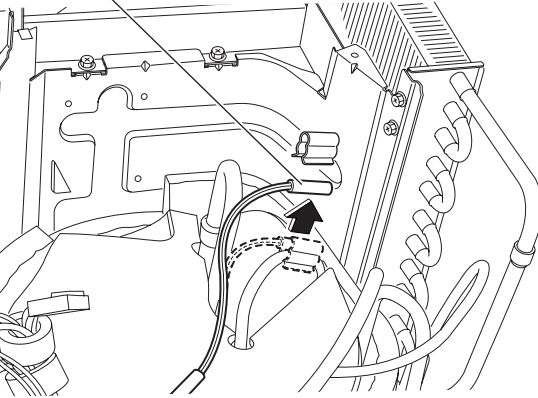
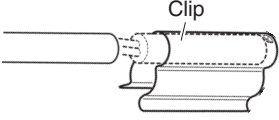
Step	Procedure	Points
9	<p>Unfasten the 3 hooks, and remove the right side panel.</p>  <p style="text-align: right;">(R14874)</p>	<p>■ When reassembling, make sure to fit the hook.</p>
2. Remove the electrical box.		<p>1 : black, upper                  2 : white, lower                  3 : red, upper                  ⊥ : green, lower</p>
1	<p>Pull out the terminals from the terminal board.</p>  <p style="text-align: right;">(R14875)</p>	
2	<p>Remove the screw and release the earth wire.</p>  <p style="text-align: right;">(R14876)</p>	

Step	Procedure	Points
3	<p>Disconnect the connector for the fan motor [S70]. Release the fan motor lead wire from the hook.</p> 	
4	<p>Release the fan motor lead wire from the hooks.</p> 	
5	<p>Disconnect the connector for the overload protector [S40].</p> 	
6	<p>Disconnect the connectors [S20] [S90].</p> 	<p>[S20]: electronic expansion valve [S90]: thermistors</p>

Step	Procedure	Points
7	Release the harnesses of [S20] and [S90] from the groove.	 <p>(R14881)</p>
8	Disconnect the relay connector.	 <p>(R14882)</p>
9	Disconnect the 2 terminals of the reactor.	 <p>Orange</p> <p>Reactor</p> <p>Brown</p> <p>(14883)</p>
10	Release the harnesses of the reactor and the relay connector from the groove.	 <p>(R14884)</p>

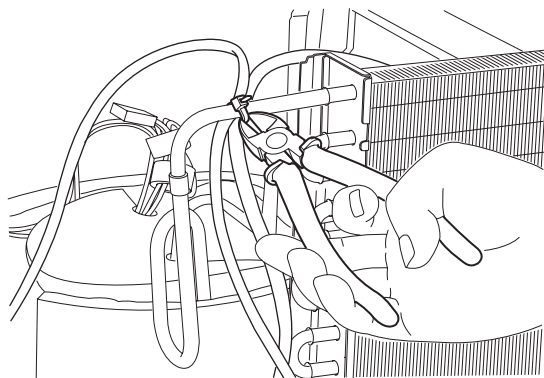
Step	Procedure	Points
11	<p>Release the harnesses of the terminals and the earth wire from the groove.</p>  <p>(R14885)</p>	
12	<p>Remove the electrical box cover and the insulation sheet.</p>  <p>Electrical box cover Insulation sheet</p> <p>(R14886)</p>	
13	<p>Remove the 5 screws.</p>  <p>(R14887)</p>	
14	<p>Unfasten the hook.</p>  <p>(R14888)</p>	

Step	Procedure	Points
15	Remove the PCB.	 <p>[S20]: electronic expansion valve  [S40]: overload protector  [S70]: fan motor  [S90]: thermistors</p>
16	Remove the 2 screws.	
17	Remove the electrical box.	

