



Si001162


# REMOVAL PROCEDURE



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

**5.0/6.0 kW Class**

**15000/18000/24000 Btu/h Class**

-  Outdoor Unit
-  Inverter
-  Pair Type



# **Service Manual Removal Procedure**

## **Outdoor Unit**

### **Applicable Models**

#### **●Cooling Only**

**RKN15KEVJU  
RKN18KEVJU  
RKN24KEVJU**

**RKN50KEVM  
RKN60KEVM**

#### **●Heat Pump**

**RXN15KEVJU  
RXN18KEVJU  
RXN24KEVJU**

**RX50KEVM  
RX60KEVM**

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**Note:**

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

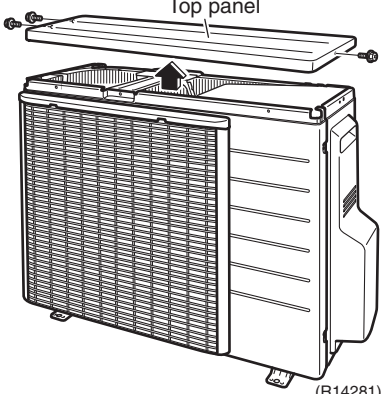
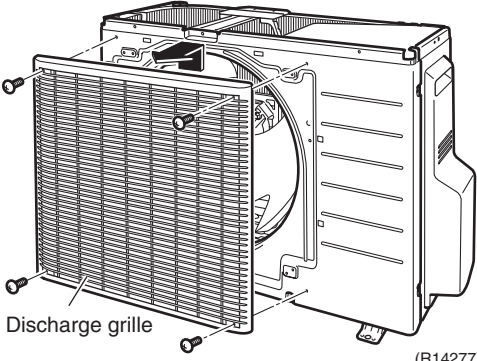
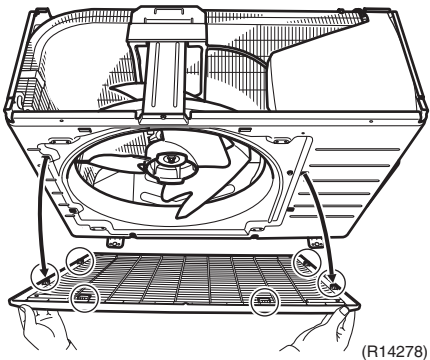
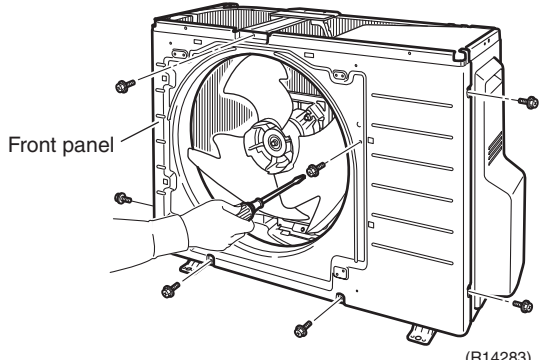
# 1. Removal of Outer Panels

**Procedure**

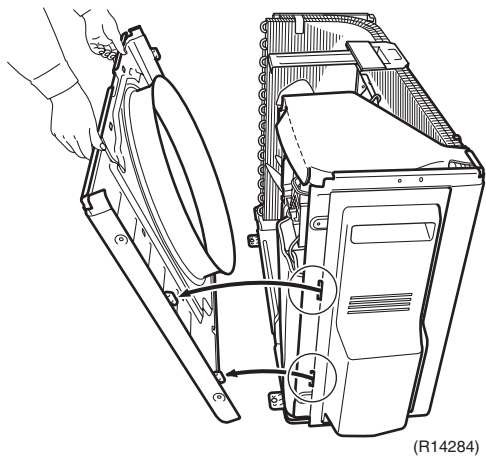


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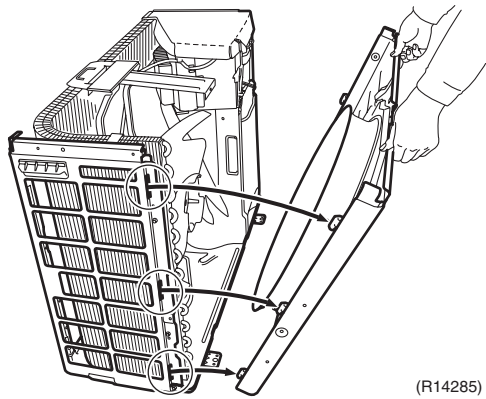
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Procedure	Points
1	Remove the 3 screws and lift the top panel.		<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 4 screws and remove the discharge grille.	 	<ul style="list-style-type: none"> <li>■ Slide the discharge grille upwards and remove it.</li> <li>■ The discharge grille has 6 hooks.</li> <li>■ The number of hooks varies depending on the model.</li> </ul>
3	Remove the 7 screws of the front panel.		

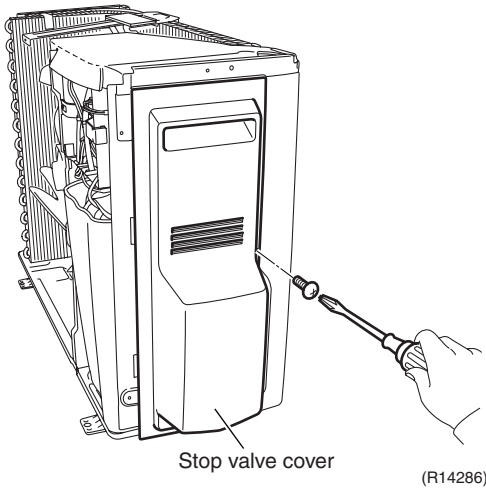
Step	Procedure	Points
4	Unfasten the right side hooks.	
5	Unfasten the left side hooks. Remove the front panel.	<ul style="list-style-type: none"> <li>■ When reassembling, fit the left side of the front panel first.</li> </ul>
6	Remove the screw of the stop valve cover.	



(R14284)

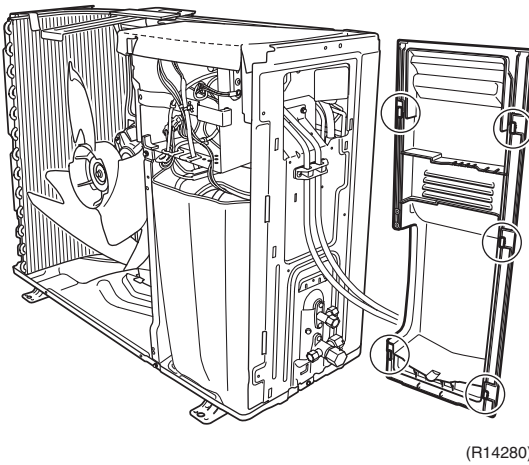
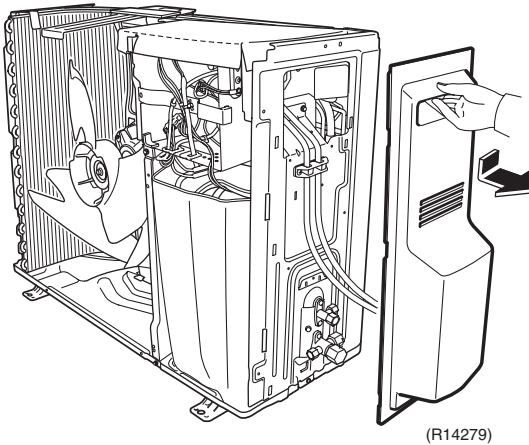


(R14285)



(R14286)

Step	Procedure	Points
7	<p>Pull down the stop valve cover to unfasten the hooks and remove it.</p>	<ul style="list-style-type: none"> <li>■ The stop valve cover has 5 hooks.</li> </ul>



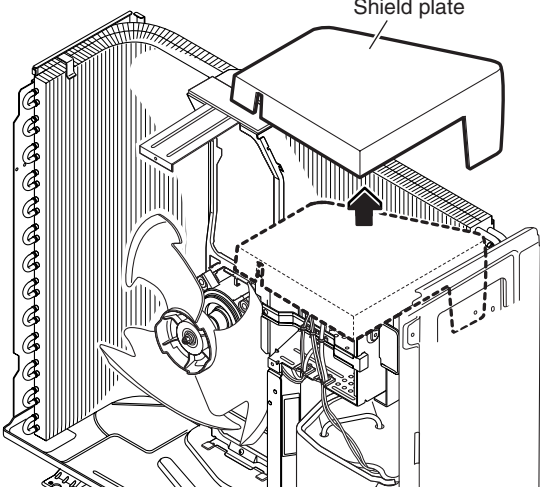
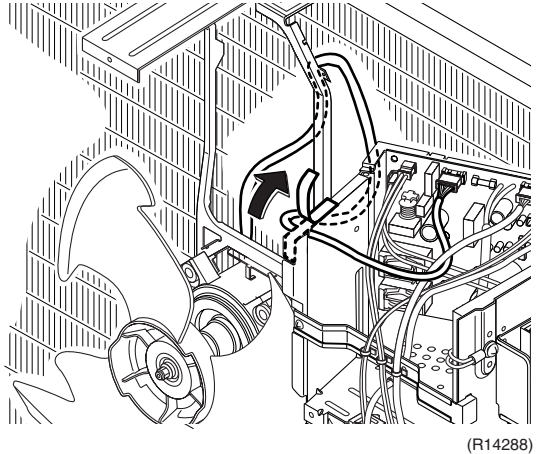
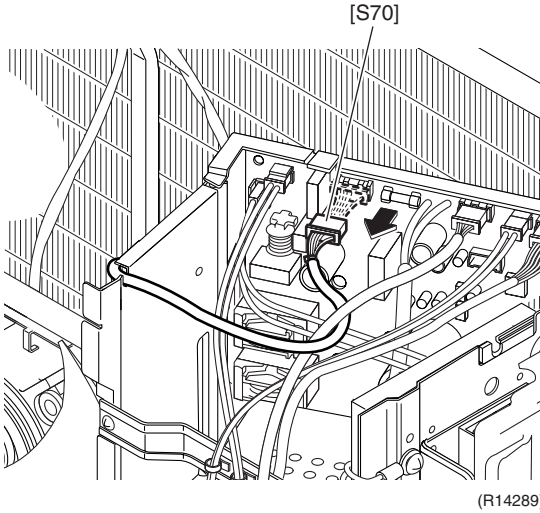
## 2. Removal of Outdoor Fan / Fan Motor

