Si121295

REMOVAL PROCEDURE

SERVICE MANUAL

SERVICE MANUAL

4.0/5.0 kW Class

- Outdoor Unit
- Inverter
- Multi Type

Service Manual
Removal Procedure

Outdoor Unit

●Heat Pump

2AMX40G3V1B
2AMX50G3V1B

2MXS40H3V1B
2MXS50H3V1B

Table of Contents

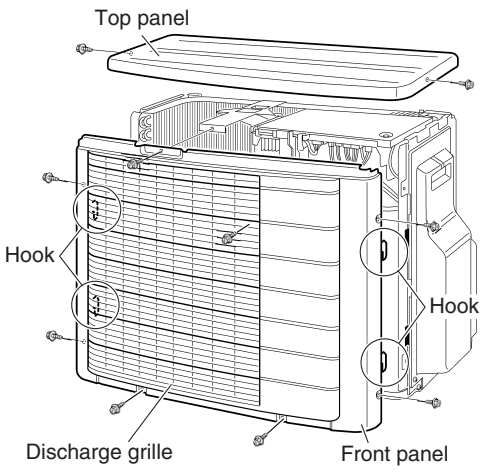
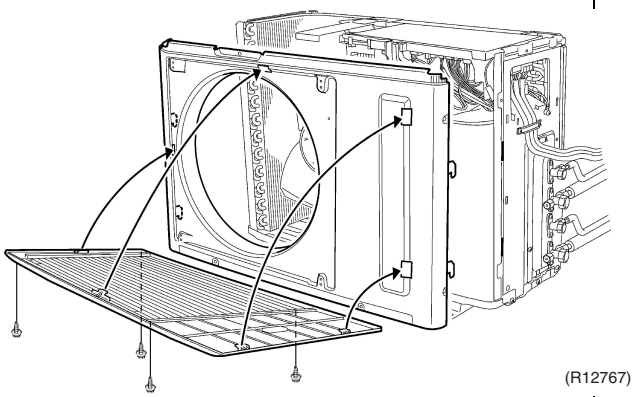
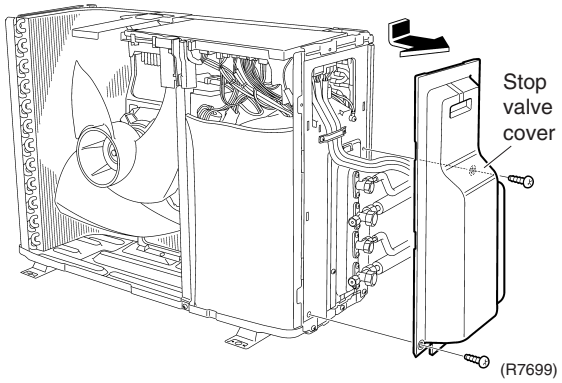
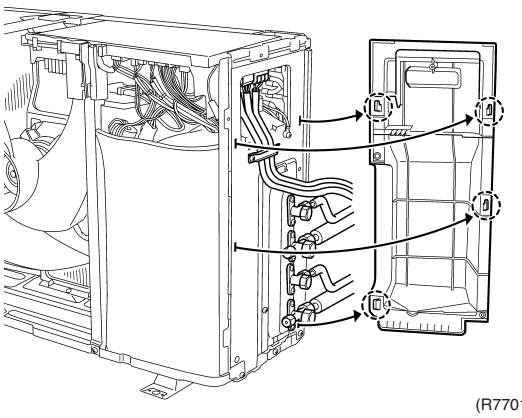
1. Outer Panels 2
2. Outdoor Fan / Fan Motor.....3
3. Electrical Box 5
4. PCB.....9
5. Sound Blankets 12
6. Thermistors 14
7. Four Way Valve / Outdoor Electronic Expansion Valves 16
8. Compressor.....19

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

1. Outer Panels

Warning

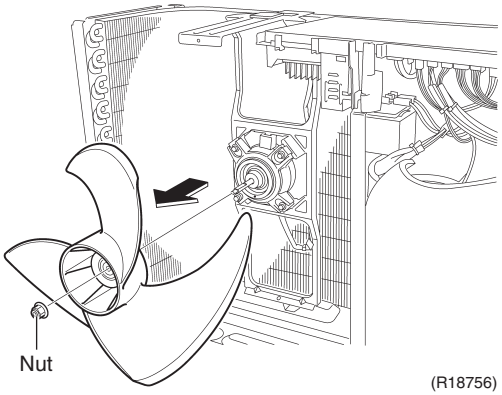
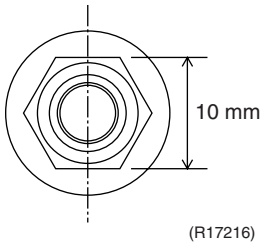
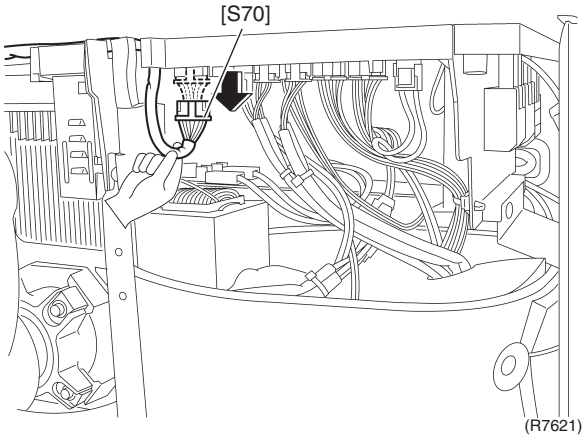
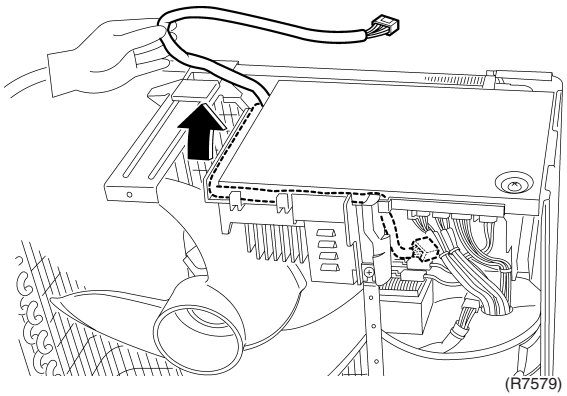
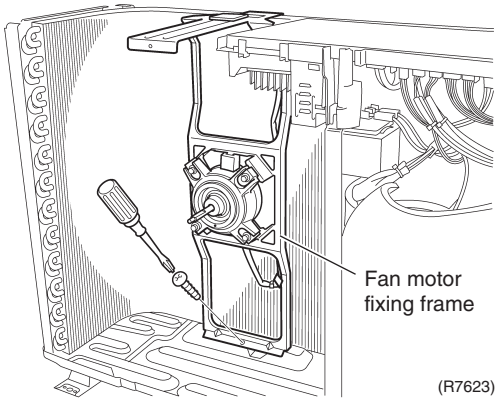
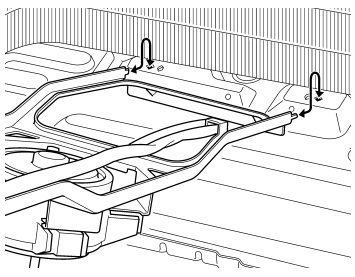
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