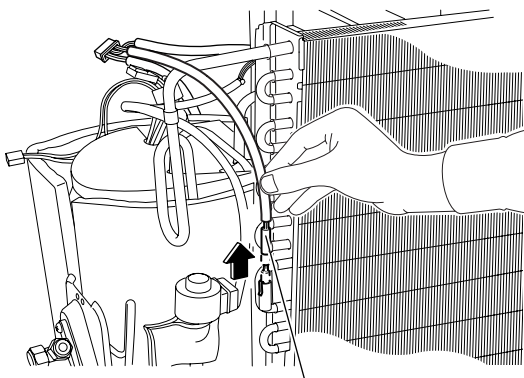
Step	Procedure	Points
<p>3. Remove the reactor.</p> <p>1 Remove the 3 screws of the reactor.</p> <p>2 Remove the reactor.</p>	<p style="text-align: center;">Reactor</p>  <p style="text-align: right;">(R14893)</p>  <p style="text-align: right;">(R14894)</p>	
<p>4. Remove the thermistor ASSY.</p> <p>1 Remove the discharge pipe thermistor.</p>	<p style="text-align: center;">Discharge pipe thermistor</p>  <p style="text-align: right;">(R14895)</p>	<p>■ Be careful not to lose the clip for the thermistor.</p>  <p style="text-align: right;">(R12279)</p>



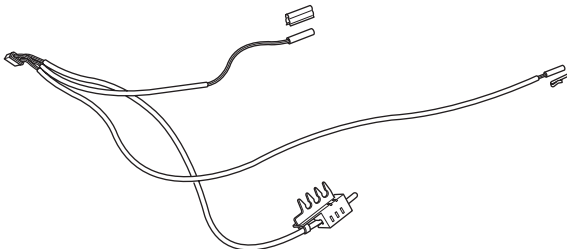
Step	Procedure	Points
2	Cut the clamp.	<ul style="list-style-type: none"> <li>When reassembling, fix the outdoor heat exchanger lead wire and the harness of the electronic expansion valve with a clamp.</li> </ul>
3	Pull out the outdoor heat exchanger thermistor.	
4	Remove the thermistor ASSY.	



(R14896)



Outdoor heat exchanger thermistor (R14897)



(R14898)

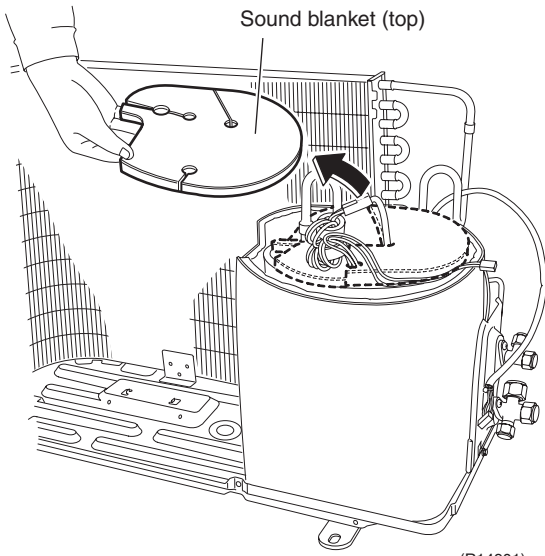
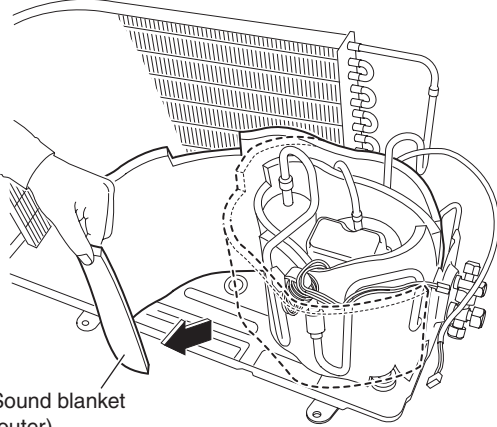
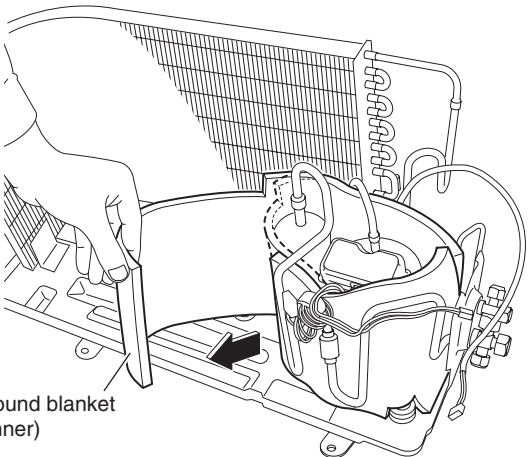
# 4. Removal of Sound Blankets

