


REMOVAL PROCEDURE



SERVICE
MANUAL

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

2.0/2.5/3.0/3.5 kW Class

-  Outdoor Unit
-  Inverter
-  Pair Type



Service Manual

Removal Procedure

Outdoor Unit

●Cooling Only

RK20GV1B
RK25GV1B
RK35GV1B

RK20GVLT
RK25GVLT
RK30GVLT

●Heat Pump

ARX20GV1B
ARX25GV1B
ARX35GV1B

RX20GV1B
RX25GV1B
RX35GV1B

RX20GVLT
RX25GVLT
RX30GVLT

Table of Contents

1. Removal of Outer Panels	2
2. Removal of Outdoor Fan / Fan Motor	4
3. Removal of Electrical Box / PCBs	6
4. Removal of Sound Blankets	14
5. Removal of Electronic Expansion Valve ASSY	16
6. Removal of Four Way Valve	17
7. Removal of Compressor	19



Note:

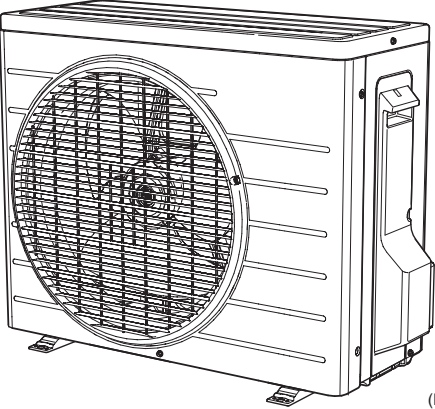
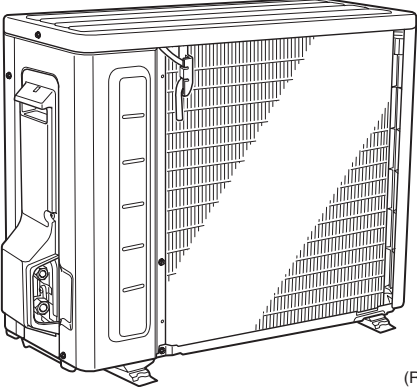
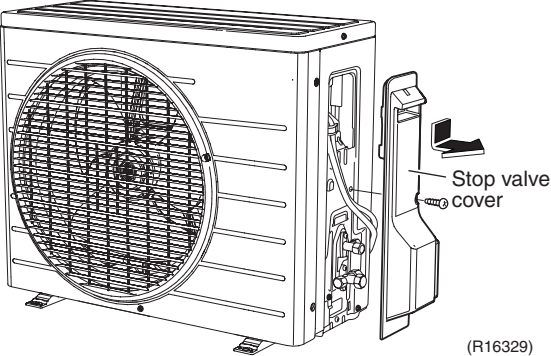
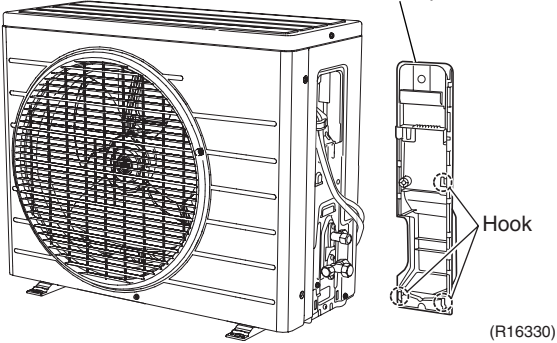
- The illustrations may be slightly different depending on the model.
- The illustrations are for heat pump models as representative.

1. Removal of Outer Panels

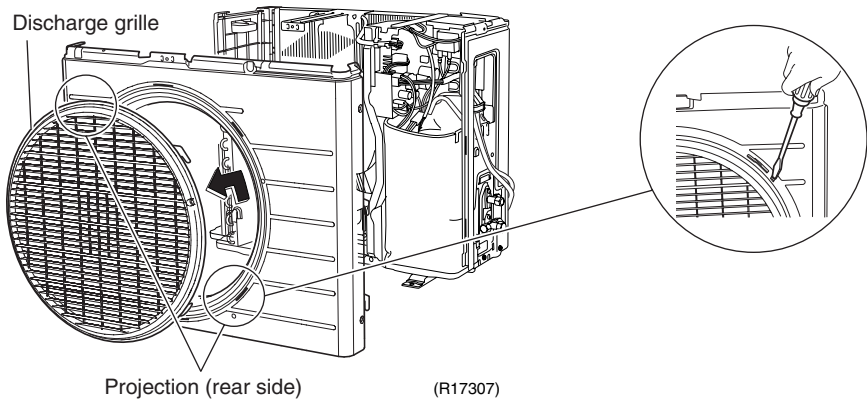
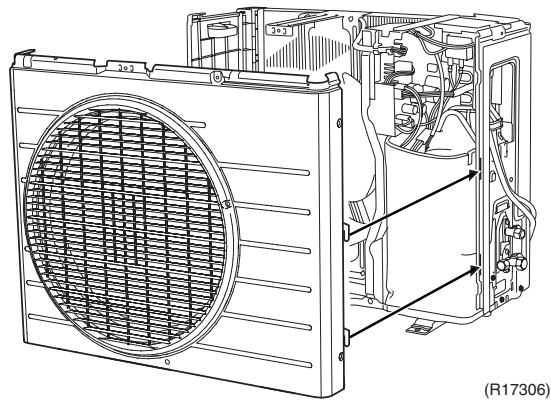
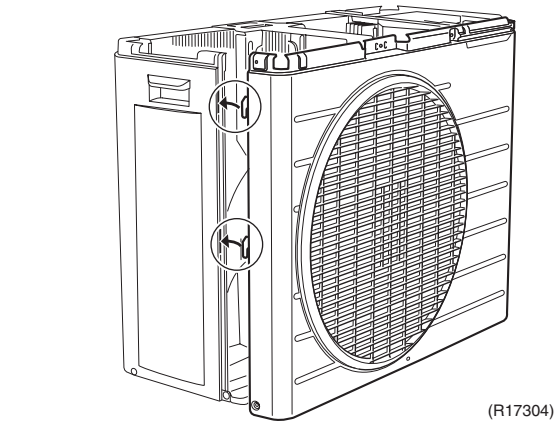
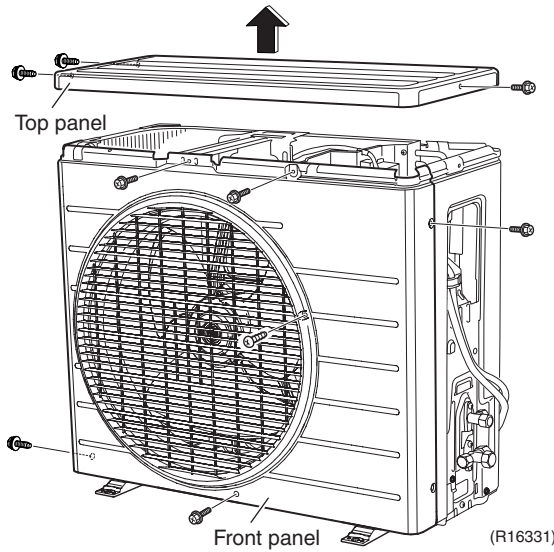
Procedure



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

Step	Procedure	Points
<p>1. Appearance features</p>	 <p>(R10742)</p>  <p>(R14768)</p>	<ul style="list-style-type: none"> ■ Take care not to cut your finger by the fins of the outdoor heat exchanger.
<p>2. Remove the panels.</p> <p>1 Remove the screw of the stop valve cover. Pull down the stop valve cover and remove it.</p>	 <p>(R16329)</p>  <p>(R16330)</p>	<ul style="list-style-type: none"> ■ The stop valve cover is united with the shield plate. ■ When reassembling, make sure to fit the 3 hooks.