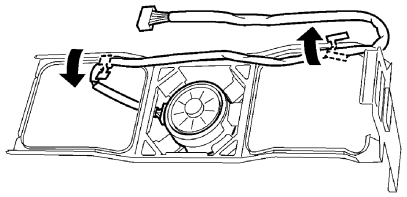
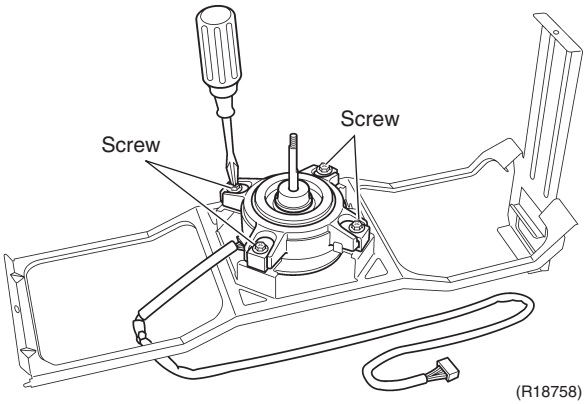
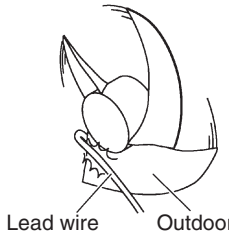
Step	Procedure		Points
1	Remove the 2 screws and remove the top panel.		■ The front panel has 4 hooks.
2	Remove the 8 screws and remove the front panel.		
3	Remove the 4 screws and remove the discharge grille.		■ When reassembling, make sure to fit the 4 hooks.
4	Remove the 2 screws and remove the stop valve cover.		
			■ When reassembling, make sure to fit the 4 hooks.

2. Outdoor Fan / Fan Motor

Warning

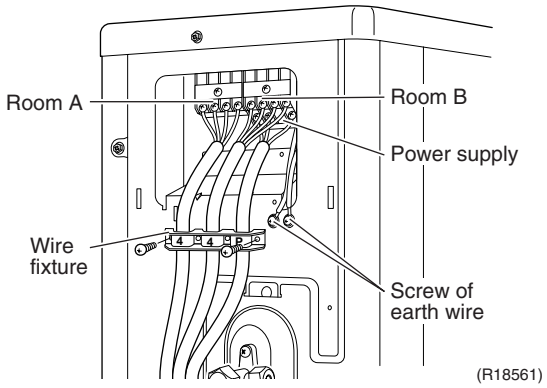
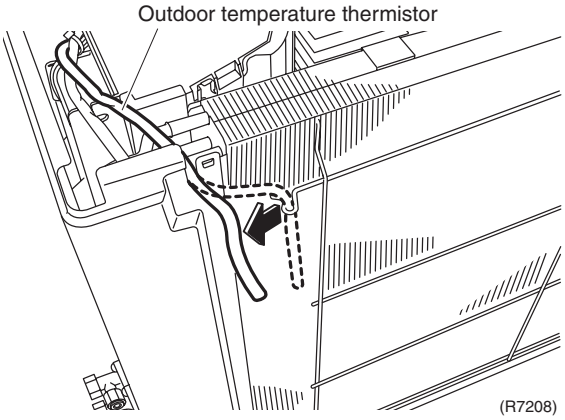
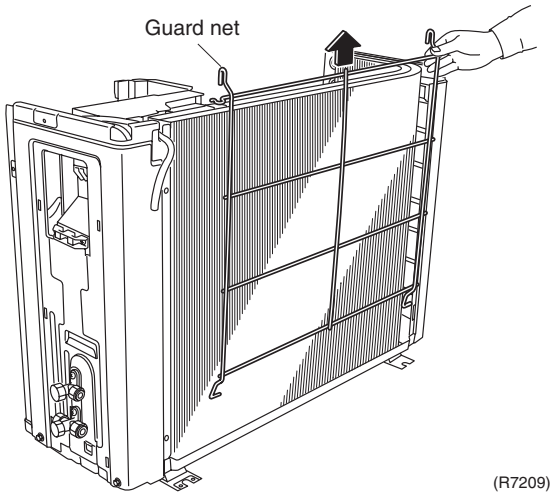
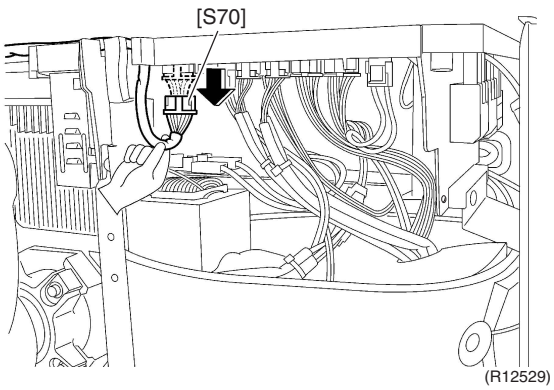
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

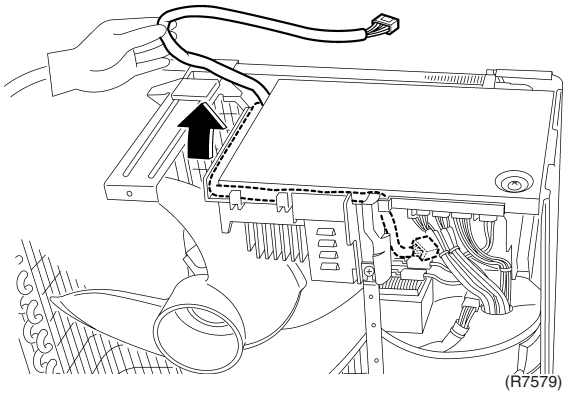
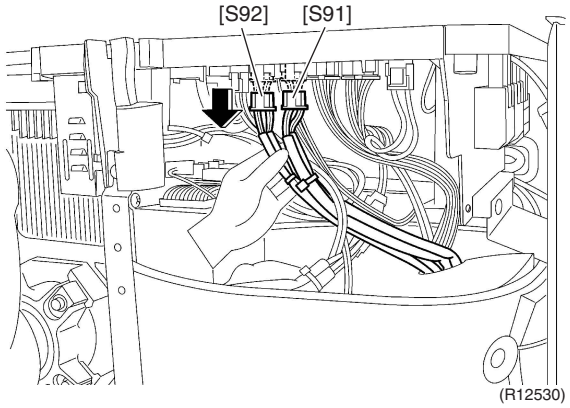
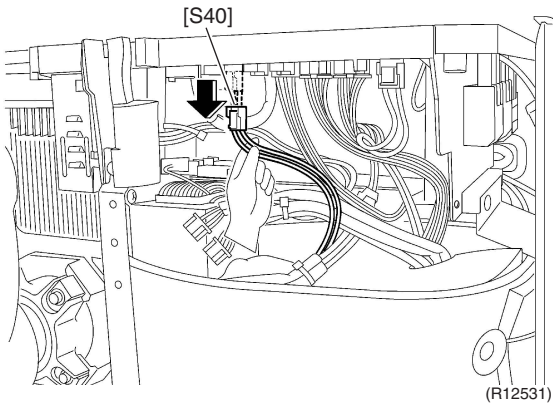
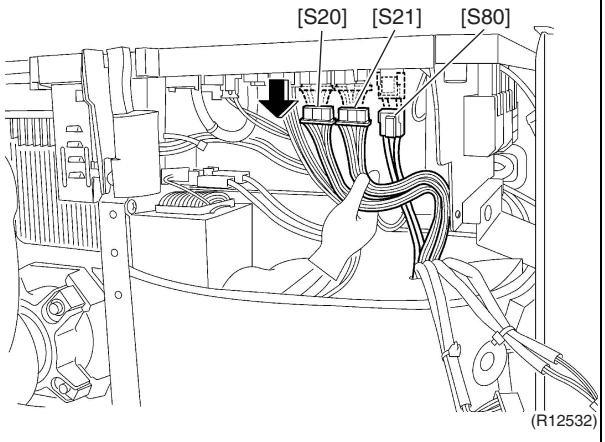
Step	Procedure		Points
1	Remove the nut and remove the outdoor fan.	 (R18756)	■ Nut size: M6  (R17216) ■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft.
2	Disconnect the connector [S70].	 (R7621)	[S70]: fan motor
3	Release the fan motor lead wire.	 (R7579)	
4	Remove the screw and remove the fan motor fixing frame.	 (R7623)	■ When reassembling, fit the lower 2 hooks into the bottom frame.  (R18757)