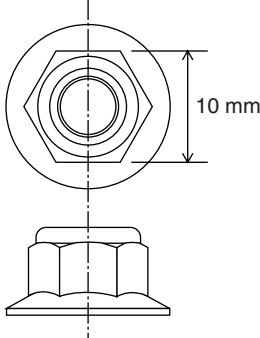
### Procedure

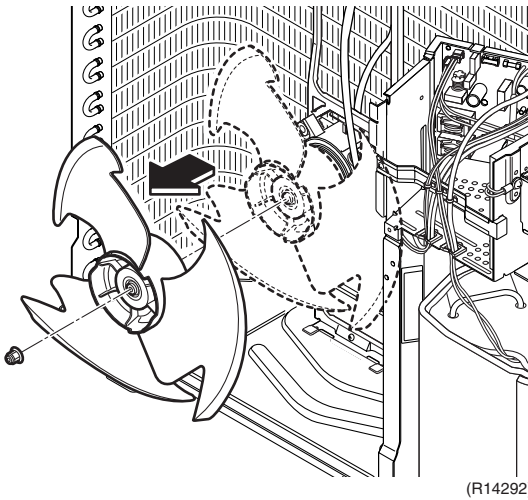
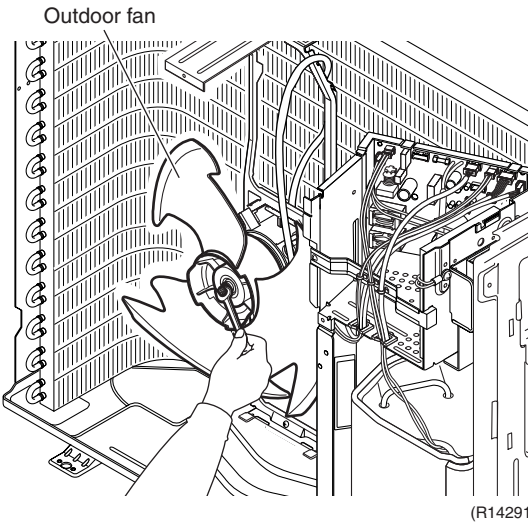
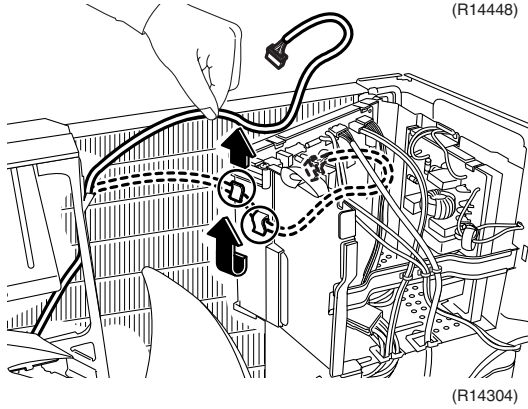
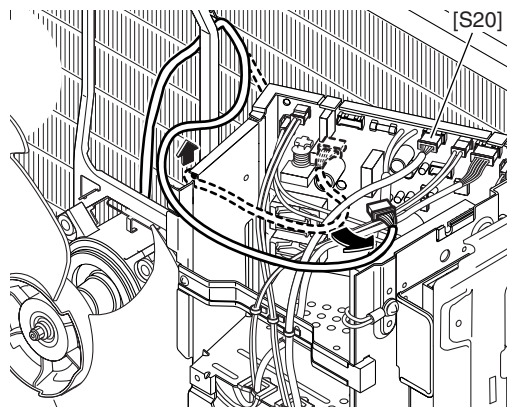


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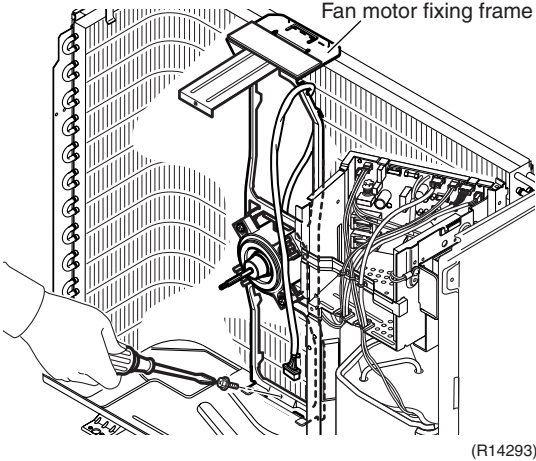
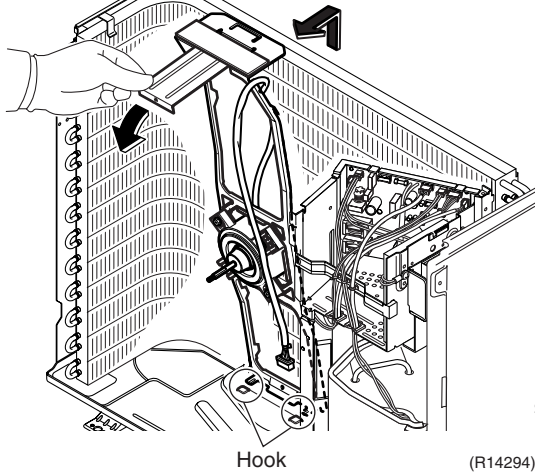
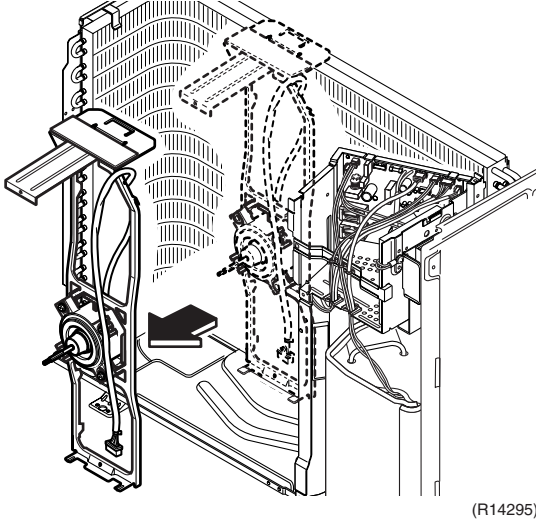
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

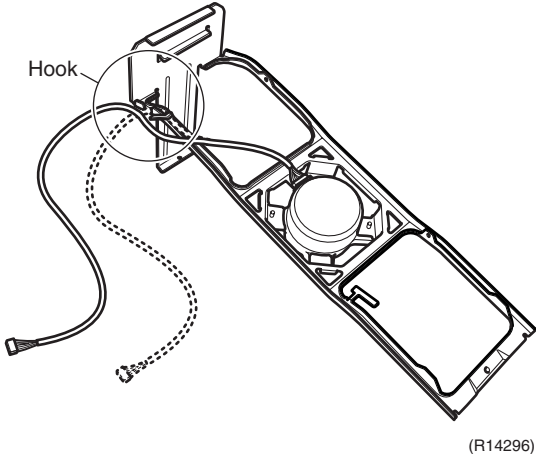
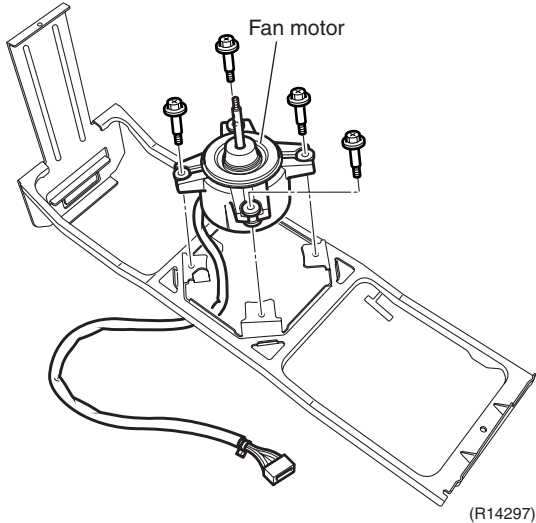
Step	Procedure	Points
1	Remove the shield plate.	<p><b>Preparation</b></p> <ul style="list-style-type: none"> <li>■ Remove the top panel and the front panel according to the “Removal of Outer Panels”.</li> <li>■ This procedure is not necessary to remove the outdoor fan only.</li> </ul>
2	Peel off the filament tape.	 
3	Disconnect the connector for the fan motor [S70].	

Step	Procedure	Points
4	Release the fan motor lead wire from the groove and the 2 hooks of the partition plate.	<ul style="list-style-type: none"> <li>■ The harnesses of [S70] and [S20] cross each other.</li> </ul>
5	Remove the nut of the outdoor fan.	<ul style="list-style-type: none"> <li>■ Nut size: M6</li> </ul>  <p style="text-align: right;">(R12236)</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>





Step	Procedure	Points
6	Remove the screw of the fan motor fixing frame.	
	 <p style="text-align: right;">(R14293)</p>	
7	Pull down the fan motor fixing frame to unfasten the 2 hooks at the bottom.	
	 <p style="text-align: right;">(R14294)</p>	
8	Remove the fan motor fixing frame.	
	 <p style="text-align: right;">(R14295)</p>	

Step	Procedure	Points
9	Open the hook and release the fan motor lead wire.	
	 <p>Diagram (R14296) illustrates the removal of the fan motor lead wire. A hook on the fan housing is shown being opened to release the lead wire. The lead wire is shown as a solid line connected to the housing and a dashed line being pulled away.</p>	
10	Remove the 4 screws and remove the fan motor.	
	 <p>Diagram (R14297) illustrates the removal of the fan motor. Four screws are shown being removed from the fan motor housing. The fan motor is shown being lifted out of the fan housing.</p>	

# 3. Removal of Conduit Mounting Plate (U.S. Model Only)

**Procedure**



**Warning**

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Step	Procedure	Procedure	Points
1	Remove the 2 screws of the protection plate.	<p>Protection plate</p> <p>(R14706)</p>	<p>■ When reassembling, pass the connecting wires through the conduit and secure them with a lock nut.</p>
2	Remove the protection plate.	<p>(R14707)</p>	<p>Conduit mounting plate</p> <p>Lock nut</p> <p>Conduit</p> <p>(R14734)</p>
3	Remove the 2 screws of the conduit mounting plate.	<p>Conduit mounting plate</p> <p>(R14708)</p>	
4	Remove the conduit mounting plate.	<p>(R14709)</p>	