Step	Procedure	Points
2	Remove the 3 screws (right: 1 screw, left: 2 screws) and remove the top panel.	
3	Remove the 6 screws of the front panel.	
4	Lift up the left side and unfasten the hooks.	
5	Unfasten the right side hooks and remove the front panel.	
6	The discharge grille has 2 projections to prevent its rotation. Press the projection from the rear side and rotate the discharge grille to remove it.	

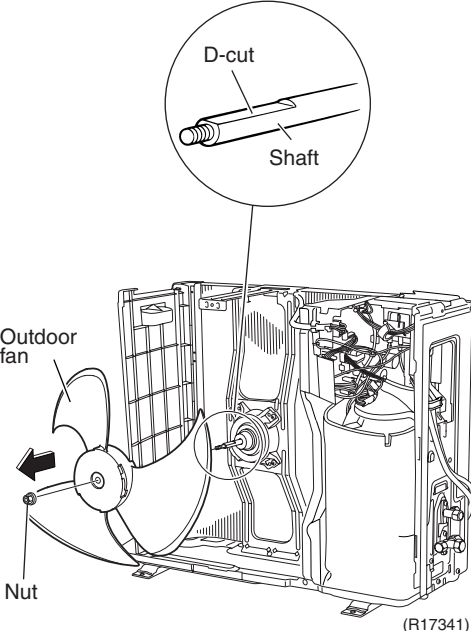
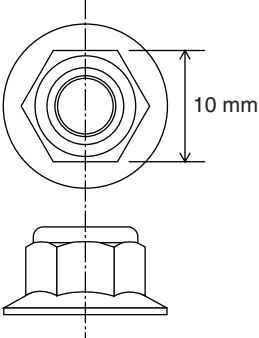
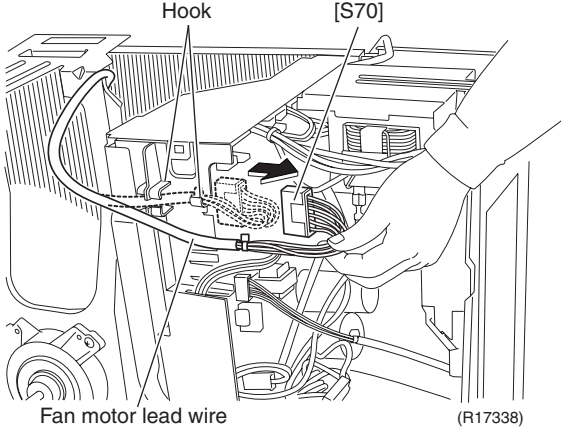
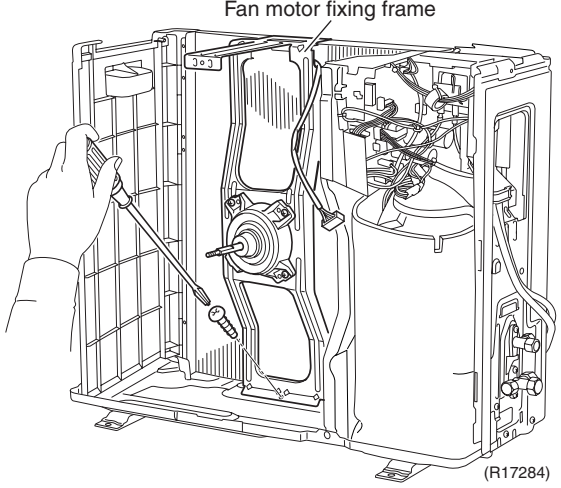
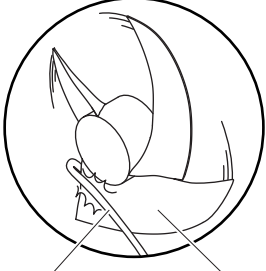


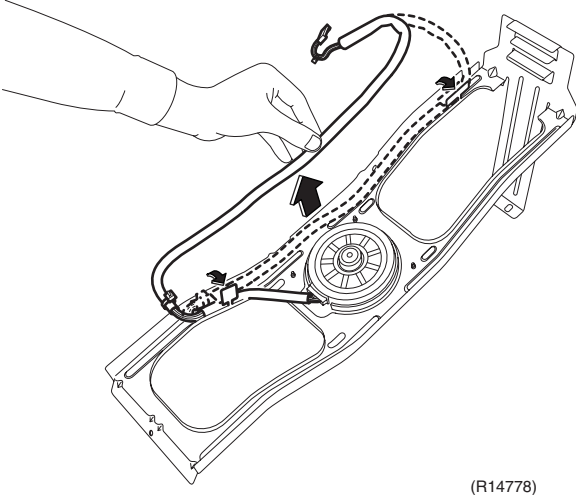
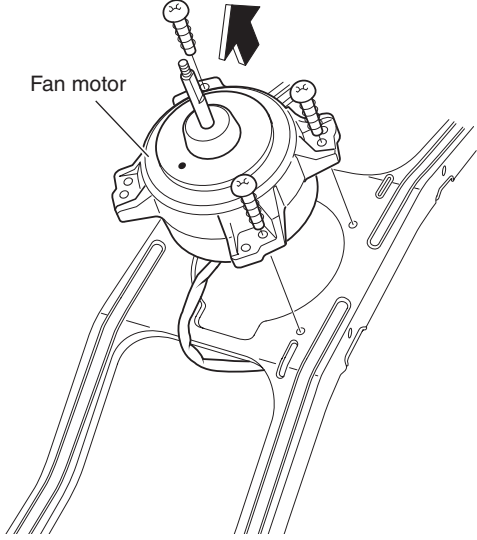
2. Removal of Outdoor Fan / Fan Motor