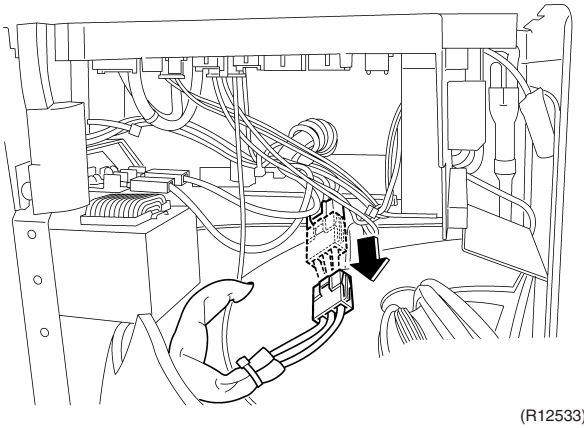
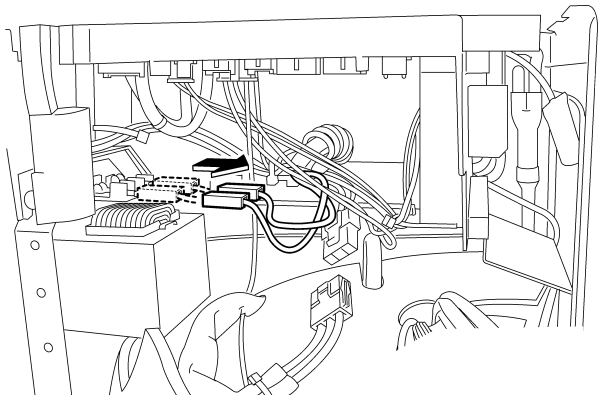
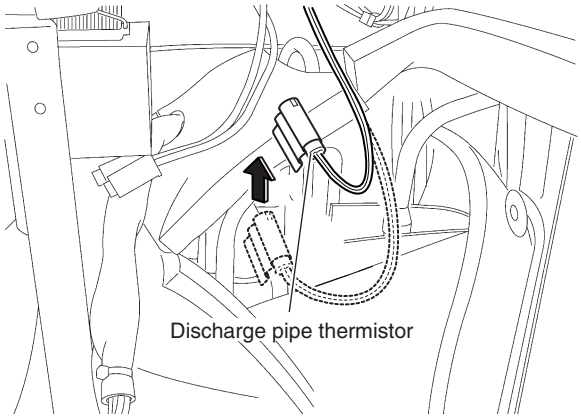
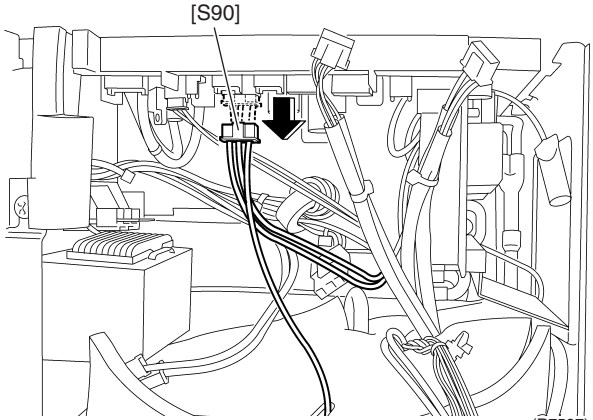
Step	Procedure		Points
5	Turn the fan motor fixing frame backward and open the 2 hooks to release the fan motor lead wire.	 (R7626)	
6	Remove the 4 screws and remove the fan motor.	 (R18758)	■ When reassembling, put the fan motor lead wire through the back of the fan motor so as not to be entangled with the outdoor fan.  (R12215)

3. Electrical Box

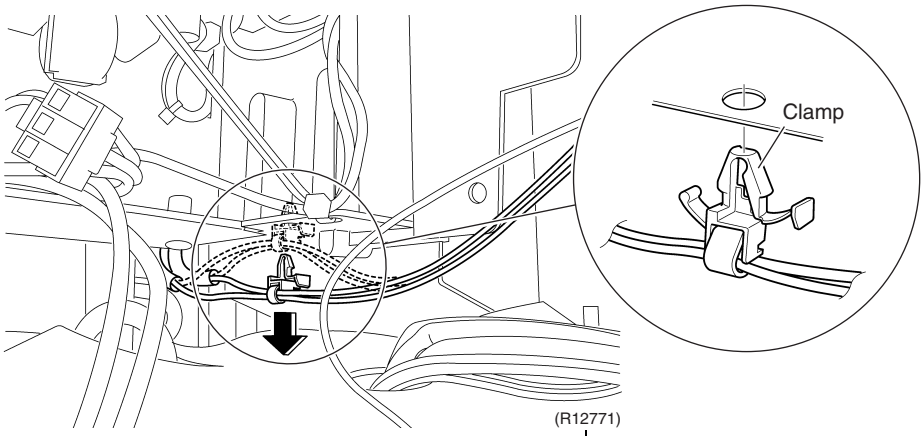
Warning ◆ **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

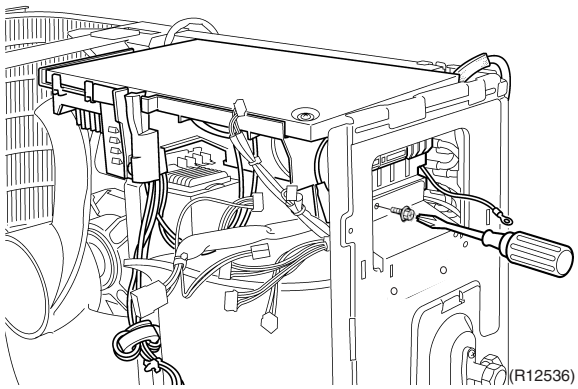
Step	Procedure	Points
1. Disconnect the connecting wires.		■ When reassembling, fasten the wires with screws on the terminal board.
1 Remove the 2 screws of earth wires. Remove the 2 screws and remove the wire fixture. Then remove all the screws to disconnect the power supply cables and the connecting wires.		
2. Remove the electrical box.		
1 Release the outdoor temperature thermistor.		
2 Lift up the guard net and remove it.		
3 Disconnect the connector [S70].		[S70]: fan motor

