




# REMOVAL PROCEDURE



SERVICE  
MANUAL

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

## 5.0/6.0/7.1 kW Class

-  Outdoor Unit
-  Inverter / Non-Inverter
-  Pair Type



# Service Manual

# Removal Procedure

## Outdoor Unit

### ●Cooling Only

RKS50E2V1B  
RKS60E2V1B

RKS50E3V1B  
RKS60E3V1B

RKS50F2V1B  
RKS60F2V1B

RKS50FVLT  
RKS60FVLT  
RKS71FVLT

RKS50FVM  
RKS60FVM  
RKS71FVM

RKS50FVMA  
RKS60FVMA

RN50E2V1B  
RN50E3V1B  
RN60E3V1B

### ●Heat Pump

RXS50E2V1B  
RXS60E2V1B

RXS50E3V1B  
RXS60E3V1B

RXS50F2V1B  
RXS60F2V1B

RXS50FAVMA

RXS71FMV2C

RXS50FVLT  
RXS60FVLT  
RXS71FVLT

RXS50FVMA  
RXS60FVMA

RYN50E3V1B  
RYN60E3V1B

RYN50FV1A  
RYN60FV1A

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**Note:**

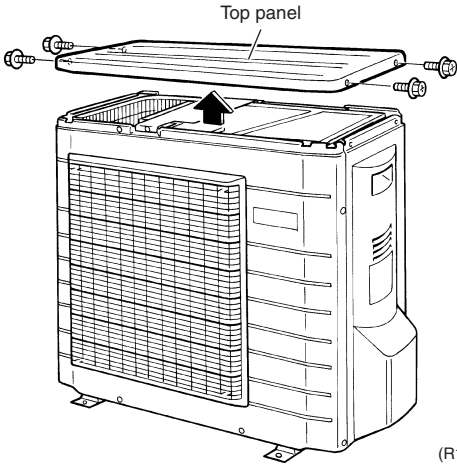
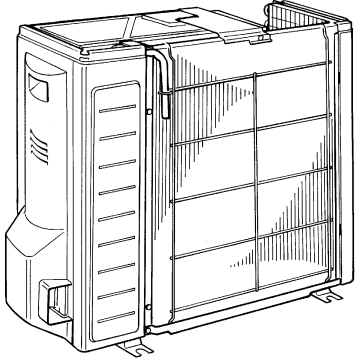
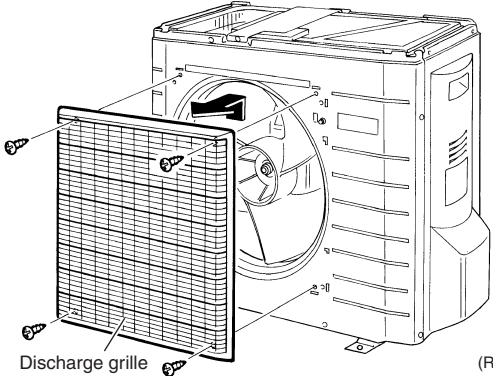
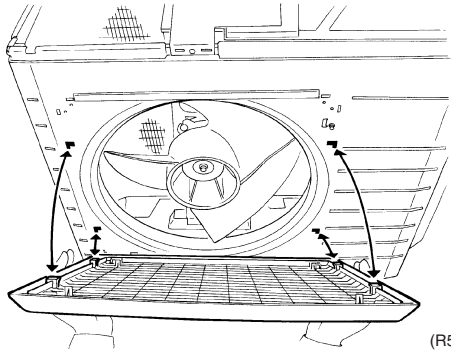
- ♦ The illustrations may be slightly different depending on the model.
- ♦ The illustrations are for heat pump models as representative.

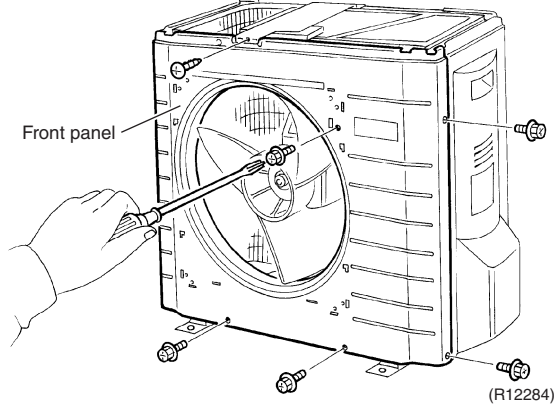
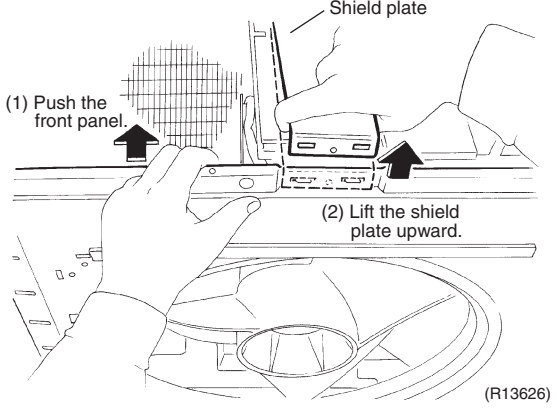
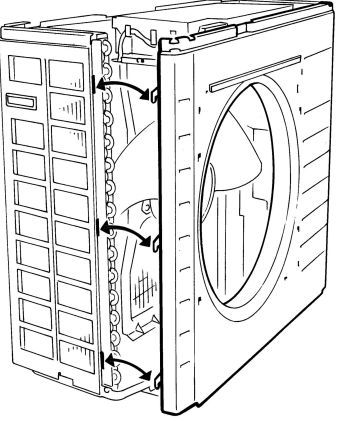
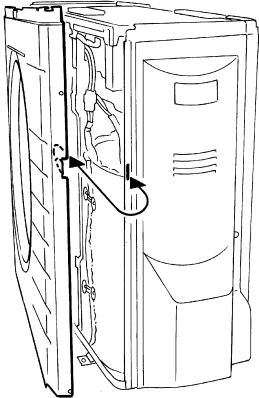
# 1. Removal of Outer Panels

