DAIKIN

Si12-793

REMOVAL PROCEDURE

SERVICE MANUAL

SERVICE MANUAL

5.8/6.8/7.1/7.5 kW Class

- Outdoor Unit
- Inverter
- Multi Type

Service Manual
Removal Procedure

Outdoor Unit

●Cooling Only

3MKD75BVMA8

2MKD58DVM
3MKD58DVM
3MKD75DVM
4MKD75DVM

4MKS71DVM
3MKS71ESG
3MKS75EVMA

●Heat Pump

3MXD68BVMA8

3MXS68EVMA

Table of Contents

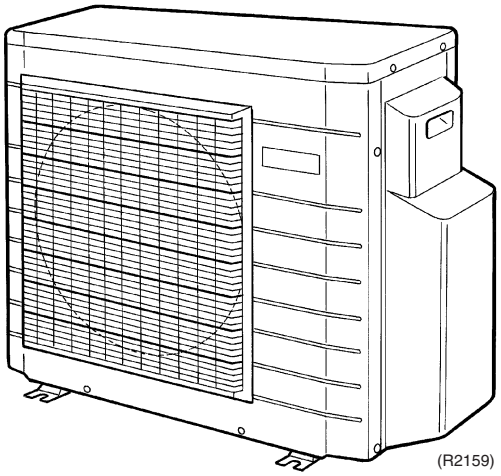
Note:
- The illustrations may be slightly different depending on the model.
- The illustrations are for heat pump models as representative.

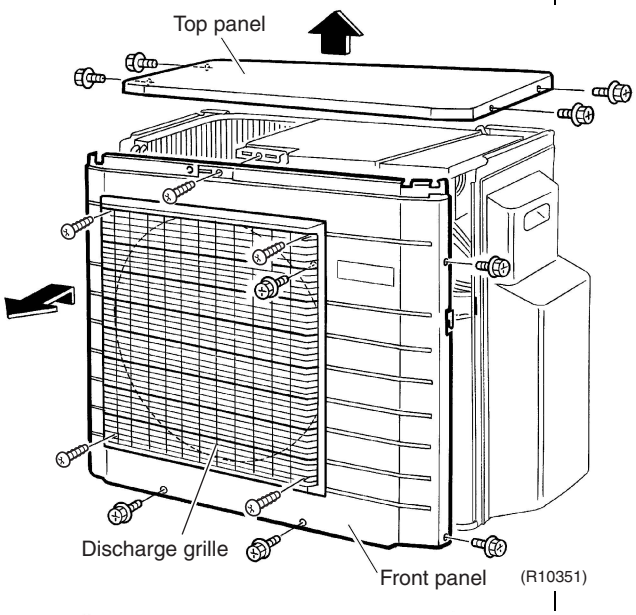
1. Removal of Outer Panels

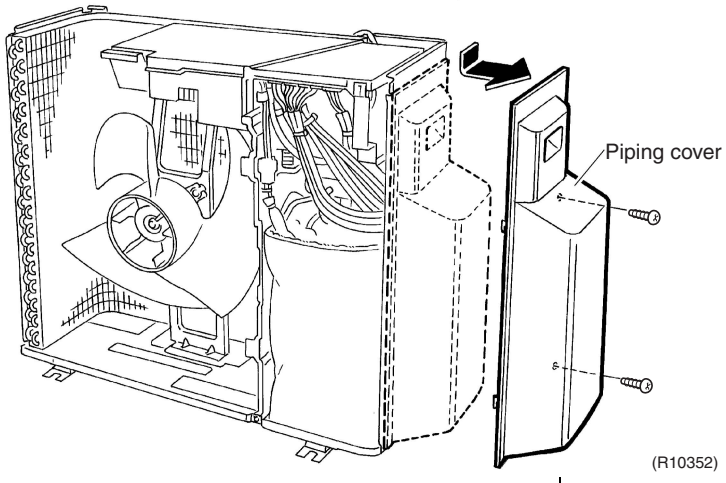
Procedure

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

Step	Procedure	Points
1	External appearance	
2	Remove the 4 screws of the top panel and the 6 screws of the front panel.	
3	Remove the 4 screws of the discharge grille.	
4	Remove the 2 screws of the piping cover.	