Procedure



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

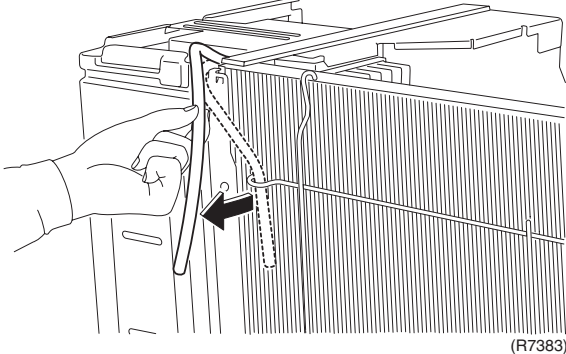
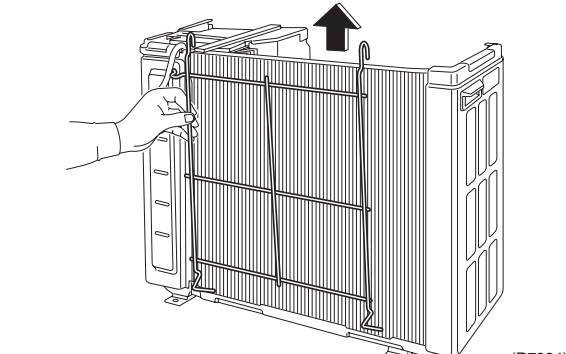
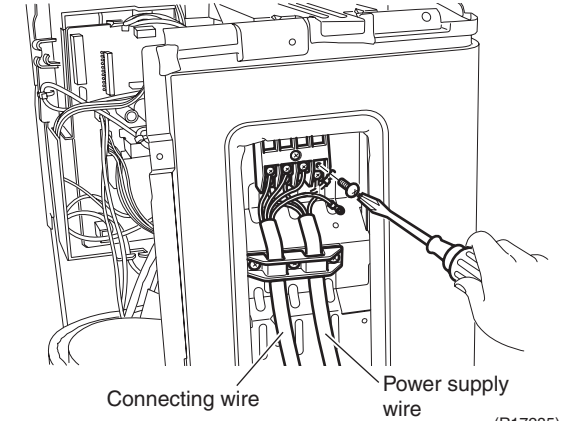
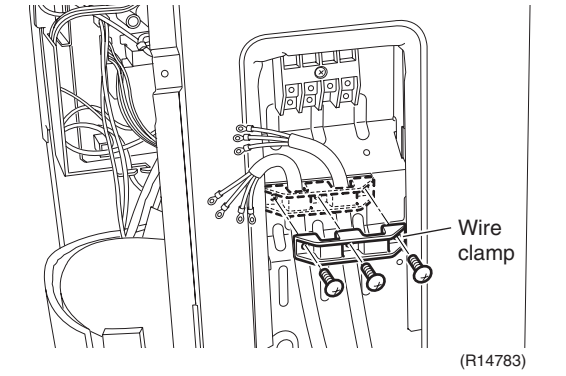
Step	Procedure	Points
1. Remove the outdoor fan.	<p data-bbox="204 414 459 472">1 Remove the nut of the outdoor fan.</p> <p data-bbox="204 546 459 604">2 Remove the outdoor fan.</p>  <p data-bbox="954 1077 1023 1099">(R17341)</p>	<p data-bbox="1098 376 1241 405">Preparation</p> <ul data-bbox="1098 412 1465 539" style="list-style-type: none"> ■ Remove the panels according to the "Removal of Outer Panels". ■ Nut size: M6  <p data-bbox="1337 887 1406 909">(R12236)</p> <ul data-bbox="1098 920 1465 1048" style="list-style-type: none"> ■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft.
2. Remove the fan motor.	<p data-bbox="204 1160 459 1256">1 Disconnect the connector for the fan motor [S70].</p> <p data-bbox="204 1361 459 1458">2 Release the fan motor lead wire from the hooks.</p> <p data-bbox="204 1608 459 1704">3 Remove the screw and remove the fan motor fixing frame.</p>  <p data-bbox="959 1563 1027 1585">(R17338)</p>  <p data-bbox="986 2101 1054 2123">(R17284)</p>	<ul data-bbox="1098 1608 1465 1765" style="list-style-type: none"> ■ 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 data-bbox="1358 2101 1426 2123">(R3249)</p>

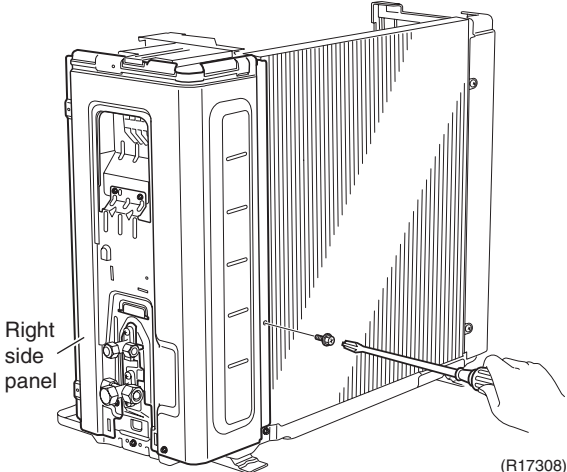
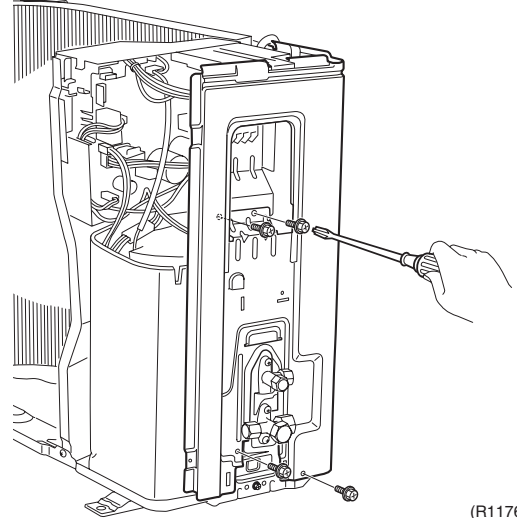
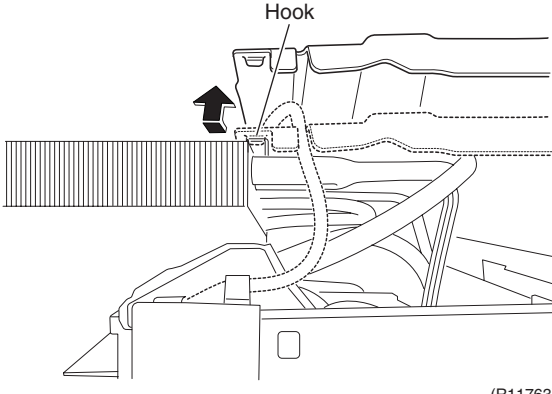
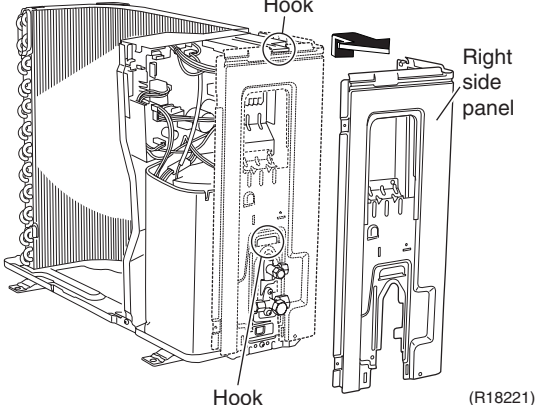
Step	Procedure	Points
4	Release the fan motor lead wire from the hooks.	
	 <p>(R14778)</p>	
5	Remove the 3 screws to remove the fan motor.	
	 <p>(R14779)</p>	