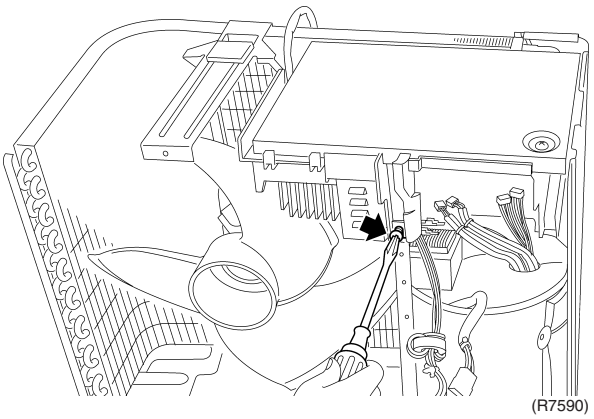
Step	Procedure		Points
4	Release the fan motor lead wire.		
5	Disconnect the connectors [S91] [S92].		[S91]: gas pipe thermistor (white) [S92]: liquid pipe thermistor (red)
6	Disconnect the connector [S40].		[S40]: overload protector
7	Disconnect the connectors [S20] [S21] [S80].		[S20]: outdoor electronic expansion valve coil for room A (white) [S21]: outdoor electronic expansion valve coil for room B (red) [S80]: four way valve coil

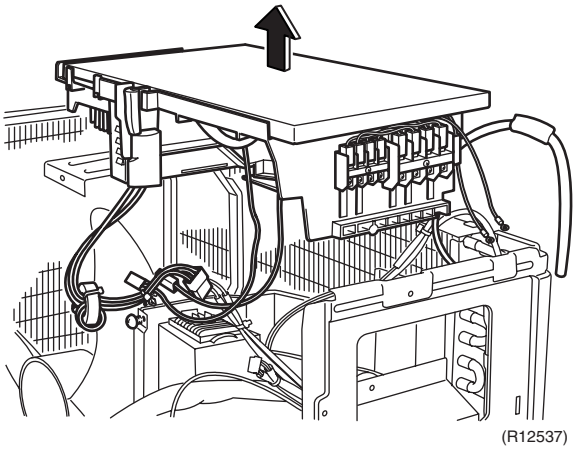
Step	Procedure		Points
8	Disconnect the relay connector for the compressor.	 (R12533)	
9	Disconnect the 2 connectors for the reactor.	 (R12534)	
10	Release the discharge pipe thermistor.	 (R12535)	■ Meet the edge of the thermistor and the fixture. ■ Be careful not to lose the fixture for the thermistor.
11	Disconnect the connector [S90].	 (R7587)	[S90]: thermistors (outdoor temperature, outdoor heat exchanger, discharge pipe)

Step	Procedure	Points
12	Detach the clamp for the thermistors from the electrical box.	
13	Remove the screw on the right side of the electrical box.	
14	Loosen the screw at the front of the electrical box.	
15	Lift and remove the electrical box.	







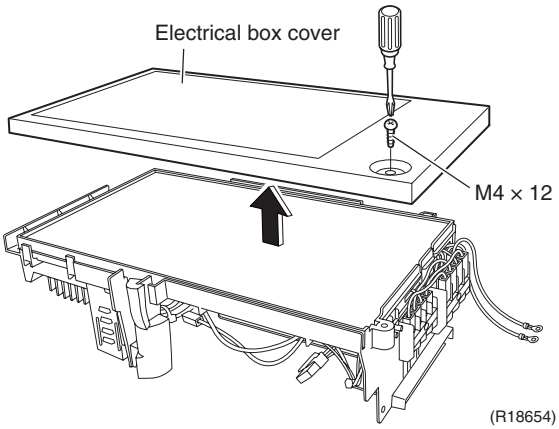


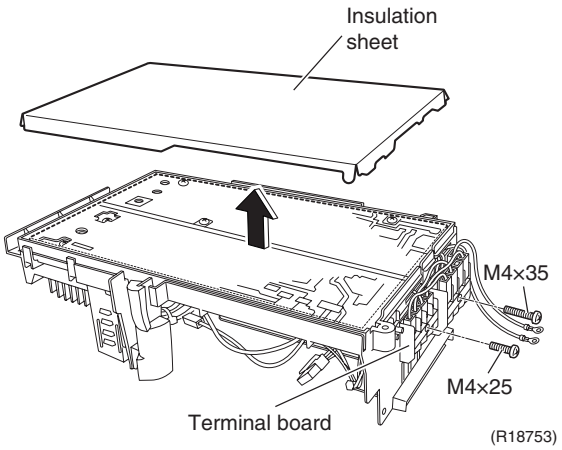
4. PCB

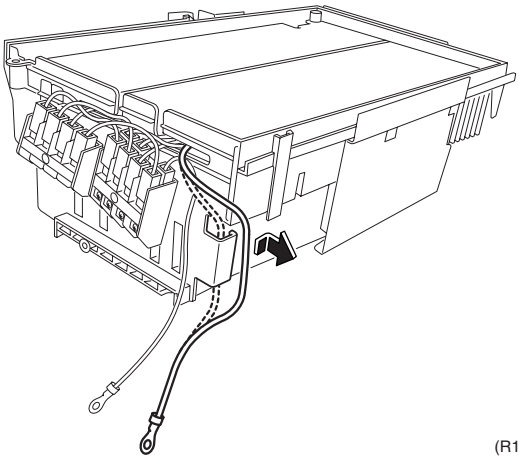
Warning

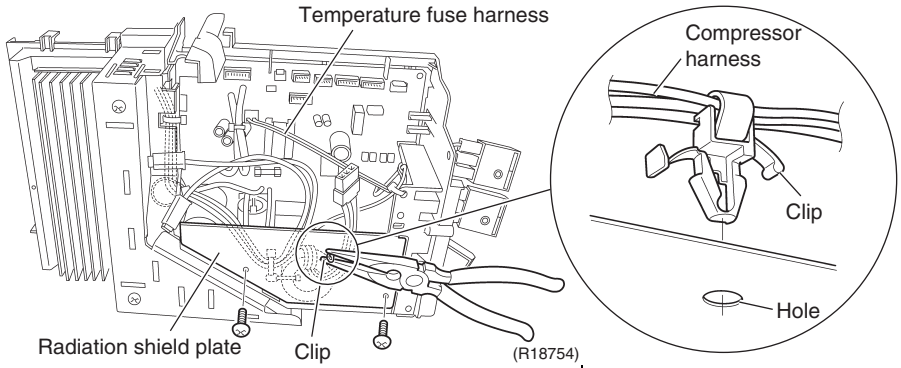
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

