




REMOVAL PROCEDURE



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

2.0/2.5/3.5 kW Class 9000/12000 Btu/h Class

-  Outdoor Unit
-  Inverter/Hybrid
-  Pair Type



Service Manual Removal Procedure

Outdoor Unit

Applicable Models

●Cooling Only

**RKS09HV2S
RKS12HV2S**

**RKS20KVMA
RKS25KVMA
RKS35KVMA**

**RN25KV1A
RN35KV1A**

RN35KAV1A

●Heat Pump

**RXG25J2V1B
RXG35J2V1B**

**RXG25K2V1B
RXG35K2V1B**

**RXS20K2V1B
RXS25K2V1B**

**RXS20KVMA
RXS25KVMA
RXS35KVMA**

**RYN25KV1A
RYN35KV1A**

RYN35KAV1A

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Note:

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

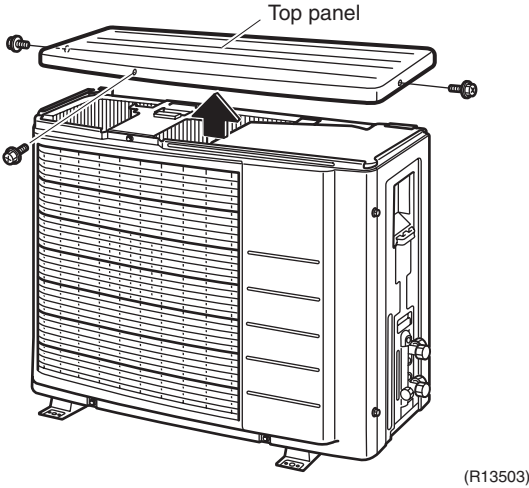
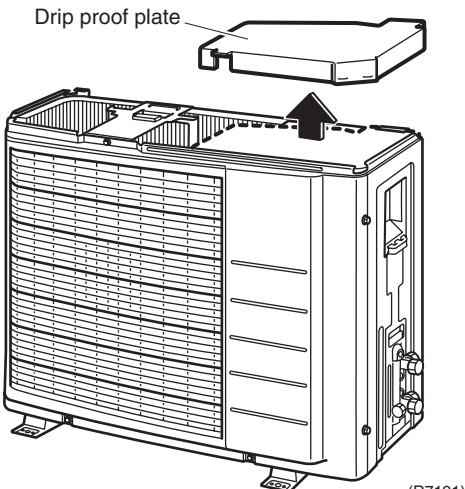
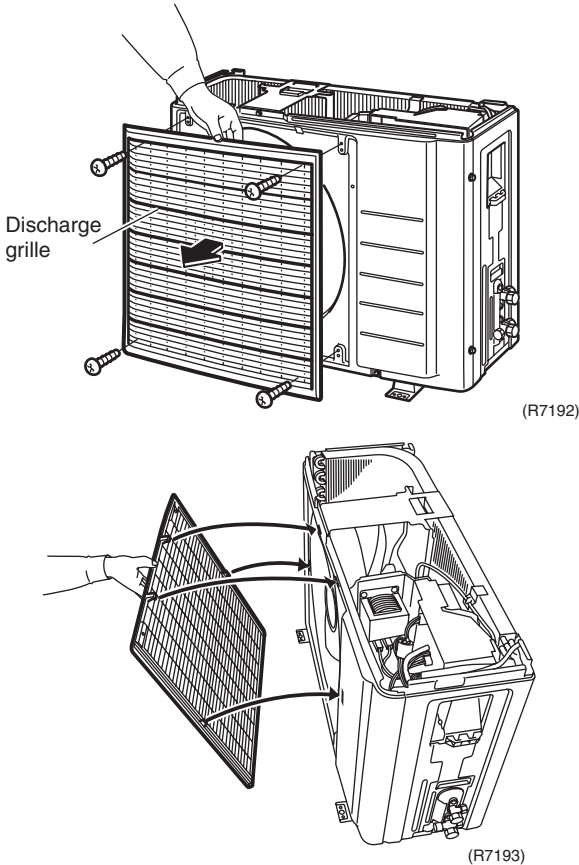
1. Removal of Outer Panels / Fan Motor

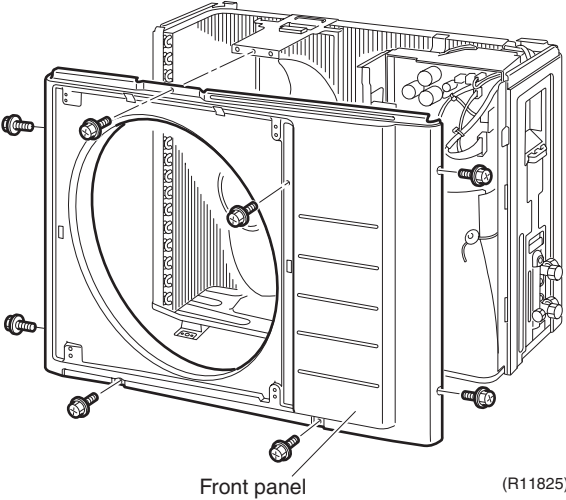
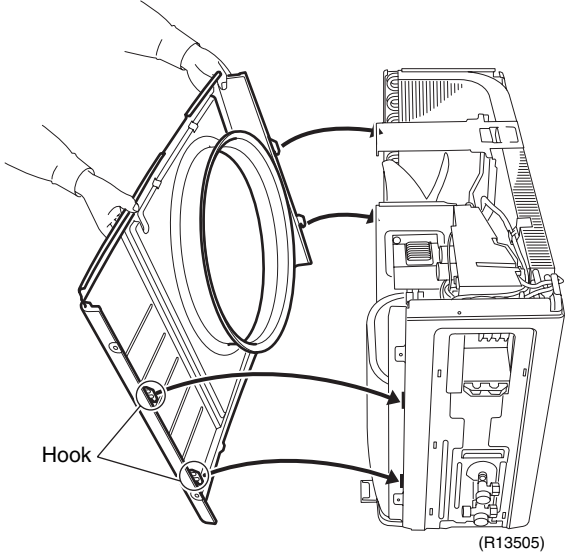
Procedure

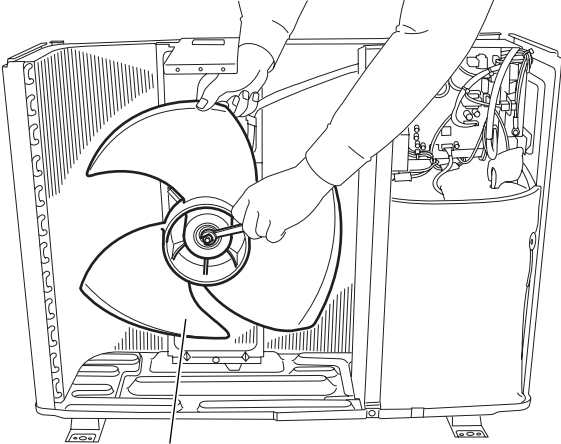
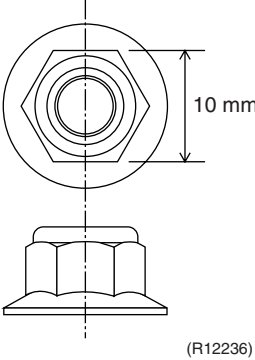
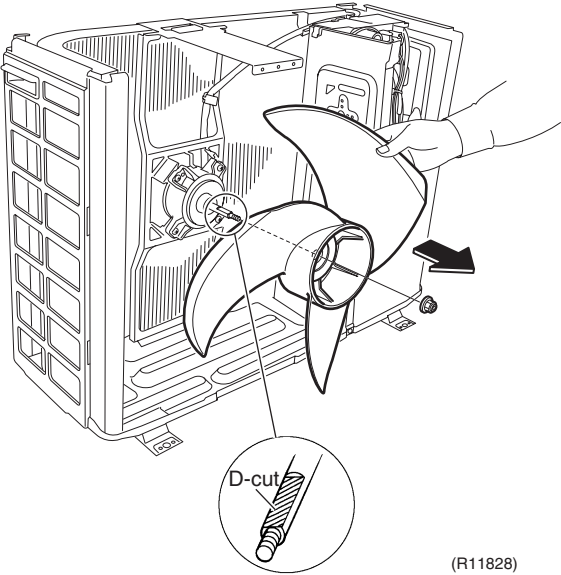
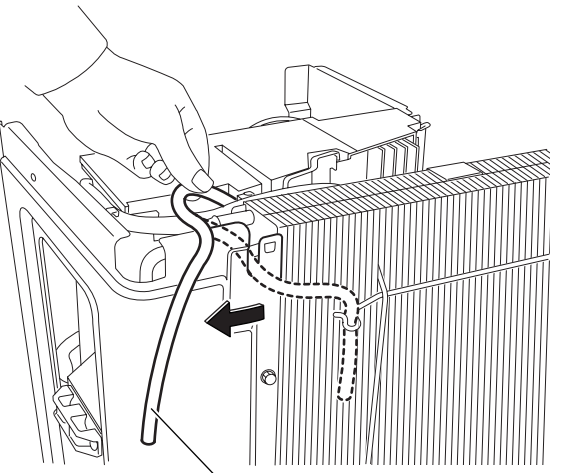