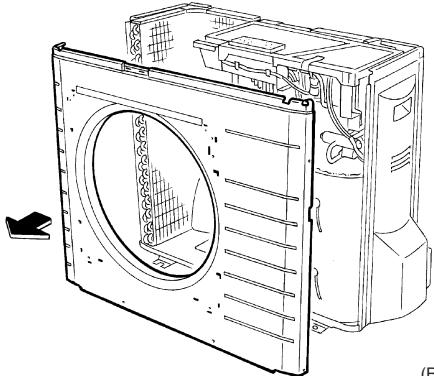
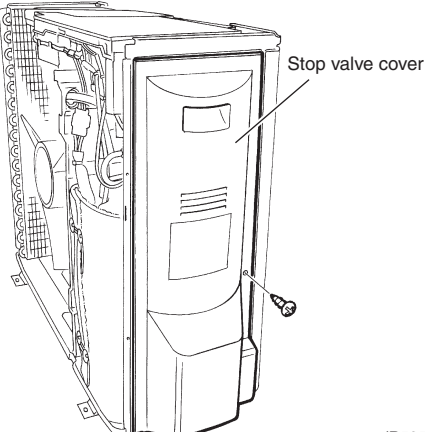
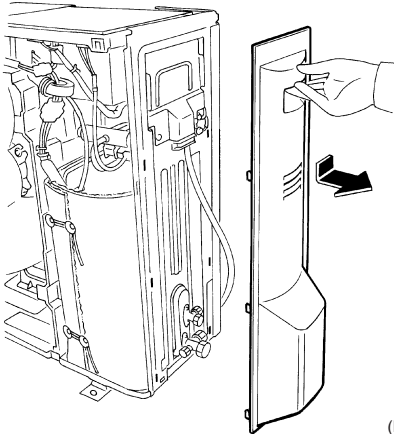
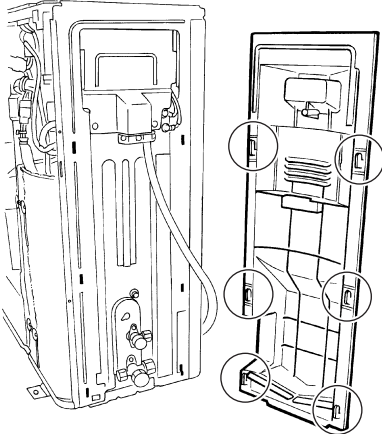
**Procedure**



**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 panels.</p> <p>1 Remove the 4 screws and lift the top panel.</p> <p>2 Remove the 4 screws and remove the discharge grille.</p>	 <p style="text-align: right;">(R12283)</p>  <p style="text-align: right;">(R12315)</p>  <p style="text-align: right;">(R5245)</p>  <p style="text-align: right;">(R5246)</p>	<ul style="list-style-type: none"> <li>■ Take care not to cut your finger by the fins of the outdoor heat exchanger.</li> <li>■ Slide the discharge grille upward and remove it.</li> <li>■ The discharge grille has 4 hooks.</li> </ul>

Step	Procedure	Procedure	Points
3	Remove the 6 screws of the front panel.		
4	Push the front panel and lift the shield plate to unfasten the hooks.		
5	Unfasten the left side hooks, and then the right side hook. Remove the front panel.	 	<ul style="list-style-type: none"> <li>■ Lift the front panel while pushing the left side panel inward.</li>   <li>■ Lift the front panel and unfasten the right side hook.</li> </ul>

Step	Procedure	Points
	 <p style="text-align: right;">(R5251)</p>	<ul style="list-style-type: none"> <li>■ When reassembling, fit the right side of the front panel first.</li> </ul>
<p>2. Remove the stop valve cover.</p>	<p>1 Remove the screw of the stop valve cover.</p>  <p style="text-align: right;">(R5252)</p> <p>2 Pull the stop valve cover downward to unfasten the hooks and remove it.</p>  <p style="text-align: right;">(R5253)</p>  <p style="text-align: right;">(R5254)</p>	<ul style="list-style-type: none"> <li>■ The stop valve cover has 6 hooks.</li> </ul>

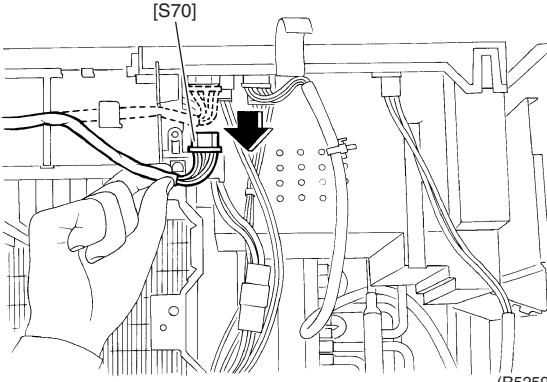
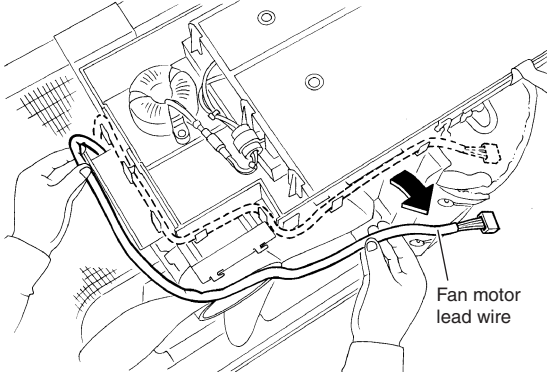
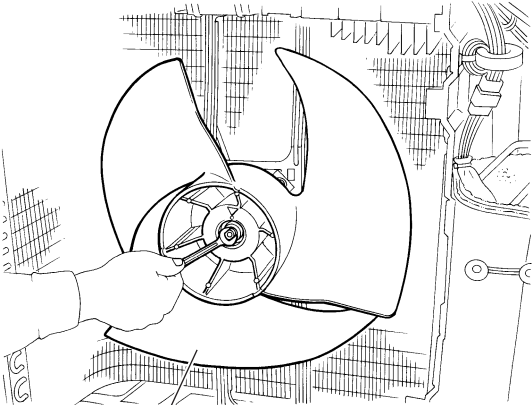
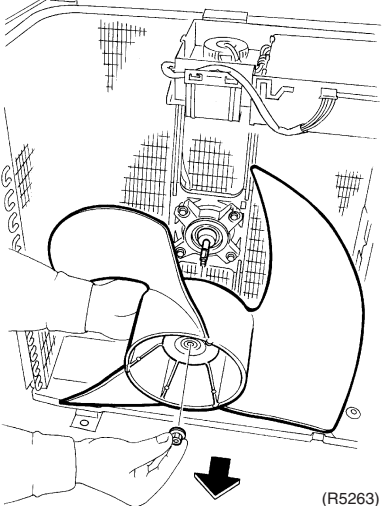
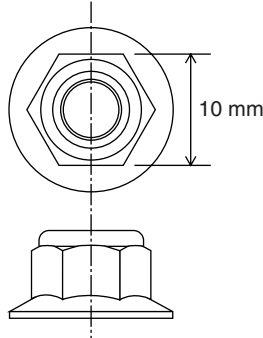
## 2. Removal of Outdoor Fan / Fan Motor