**Procedure**



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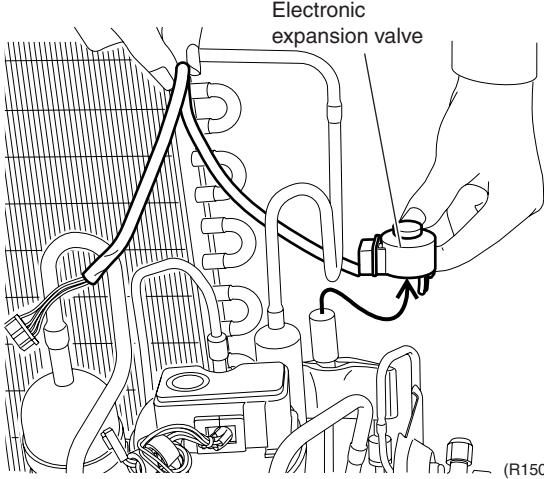
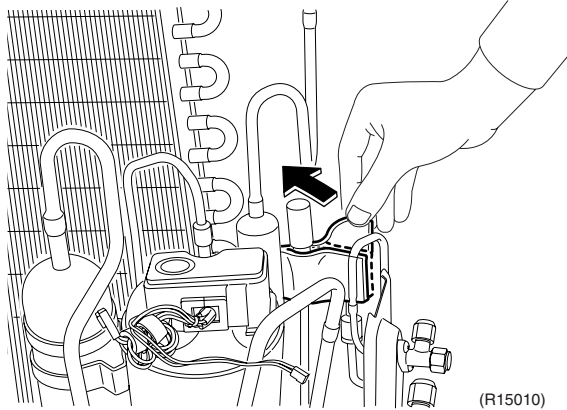
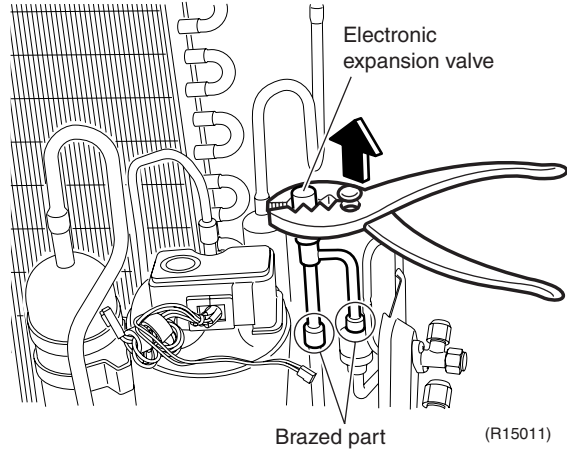
Step	Procedure	Points
1. Remove the partition plate.	<p style="text-align: right;">(R14899)</p>	
1 Remove the 2 screws.	<p>Partition plate</p> <p style="text-align: right;">(R14900)</p>	
2 Remove the partition plate.		