Warning Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

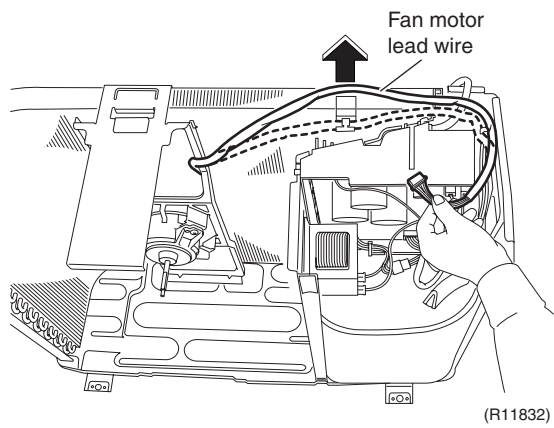
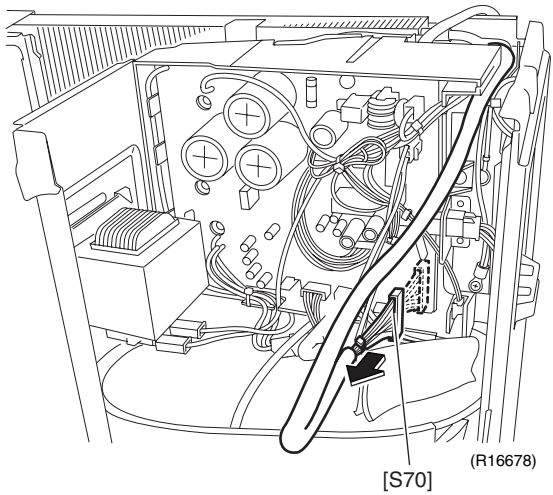
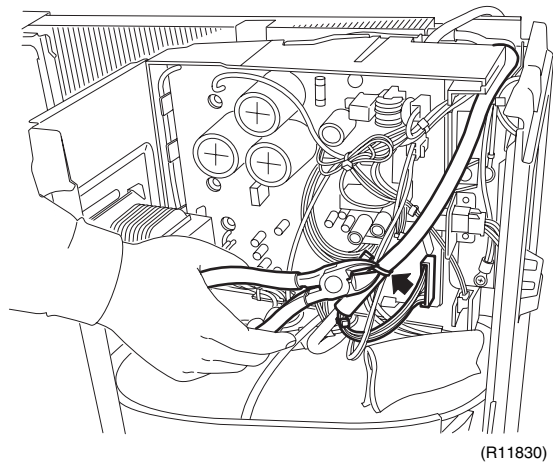
Step	Procedure	Points
<p>1. Appearance features</p>		<ul style="list-style-type: none"> ■ Take care not to cut your finger by the fins of the outdoor heat exchanger.
<p>2. Remove the panels.</p> <p>1 Remove the screw of the stop valve cover. Pull the stop valve cover downward and remove it.</p>		<ul style="list-style-type: none"> ■ The stop valve cover is united with the shield plate. ■ When reassembling, make sure to fit the 5 hooks.

Step		Procedure	Points
2	Remove the 3 screws and lift the top panel.	 <p>Top panel</p> <p>(R13503)</p>	<ul style="list-style-type: none"> Some models have only 2 screws.
3	Remove the drip proof plate.	 <p>Drip proof plate</p> <p>(R7191)</p>	
4	Remove the 4 screws and remove the discharge grille.	 <p>Discharge grille</p> <p>(R7192)</p> <p>(R7193)</p>	<ul style="list-style-type: none"> The discharge grille has 4 hooks.

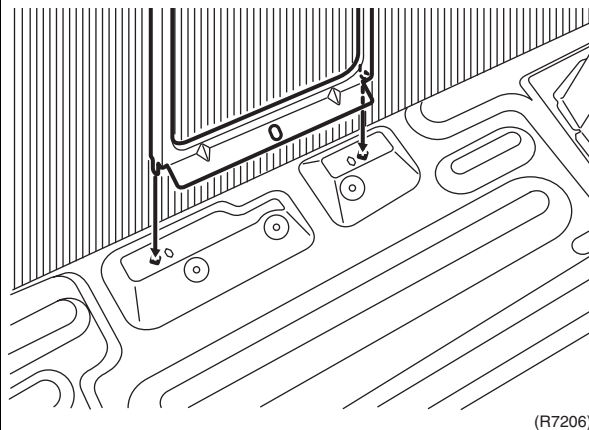
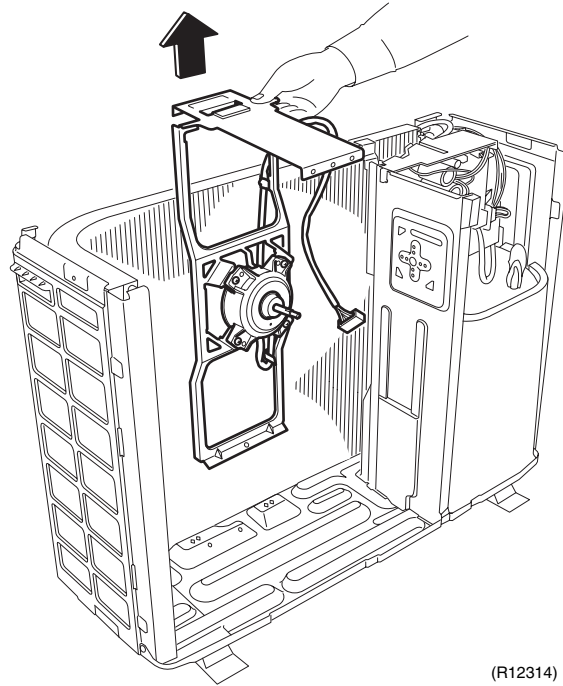
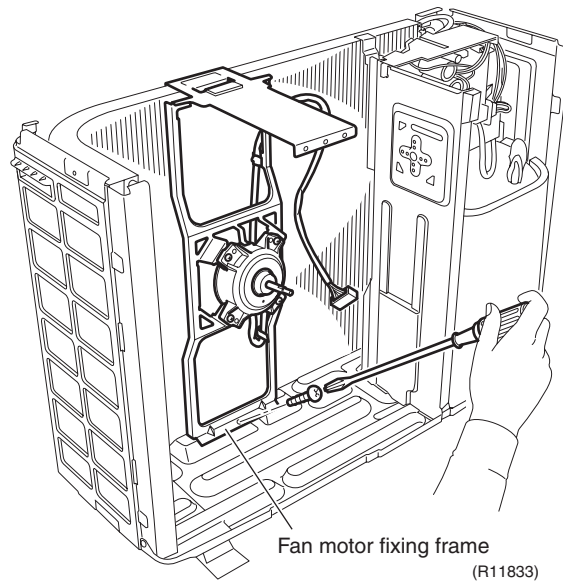
Step	Procedure	Points
5	Remove the 8 screws of the front panel.	
	 <p style="text-align: center;">Front panel (R11825)</p>	
6	Unfasten the hooks. Pull and remove the front panel.	<p>■ The front panel has 4 hooks.</p>
	 <p style="text-align: center;">Hook (R13505)</p>	

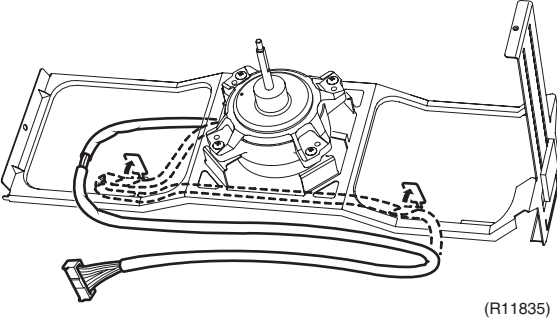
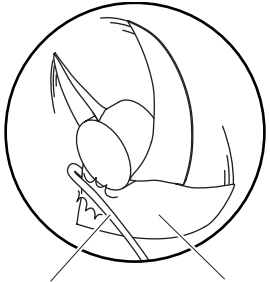
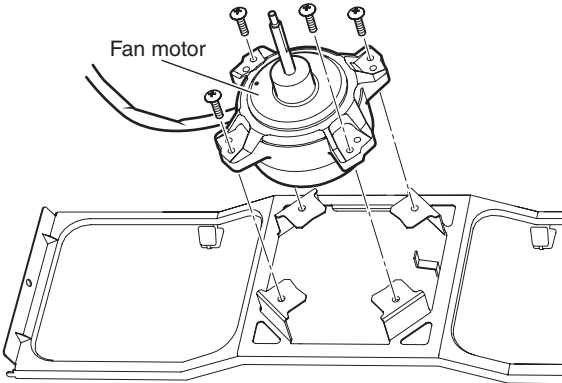
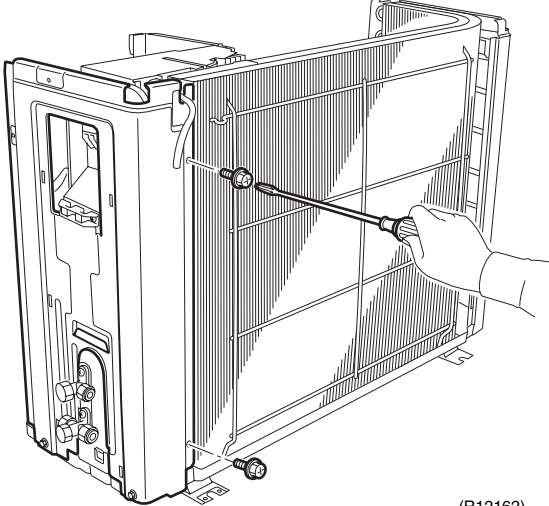
Step	Procedure	Points
3. Remove the fan motor.		
1	<p>Remove the nut of the outdoor fan.</p>  <p>Outdoor fan (R13741)</p>	<p>■ Nut size: M6</p>  <p>(R12236)</p>
2	<p>Remove the outdoor fan.</p>  <p>D-cut (R11828)</p>	<p>■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft.</p>
3	<p>Release the outdoor temperature thermistor.</p>  <p>Outdoor temperature thermistor (R11829)</p>	