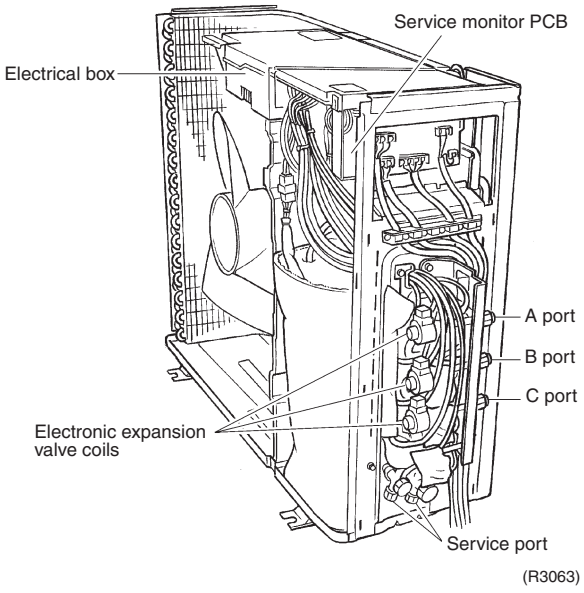


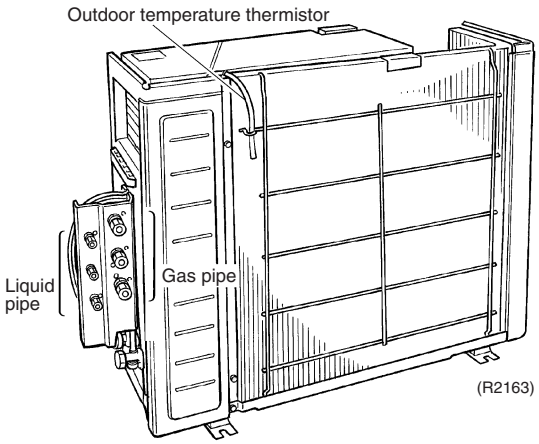
2. Removal of Electrical Box

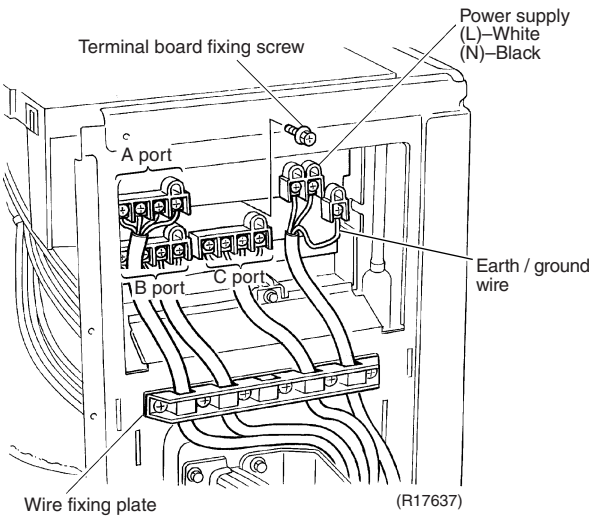
Procedure

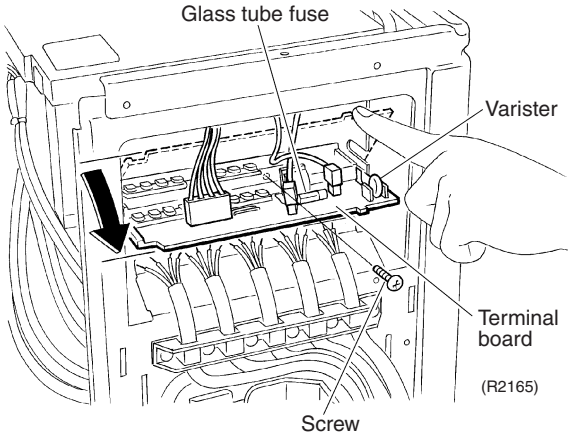