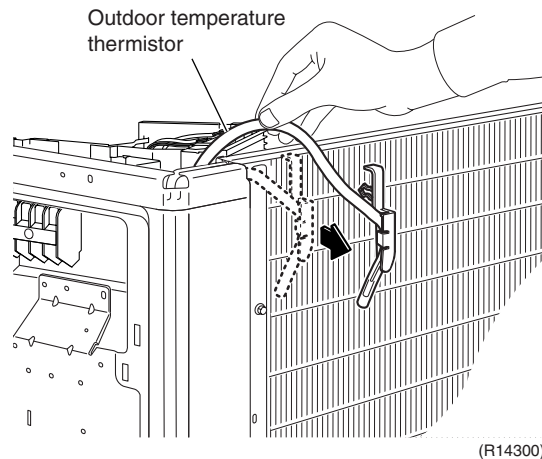
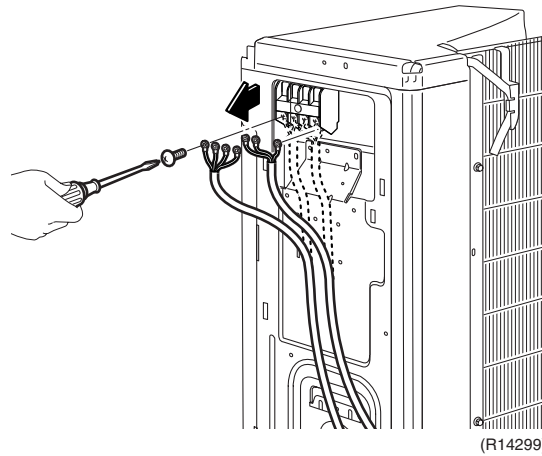
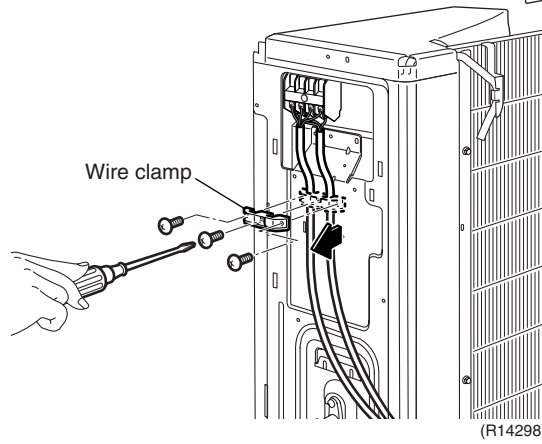
# 4. Removal of Electrical Box

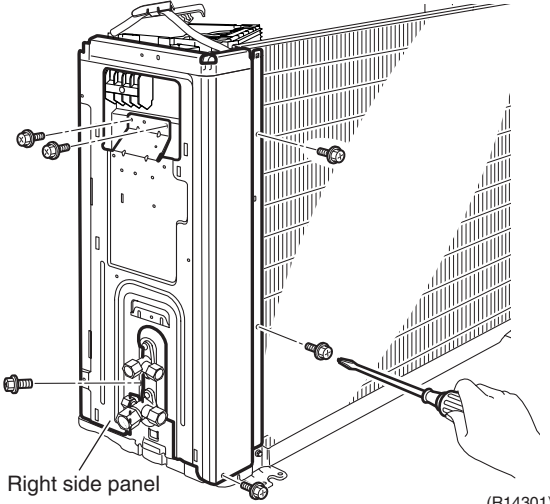
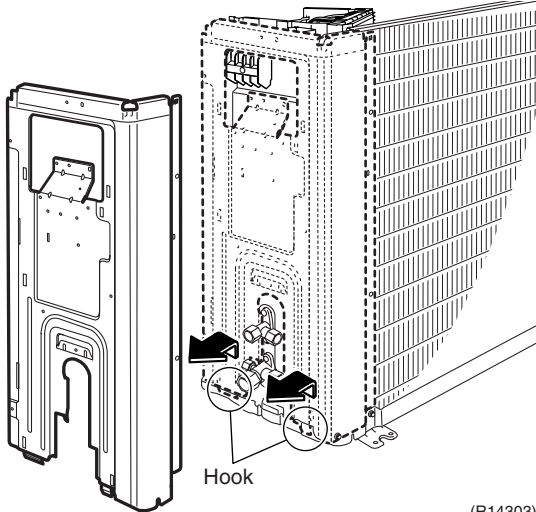
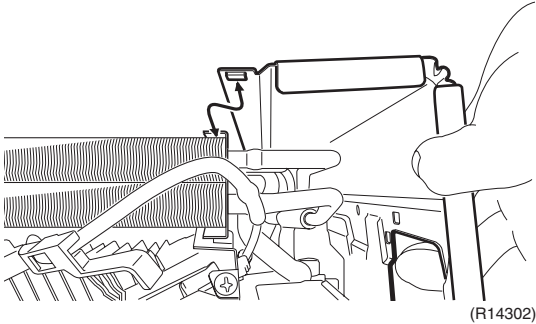
**Procedure**

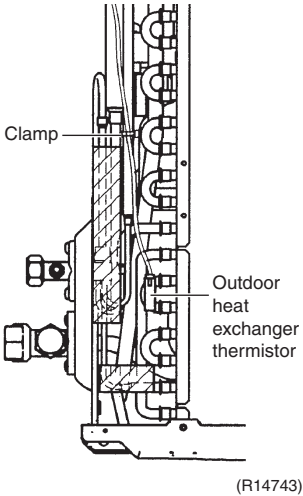
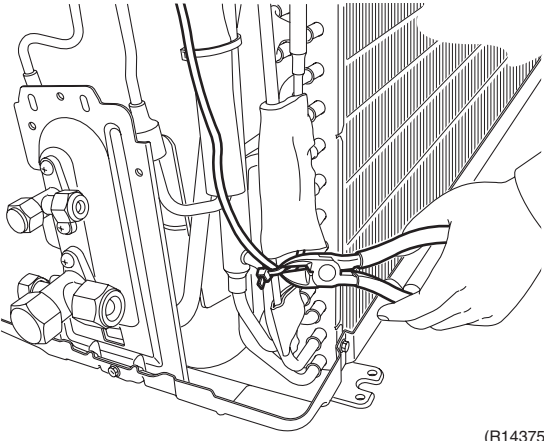
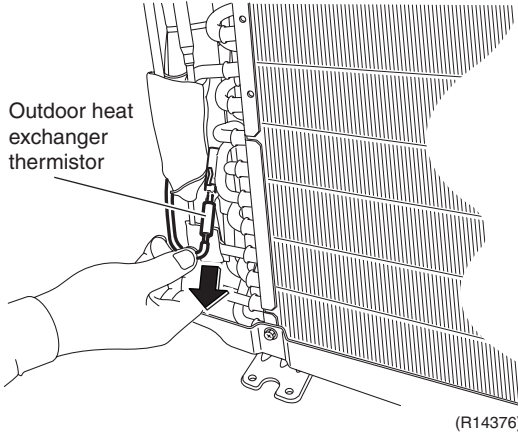
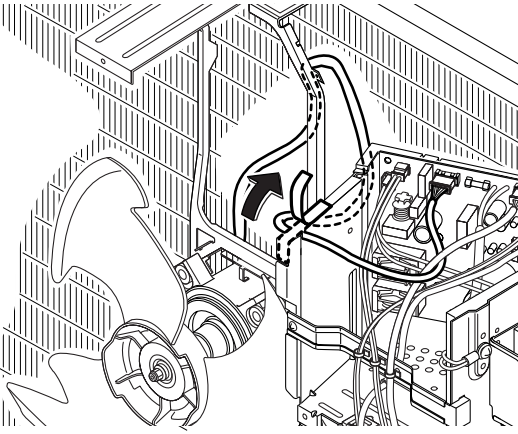


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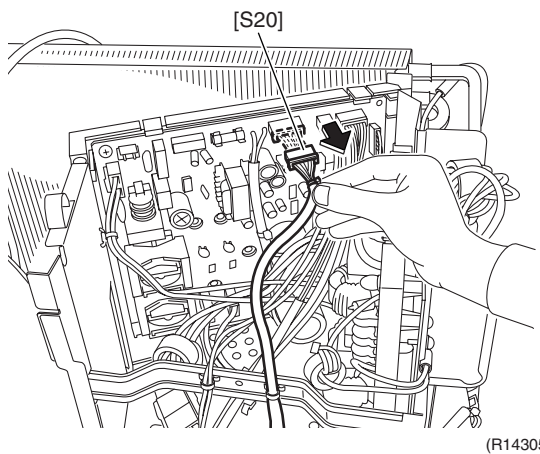
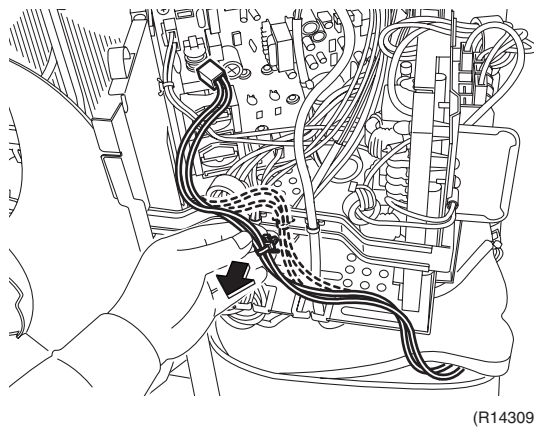
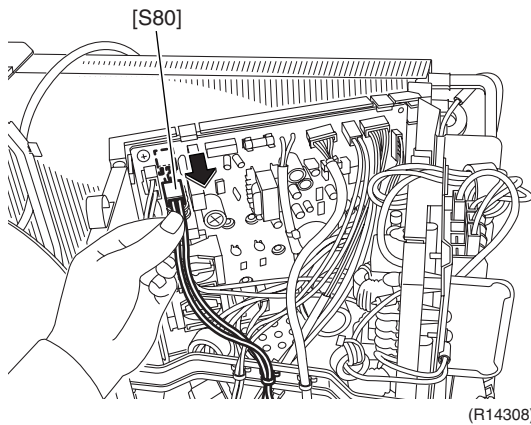
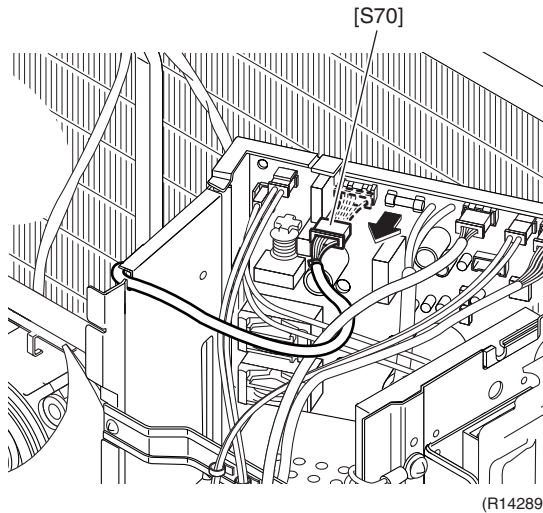
Step	Procedure	Points
1	Remove the 3 screws and remove the wire clamp.	<ul style="list-style-type: none"> <li>Some models do not have the wire clamp.</li> </ul>
2	Remove the screws and remove the connecting wires.	
3	Pull out the outdoor temperature thermistor.	