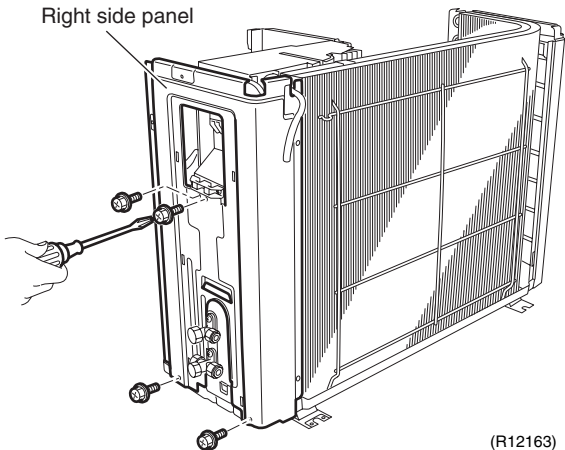
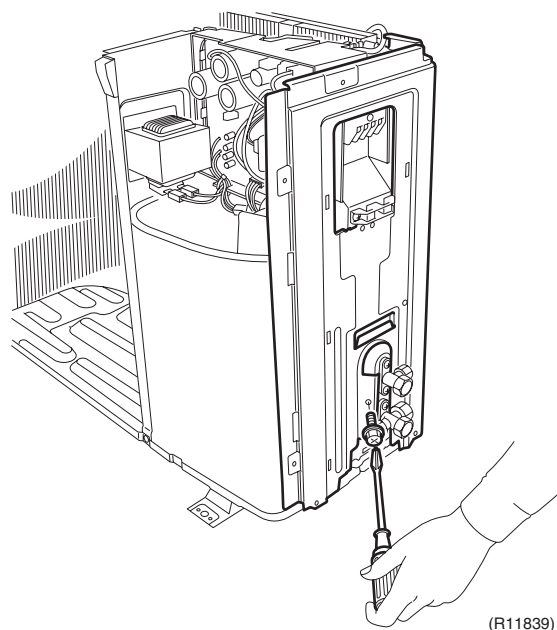
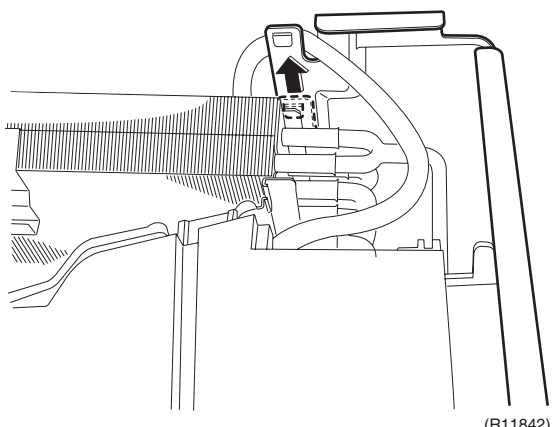
Step	Procedure	Points
4	Cut the clamp.	<ul style="list-style-type: none"> Some models do not have the clamp.
5	Disconnect the connector for the fan motor [S70].	
6	Release the fan motor lead wire from the hook.	



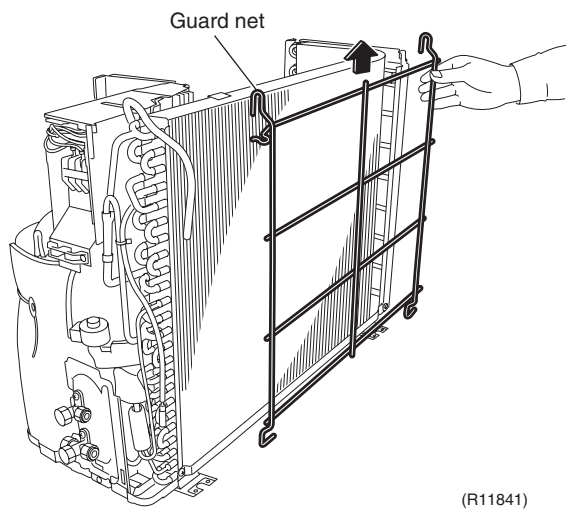
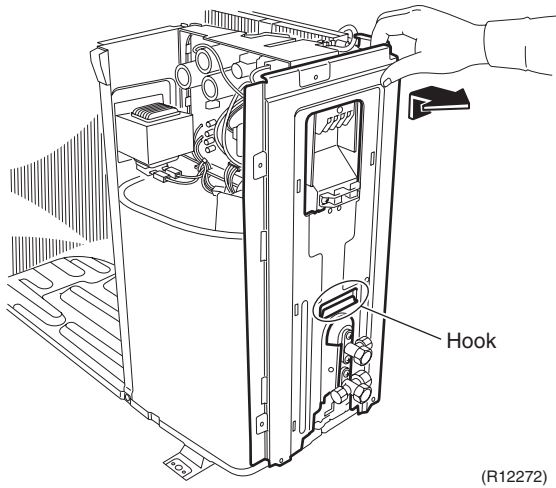
Step	Procedure	Points
7	Remove the screw and remove the fan motor fixing frame.	<ul style="list-style-type: none"> ■ When reassembling, fit the lower hooks into the bottom frame.



Step	Procedure	Points
8	<p>Open the 2 hooks and release the fan motor lead wire.</p>  <p>(R11835)</p>	<p>■ When reassembling, put the fan motor lead wire through the back of the fan motor so as not to be entangled with the outdoor fan.</p>  <p>Lead wire Outdoor fan</p> <p>(R3249)</p>
9	<p>Remove the 4 screws and remove the fan motor.</p>  <p>Fan motor</p> <p>(R12311)</p>	
4.	<p>Remove the right side panel.</p> <p>1 Remove the 2 screws on the rear side.</p>  <p>(R12162)</p>	

Step	Procedure	Points
2	<p>Remove the 4 screws on the right side panel.</p>  <p style="text-align: right;">(R12163)</p>	
3	<p>Remove the screw near the stop valves.</p>  <p style="text-align: right;">(R11839)</p>	
4	<p>Unfasten the hook on the rear side.</p>  <p style="text-align: right;">(R11842)</p>	<p>■ When reassembling, make sure to fit the hook.</p>

Step	Procedure	Points
5	Lift up the right side panel and remove it.	<ul style="list-style-type: none"> ■ When reassembling, make sure to fit the hook.
6	Lift up the guard net and remove it.	



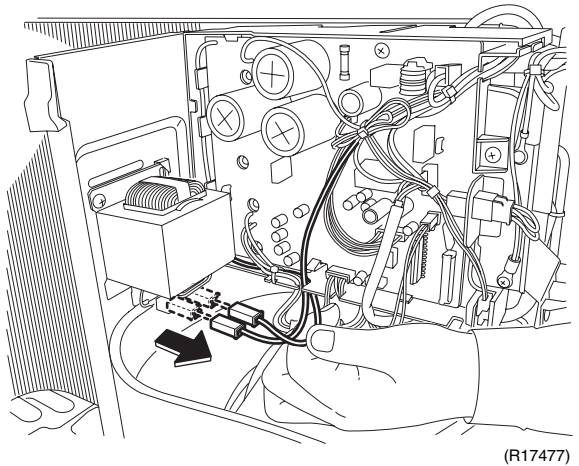
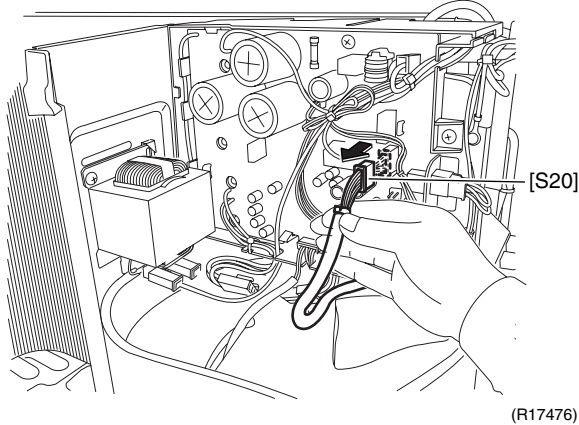
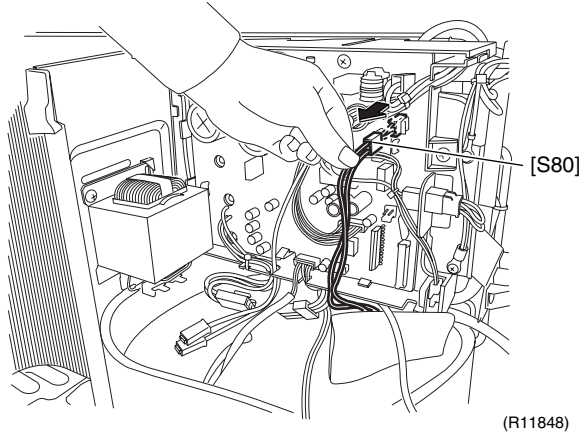
2. Removal of Electrical Box

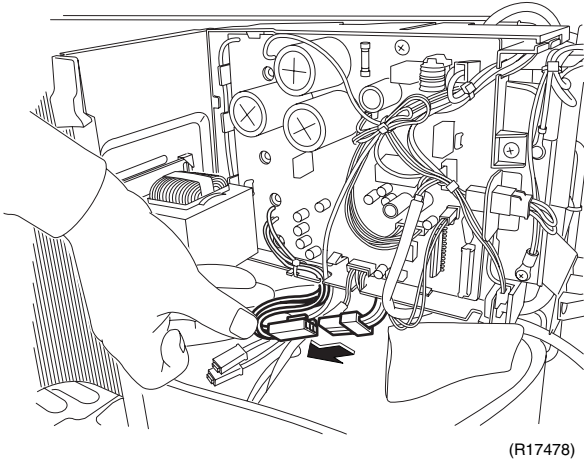
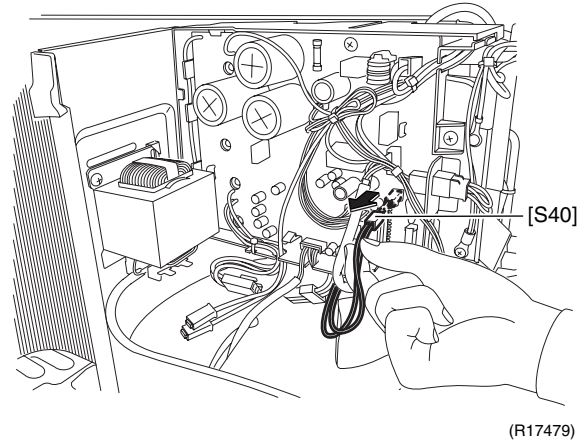
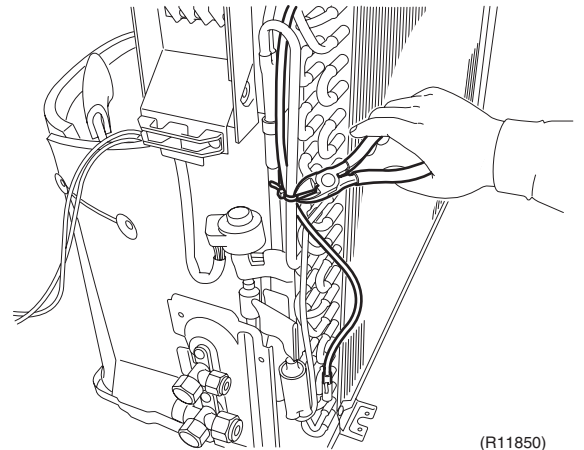
Procedure