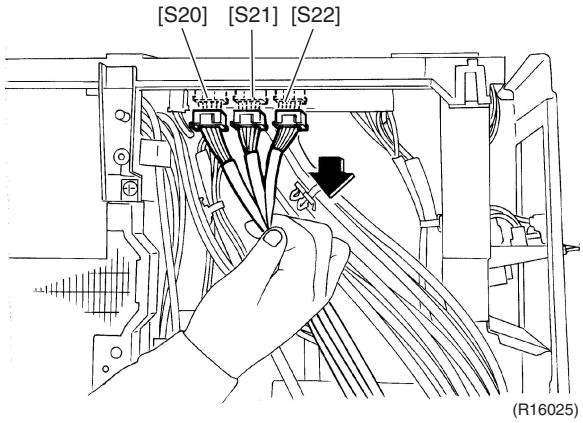
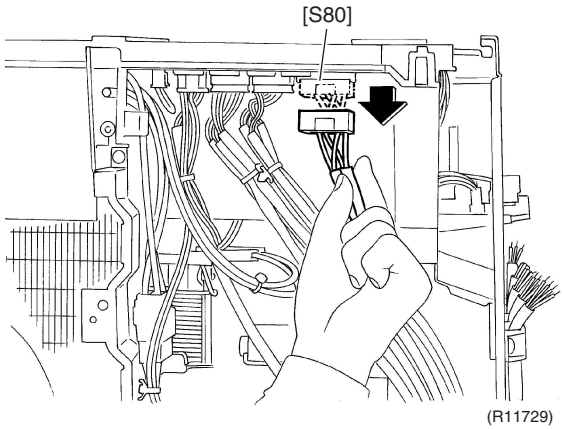
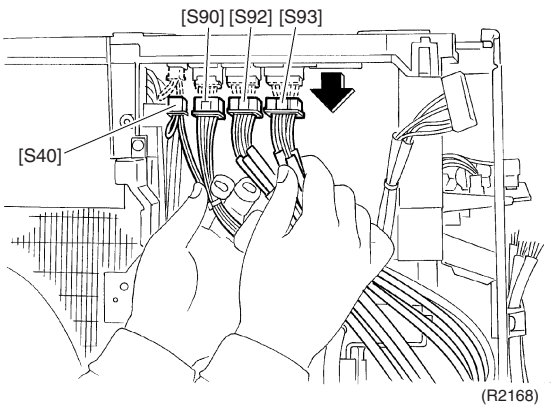
Warning **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