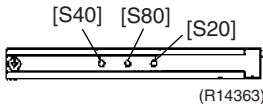
Step	Procedure	Points
4	Remove the 6 screws of the right side panel.	
5	Unfasten the 2 lower hooks and the 1 upper hook. Remove the right side panel.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the 2 lower hooks and the 1 upper hook of the back.</li> </ul>
	 <p>Right side panel (R14301)</p>	
	 <p>Hook (R14303)</p>	
	 <p>(R14302)</p>	

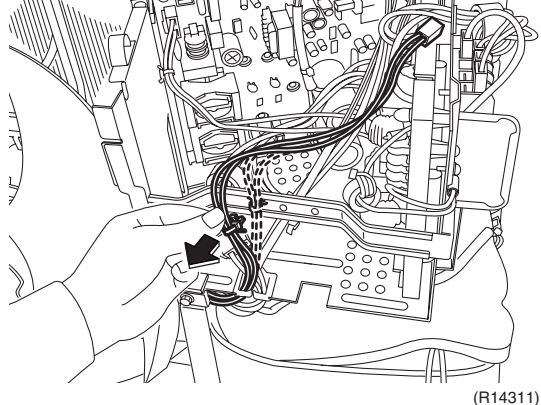
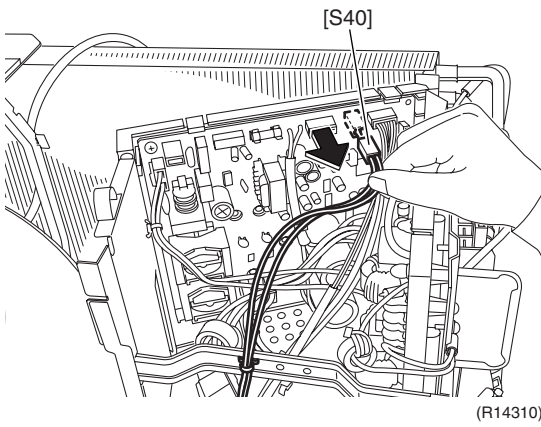
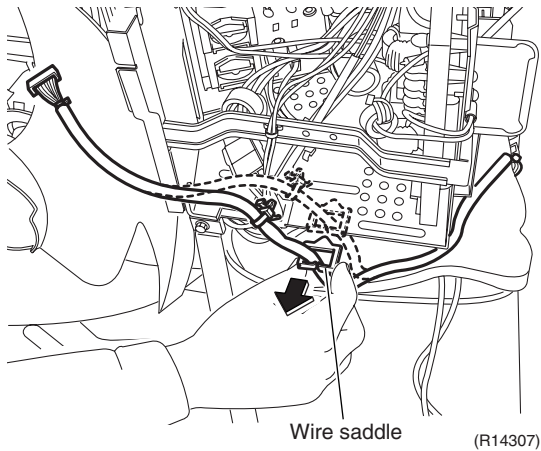
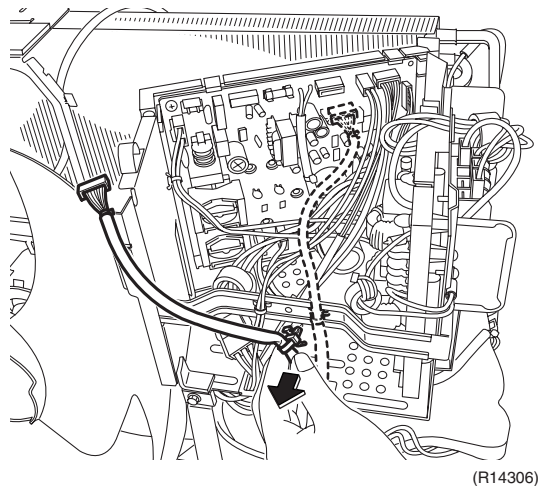
Step	Procedure	Points
6	Cut the clamp.	<ul style="list-style-type: none"> <li>Some models have a clamp and an outdoor heat exchanger thermistor at the position illustrated below.</li> </ul>
7	Pull out the outdoor heat exchanger thermistor.	
8	Peel off the filament tape.	 <p data-bbox="975 663 1038 685">(R14375)</p>  <p data-bbox="518 1032 651 1106">Outdoor heat exchanger thermistor</p> <p data-bbox="975 1346 1038 1368">(R14376)</p>  <p data-bbox="975 1883 1038 1906">(R14288)</p>

Step	Procedure	Points
9	Disconnect the connector for the fan motor [S70].	
10	Disconnect the connector for the four way valve coil [S80].	<p>■ The cooling only models have no harness for [S80].</p>
11	Pull out the clamp.	
12	Disconnect the connector for the electronic expansion valve coil [S20].	

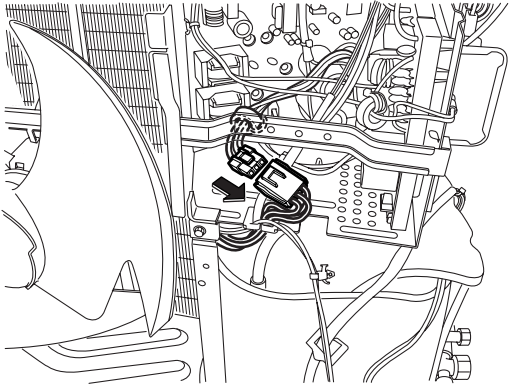
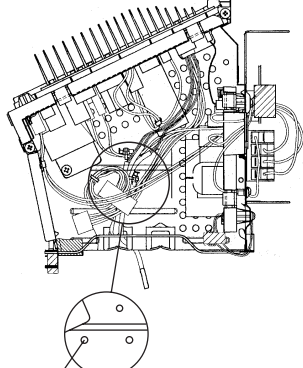
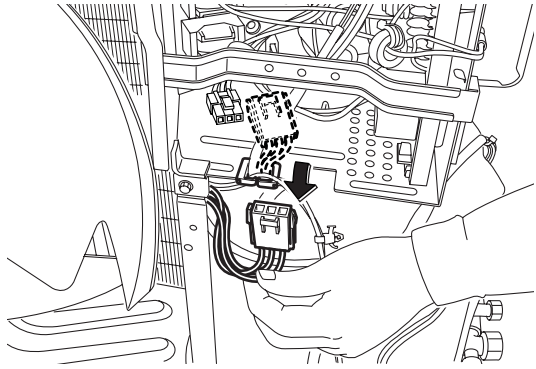
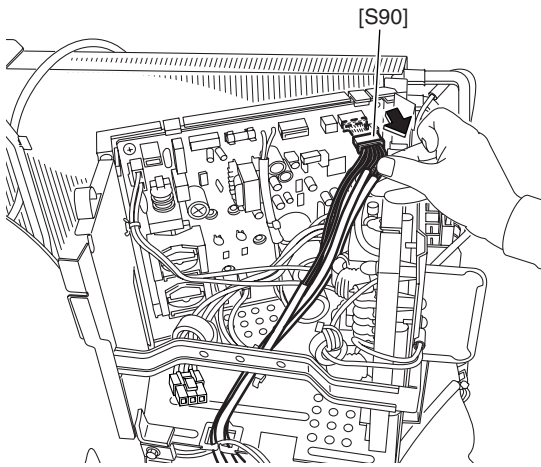
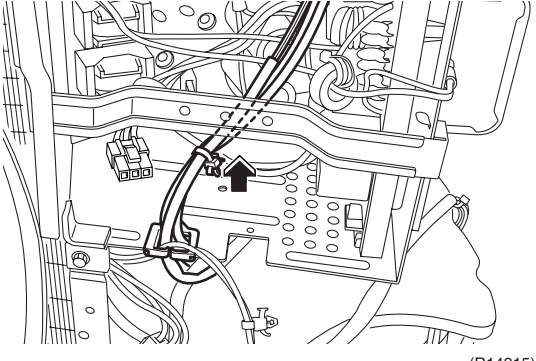
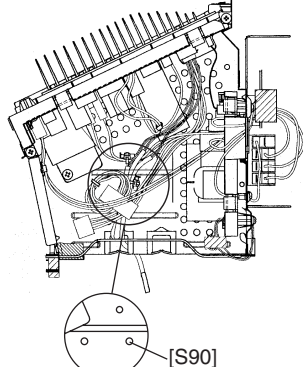




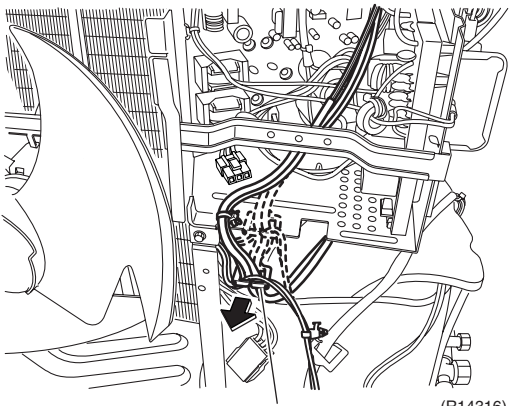
Step	Procedure	Points
13	Pull out the clamp.	
14	Remove the wire saddle.	
15	Disconnect the connector for the overload protector [S40].	<p>■ When reassembling, insert the clamps of harnesses as below.</p> 
16	Pull out the clamp.	<p>■ When reassembling, connect the connectors in the following order.</p> <ol style="list-style-type: none"> <li>(1) [S40]</li> <li>(2) [S20]</li> <li>(3) [S80]</li> <li>(4) [S70]</li> </ol>