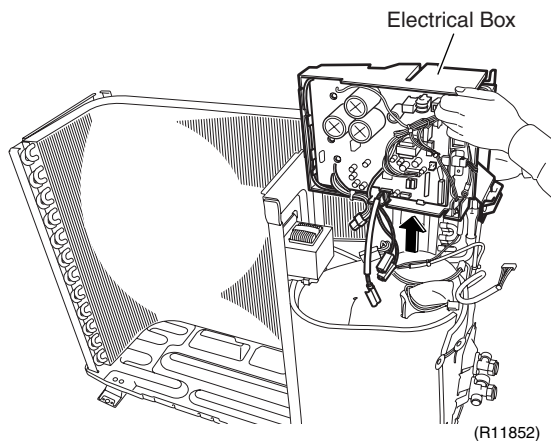
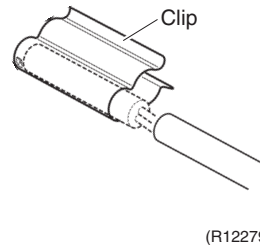
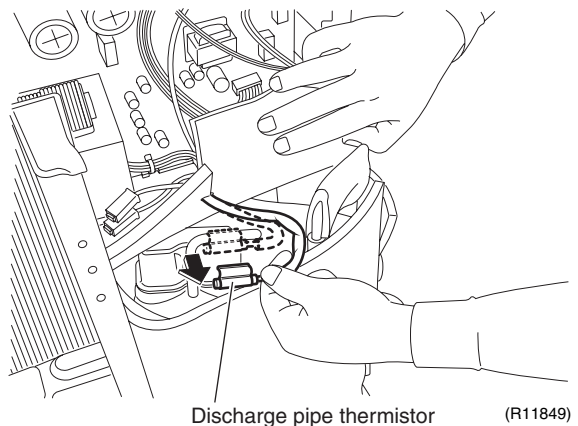
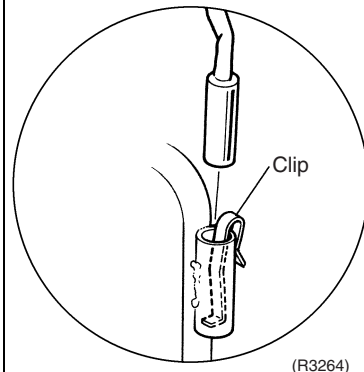
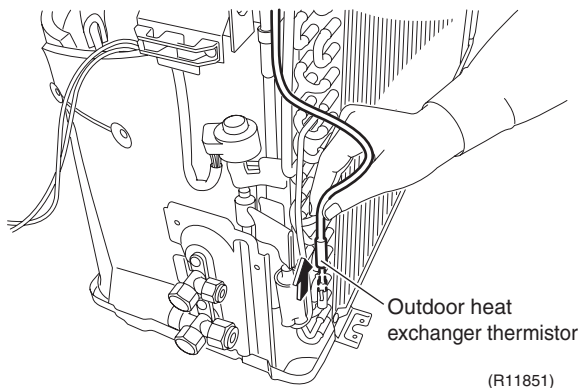
Warning Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
1	Disconnect the connector for the four way valve coil [S80].	Preparation <ul style="list-style-type: none"> Remove the outer panels and disconnect the connector for the fan motor according to the "Removal of Outer Panels / Fan Motor".
2	Disconnect the connector for the electronic expansion valve coil [S20].	<ul style="list-style-type: none"> When reassembling, you can connect the 2 harnesses in either way regardless of the color.
3	Disconnect the 2 connectors for the reactor.	



Step	Procedure	Points
4	Disconnect the relay connector for the compressor.	
	 <p style="text-align: right;">(R17478)</p>	
5	Disconnect the connector for the overload protector [S40].	
	 <p style="text-align: right;">(R17479)</p>	<p>■ When reassembling, connect the connectors in the following order.</p> <ol style="list-style-type: none"> (1) [S40] (2) relay connector for compressor (3) reactor (4) [S20] (5) [S80] (6) [S70]
6	Cut the clamp.	
	 <p style="text-align: right;">(R11850)</p>	

Step	Procedure	Points
7	Pull out the outdoor heat exchanger thermistor.	<ul style="list-style-type: none"> Be careful not to lose the clip for the thermistor.
8	Release the discharge pipe thermistor.	<ul style="list-style-type: none"> Be careful not to lose the clip for the thermistor.
9	Lift and remove the electrical box.	

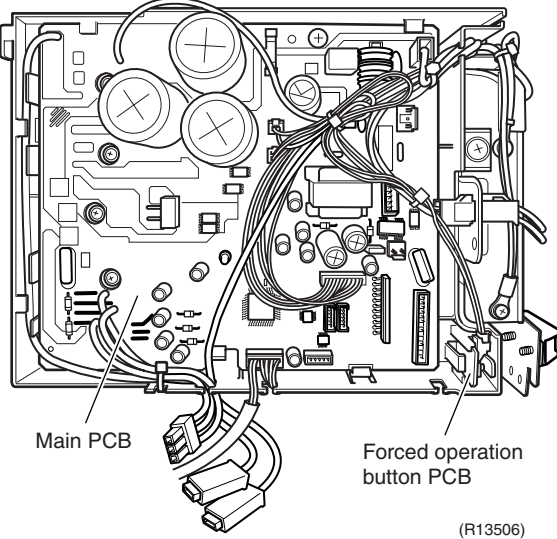
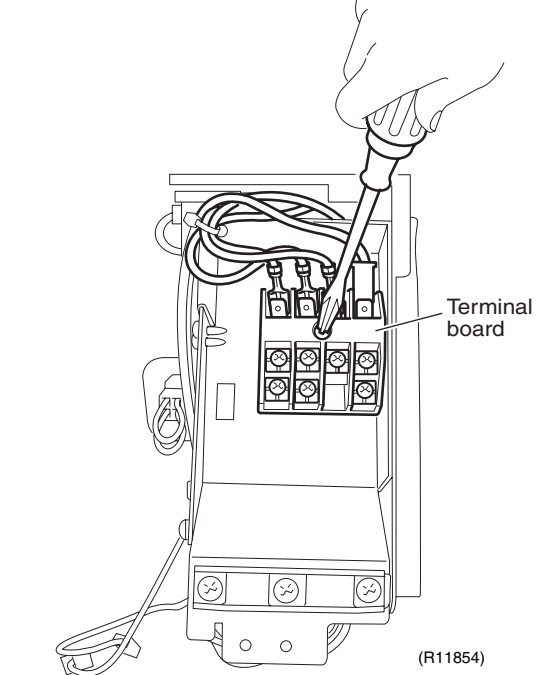
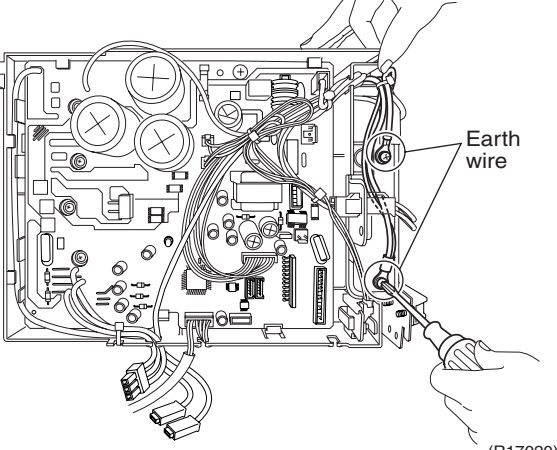