Step	Procedure	Points	
2. Remove the sound blankets.	 <p style="text-align: right;">(R14901)</p>	<ul style="list-style-type: none"> <li>■ Since the piping ports on the sound blanket are torn easily, remove the blanket carefully.</li> </ul>	
1	Lift and remove the sound blanket (top).		
2	Pull the sound blankets (outer) out.	 <p style="text-align: right;">(R14902)</p>	
3	Pull the sound blanket (inner) out.	 <p style="text-align: right;">(R14903)</p>	

# 5. Removal of Electronic Expansion Valve

**Procedure**

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

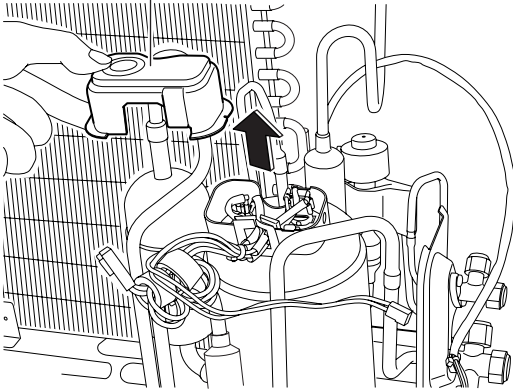
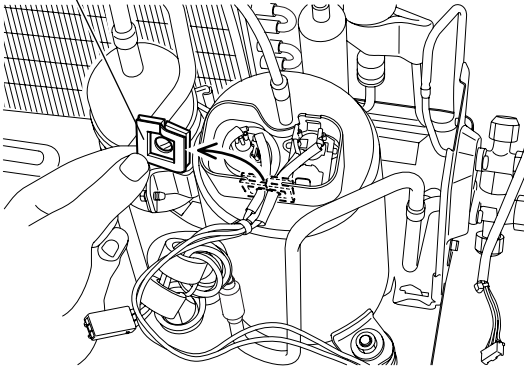
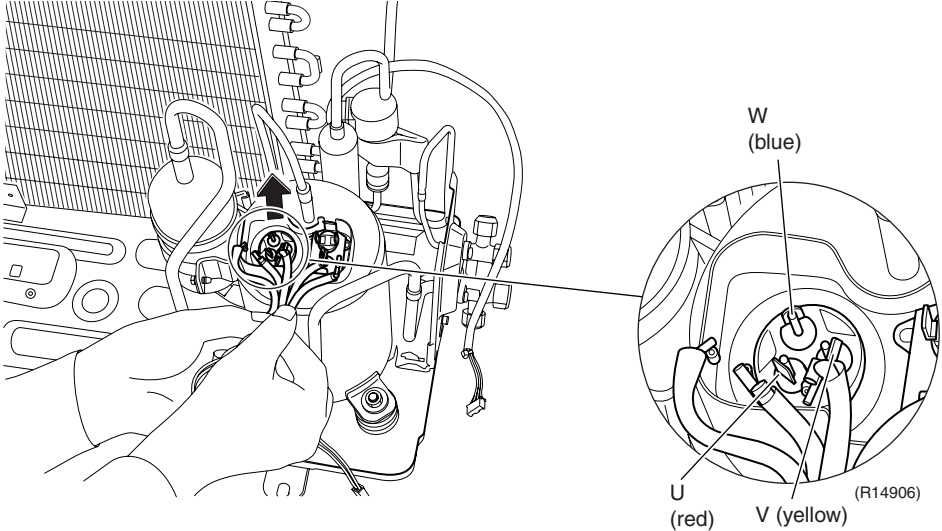
Step	Procedure	Points
1	<p>Pull out the electronic expansion valve coil.</p>  <p style="text-align: right;">(R15009)</p>	
2	<p>Remove the putty.</p>  <p style="text-align: right;">(R15010)</p>	<p><b>Warning</b> Be careful not to get yourself burnt with the pipes and other parts that are heated by the 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>
3	<p>Heat up the 2 brazed parts. Remove the electronic expansion valve.</p>  <p style="text-align: right;">(R15011)</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. Avoid excessive heating. (Keep below 120°C)</li> </ol> <p><b>In case of difficulty with gas brazing machine</b></p> <ol style="list-style-type: none"> <li>1. Disconnect the brazed part where is easy to disconnect and restore.</li> <li>2. Cut pipes on the main unit in order to make it easy to disconnect.</li> </ol>