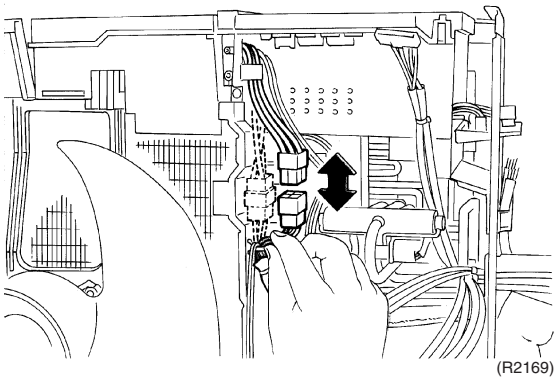
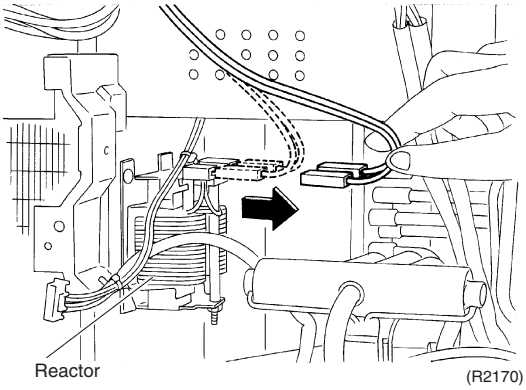
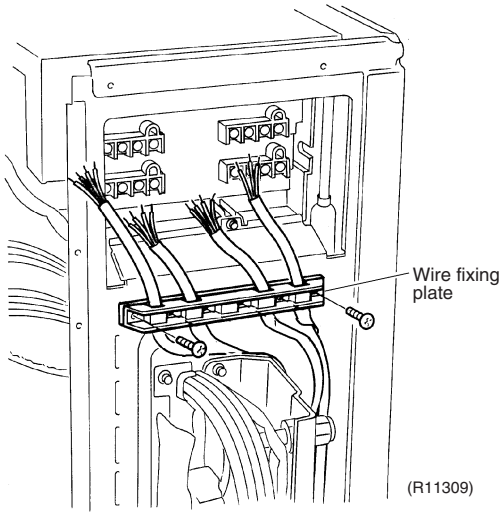
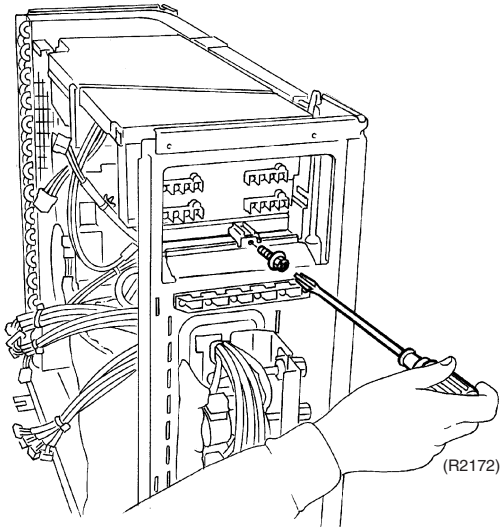
Step	Procedure	Points
1. Remove the connecting wires.		
1	The figure shows the connecting wires.	
2	Remove the terminal board fixing screw.	■ Match the colors of the connection wires to A, B and C ports as follows. (1) Black: Power supply (2) White: Power supply (3) Red: Transmission ■ The wires are fixed to the terminal board with screws.

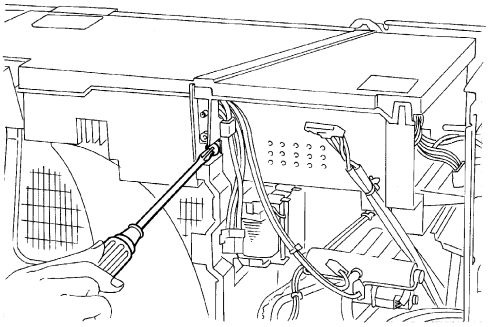
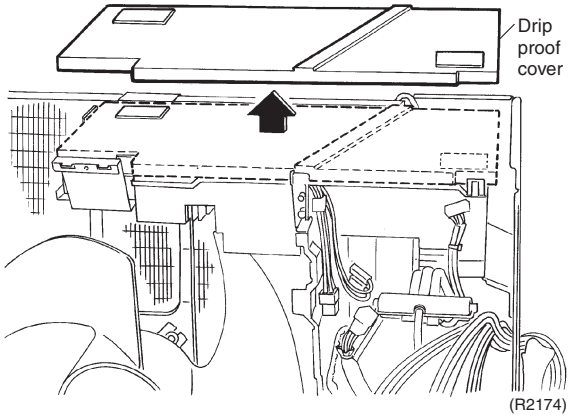
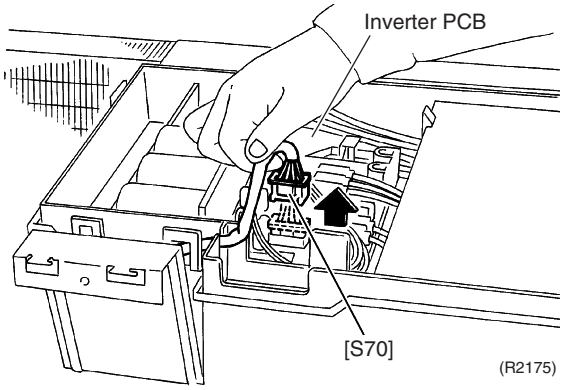
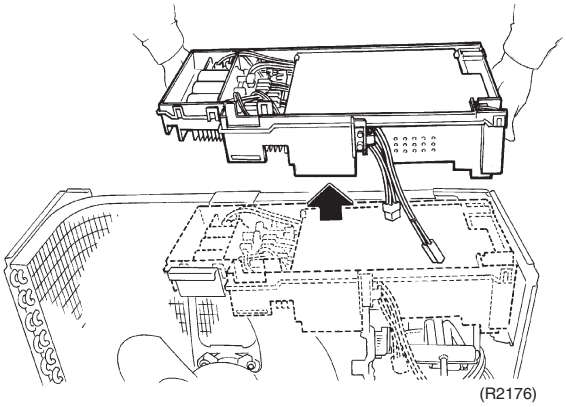