3. Removal of PCBs

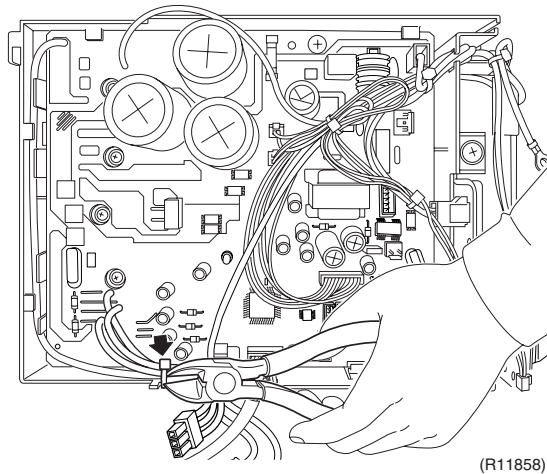
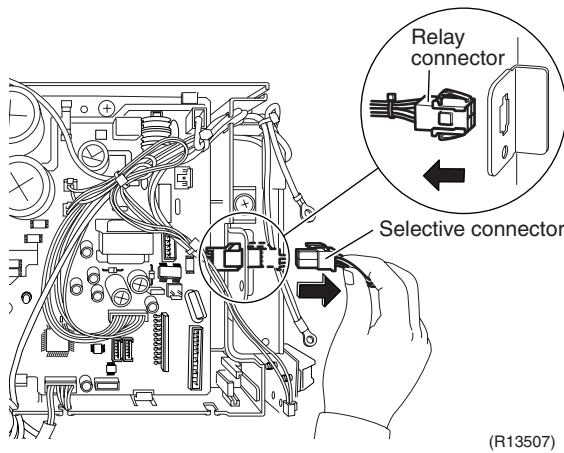
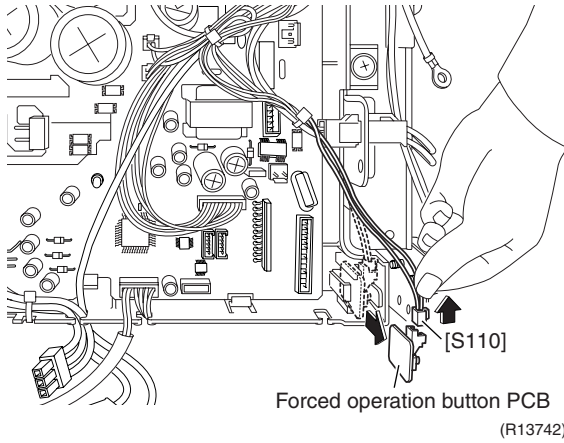
Procedure

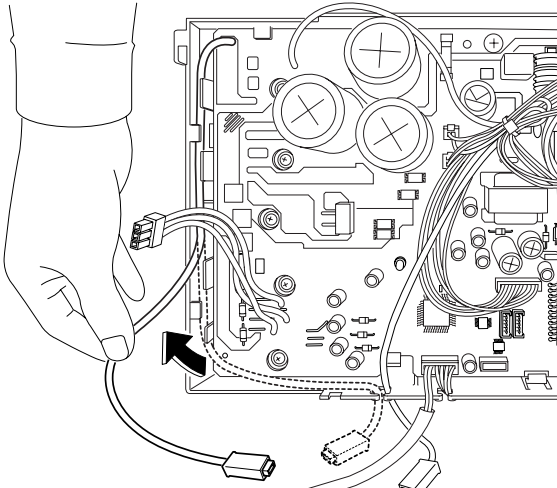
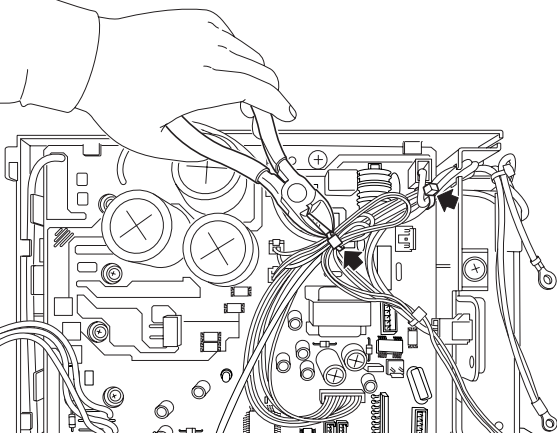
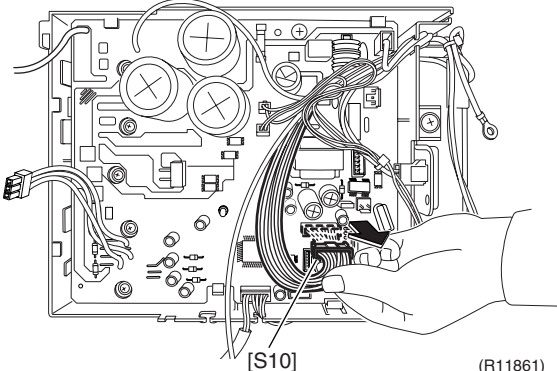


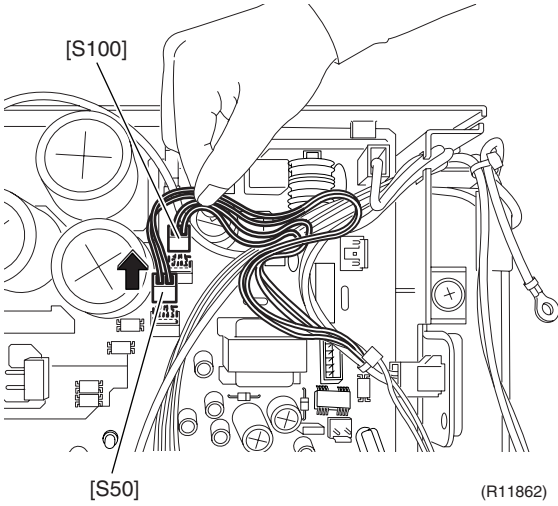
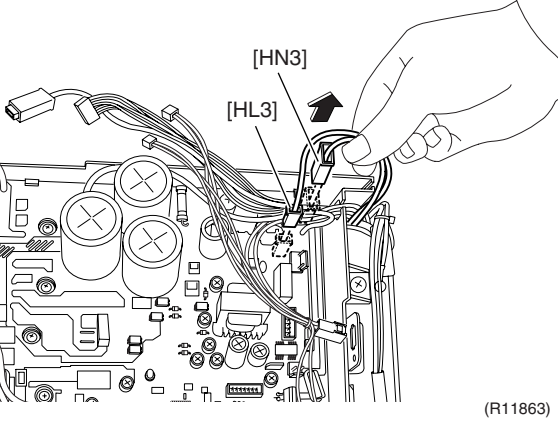
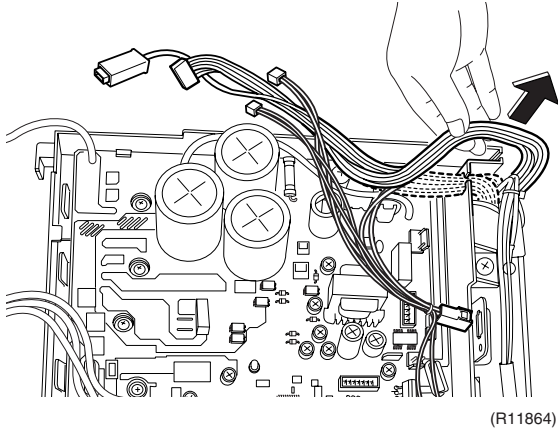
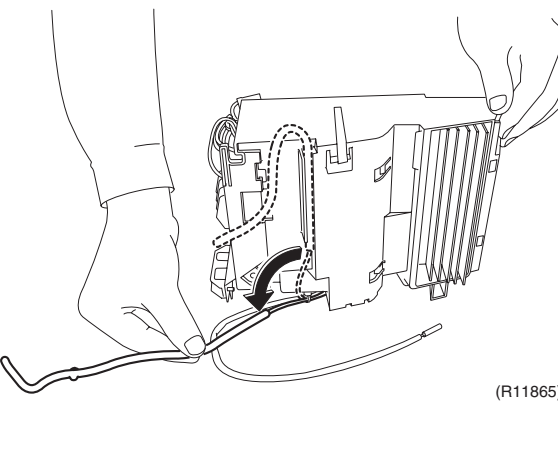
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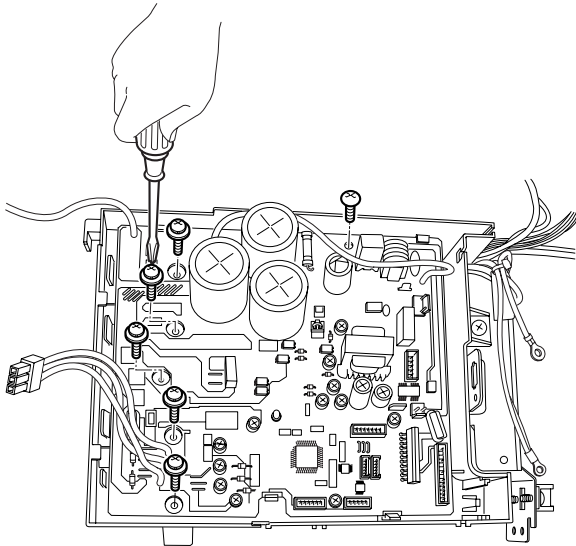
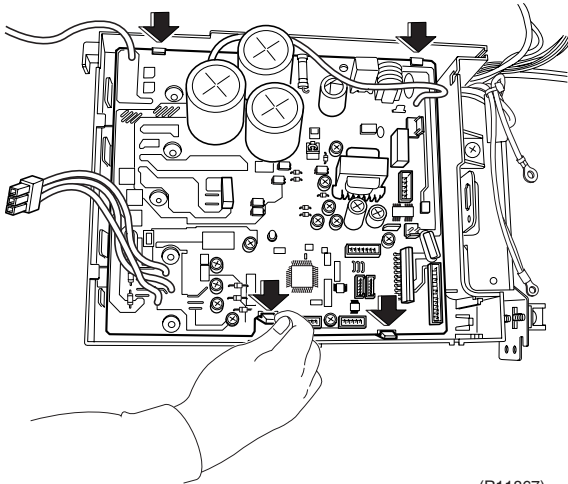
Step	Procedure	Points
1. Remove the main PCB and the forced operation button PCB.		<ul style="list-style-type: none"> ■ You can remove the main PCB when you disconnect the lead wires on the terminal board without removing the electrical box.
1	Layout of the main PCB	
2	Remove the screw on the terminal board.	
		