### Procedure

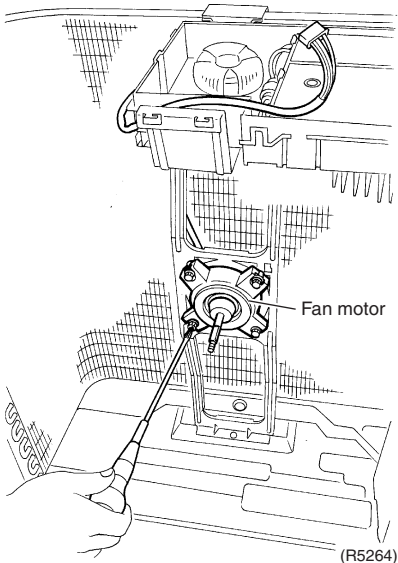
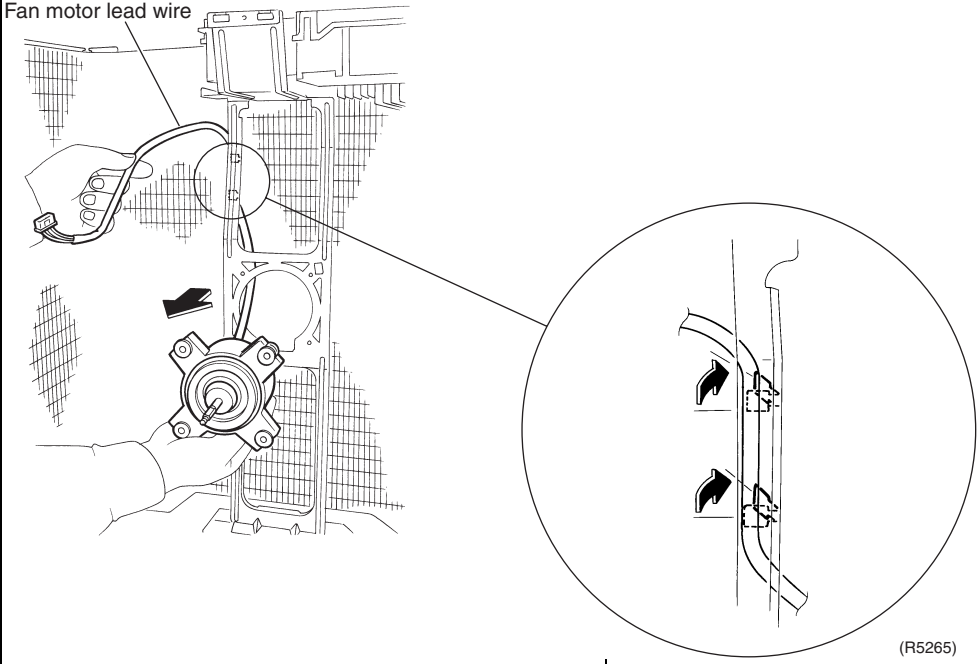


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Step	Procedure	Points
1. Remove the electrical box cover.	<p style="text-align: right;">(R5255)</p>	<p><b>Preparation</b></p> <ul style="list-style-type: none"> <li>■ Remove the top panel and the front panel according to the "Removal of Outer Panels".</li> <li>■ This procedure is not necessary to remove the outdoor fan only.</li> </ul>
2. Unfasten the 2 hooks and remove the shield plate.	<p style="text-align: right;">(R12029)</p>	
3. Unfasten the 4 hooks of the electrical box cover and remove it.	<p style="text-align: right;">(R5257)</p>	
	<p style="text-align: right;">(R5258)</p>	

Step	Procedure	Points
<p>2. Remove the fan motor.</p> <p>1 Disconnect the connector for the fan motor [S70].</p> <p>2 Release the fan motor lead wire from the 7 hooks.</p> <p>3 Remove the nut of the outdoor fan.</p>	 <p>(R5259)</p>  <p>Fan motor lead wire</p> <p>(R5260)</p>  <p>Outdoor fan</p> <p>(R5262)</p>  <p>(R5263)</p>	<p>■ Nut size: M6</p>  <p>10 mm</p> <p>(R12236)</p> <p>■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft.</p>



Step	Procedure	Points
<p>4 Remove the 2 lower screws from the fan motor first.</p> <p>5 Then, remove the 2 upper screws.</p>	 <p style="text-align: right;">(R5264)</p>	<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 down or fall and cause injury because its center of gravity is shifted to the front.</li> </ul>
<p>6 Release the fan motor lead wire from the 2 hooks and pull the fan motor out.</p>	 <p style="text-align: right;">(R5265)</p>	<ul style="list-style-type: none"> <li>■ 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.</li> </ul>

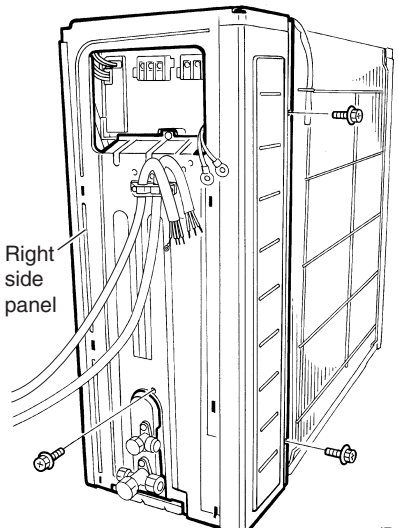
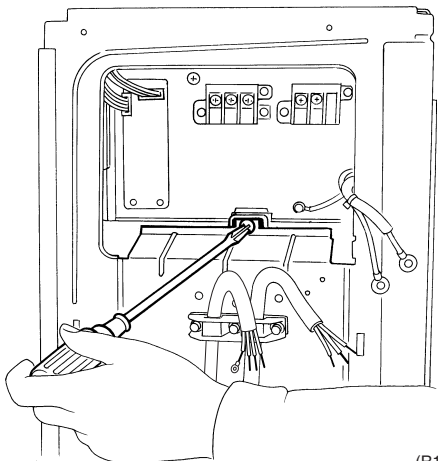
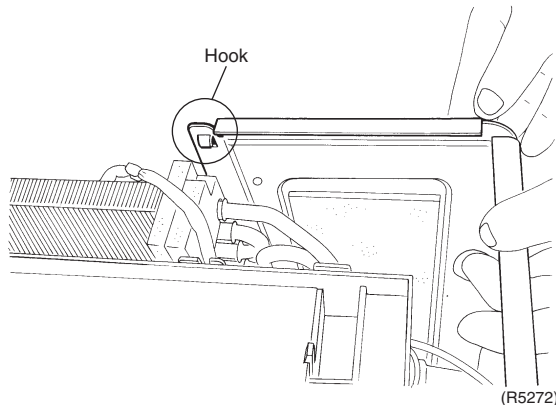
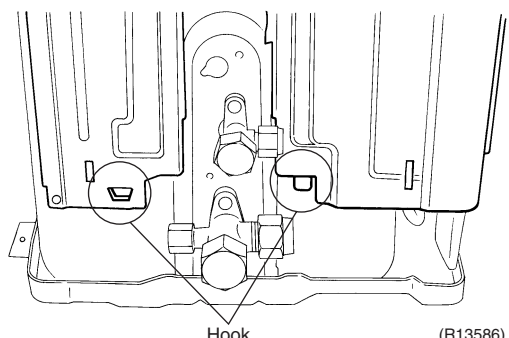
### 3. Removal of Electrical Box