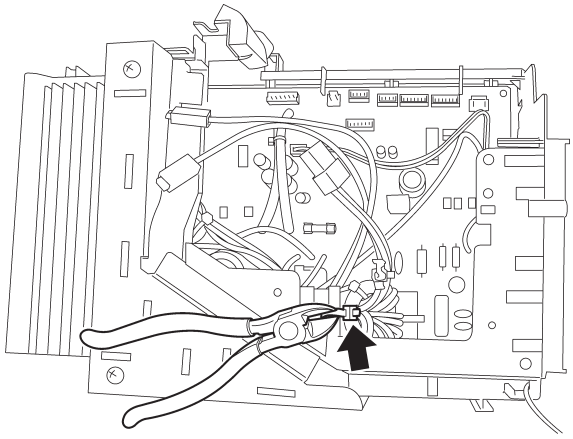
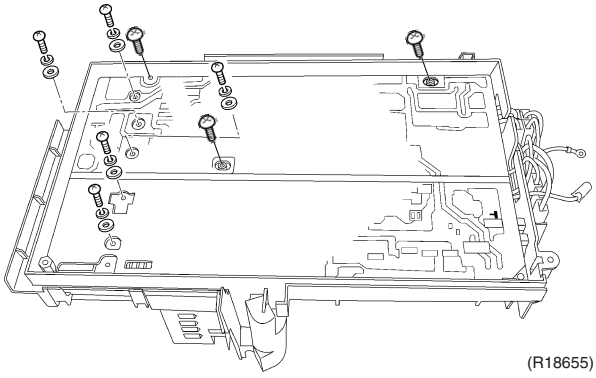
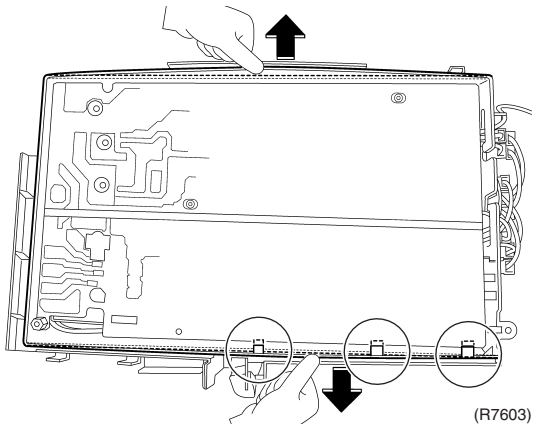
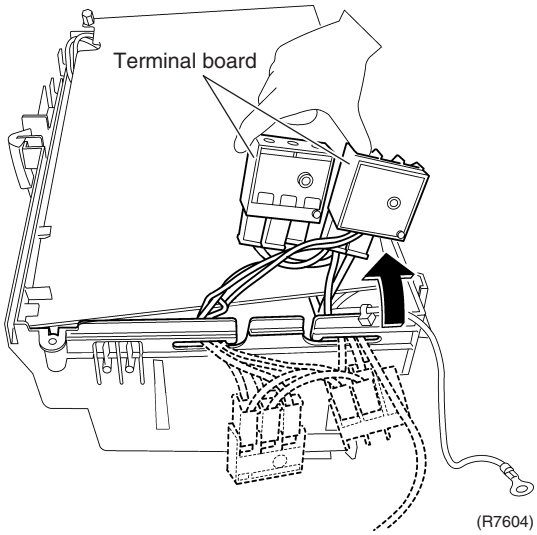
Step	Procedure	Points
1	Remove the screw and remove the electrical box cover.	
2	Detach the insulation sheet.	■ The trimmed part goes front.
3	Remove the 2 screws and remove the terminal boards.	■ The thermal fuse is united with terminal board.
4	Release the earth wire from the hook.	
5	Remove the 2 screws and detach the clip to remove the radiation shield plate.	

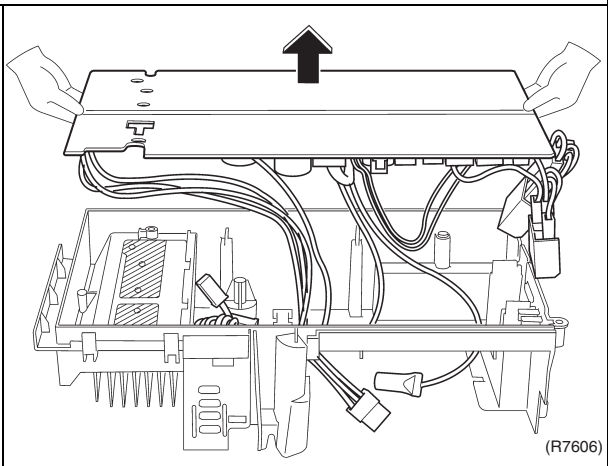
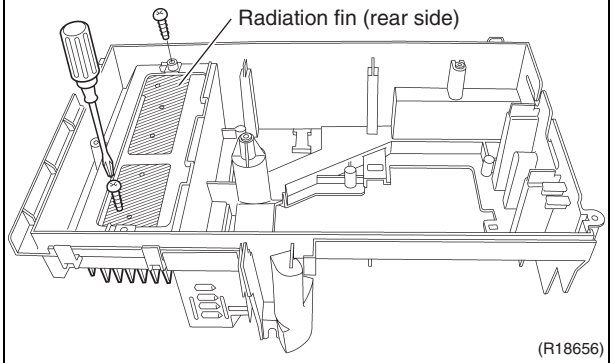








Step	Procedure		Points
6	Cut the clamp and release the wire harnesses.	 (R7597)	
7	Remove the screws to remove the PCB.	 (R18655)	■ The number of screws varies depending on the model.
8	Lift up the back side of the electrical box slightly and unfasten the 3 hooks.	 (R7603)	■ When reassembling, make sure that the hooks of the electrical box are placed on the PCB.
9	Release the lead wires from the hooks and remove the terminal boards.	 (R7604)	

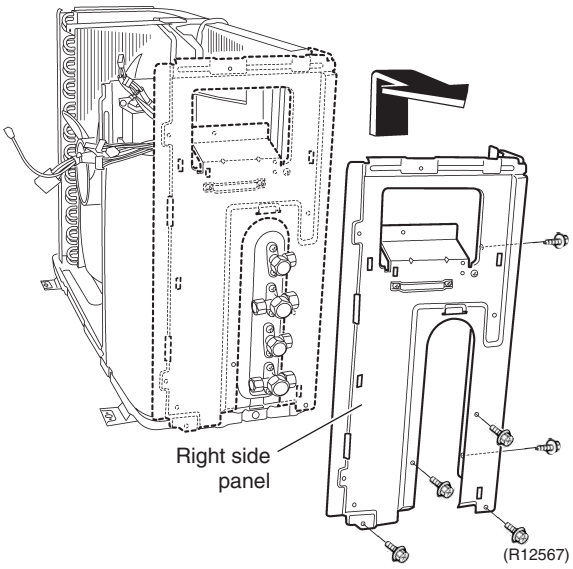
Step	Procedure		Points
10	Lift up and remove the PCB.	 (R7606)	
11	Remove the 2 screws and remove the radiation fin.	 (R18656)	