3. Removal of Electrical Box / PCBs

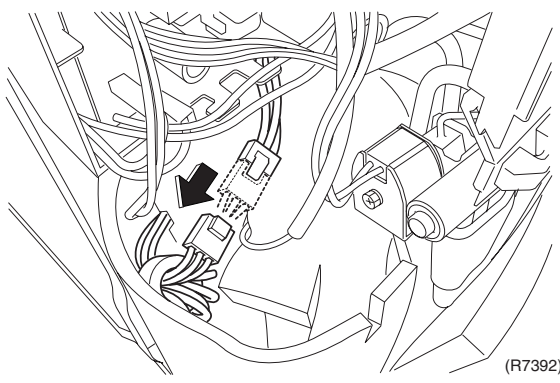
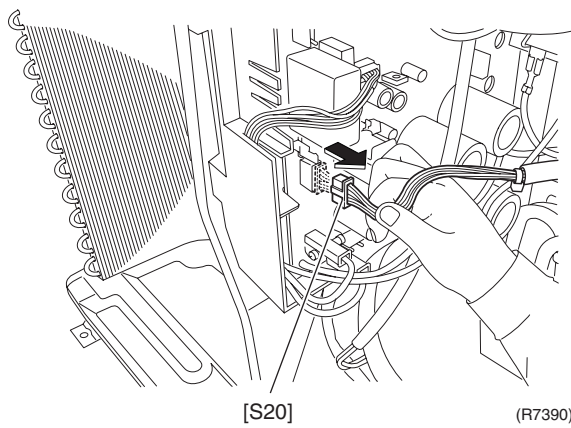
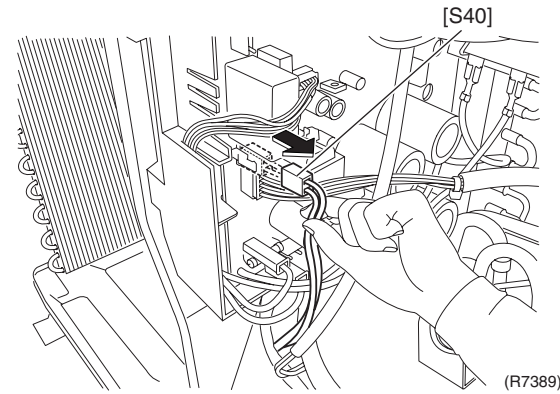
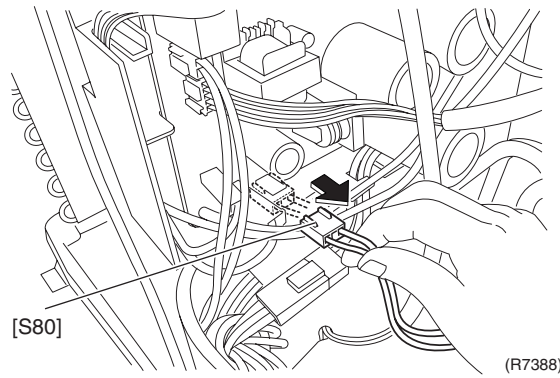
Procedure

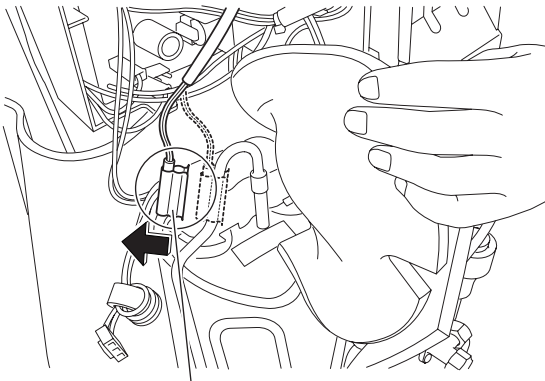
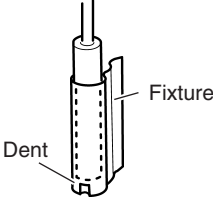
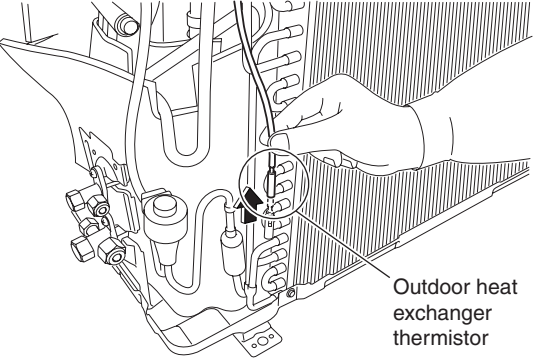
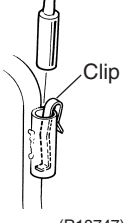
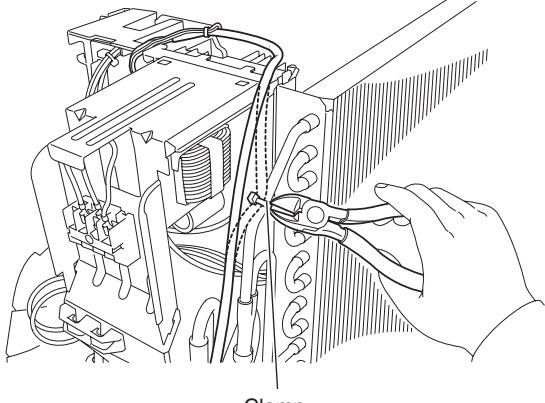
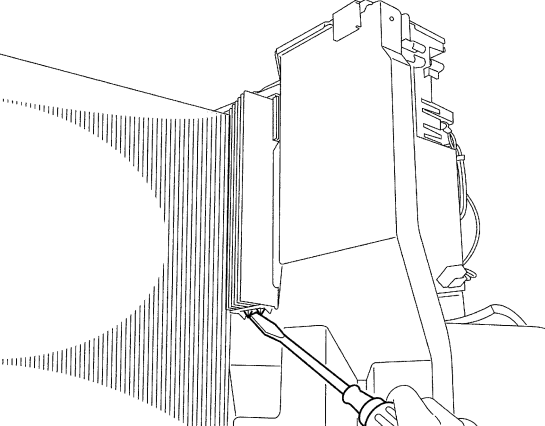
 **Warning** Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

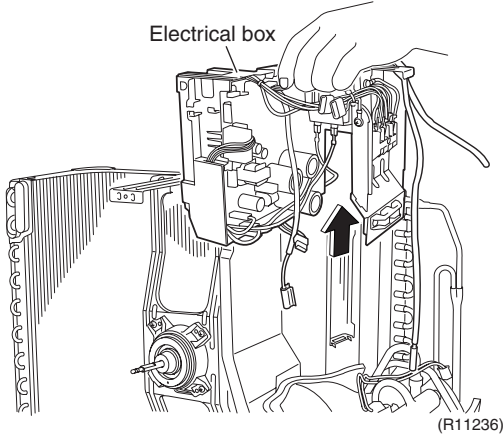
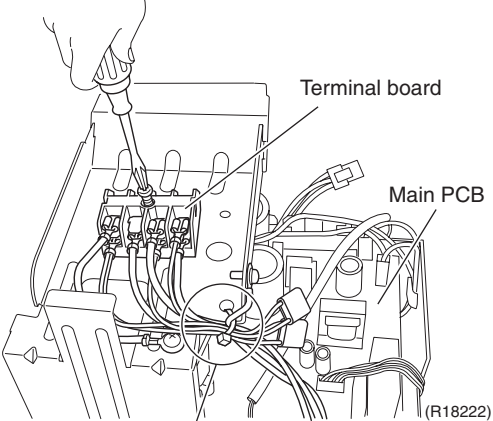
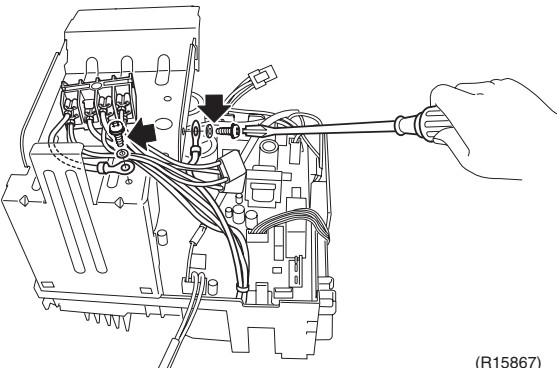
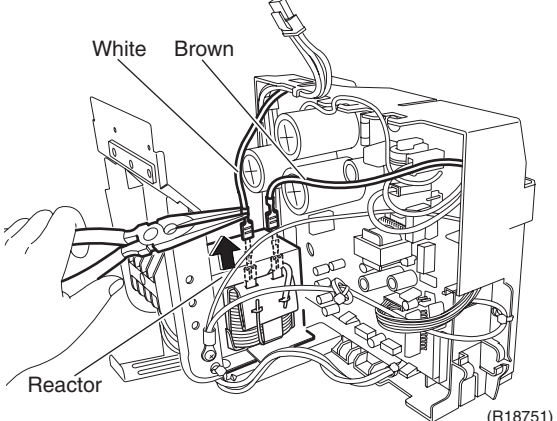
Step	Procedure	Points
1. Remove the right side panel.	 <p>(R7383)</p>	<p>Preparation</p> <ul style="list-style-type: none"> Remove the panels according to the "Removal of Outer Panels".
1 Release the outdoor temperature thermistor.	 <p>(R7384)</p>	
2 Lift up the guard net to remove.	 <p>(R17285)</p>	
3 Remove the screws and release the connecting wire and the power supply wire.	 <p>(R14783)</p>	
4 Remove the 3 screws and remove the wire clamp.		