3	Release the 2 earth wires.	
		

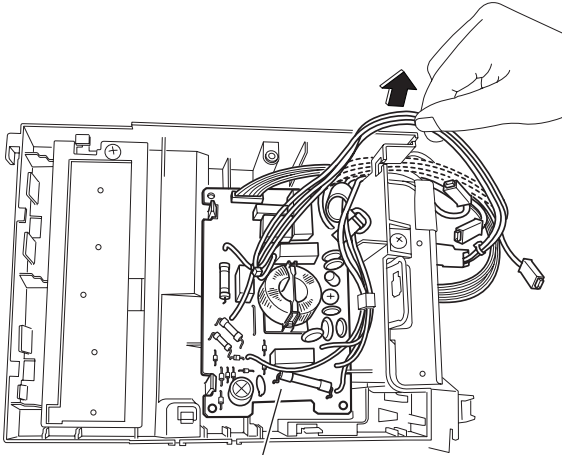
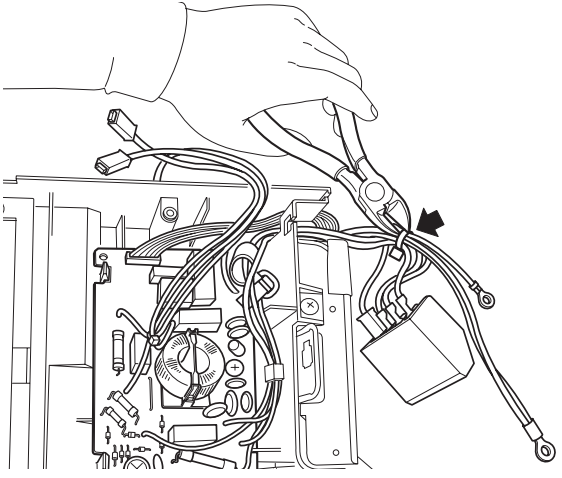
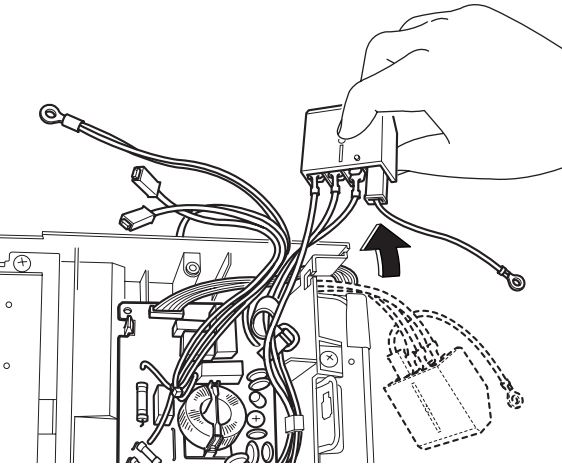
Step	Procedure	Points
4	Pull out the forced operation button PCB. Disconnect the connector [S110] to remove the forced operation button PCB.	<ul style="list-style-type: none"> Be careful of a sharp protrusion at the back of the forced operation button PCB.
5	Disconnect the selective connector for standby electricity saving and pull out the relay connector.	
6	Cut the clamp.	

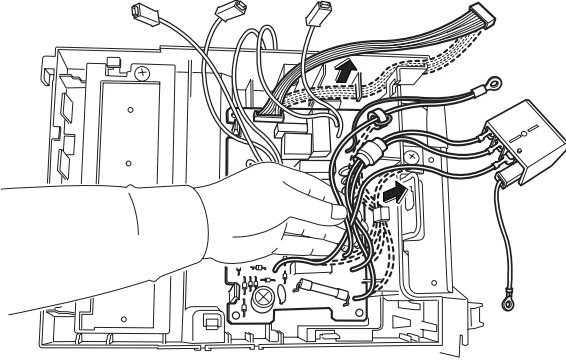
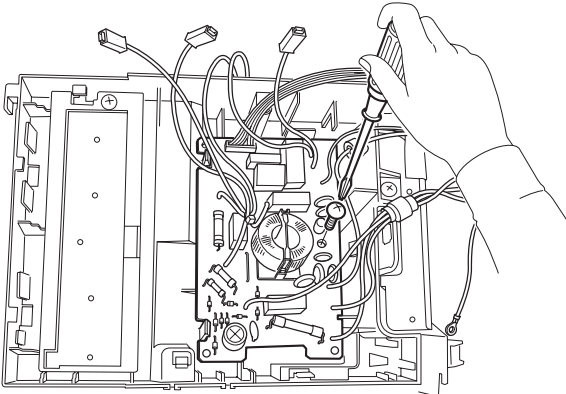
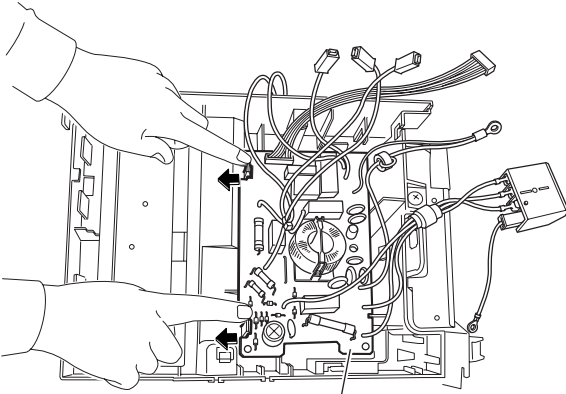
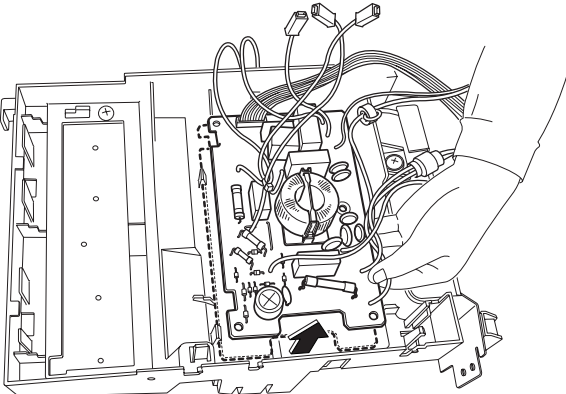


Step	Procedure	Points
7	<p>Release the harness.</p>  <p>(R11859)</p>	
8	<p>Cut the clamps at the 2 locations.</p>  <p>(R11860)</p>	
9	<p>Disconnect the connector for the filter PCB [S10].</p>  <p>[S10] (R11861)</p>	

Step	Procedure	Procedure	Points
10	Disconnect the connectors for the magnetic relay [S50] and for the forced operation button PCB [S100].		
11	Disconnect the connector for the filter PCB [HL3] [HN3].		
12	Release the harnesses from the hook.		
13	Release the harness for the outdoor temperature thermistor.		

Step	Procedure	Points
14	Remove the 6 screws.  <p style="text-align: right;">(R11866)</p>	
15	Unfasten the 4 hooks and remove the main PCB.  <p style="text-align: right;">(R11867)</p>	
	<p style="text-align: right;">(R11868)</p>	<p>[S10] [HL3] [HN3]: filter PCB [S20]: electronic expansion valve coil [S40]: overload protector [S50]: magnetic relay [S70]: fan motor [S80]: four way valve coil [S90]: thermistors [S100]: forced operation button PCB</p>

Step	Procedure	Points
2. Remove the filter PCB.		
1	Release the harnesses from the hook.	
	 <p data-bbox="708 689 810 712">Filter PCB</p> <p data-bbox="991 696 1066 719">(R11869)</p>	
2	Cut the clamp.	
	 <p data-bbox="991 1223 1066 1245">(R11871)</p>	
3	Release the harnesses from the hook.	
	 <p data-bbox="963 1742 1038 1765">(R11872)</p>	

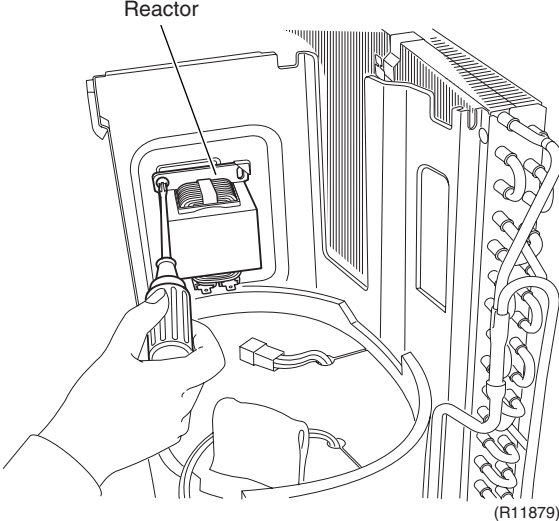
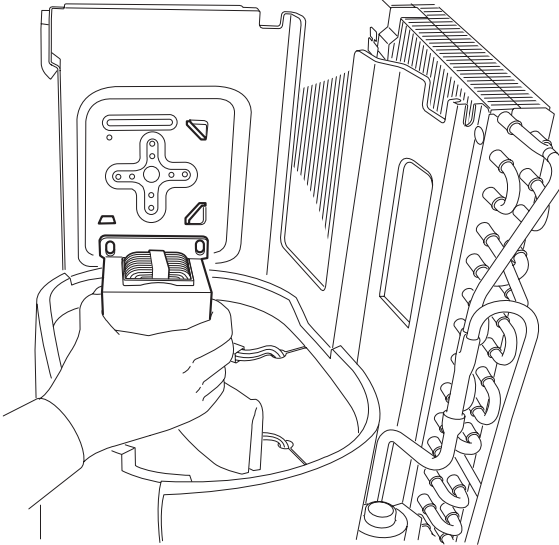
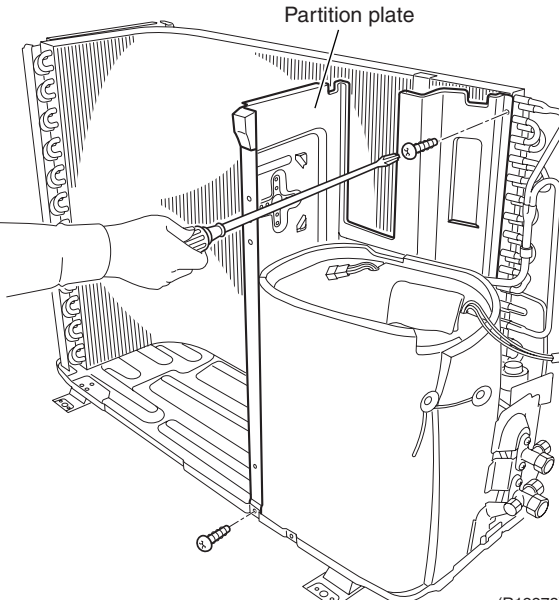
Step	Procedure	Points
4	<p>Release the harnesses from the 2 hooks.</p>  <p>(R11873)</p>	
5	<p>Remove the screw.</p>  <p>(R11874)</p>	
6	<p>Unfasten the 2 hooks.</p>  <p>Filter PCB (R11876)</p>	
7	<p>Lift and remove the filter PCB.</p>  <p>(R11877)</p>	