**Procedure**

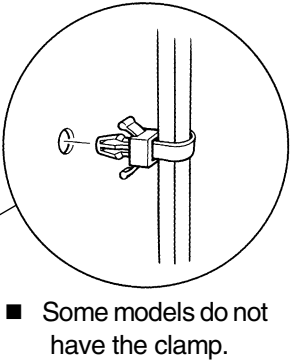
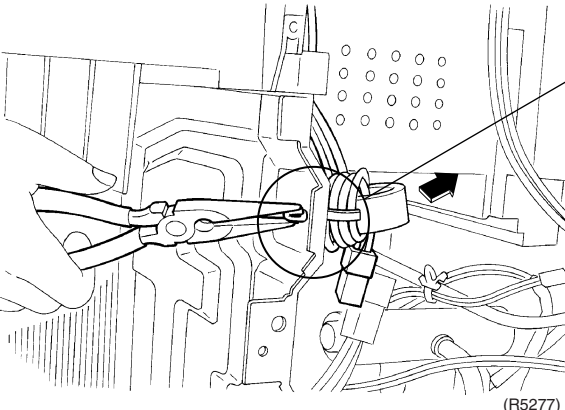
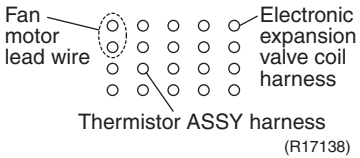
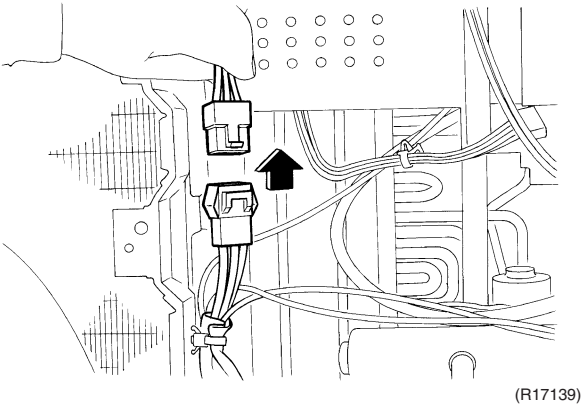
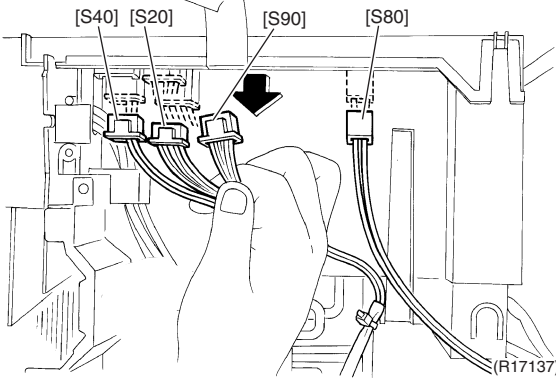
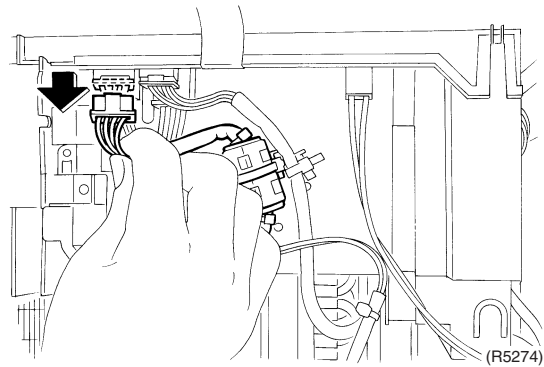


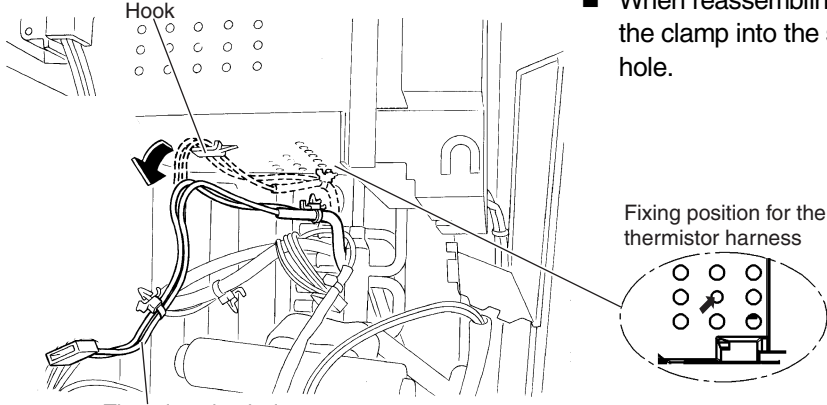
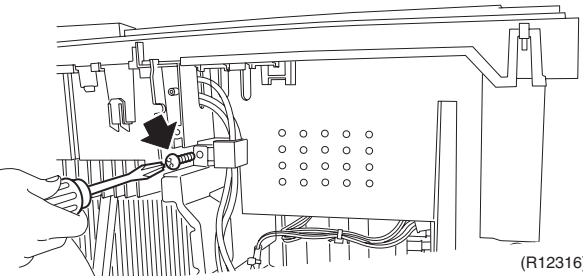
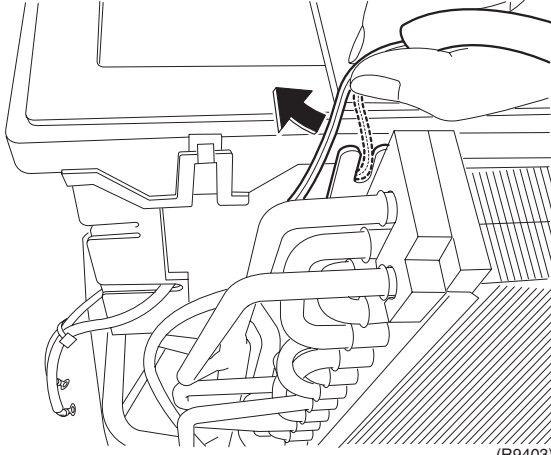
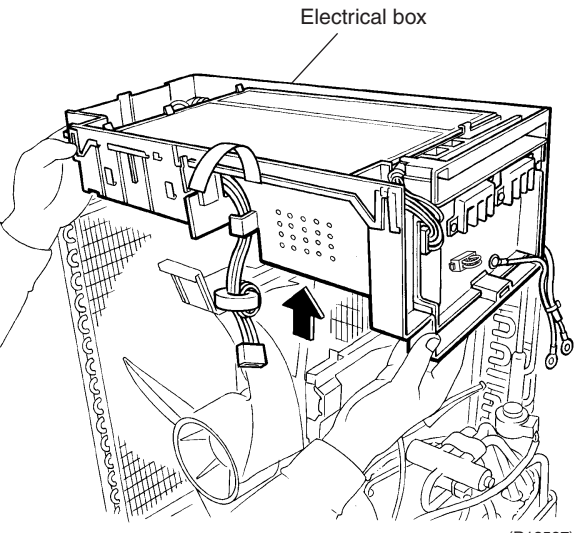
**Warning** Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Remove the 2 screws of 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> </ul>
	<p style="text-align: right;">Shield plate (R17060)</p>	
2	Slide the shield plate upward to unfasten the hook on the bottom left, and then remove the shield plate.	
	<p style="text-align: center;">Hook (R17021)</p>	
3	Remove all the screws of the terminal boards and of the earth wires. Disconnect the power supply wire and the connection wire.	
	<p style="text-align: right;">Earth wire (R17239)</p> <p style="text-align: center;">Connection wire      Power supply wire</p>	
4	Disconnect the 2 earth wires.	
	<p style="text-align: right;">Earth wire (R17240)</p>	