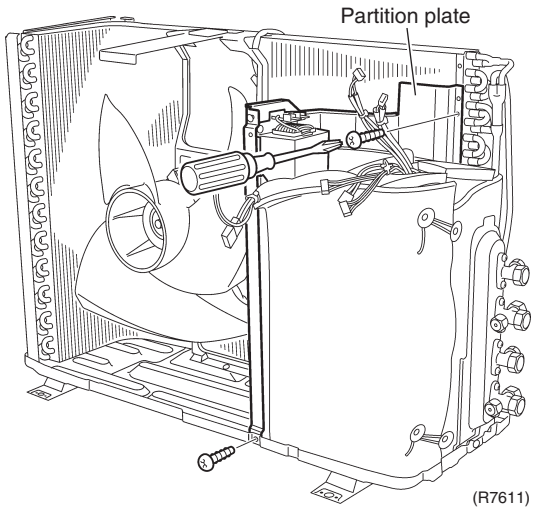
5. Sound Blankets

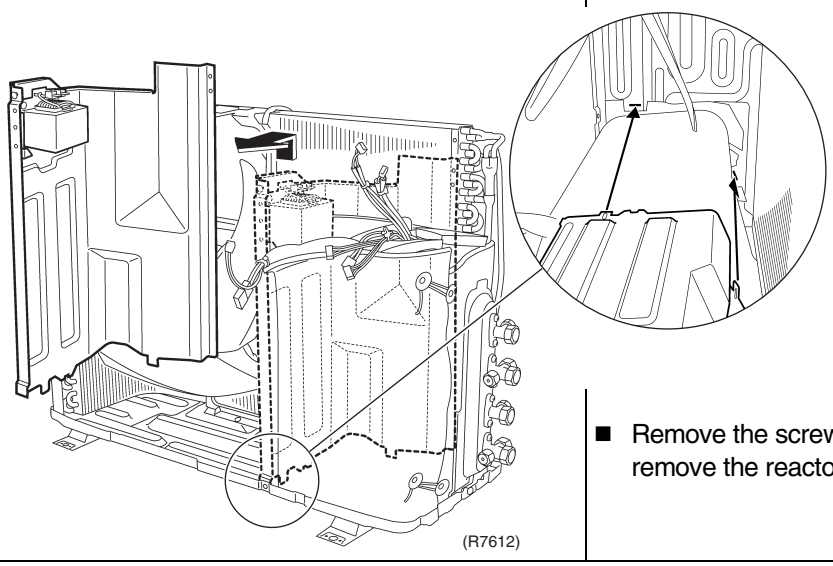
Warning

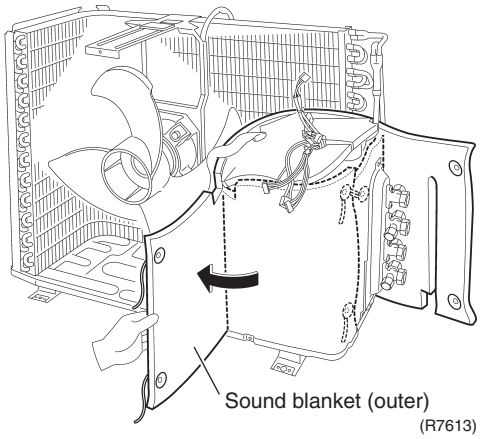
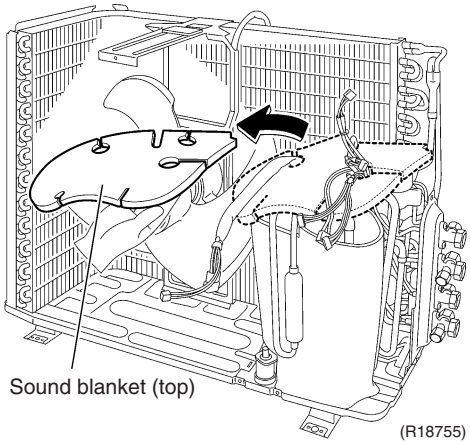
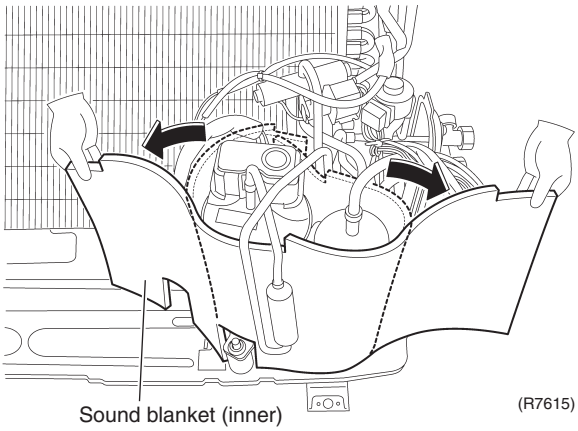
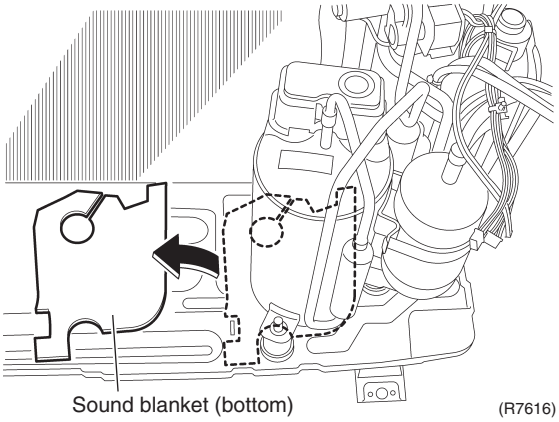
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

Step	Procedure	Points
1. Remove the right side panel.		
1	Remove the 6 screws and remove the right side panel.	
2. Remove the partition plate.		
1	Remove the 2 screws.	■ When reassembling, fit the lower hooks into the bottom frame.
2	The partition plate has 2 hooks on the lower side. Lift and pull the partition plate and remove it.	■ Remove the screw to remove the reactor.





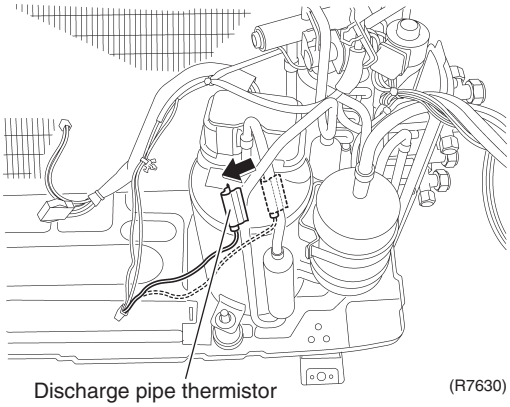
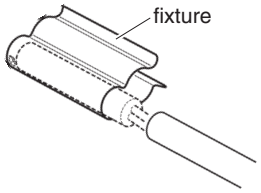
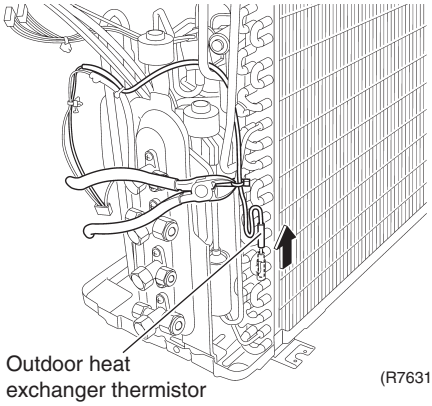
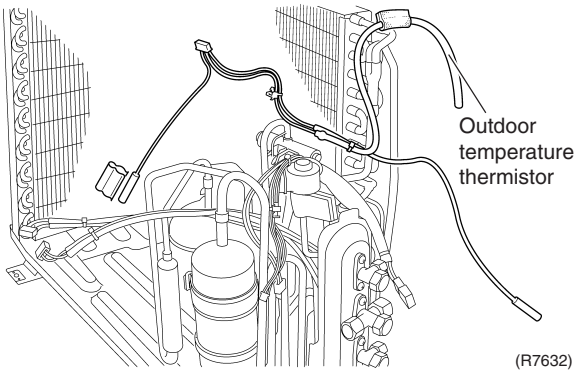
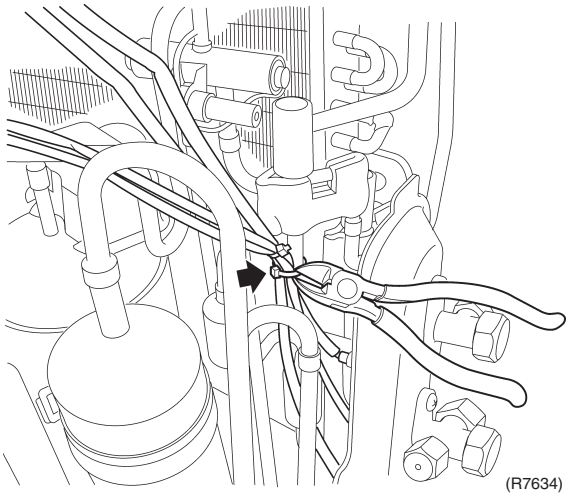