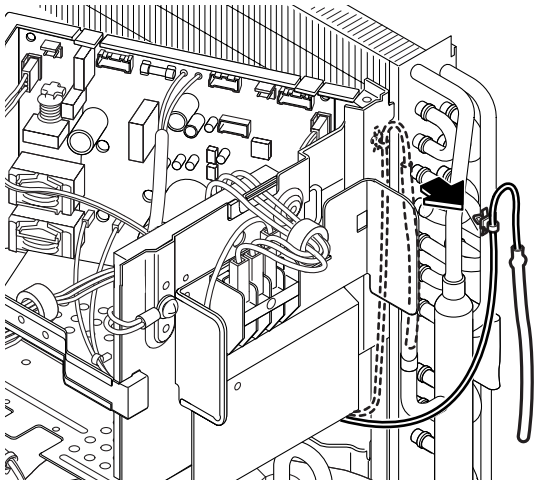


Step	Procedure	Procedure	Points
17	Disconnect the relay connector for the compressor.	 <p>(R14312)</p>	<p>■ The compressor harness has a clamp. When reassembling, insert the clamp as below.</p>  <p>Compressor harness (red, blue, yellow) (R14696)</p>
18	Release the harness of the relay connector from the wire saddle.	 <p>(R14313)</p>	
19	Disconnect the connector for the thermistor [S90].	 <p>[S90]</p> <p>(R14314)</p>	
20	Pull out the clamp.	 <p>(R14315)</p>	<p>■ When reassembling, insert the clamp as below.</p>  <p>[S90]</p> <p>(R14697)</p>

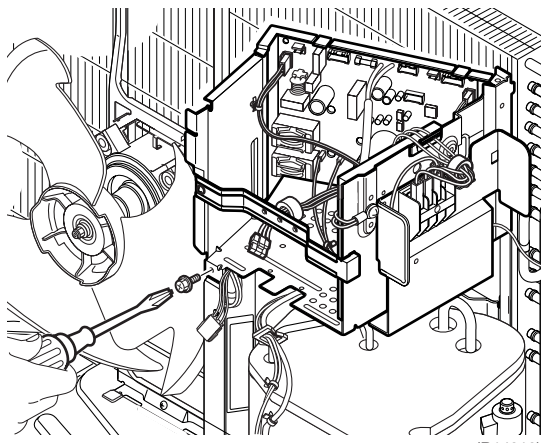
Step	Procedure	Points
21	Remove the wire saddle.	
22	Pull out the clamp.	
23	Remove the screw.	



Wire saddle (R14316)

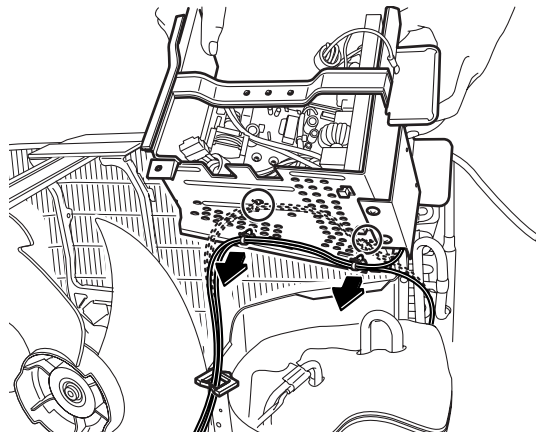


(R14317)

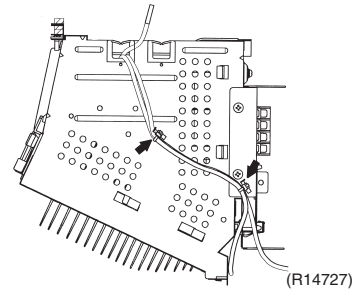


(R14318)

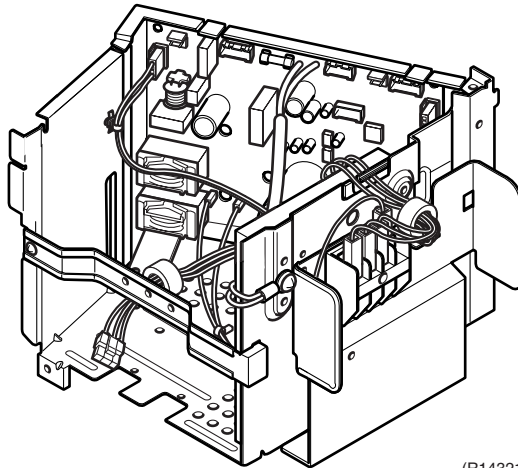
Step	Procedure	Points
24	Pull out the 2 clamps at the bottom of the electrical box.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the 2 clamps of the thermistor ASSY into the holes as below.</li> </ul>
25	Remove the electrical box.	



(R14320)



(R14727)



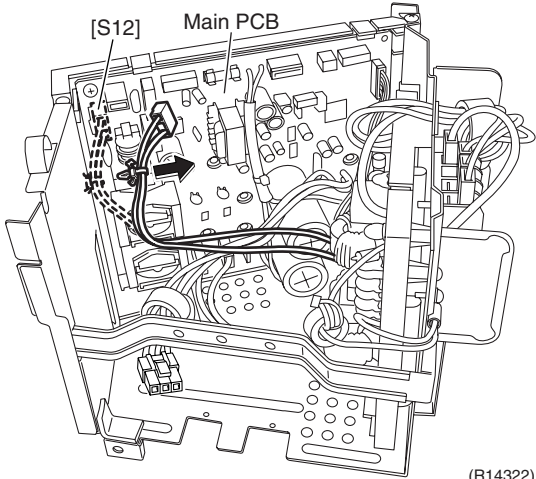
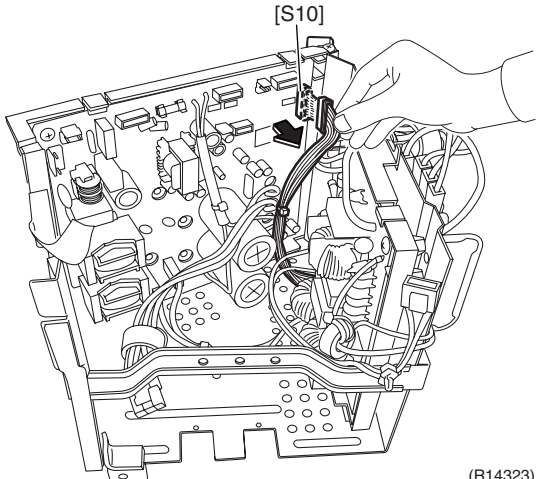
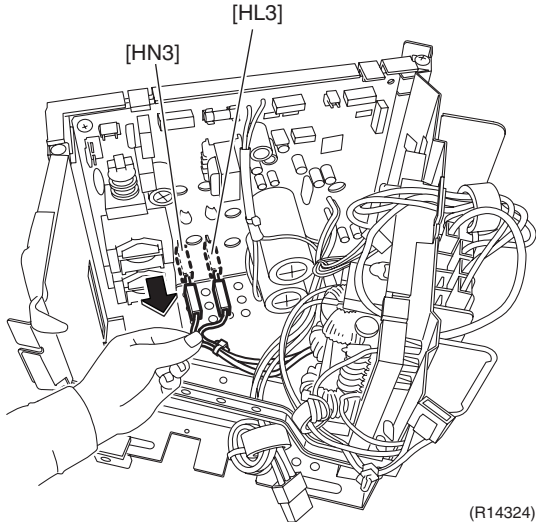
(R14321)

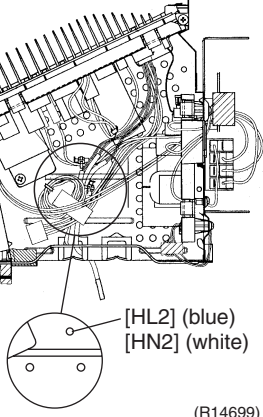
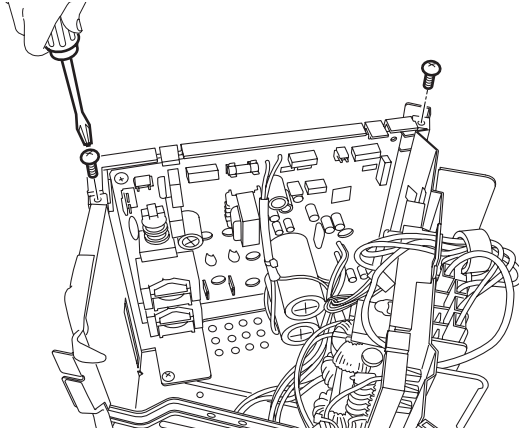
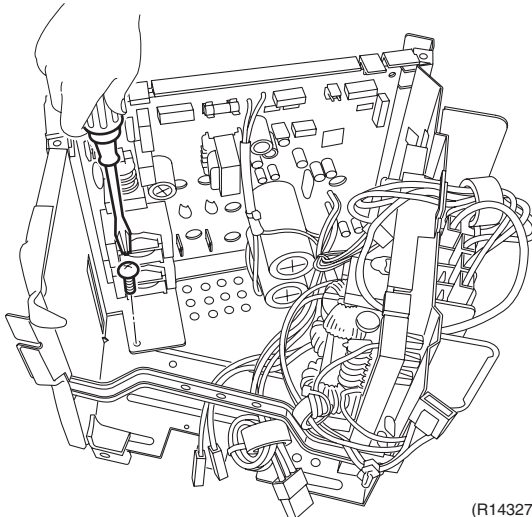
# 5. Removal of PCBs

**Procedure**



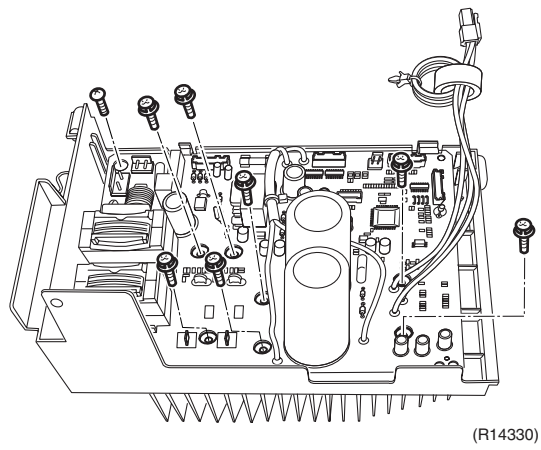
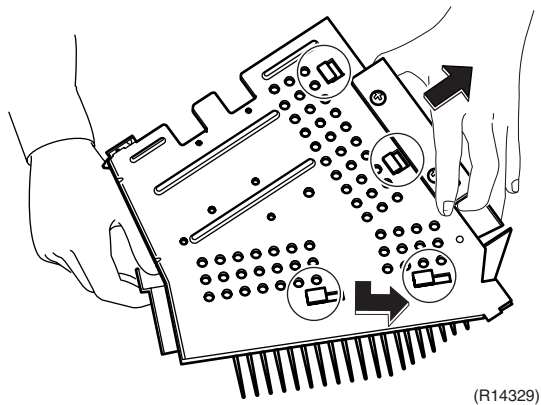
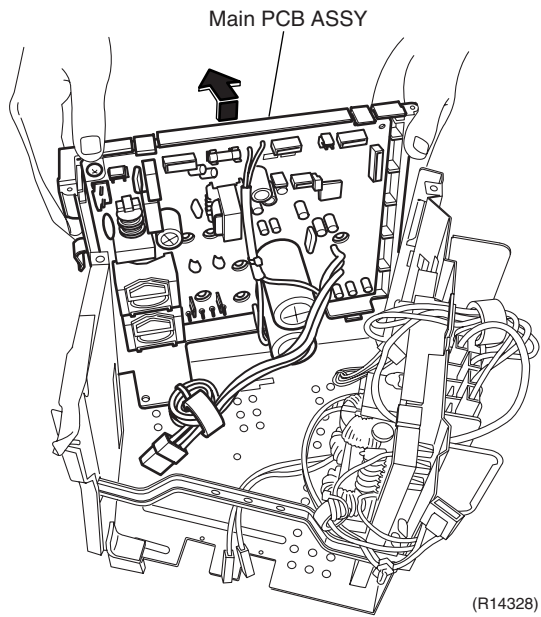
**Warning** Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