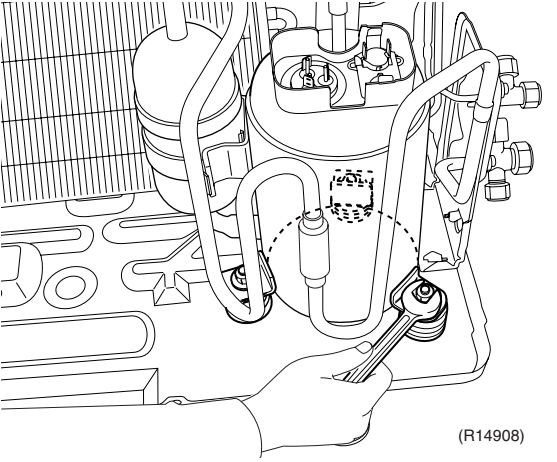
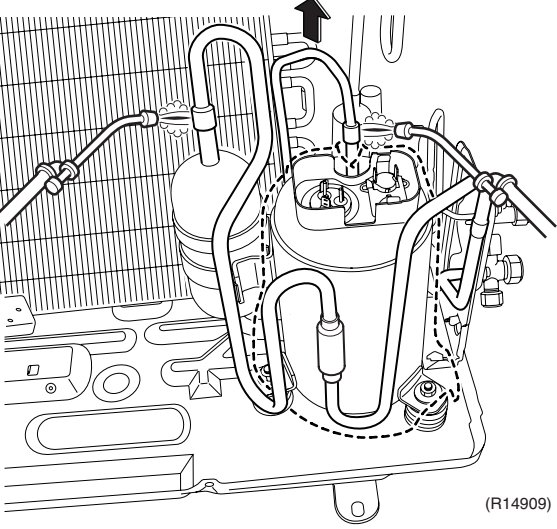
## 6. Removal of Compressor

### Procedure



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

Step	Procedure	Points
1. Remove the peripheries.		
1 Remove the terminal cover.	<p data-bbox="635 398 778 427">Terminal cover</p>  <p data-bbox="995 835 1066 857">(R14904)</p>	
2 Remove the protection bushing.	<p data-bbox="555 913 735 943">Protection bushing</p>  <p data-bbox="1002 1317 1072 1339">(R14905)</p>	
3 Disconnect the terminals and overload protector.	 <p data-bbox="1251 1503 1305 1554">W (blue)</p> <p data-bbox="1171 1877 1198 1906">U (red)</p> <p data-bbox="1257 1899 1353 1928">V (yellow)</p> <p data-bbox="1358 1877 1428 1899">(R14906)</p>	

Step	Procedure	Points
4	<p>Unscrew the 3 nuts of the compressor.</p>  <p>(R14908)</p>	
2.	<p>Remove the compressor.</p> <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><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>
1	<p>Heat up the brazed part of the discharge side and disconnect.</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>
2	<p>Heat up the brazed part of the suction side and disconnect.</p>	
3	<p>Lift the compressor up and remove it.</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>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>(R14909)</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. Avoid excessive heating. (Keep below 120°C)</li> </ol> <p><b>In case of difficulty with gas brazing machine</b></p> <ol style="list-style-type: none"> <li>1. Disconnect the brazed part where is easy to disconnect and restore.</li> <li>2. Cut pipes on the main unit with a tube cutter in order to make it easy to disconnect.</li> </ol>

# Revision History

Month / Year	Version	Revised contents
08/2012	Si001170	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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