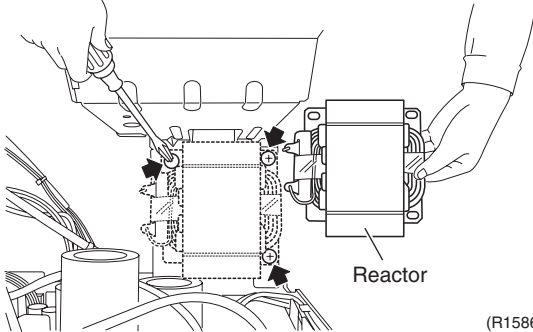
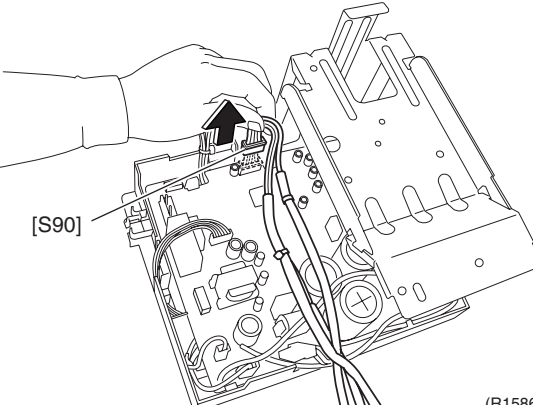
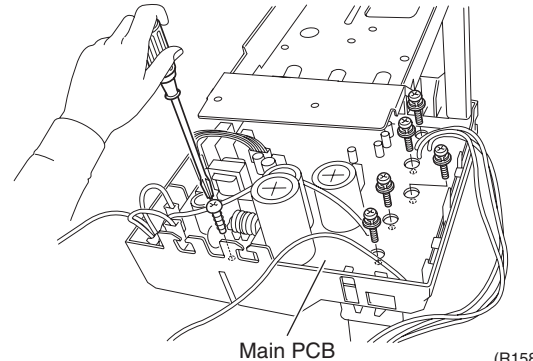
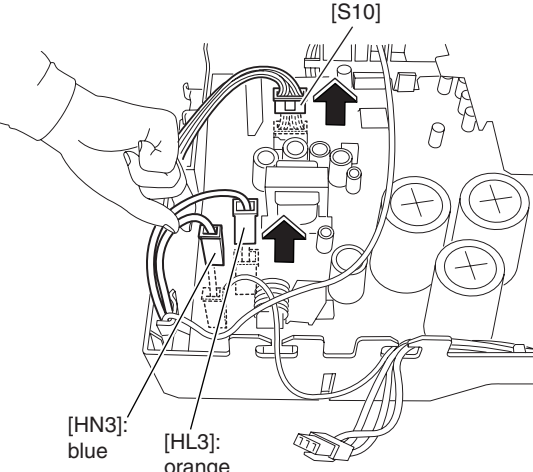
Step	Procedure	Points
5	<p>Remove the screw on the rear side of the right side panel.</p>  <p>(R17308)</p>	
6	<p>Remove the 4 screws on the right side panel.</p>  <p>(R11762)</p>	
7	<p>Unfasten the hook on the rear side.</p>  <p>(R11763)</p>	<p>■ When reassembling, make sure to fit the hook.</p>
8	<p>Unfasten the 2 hooks, and remove the right side panel.</p>  <p>(R18221)</p>	

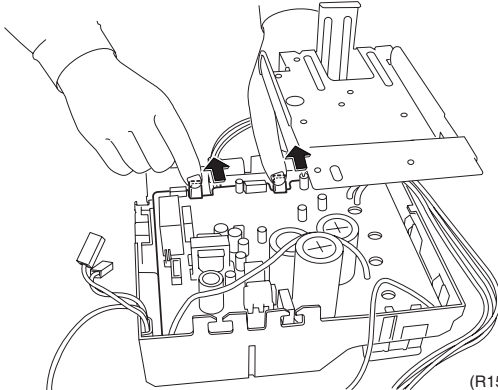
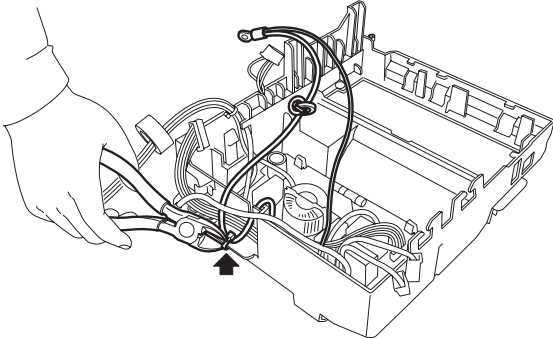
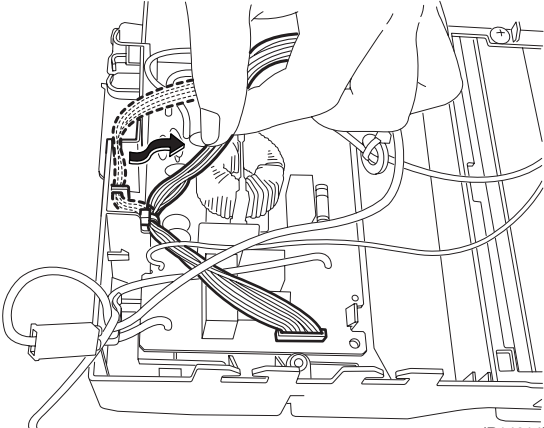
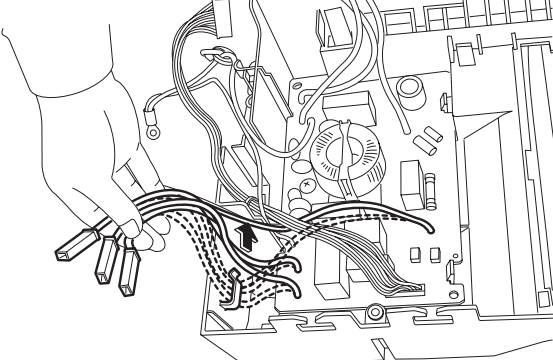
Step	Procedure	Points
2.	Remove the electrical box.	[S80]: four way valve coil
1	Disconnect the connector [S80].	
2	Disconnect the connector [S40].	[S40]: overload protector
3	Disconnect the connector [S20].	[S20]: electronic expansion valve coil
4	Disconnect the relay connector for the compressor.	