Step	Procedure	Points
5	<p>Remove the 3 screws of the right side panel.</p>  <p style="text-align: right;">(R17241)</p>	
6	<p>Remove the screw of the electrical box.</p>  <p style="text-align: right;">(R17242)</p>	
7	<p>Unfasten the hooks and remove the right side panel.</p>  <p style="text-align: right;">(R5272)</p>  <p style="text-align: right;">(R13586)</p>	<p>■ When reassembling, insert the upper hook and the 2 lower hooks back into place.</p>

Step	Procedure	Points
8	Disconnect the relay harness for fan motor.	<ul style="list-style-type: none"> <li>71 class only.</li> </ul>
9	Disconnect the connectors of the front side.	<p>[S20]: electronic expansion valve coil                      [S40]: overload protector                      [S80]: four way valve coil                      [S90]: thermistors</p>
10	Disconnect the relay connector for the compressor.	<ul style="list-style-type: none"> <li>The cooling only models do not have the harness for [S80].</li> <li>When reassembling, insert each clamp into the hole as below.</li> </ul>
11	Release the clamp by pliers.	<ul style="list-style-type: none"> <li>71 class only.</li> </ul>



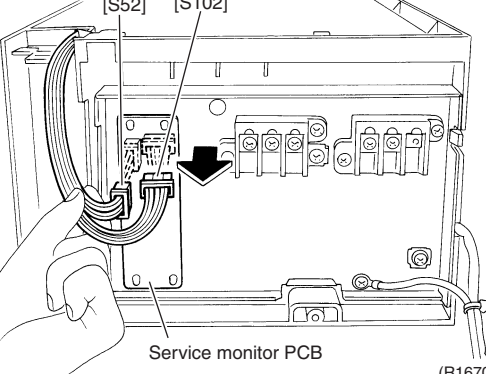
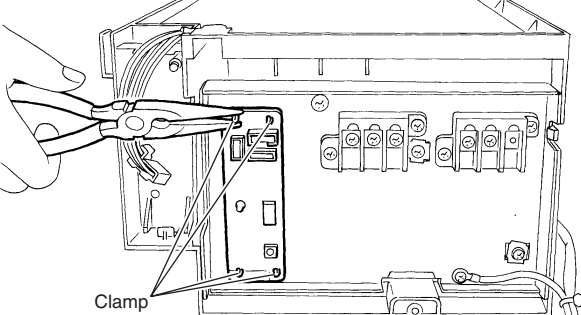
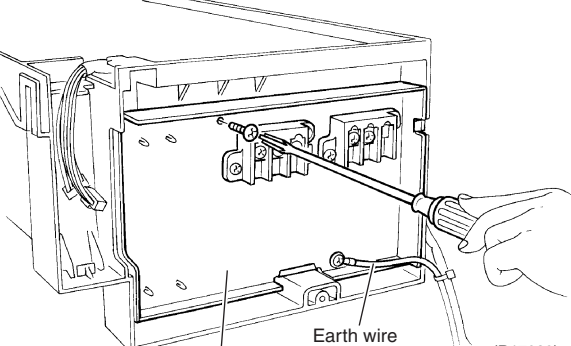
Step	Procedure	Procedure	Points
12	Detach the clamp and release the thermistor lead wires from the hook.		<ul style="list-style-type: none"> <li>When reassembling, insert the clamp into the small hole.</li> </ul>
13	Remove the screw.		
14	Release the harness of the outdoor temperature thermistor from the hook.		
15	Lift and remove the electrical box.		

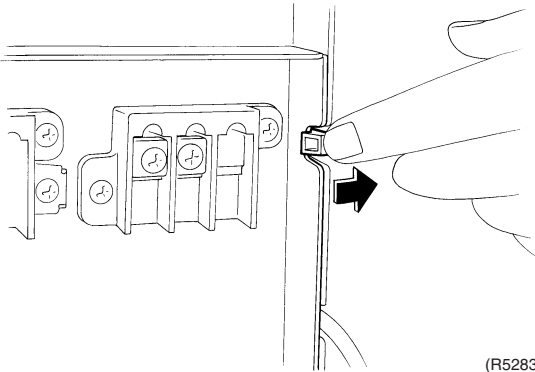
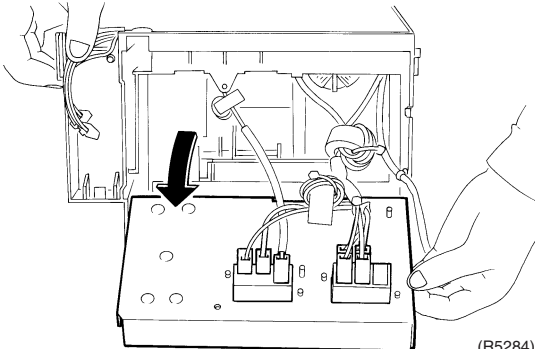
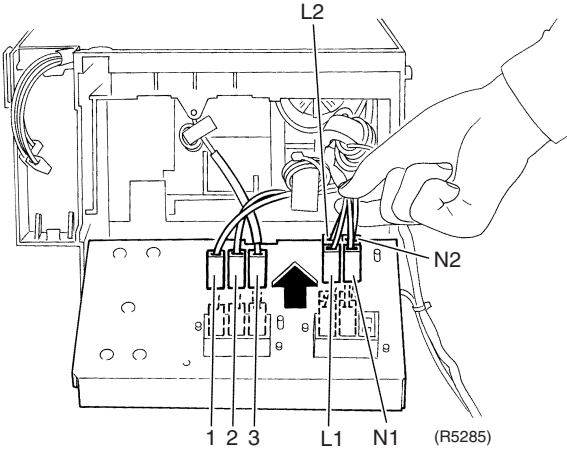
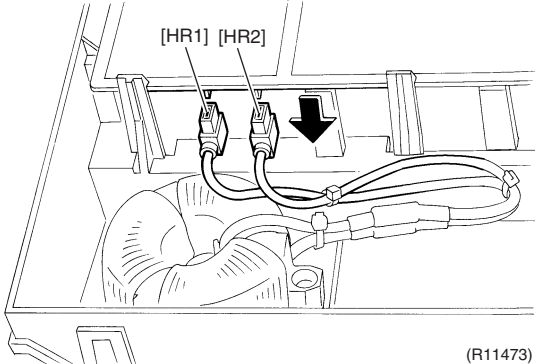
# 4. Removal of PCBs