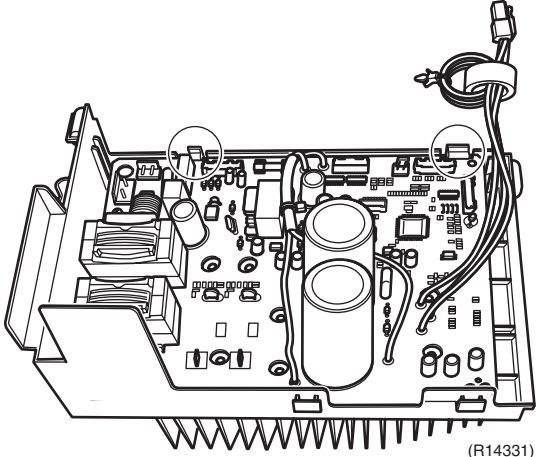
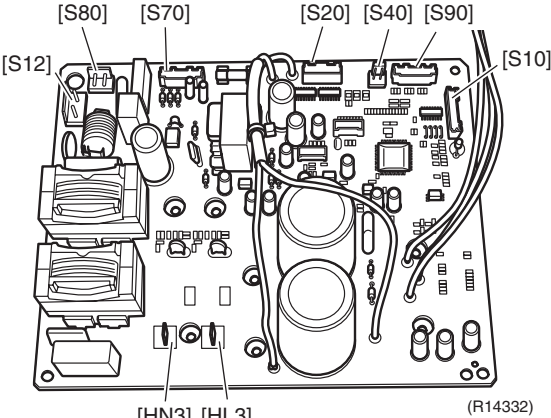
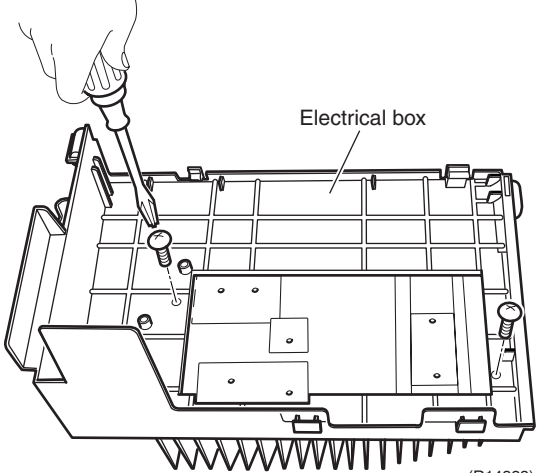
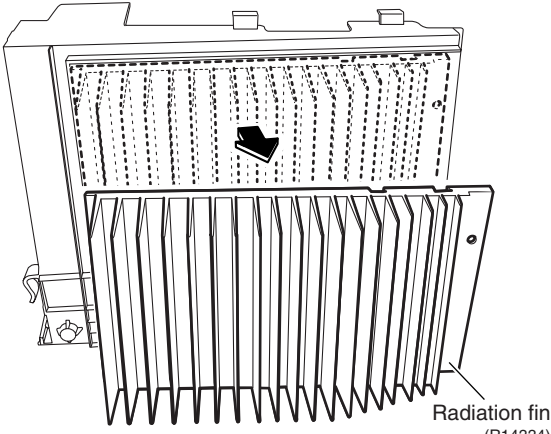
Step	Procedure	Points
1. Remove the main PCB.	 <p>(R14322)</p>	[S12]: for [HL4] [HN4] on filter PCB
2. Disconnect the connector [S10].	 <p>(R14323)</p>	[S10]: for [S11] on filter PCB
3. Disconnect the connectors [HN3] [HL3].	 <p>(R14324)</p>	[HL3] [HN3]: for [HL2] [HN2] on filter PCB

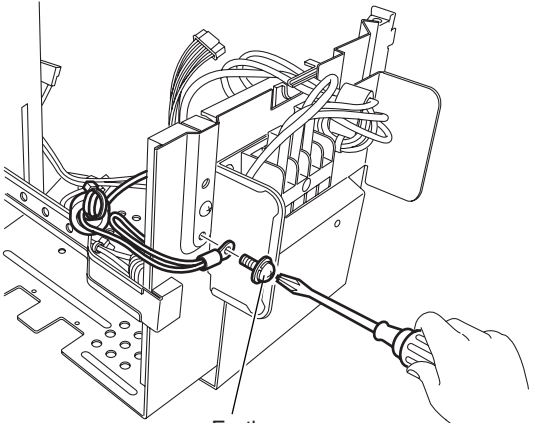
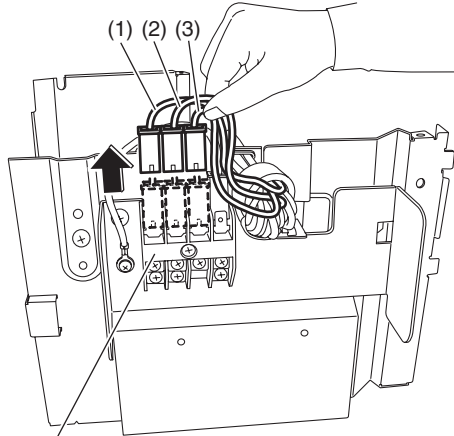
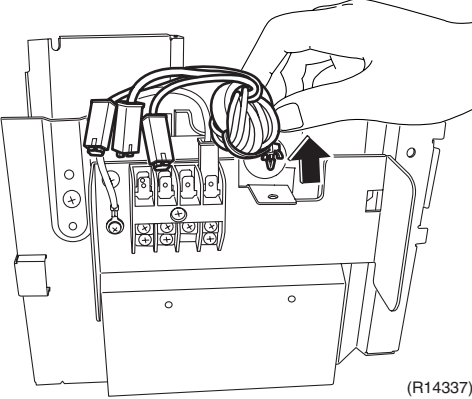
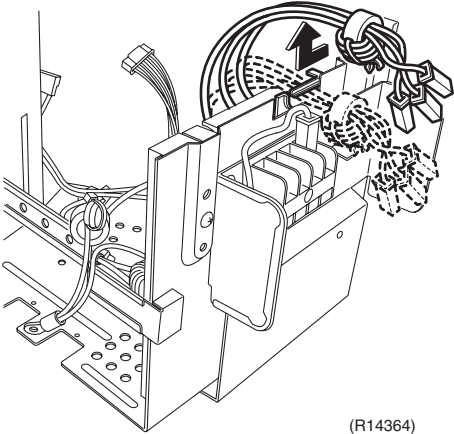
Step	Procedure	Points
4	Pull out the clamp.	<ul style="list-style-type: none"> <li>■ When reassembling, insert the clamp as below.</li> </ul>
5	Remove the 2 upper screws.	
6	Remove the 1 lower screw.	(R14325)
		(R14326)
		(R14327)



Step	Procedure	Points
7	Lift the main PCB ASSY.	
8	Unfasten the 4 hooks at the bottom.	
9	Remove the 8 screws.	

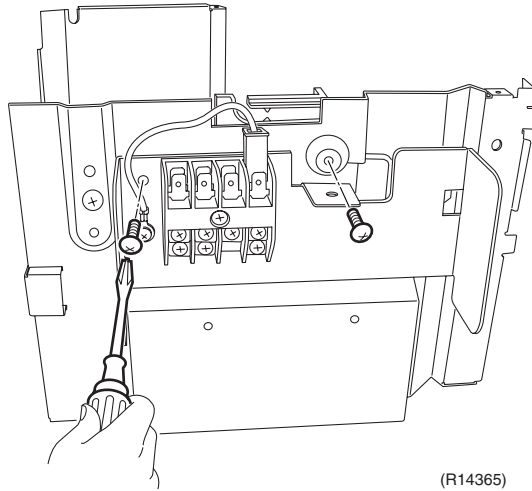


Step	Procedure	Points	
10	Unfasten the 2 hooks.		
11	Remove the main PCB.		<p>[S10]: filter PCB  [S12]: filter PCB  [S20]: electronic expansion valve coil  [S40]: overload protector  [S70]: fan motor  [S80]: four way valve coil  [S90]: thermistors  [HL3] [HN3]: filter PCB</p>
2.	Remove the radiation fin.		
1	Remove the 2 screws on the bottom of the electrical box.		
2	Remove the radiation fin.		

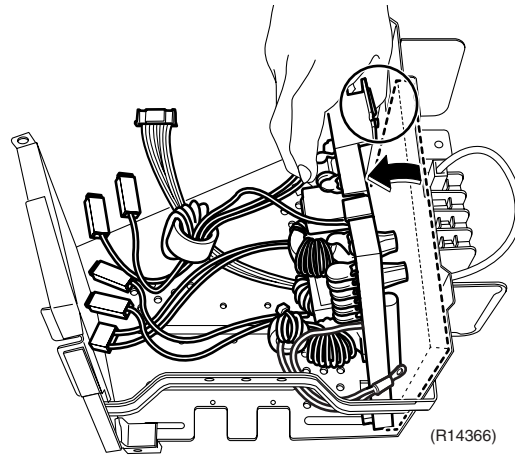
Step	Procedure	Points
3. Remove the filter PCB.		
1 Remove the earth screw.	 <p>Earth screw (R17491)</p>	
2 Pull out the terminals from the terminal board.	 <p>Terminal board (R14336)</p>	<p>(1): black                  (2): white                  (3): red</p>
3 Pull out the clamp.	 <p>(R14337)</p>	
4 Release the harnesses from the groove.	 <p>(R14364)</p>	



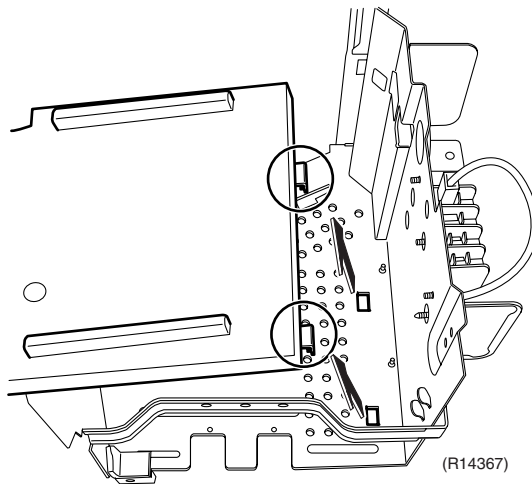
Step	Procedure	Points
5	Remove the 2 screws.	
6	Unfasten the 3 hooks of the filter PCB ASSY.	
7	Remove the 1 screw.	