4. Removal of Reactor / Partition Plate

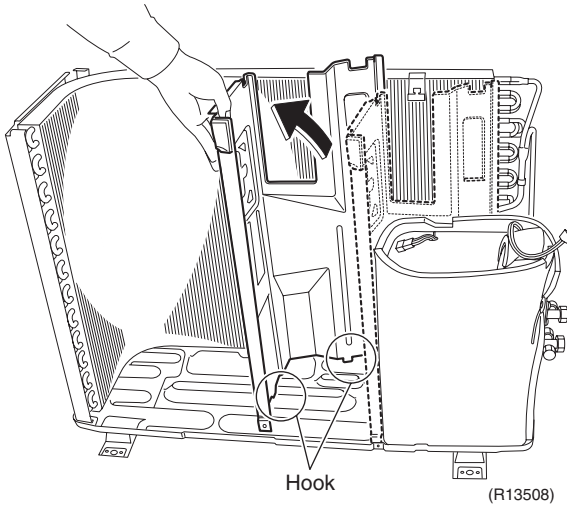
Procedure



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 reactor. 1 Remove the screw and remove the reactor.	 <p>(R11879)</p>  <p>(R11880)</p>	Preparation <ul style="list-style-type: none"> ■ Remove the outer panels according to the "Removal of Outer Panels / Fan Motor". ■ Remove the electrical box according to the "Removal of Electrical Box".
2. Remove the partition plate. 1 Remove the 2 screws.	 <p>(R12273)</p>	

Step	Procedure	Points
2	<p>The partition plate has 2 hooks on the lower side. Lift and pull the partition plate to remove.</p>	<ul style="list-style-type: none"> ■ When reassembling, fit the lower hooks into the bottom frame.



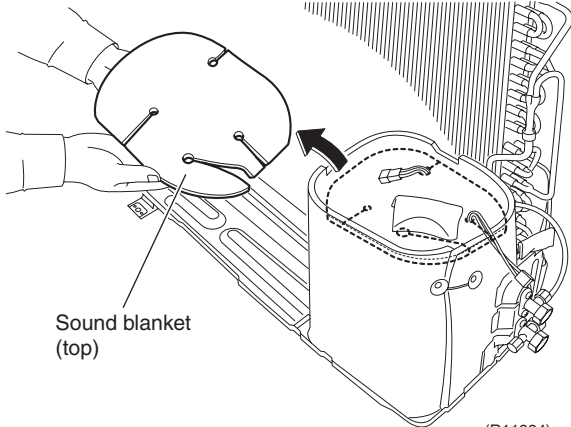
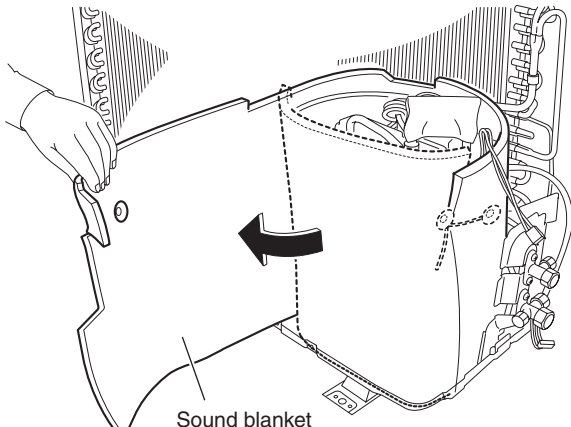
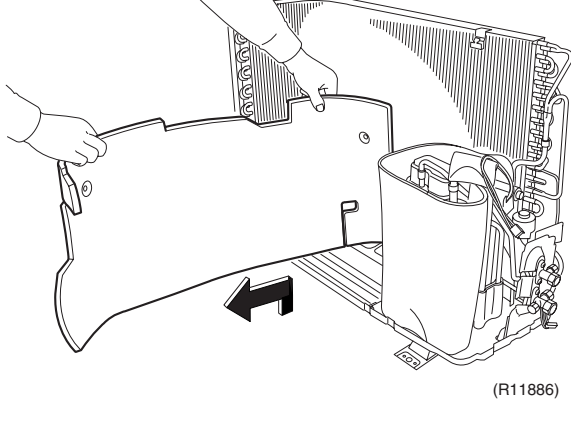
5. Removal of Sound Blankets

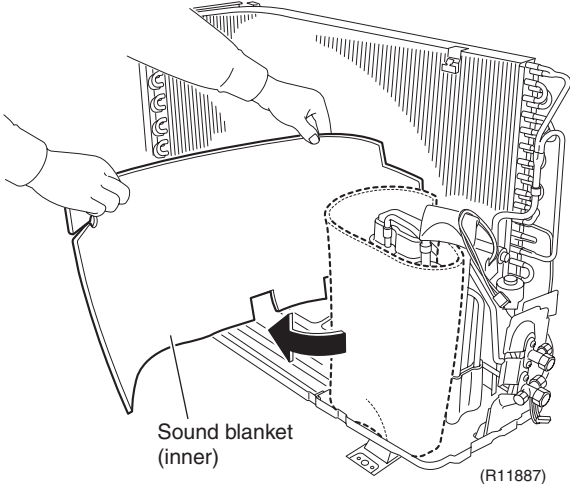
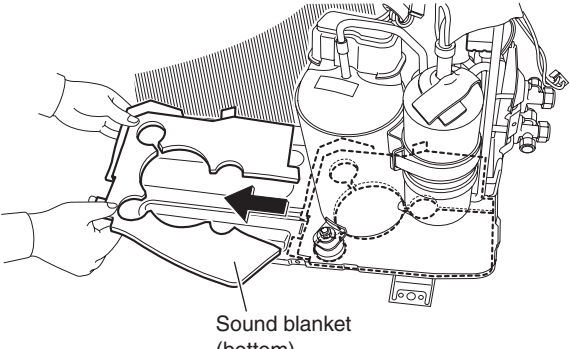
Procedure



Warning

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

Step	Procedure	Procedure	Points
1	Remove the sound blanket (top).	 <p>(R11884)</p>	<ul style="list-style-type: none"> Since the piping ports are torn easily, remove the sound blankets carefully.
2	Untie the string and open the sound blanket (outer).	 <p>(R11885)</p>	
3	Lift and remove the sound blanket (outer).	 <p>(R11886)</p>	

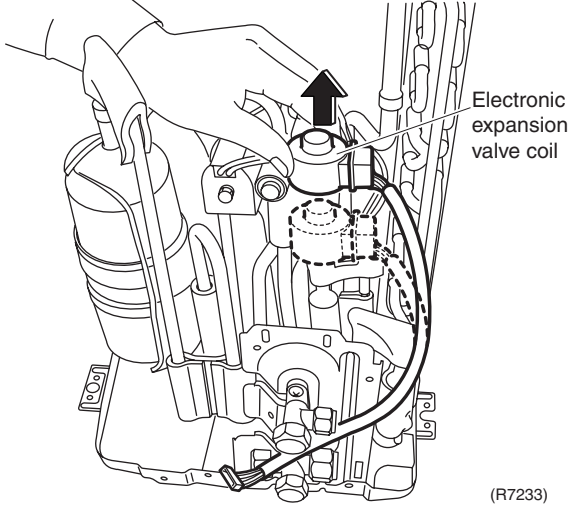
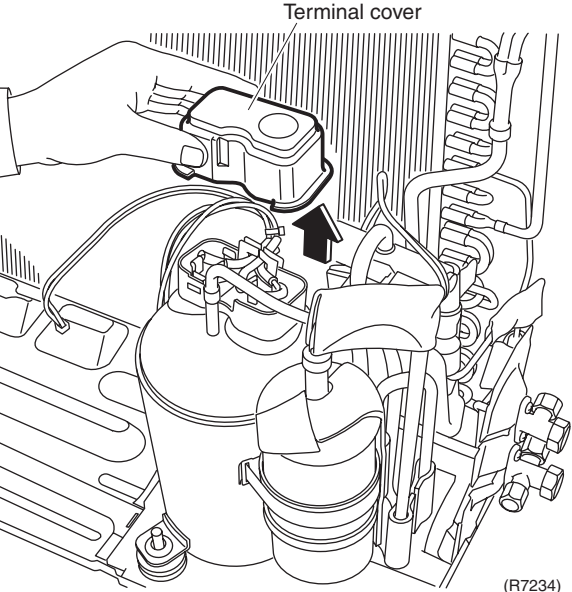
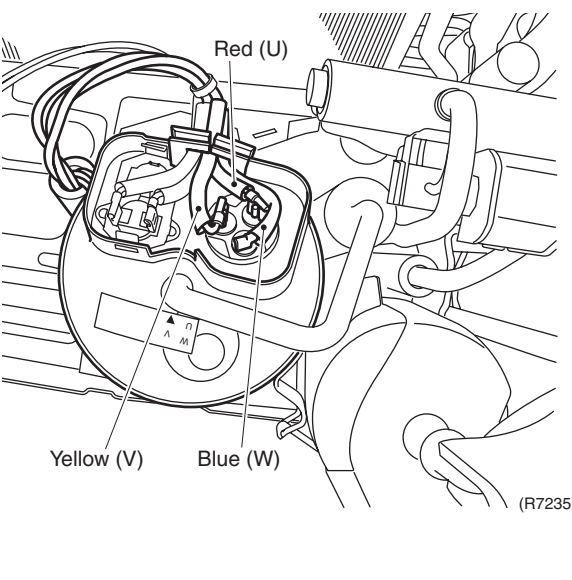
Step	Procedure	Points
4	<p>Pull out the sound blanket (inner).</p>  <p style="text-align: right;">(R11887)</p>	
5	<p>Pull out the sound blanket (bottom).</p>  <p style="text-align: right;">(R11888)</p>	