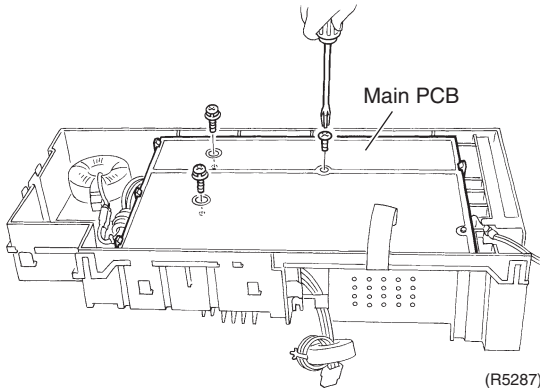
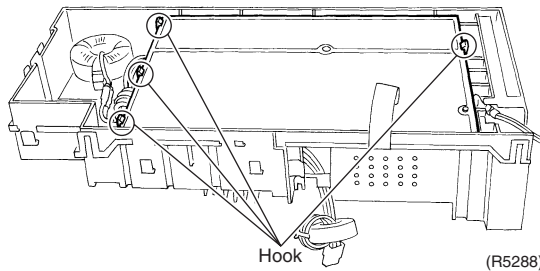
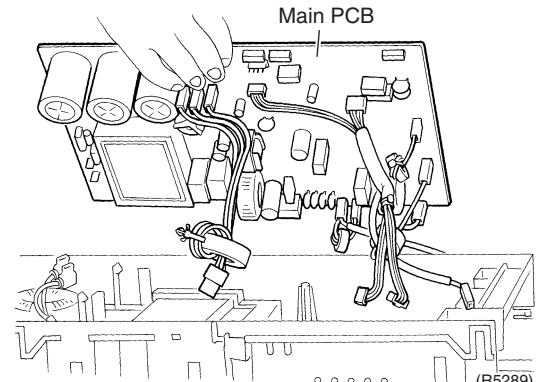
**Procedure**



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Step	Procedure	Points
1	Disconnect the connectors [S52] [S102] from the service monitor PCB.	<p><b>Preparation</b></p> <ul style="list-style-type: none"> <li>Remove the electrical box according to the "Removal of Electrical Box".</li> </ul>
2	Detach the 4 clamps with pliers and remove the service monitor PCB.	 
3	Remove the screws of the terminal board and the earth wire.	

Step	Procedure	Points
4	<p>Unfasten the hook on the right.</p>  <p>(R5283)</p>	
5	<p>Open the terminal board.</p>  <p>(R5284)</p>	
6	<p>Disconnect the harnesses.</p>  <p>(R5285)</p>	<p>1: Black                  2: White                  3: Red                  L1: Black                  L2: Brown                  N1: White                  N2: Blue</p>
7	<p>Disconnect the 2 connectors for the reactor [HR1] [HR2].</p>  <p>(R11473)</p>	

Step	Procedure	Points
8	<p>Remove the 3 screws of the main PCB.</p>  <p>(R5287)</p>	
9	<p>Unfasten the 4 hooks.</p>  <p>(R5288)</p>	
10	<p>Lift up and remove the main PCB.</p>  <p>(R5289)</p>	

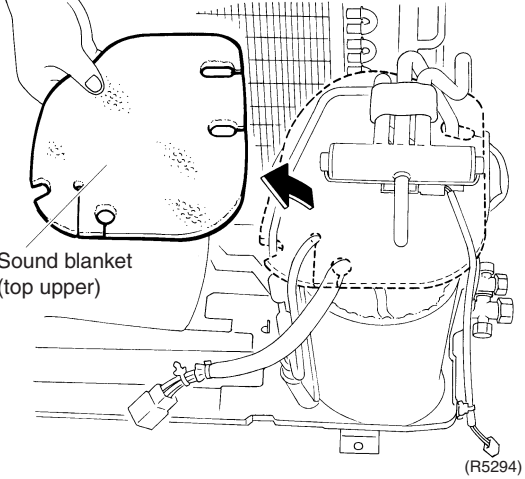
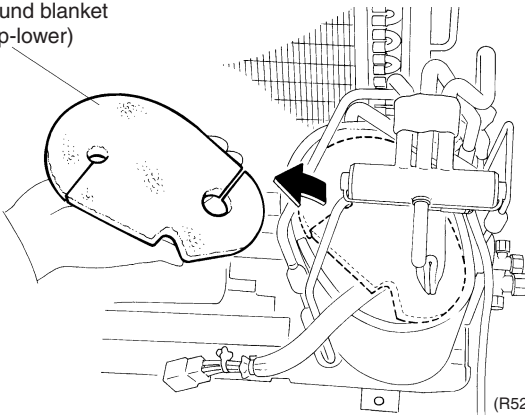
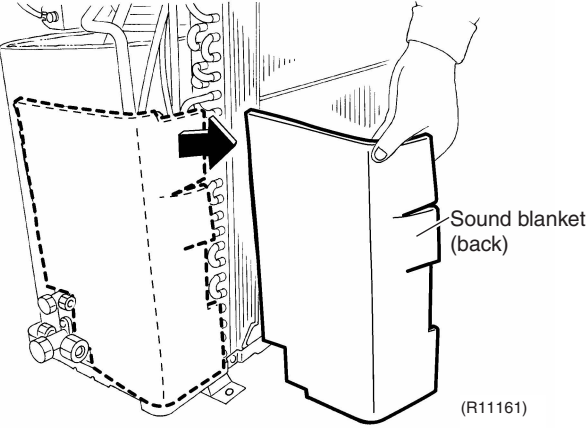


## 5. Removal of Sound Blankets / Thermistors

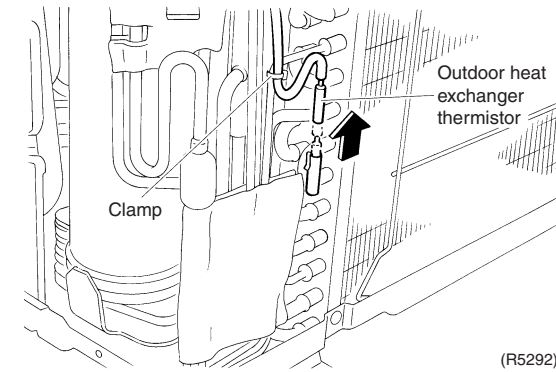
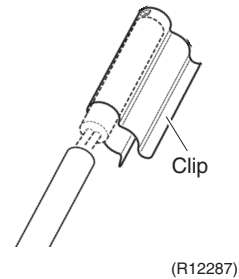
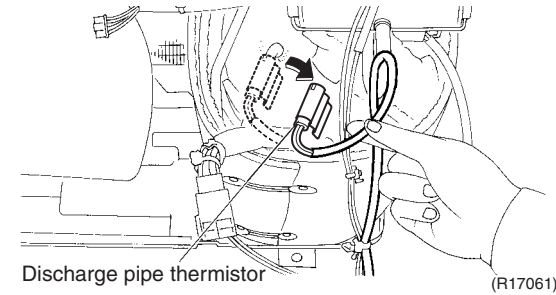
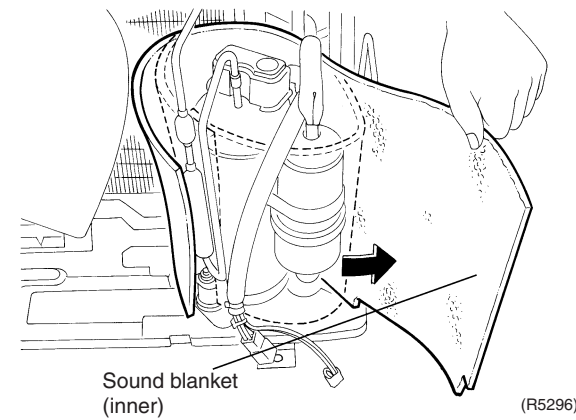
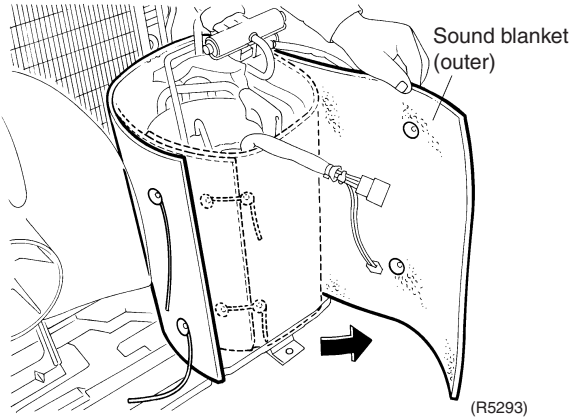
### Procedure



**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 sound blanket (top upper).		
2	Remove the sound blanket (top lower).		
3	Remove the sound blanket (back).		