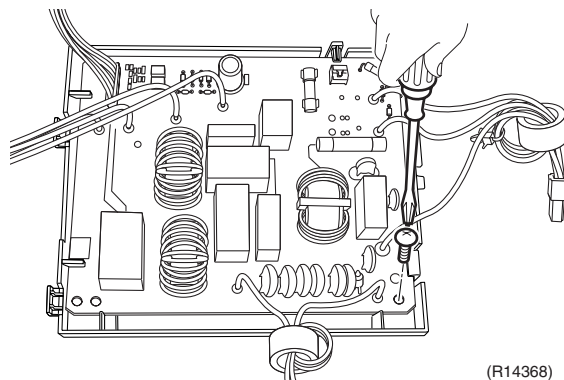
(R14365)



(R14366)

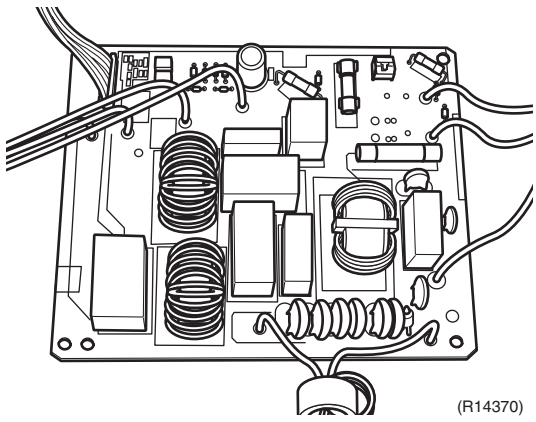
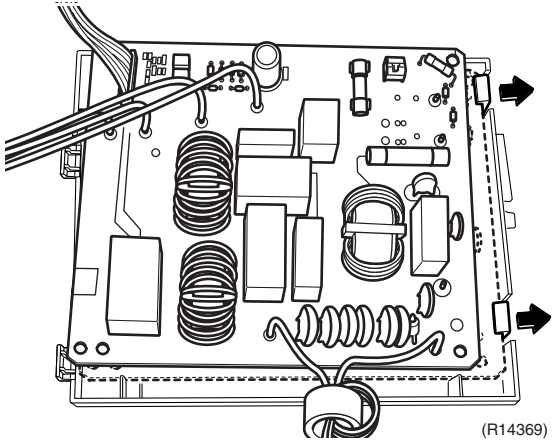


(R14367)



(R14368)

Step	Procedure	Points
8	Unfasten the 2 hooks.	
9	Remove the filter PCB.	

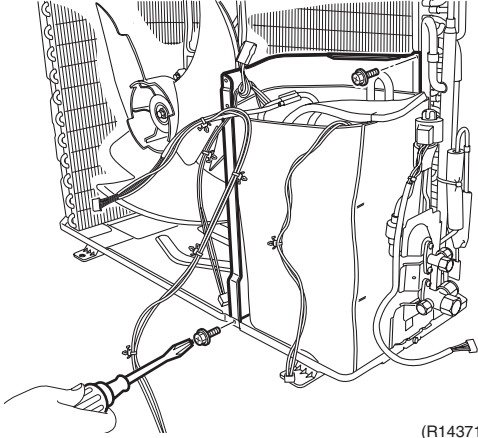
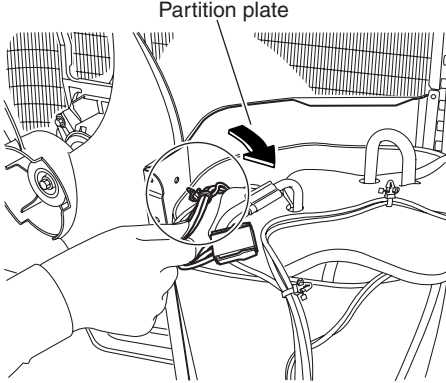
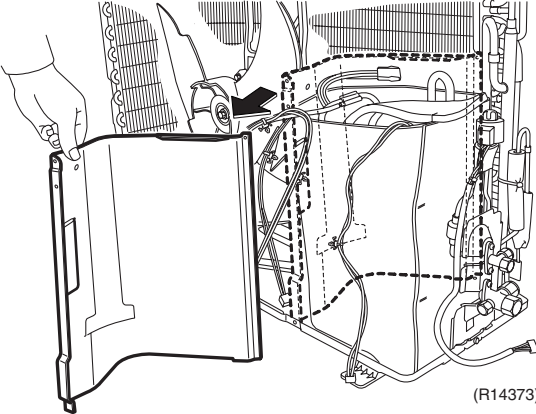


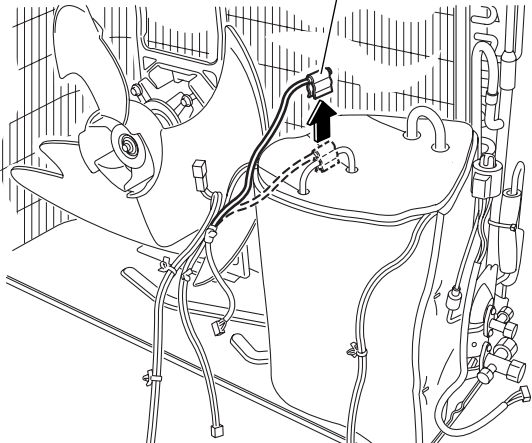
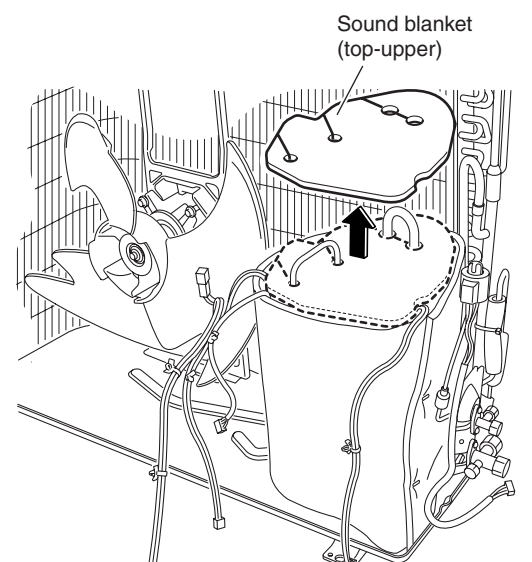
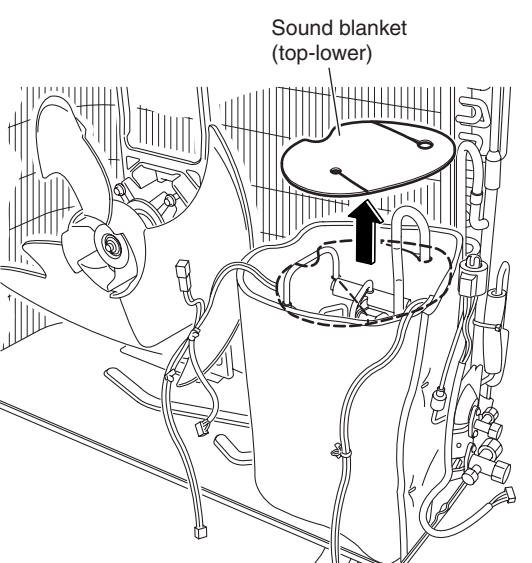
## 6. Removal of Sound Blankets

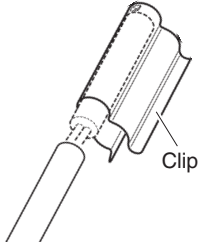
### Procedure



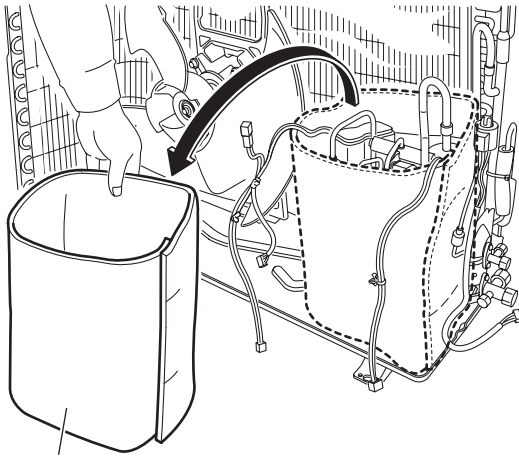
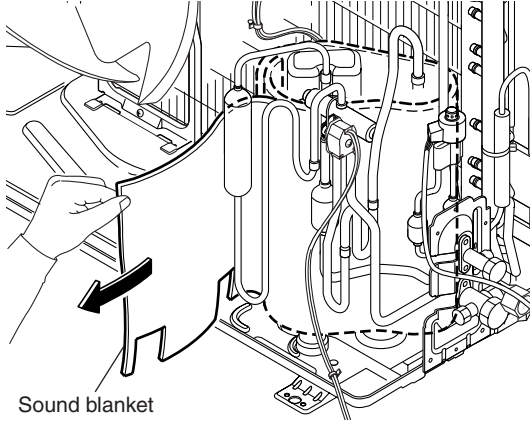
**Warning** Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1. Remove the partition plate.	 <p style="text-align: right;">(R14371)</p>	
2. Remove the 2 screws.	 <p style="text-align: right;">(R14372)</p>	
3. Pull out the clamp from the partition plate.	 <p style="text-align: right;">(R14373)</p> <p style="text-align: right;">(R14374)</p>	<p>■ When reassembling, insert the hook of bottom.</p>