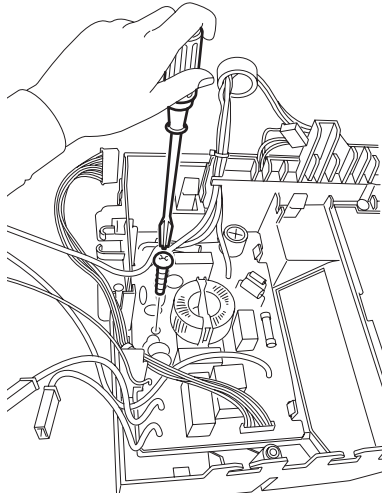
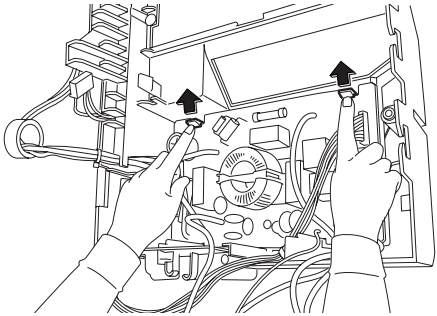
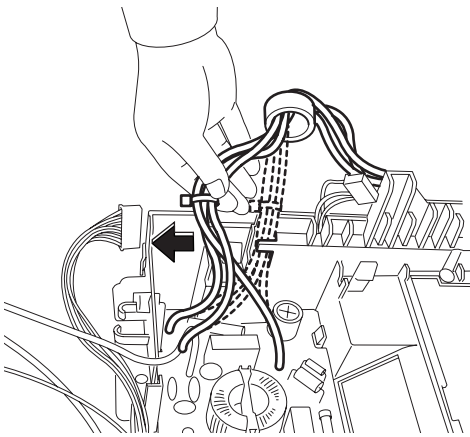
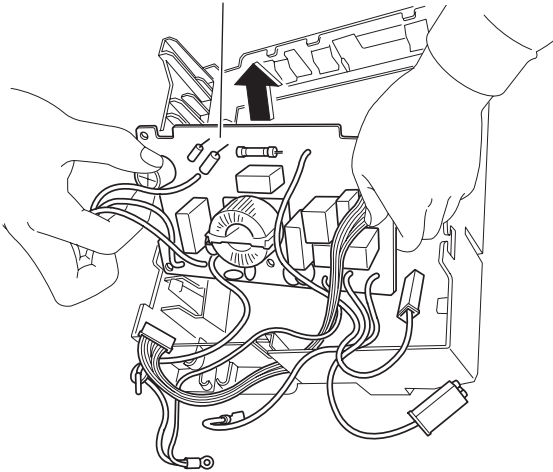


Step	Procedure	Points
5	Release the discharge pipe thermistor.	<ul style="list-style-type: none"> ■ Pay attention so as not to lose the fixture for the thermistor. ■ When reassembling, do not insert the thermistor up to the dent of fixture.
	 <p style="text-align: center;">Discharge pipe thermistor (R18744)</p>	 <p style="text-align: center;">(R18746)</p>
6	Pull out the outdoor heat exchanger thermistor.	<ul style="list-style-type: none"> ■ Pay attention so as not to lose the clip for the thermistor.
	 <p style="text-align: center;">Outdoor heat exchanger thermistor (R18745)</p>	 <p style="text-align: center;">(R18747)</p>
7	Cut the clamp.	
	 <p style="text-align: center;">Clamp (R7395)</p>	
8	Unfasten the hook from the partition plate with a flat screwdriver.	<ul style="list-style-type: none"> ■ The electrical box can be removed by lifting itself without a screwdriver.
	 <p style="text-align: center;">(R7318)</p>	

Step	Procedure	Points
9	<p>Lift and remove the electrical box.</p>  <p>(R11236)</p>	
3.	<p>Remove the main PCB.</p> <p>1 Remove the screw on the terminal board.</p> <p>2 Cut the clamp.</p> <p>3 Remove the 2 screws of the earth / ground wires.</p> <p>4 Disconnect the 2 terminals of the reactor.</p>  <p>(R18222)</p>  <p>(R15867)</p>  <p>(R18751)</p>	<p>1: black, upper 2: white, lower 3: red, upper (⊥) : green / yellow, lower</p>

Step	Procedure	Points
5	<p>Remove the 3 screws to remove the reactor.</p>  <p style="text-align: right;">(R15862)</p>	
6	<p>Disconnect the connector [S90].</p>  <p style="text-align: right;">(R15863)</p>	[S90]: thermistors
7	<p>Remove the 6 screws.</p>  <p style="text-align: right;">(R15864)</p>	
8	<p>Disconnect the 3 connectors [S10] [HL3] [HN3].</p>  <p style="text-align: right;">(R17309)</p>	[S10] [HL3] [HN3]: filter PCB

Step	Procedure	Points
<p>9 Unfasten the 2 hooks.</p> <p>10 Lift and remove the main PCB.</p>	 <p>(R15869)</p>	
<p>4. Remove the filter PCB.</p> <p>1 Cut the clamp.</p> <p>2 Release the harnesses from the hooks.</p>	 <p>(R14813)</p>  <p>(R14814)</p>  <p>(R18752)</p>	

Step	Procedure	Points
3	Remove the screw.	 <p>(R14816)</p>
4	Unfasten the 2 hooks.	 <p>(R14817)</p>
5	Release the harnesses.	 <p>(R14818)</p>
6	Remove the filter PCB.	<p>Filter PCB</p>  <p>(R14819)</p>