Step	Procedure	Points
4	Remove the sound blanket (outer).	<ul style="list-style-type: none"> <li>Since the piping ports are torn easily, remove the sound blankets carefully.</li> </ul>
5	Remove the sound blanket (inner).	
6	Release the discharge pipe thermistor.	<ul style="list-style-type: none"> <li>Be careful not to lose the clip for the thermistor.</li> </ul>
7	Cut the clamp and pull out the outdoor heat exchanger thermistor.	

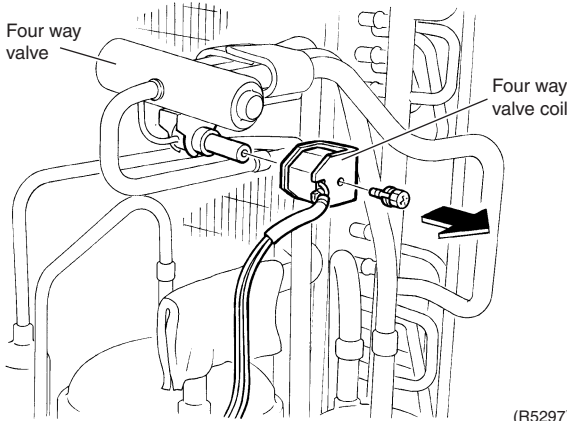



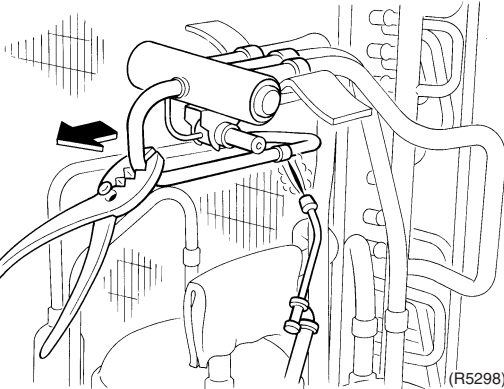
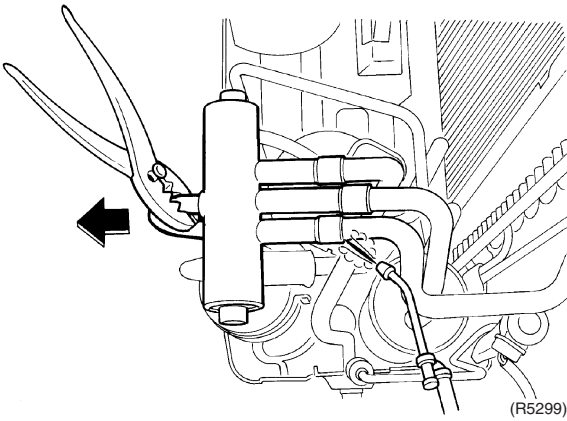


## 6. Removal of Four Way Valve

### Procedure



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

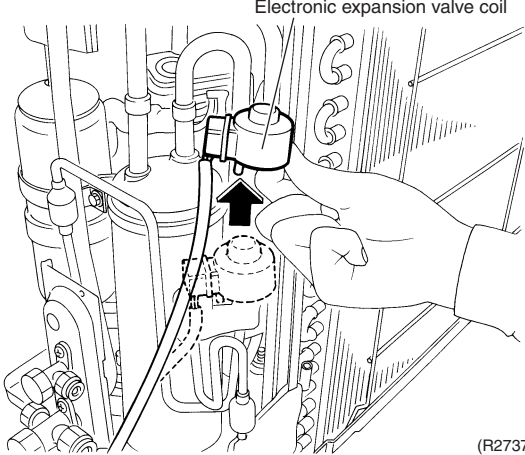
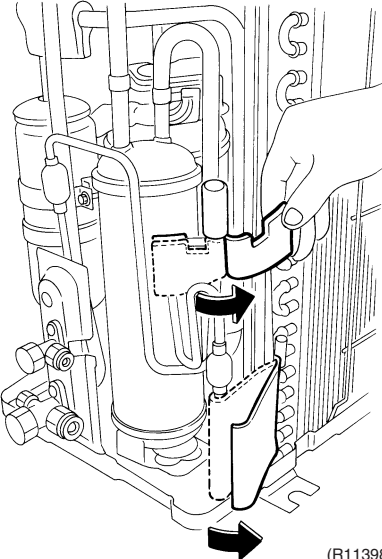
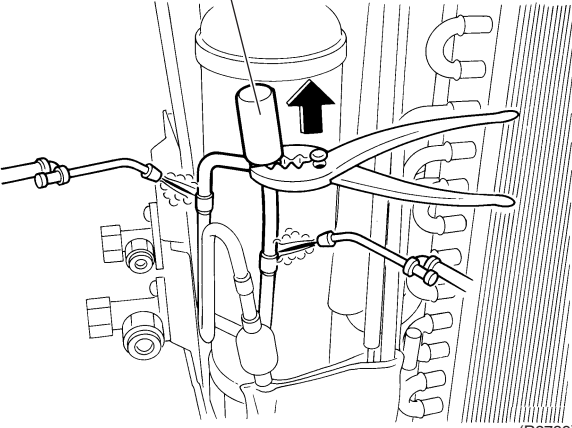
Step	Procedure	Points
1	<p>Remove the screw and remove the four way valve coil.</p>  <p>(R5297)</p>	<ul style="list-style-type: none"> <li>■ The cooling only models do not have a four way valve coil.</li> <li> <b>Warning</b> Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</li> <li> <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.)</li> <li> <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.</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>(R5298)</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>
2	<p>Heat up the brazed part of the four way valve and disconnect.</p> <p>3 Heat up every brazed part in turn and disconnect.</p>  <p>(R5299)</p>	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>■ Never use a metal saw to cut pipes because the sawdust may enter 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>