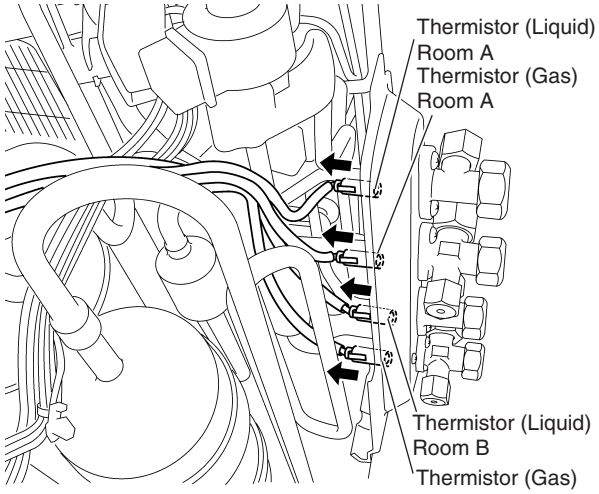
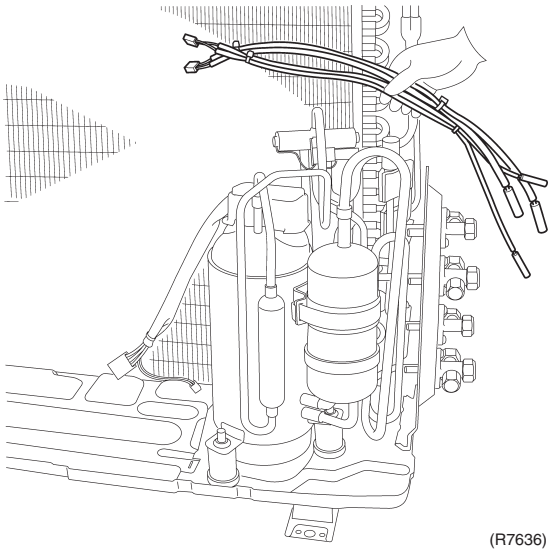
Step	Procedure	Points
3. Remove the sound blankets.		■ Since the piping ports are torn easily, remove the sound blanket carefully. ■ Some models have 2 sound blankets (top). ■ The design of the sound blankets is different depending on the models.
1	Untie the strings, open the sound blanket (outer) and pull it out.	 (R7613)
2	Remove the sound blanket (top).	 (R18755)
3	Open the sound blanket (inner) and pull it out.	 (R7615)
4	Pull out the sound blanket (bottom).	 (R7616)

6. Thermistors

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 assembly of thermistors.	 (R7630)	■ Be careful not to lose the fixture for the thermistor.  (R18790)
1 Release the discharge pipe thermistor.		
2 Cut the clamp and pull out the outdoor heat exchanger thermistor.	 (R7631)	
3 The thermistors are united as an assembly.	 (R7632)	
2. Remove the liquid / gas pipe thermistors.	 (R7634)	
1 Cut the clamp.		

Step	Procedure		Points
2	Peel the putty and remove the thermistors.	 (R7635)	[S91] : gas pipe thermistor room A (black) room B (gray) [S92] : liquid pipe thermistor room A (black) room B (gray)
3	The figure shows the arrangement of the assembly of the liquid / gas thermistors.	 (R7636)	

7. Four Way Valve / Outdoor Electronic Expansion Valves

Warning

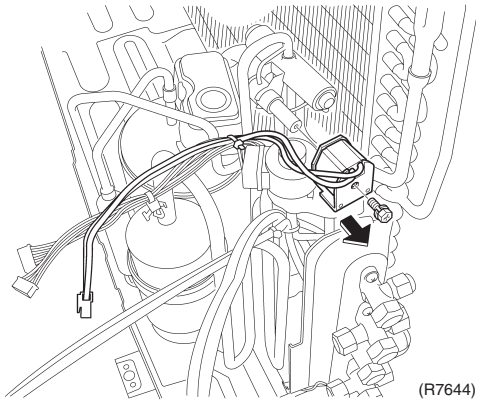
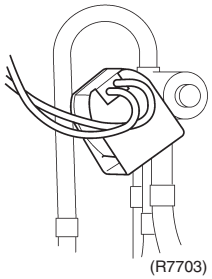
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**
- **Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.**
- **If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)**

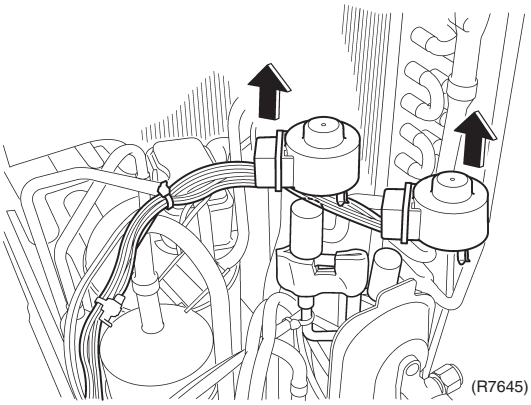
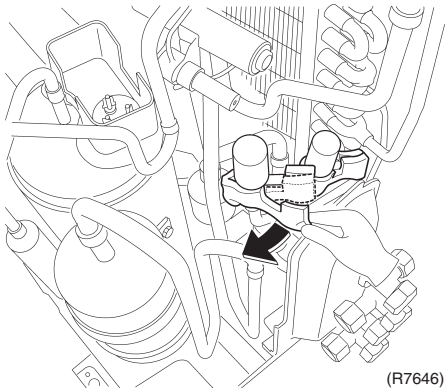
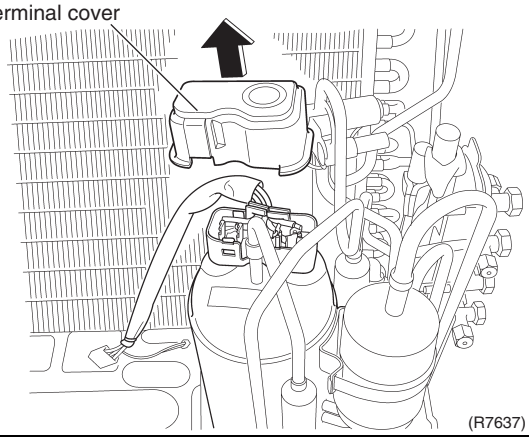
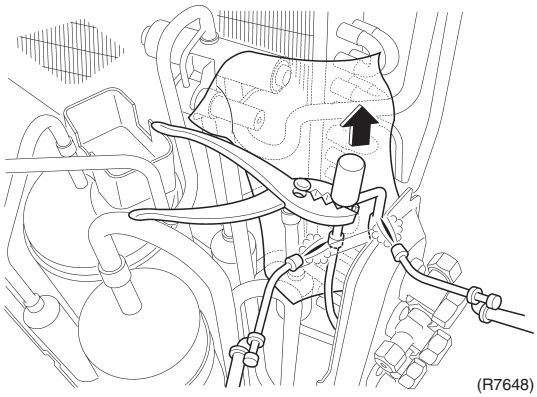
Caution