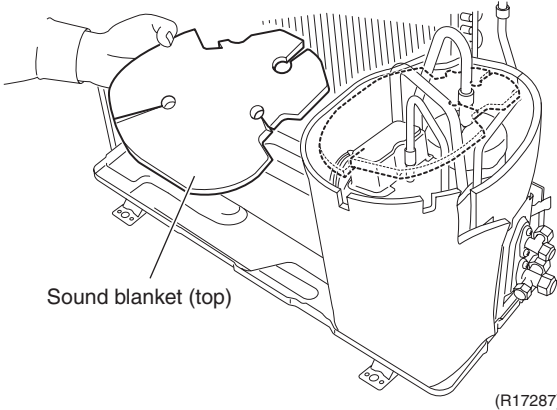
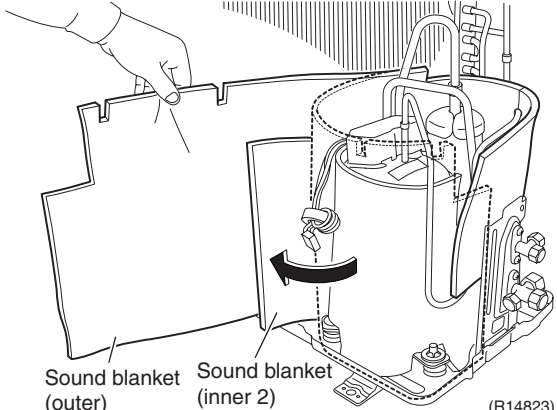
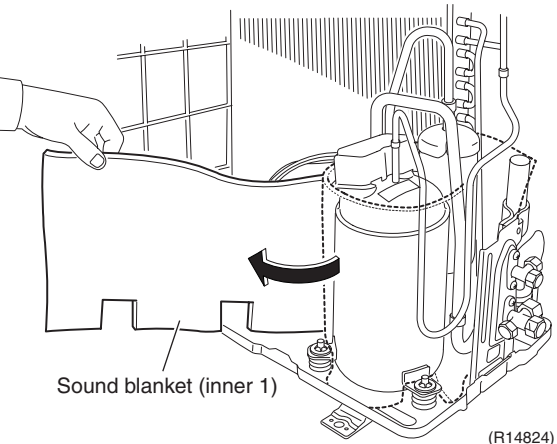
4. Removal of Sound Blankets

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>(R17286)</p>	<ul style="list-style-type: none"> Some models have 3 screws.
1 Remove the 2 screws.	<p>Partition plate</p> <p>Hook</p> <p>(R14821)</p>	<ul style="list-style-type: none"> When reassembling, fit the lower hook into the bottom frame.
2 The partition plate has a hook on the lower side. Lift and pull the partition plate and remove it.		

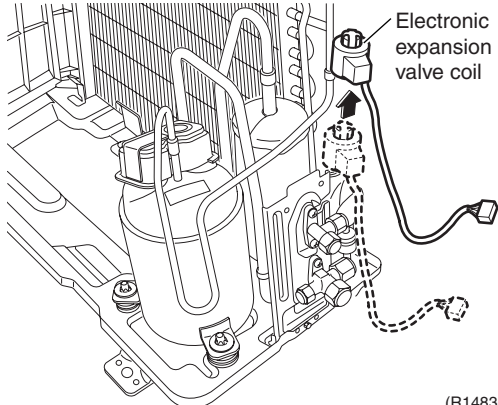
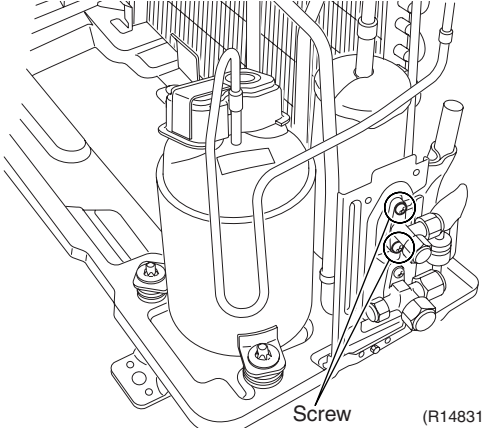
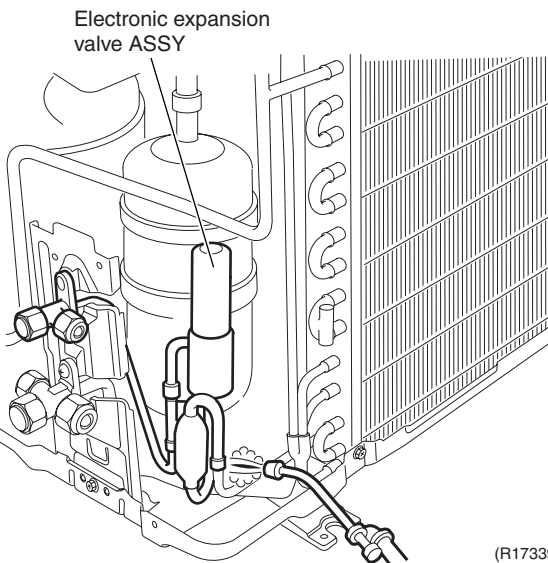
Step	Procedure	Points
2. Remove the sound blankets.		
1 Lift and remove the sound blanket (top).	 <p>Sound blanket (top)</p> <p>(R17287)</p>	<ul style="list-style-type: none"> ■ Since the piping ports on the sound blanket are torn easily, remove the blanket carefully. ■ The design of the sound blankets varies depending on the model.
2 Pull the sound blankets (outer and inner 2) out.	 <p>Sound blanket (outer) Sound blanket (inner 2)</p> <p>(R14823)</p>	<ul style="list-style-type: none"> ■ Some models have no sound blanket (inner 2).
3 Pull the sound blanket (inner 1) out.	 <p>Sound blanket (inner 1)</p> <p>(R14824)</p>	

5. 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.	 <p style="text-align: right;">(R14830)</p>	
2	Remove the 2 screws.	 <p style="text-align: right;">(R14831)</p>	<p>Warning Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</p> <p>Warning If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)</p>
	<ul style="list-style-type: none"> ■ Before working, make sure that the refrigerant gas is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part. 	 <p style="text-align: right;">(R17339)</p>	<p>Caution 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>
3	Remove the putty and heat up the brazed part.		<p>Caution 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>
4	Remove the electronic expansion valve ASSY.		<p>Caution 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>

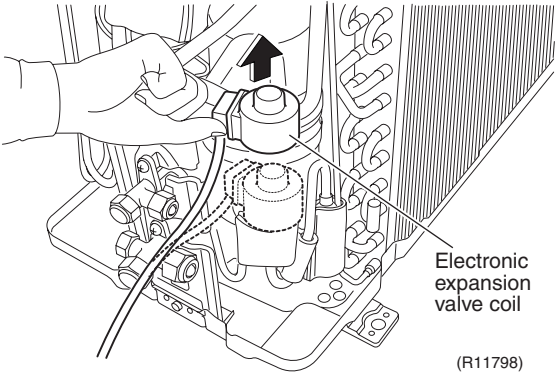
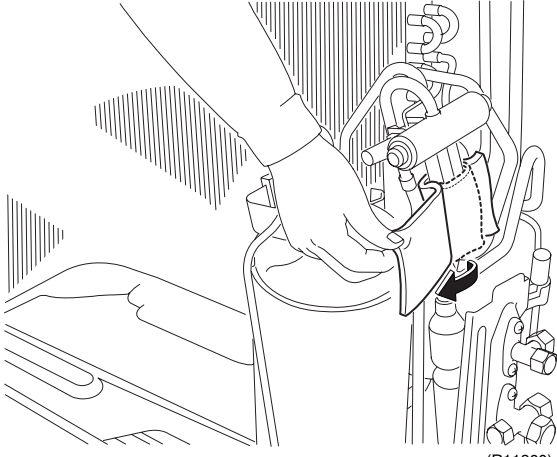
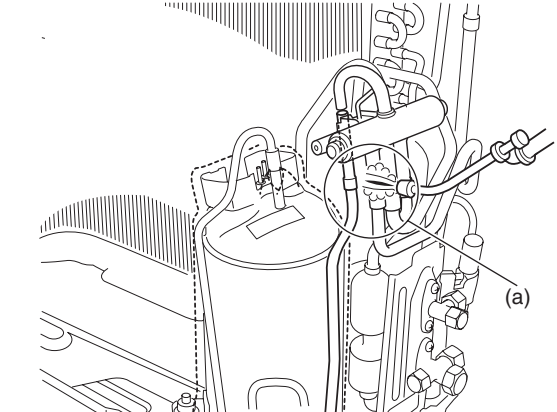
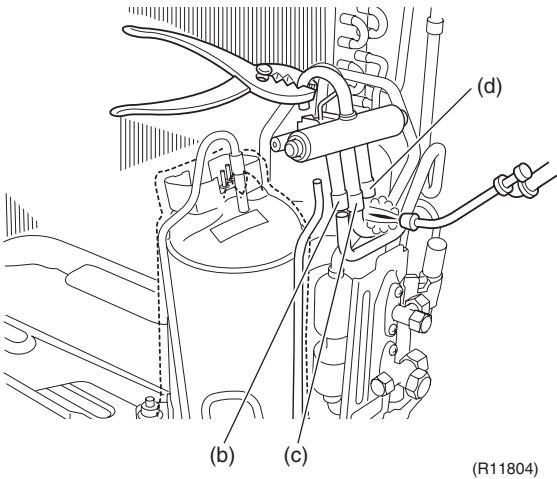
6. Removal of Four Way Valve