# 7. 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.

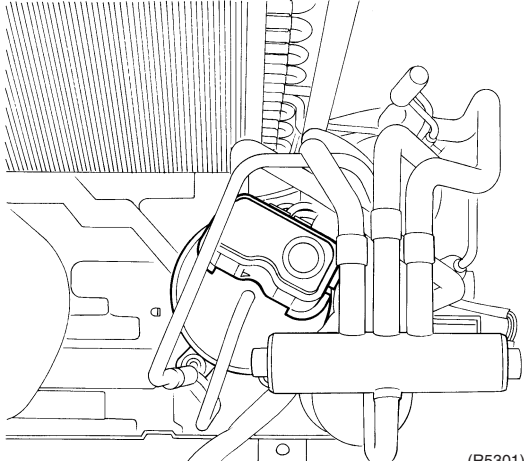
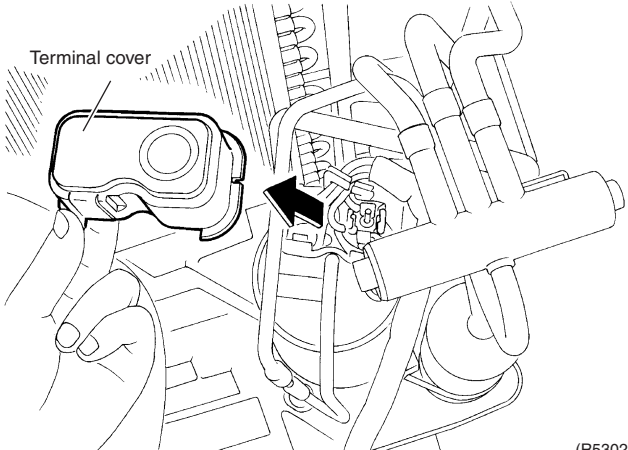
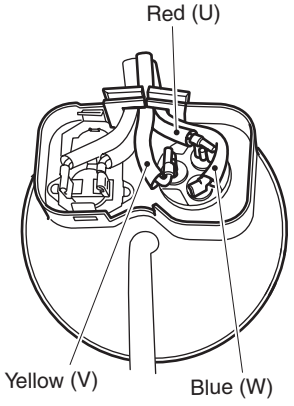
Step	Procedure	Points
1	<p>Pull out the electronic expansion valve coil.</p>  <p style="text-align: right;">(R2737)</p>	
2	<p>Remove the sheets of putty.</p>  <p style="text-align: right;">(R11398)</p>	
3	<p>Heat up the 2 brazed parts of the electronic expansion valve and remove it.</p>  <p style="text-align: right;">(R2739)</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>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>

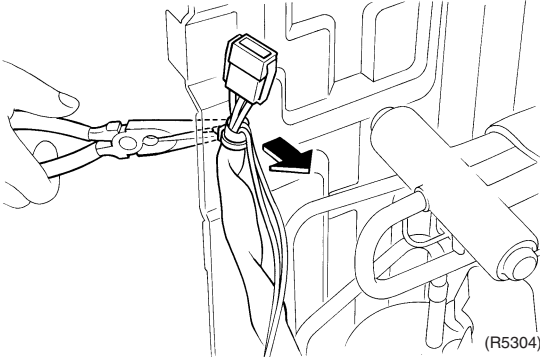
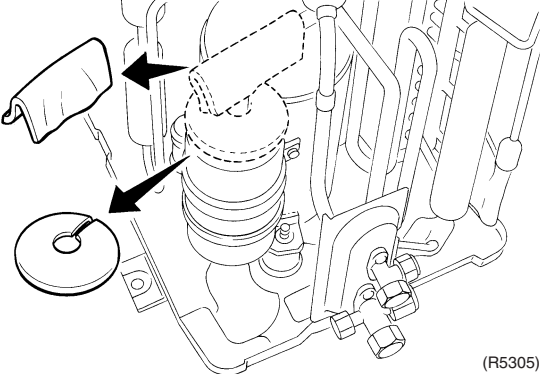
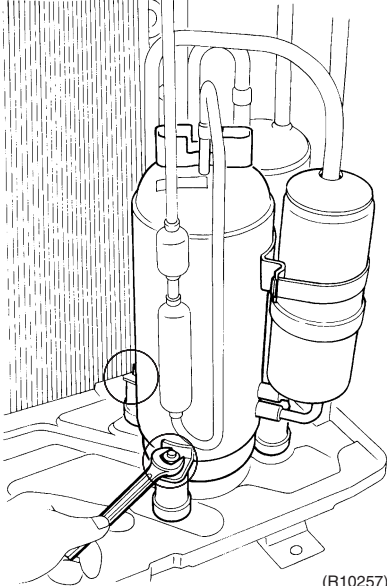
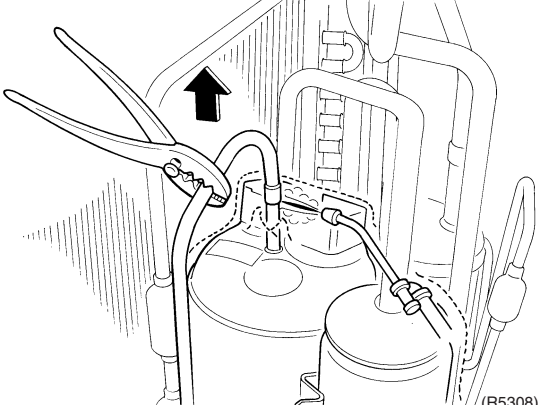
## 8. Removal of Compressor

### Procedure

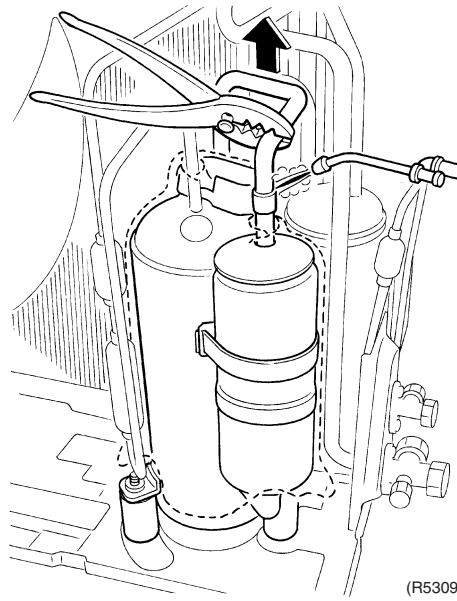


**Warning** Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Procedure	Points
1	Remove the terminal cover.	 <p>(R5301)</p>  <p>Terminal cover</p> <p>(R5302)</p>	
2	Disconnect the lead wires of the compressor.	 <p>Red (U)</p> <p>Yellow (V)</p> <p>Blue (W)</p> <p>(R12436)</p>	

Step	Procedure	Points
3	<p>Release the clamp with pliers to detach the compressor lead wires.</p>  <p>(R5304)</p>	
4	<p>Remove the putty.</p>  <p>(R5305)</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>		
5	<p>Remove the 2 nuts of the compressor.</p>  <p>(R10257)</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>
6	<p>Heat up the brazed part of the discharge side and disconnect it.</p>  <p>(R5308)</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>

Step	Procedure	Points
7	Heat up the brazed part of the suction side and disconnect it.	<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>
8	Lift the compressor up and remove it.	<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>■ Never use a metal saw to cut pipes because the sawdust may enter 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>



# Revision History

Month / Year	Version	Revised contents
07 / 2013	Si00-773	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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