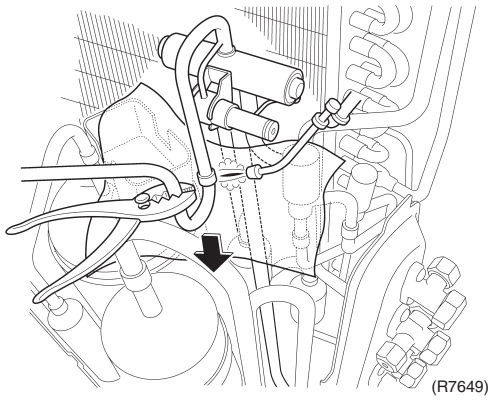
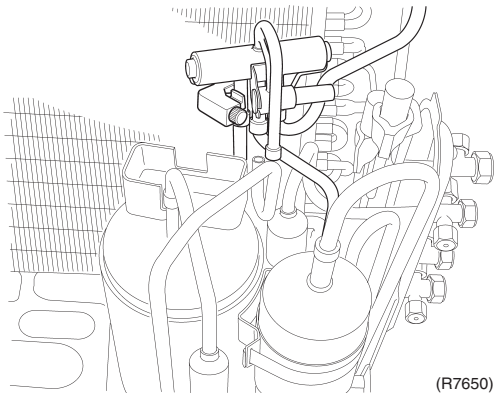
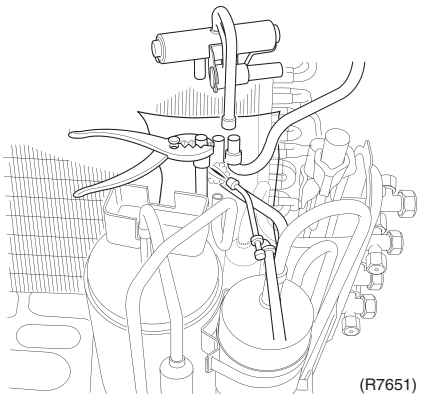
- **From the viewpoint of global environment protection, do not discharge the refrigerant gas in the atmosphere. Make sure to collect all the refrigerant gas.**
- **Cautions for restoration**
  1. Restore the piping by non-oxidation brazing.
  2. It is required to prevent the carbonization of the oil 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.

Note

- **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.**
- **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 outdoor heat exchanger fin.**
- **In case of difficulty with gas brazing machine**
  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
1. Remove the peripheries.	 (R7644)	 (R7703)
1 Remove the screw and remove the four way valve coil.		■ Detach the four way valve coil and the clamp, and then detach the wire harnesses.

Step	Procedure		Points
2	Pull out the outdoor electronic expansion valve coils.	 (R7645)	
3	Remove the putty.	 (R7646)	
4	Remove the terminal cover.	 Terminal cover (R7637)	
2. Remove the outdoor electronic expansion valves and the four way valve.			
1	Heat up the 2 brazed parts of the outdoor electronic expansion valve and remove it.	 (R7648)	

Step	Procedure		Points
2	Heat up the brazed parts of the four way valve.	 (R7649)	
3	Cut the pipes.	 (R7650)	
4	Heat up the brazed parts. Pull the pipe with pliers and disconnect.	 (R7651)	

8. Compressor

Warning

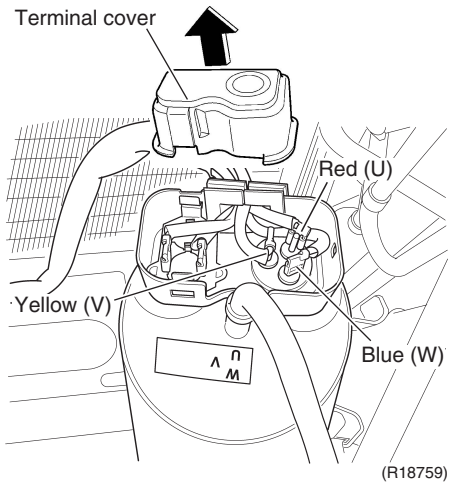
- **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**
- **Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.**
- **If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)**
- **Since it may happen that the refrigerant oil in the compressor catches fire, prepare wet cloth so as to extinguish fire immediately.**

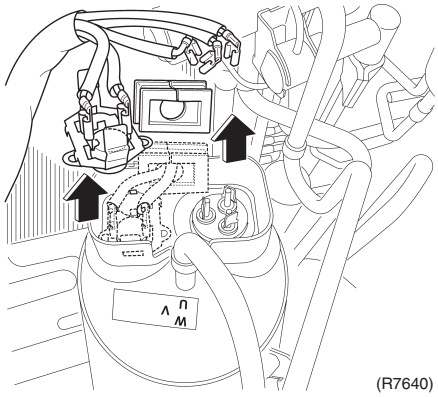
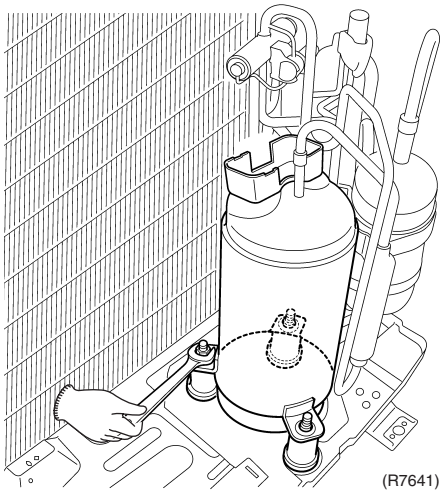
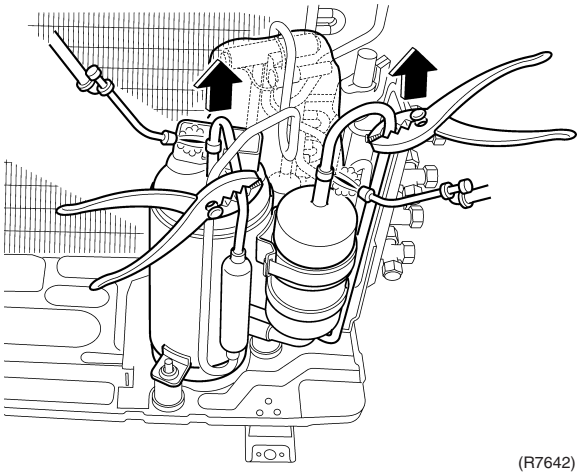
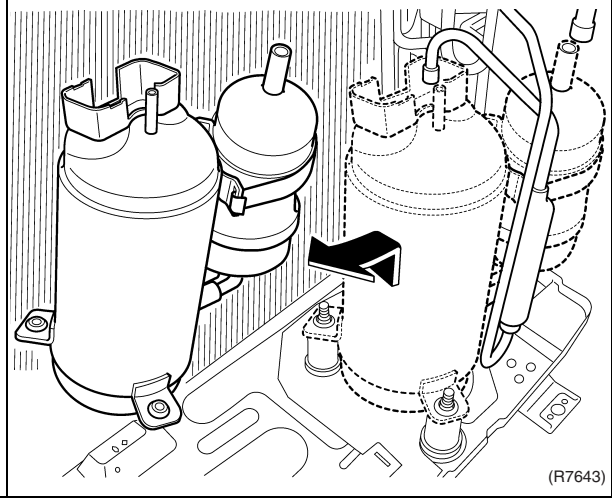
Caution

- **From the viewpoint of global environment protection, do not discharge the refrigerant gas in the atmosphere. Make sure to collect all the refrigerant gas.**
- **Cautions for restoration**
  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.

Note

- **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.**
- **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 outdoor heat exchanger fin.**
- **In case of difficulty with gas brazing machine**
  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
1	Remove the terminal cover.		
2	Disconnect the compressor terminals.		

Step	Procedure		Points
3	Unfasten the hooks with a flat screwdriver and remove the overload protector.	 (R7640)	
4	Remove the 2 nuts of the compressor.	 (R7641)	
5	Heat up the brazed part of the discharge side and disconnect.	 (R7642)	
6	Heat up the brazed part of the suction side and disconnect.		
7	Lift up and remove the compressor.	 (R7643)	

Revision History

Month / Year	Version	Revised contents
02 / 2013	Si121295	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

● Specifications, designs and other content appearing in this brochure are current as of February 2013 but subject to change without notice.

Si121295
02/2013 AK.B