Procedure



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

Step	Procedure	Points
1. Remove the peripheries.		
1 Remove the terminal cover.	<p>Terminal cover (R15005)</p>	<ul style="list-style-type: none"> ■ The cooling only models do not have a four way valve. ■ There are 2 hooks at the inner side of the terminal cover. <p>(R12653)</p>
2 Remove the screw and remove the four way valve coil.	<p>Four way valve coil (R11799)</p>	
3 Disconnect the terminals of the compressor.		
4 Remove the overload protector.	<p>Overload protector U (red) V (yellow) W (blue) (R14529)</p>	

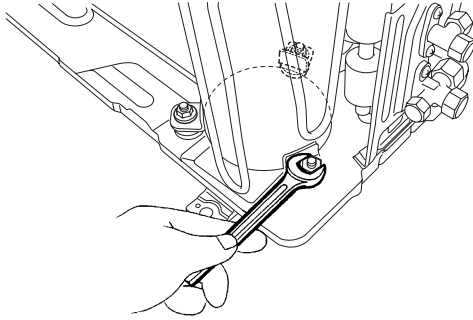
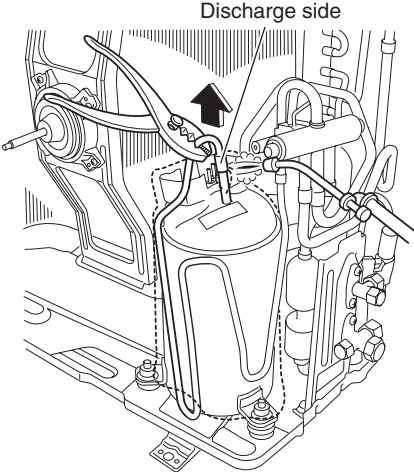
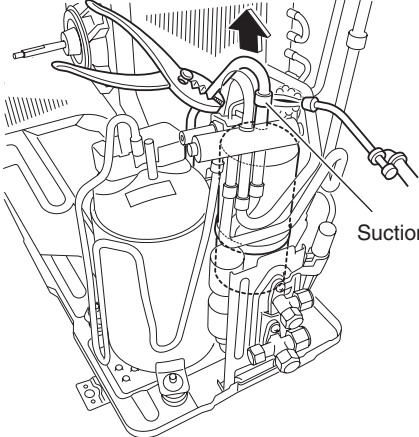
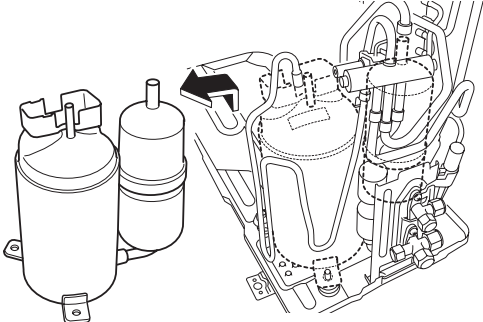
Step	Procedure	Points
5	Pull out the electronic expansion valve coil.	 <p style="text-align: right;">(R11798)</p>
6	Remove the putty.	 <p style="text-align: right;">(R11800)</p>
<ul style="list-style-type: none"> ■ Before working, make sure that the refrigerant gas is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part. 		<p>Warning Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</p> <p>Warning 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>Caution 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>
2.	Remove the four way valve.	
1	Heat up the brazed point (a) and withdraw the piping with pliers.	 <p style="text-align: right;">(R11802)</p>
2	Heat up the 3 brazed points of the four way valve. Disconnect the point (b) first.	
3	Disconnect the points (c) and (d).	
<p>Note:</p> <ul style="list-style-type: none"> ■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit. ■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed. ■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries. 		 <p style="text-align: right;">(R11804)</p> <p>Cautions for restoration</p> <ol style="list-style-type: none"> 1. Restore the piping by non-oxidation brazing. 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. <p>In case of difficulty with gas brazing machine</p> <ol style="list-style-type: none"> 1. Disconnect the brazed part where is easy to disconnect and restore. 2. Cut pipes on the main unit with a tube cutter in order to make it easy to disconnect.

7. Removal of Compressor

Procedure



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

Step	Procedure	Points
1. Remove the peripheries. 1 Remove the four way valve, the terminal cover and the lead wire for the compressor so as not to burn them. 2 Remove the 3 nuts of the compressor.	 <p style="text-align: right;">(R12022)</p>	<p>Warning Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</p> <p>Warning If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)</p>
<ul style="list-style-type: none"> ■ Before working, make sure that the refrigerant gas is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part. 	 <p style="text-align: center;">Discharge side</p> <p style="text-align: right;">(R7422)</p>	<p>Warning Since it may happen that the refrigerant oil in the compressor catches fire, prepare wet cloth so as to extinguish fire immediately.</p>
2. Remove the compressor. 1 Heat up the brazed part of the discharge side and disconnect. 2 Heat up the brazed part of the suction side and disconnect. 3 Lift the compressor up and remove it.	 <p style="text-align: right;">Suction side</p> <p style="text-align: right;">(R7423)</p>	<p>Caution 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>
Note: <ul style="list-style-type: none"> ■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit. ■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed. ■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries. ■ Be careful so as not to burn the compressor terminals, the name plate, the heat exchanger fin. 	 <p style="text-align: right;">(R7424)</p>	<p>Cautions for restoration</p> <ol style="list-style-type: none"> 1. Restore the piping by non-oxidation brazing. 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. <p>In case of difficulty with gas brazing machine</p> <ol style="list-style-type: none"> 1. Disconnect the brazed part where is easy to disconnect and restore. 2. Cut pipes on the main unit with a tube cutter in order to make it easy to disconnect.

Revision History

Month / Year	Version	Revised contents
06 / 2013	Si00-874	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

DAIKIN INDUSTRIES, LTD.

Head Office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:
JR Shinagawa East Bldg., 2-18-1, Konan,
Minato-ku, Tokyo, 108-0075 Japan

http://www.daikin.com/global_ac/

©All rights reserved