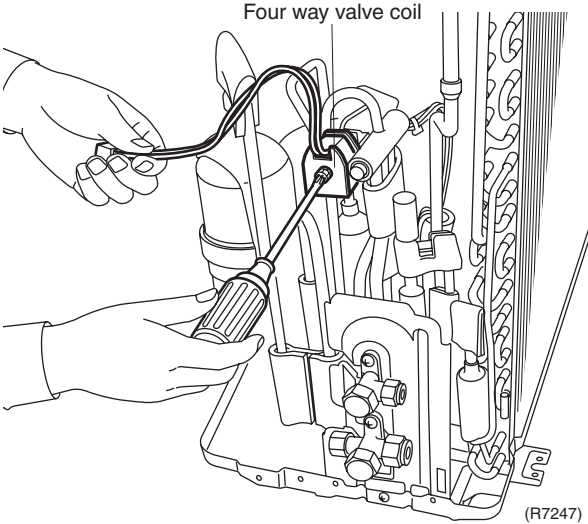
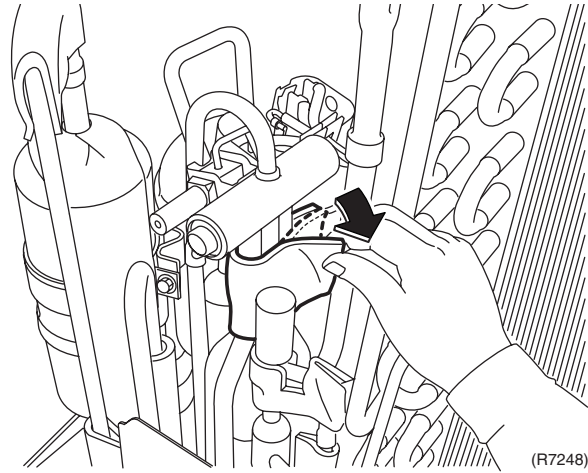
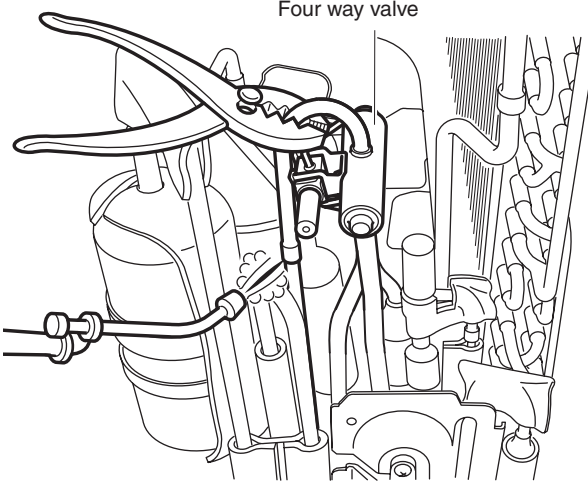
6. Removal of Four Way Valve

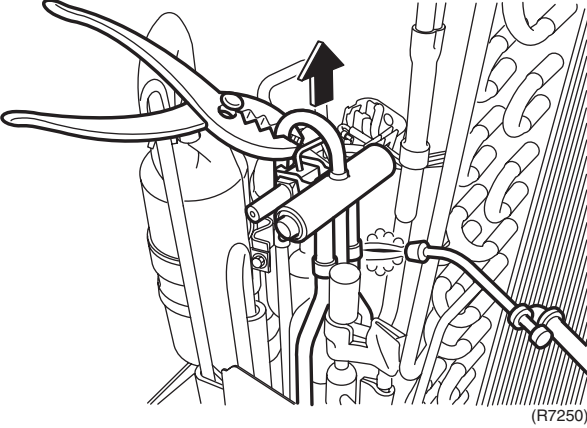
Procedure



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

Step	Procedure	Procedure	Points
1	Pull out the electronic expansion valve coil.	 <p>(R7233)</p>	
2	Remove the terminal cover.	 <p>(R7234)</p>	
3	Disconnect the lead wires of the compressor.	 <p>(R7235)</p>	

Step	Procedure	Points
4	<p>Remove the screw and remove the four way valve coil.</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> <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>
5	<p>Remove the sheets of putty.</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.
6	<p>Heat up the brazed part and withdraw the piping with pliers.</p> 	<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.

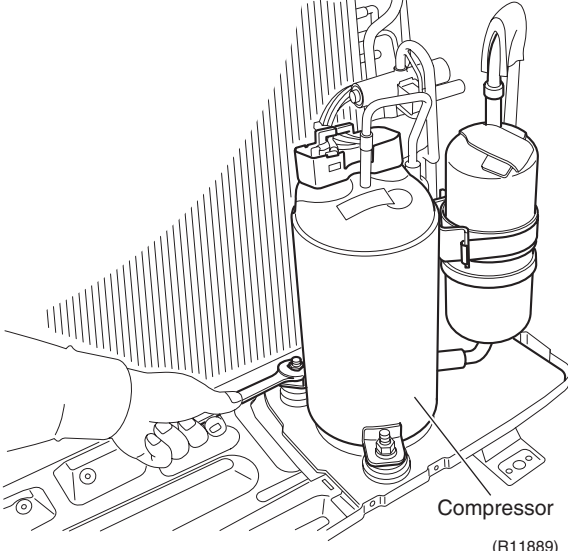
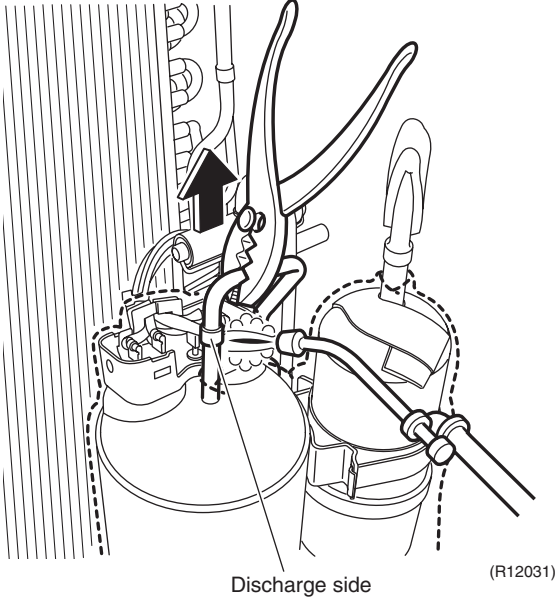
Step	Procedure	Points
	 <p>(R7250)</p>	<p>Note:</p> <ul style="list-style-type: none">■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit.■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed.■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries.

7. Removal of Compressor

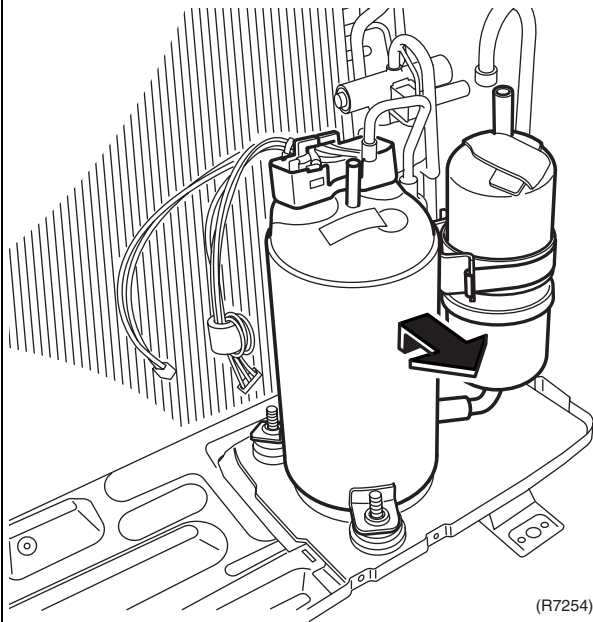
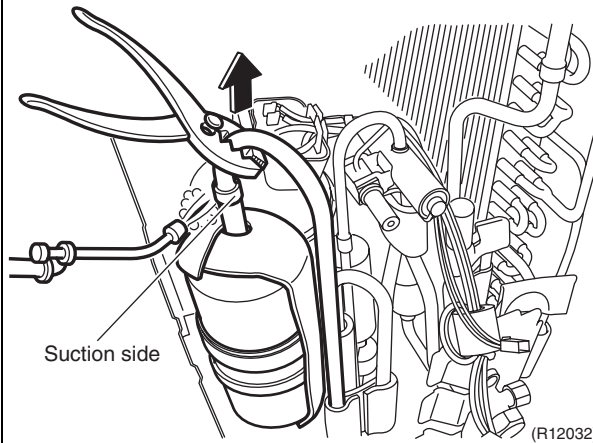
Procedure



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

Step	Procedure	Points
1	<p>Remove the 2 nuts of the compressor.</p> 	<p>Warning Be careful not to get yourself burnt with 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>Warning Since it may happen that the refrigerant oil in the compressor catches fire, prepare wet cloth so as to extinguish fire immediately.</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>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	<p>Heat up the brazed part of the discharge side and disconnect it.</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.

Step	Procedure	Points
3	Heat up the brazed part of the suction side and disconnect it.	<p>Note:</p> <ul style="list-style-type: none"> ■ Never use a metal saw to cut pipes because the sawdust may enter 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 fins.
4	Lift the compressor up and remove it.	



Revision History

Month / Year	Version	Revised contents
08/2012	Si001156	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/

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