Step	Procedure	Points
2.	Remove the sound blankets.	<ul style="list-style-type: none"> <li>■ Since the piping ports are torn easily, remove the sound blanket carefully.</li> <li>■ Be careful not to lose the clip for the thermistor.</li> </ul>
1	Release the discharge pipe temperature thermistor.	 <p style="text-align: right;">(R14338)</p>
2	Remove the sound blanket (top-upper).	 <p style="text-align: right;">(R14339)</p>
3	Remove the sound blanket (top-lower).	 <p style="text-align: right;">(R14346)</p>



(R12287)






Step	Procedure	Points
4	Remove the sound blanket (side-outer).	
	 <p data-bbox="536 707 671 757">Sound blanket (side-outer)</p> <p data-bbox="979 741 1046 763">(R14347)</p>	
5	Remove the sound blanket (side-inner).	
	 <p data-bbox="528 1200 663 1249">Sound blanket (side-inner)</p> <p data-bbox="979 1227 1046 1249">(R14348)</p>	

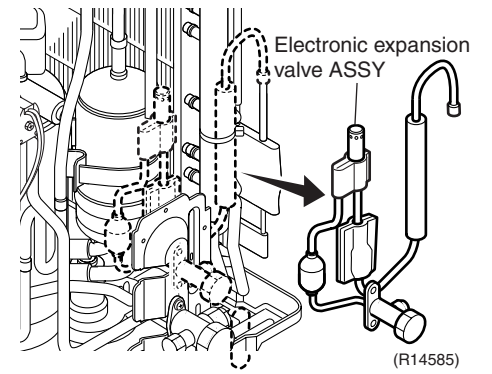
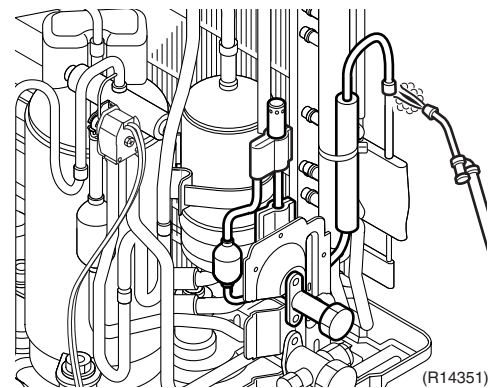
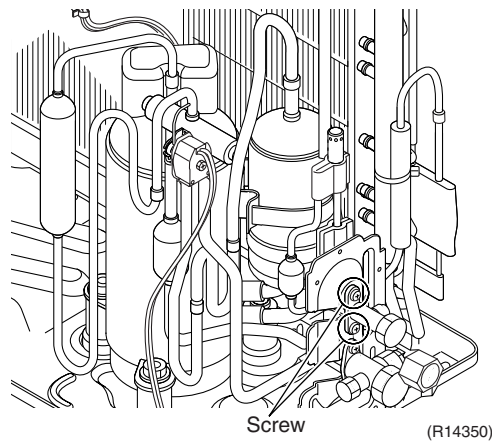
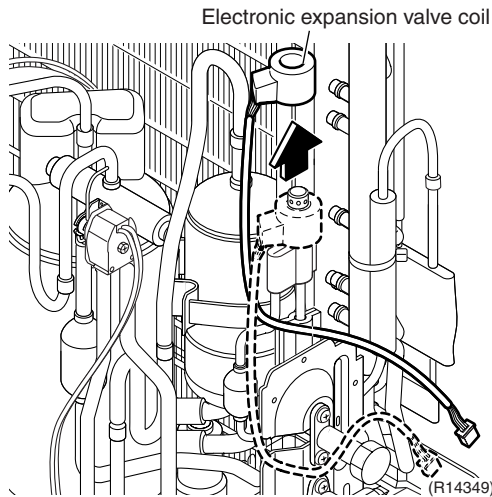
# 7. Removal of Electronic Expansion Valve ASSY

**Procedure**



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

Step	Procedure	Points
1	Pull out the electronic expansion valve coil.	
2	Remove the 2 screws.	<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>Caution</b> Never remove the electronic expansion valve because it contains plastic parts. They may melt with heat and cause operation failure. Replace the whole assembly.</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>Caution</b> Do not directly heat the electronic expansion valve. Wrap the electronic expansion valve with wet cloth and provide water so that the cloth does not dry. (Keep below 120°C.)</p>
3	Heat up the brazed part.	<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>
4	Remove the electronic expansion valve ASSY.	

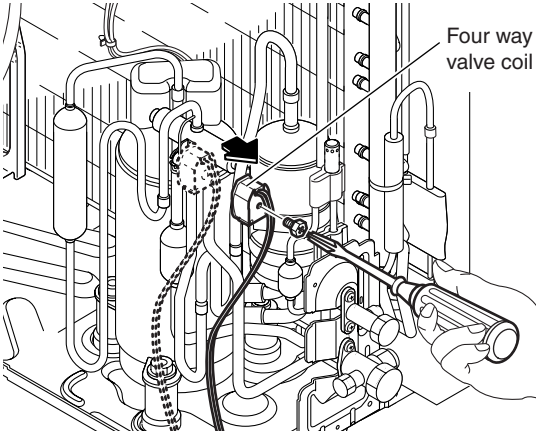
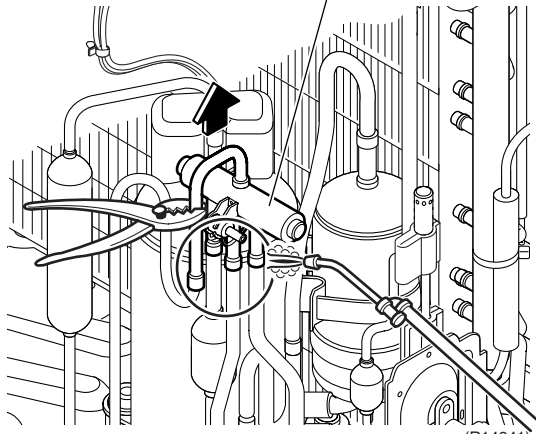


## 8. Removal of Four Way Valve

### Procedure



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

Step	Procedure	Points	
1	Remove the screw and remove the four way valve coil.	<ul style="list-style-type: none"> <li>■ The cooling only models have no four way valve coil.</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> <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>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> </ul>	
<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;">(R14340)</p>		
2	Heat up the brazed parts of the four way valve and disconnect.	 <p style="text-align: right;">(R14341)</p>	



# 9. Removal of Compressor

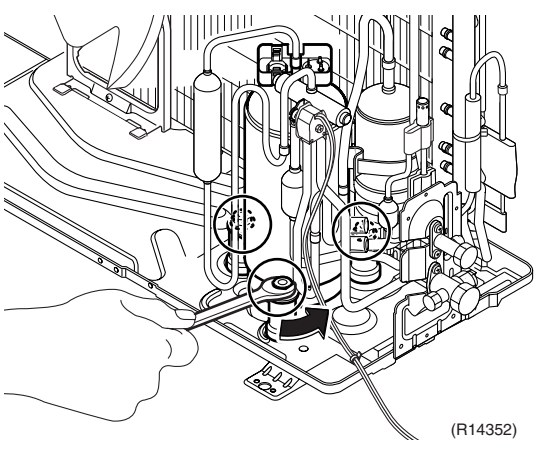
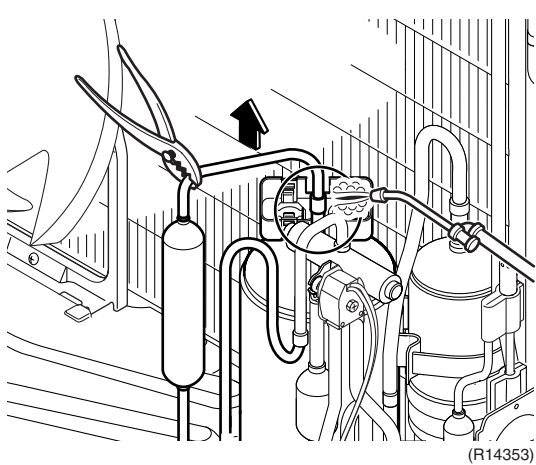
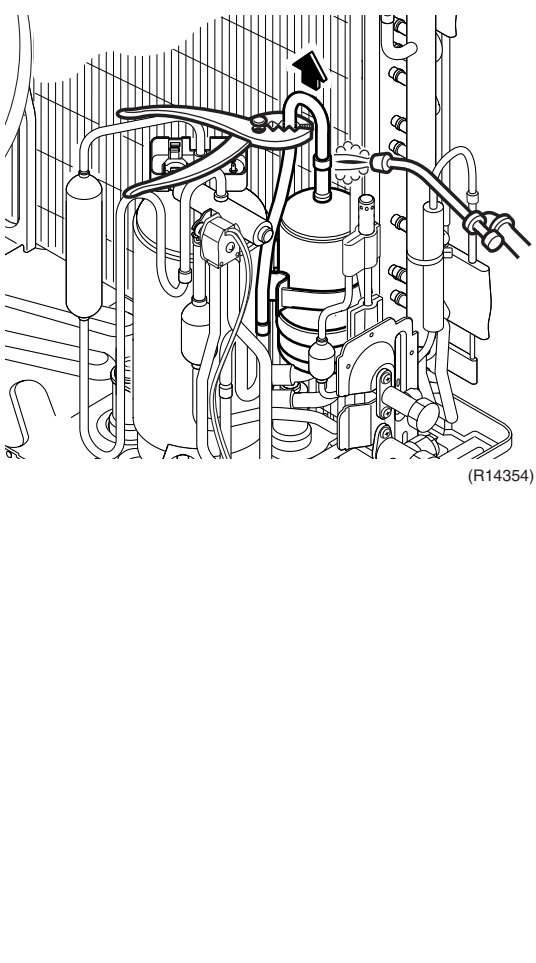
**Procedure**



**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 style="text-align: center;">Terminal cover</p> <p style="text-align: right;">(R14343)</p>	
2	Disconnect the compressor lead wires and the overload protector.	<p style="text-align: right;">(R14344)</p>	<p style="text-align: center;">Red (U)      Blue (W) Yellow (V)</p> <p style="text-align: right;">(R14377)</p>
3	Remove the protection bushing.	<p style="text-align: center;">Protection bushing</p> <p style="text-align: right;">(R14345)</p>	



Step	Procedure	Points	
4	Remove the 3 nuts of the compressor.	<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>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> <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>	
<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>(R14352)</p>		
5 6 7	5 Heat up the brazed part of the discharge side and disconnect. 6 Heat up the brazed part of the suction side and disconnect. 7 Lift the compressor up and remove it.		<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><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>(R14353)</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>(R14354)</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><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>			

# Revision History

Month / Year	Version	Revised contents
08/2012	Si001162	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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