Step	Procedure		Points
3	Pull out the terminal board to open.		■ Glass tube fuse and varistor cannot be replaced individually because lead-free soldering is provided.
2. Remove the harnesses.			
1	Disconnect the connectors for the electronic expansion valve coils. [S20] [S21] [S22].		
2	Remove the connector for the four way valve coil [S80].		■ The cooling only models do not have the harness for [S80].
3	Disconnect the connectors for the thermistors [S90] [S92] [S93] and the connector for the overload protector [S40].		[S40]: Overload protector [S90]: Thermistor (outdoor temperature, outdoor heat exchanger, discharge pipe) [S92]: Gas pipe thermistor [S93]: Liquid pipe thermistor

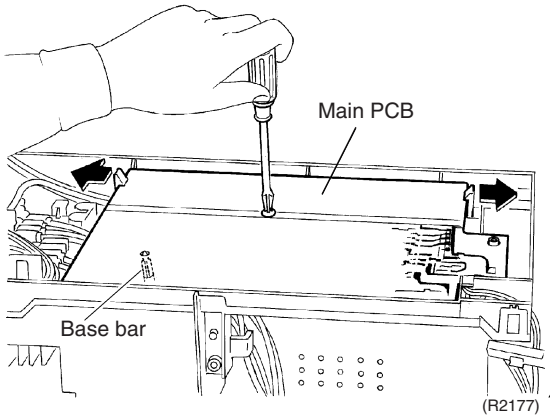
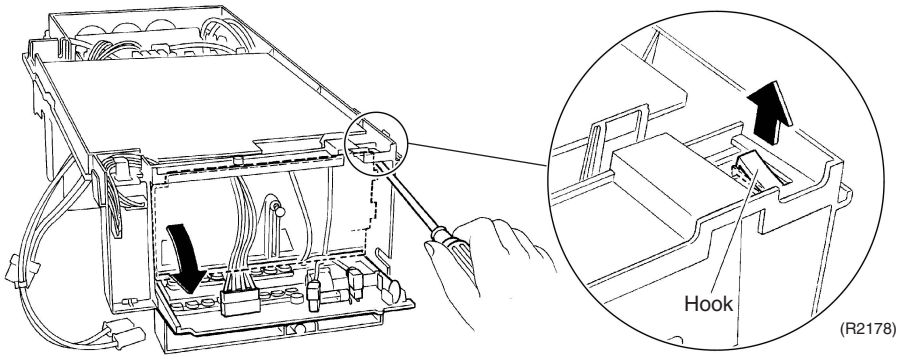
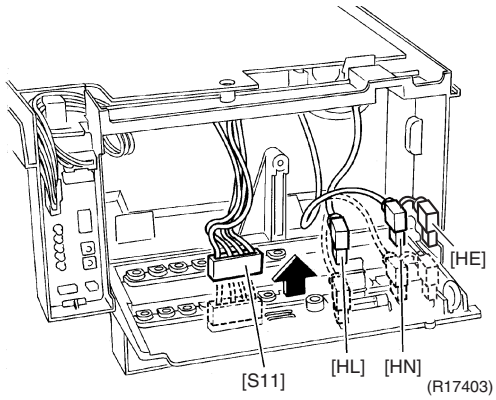
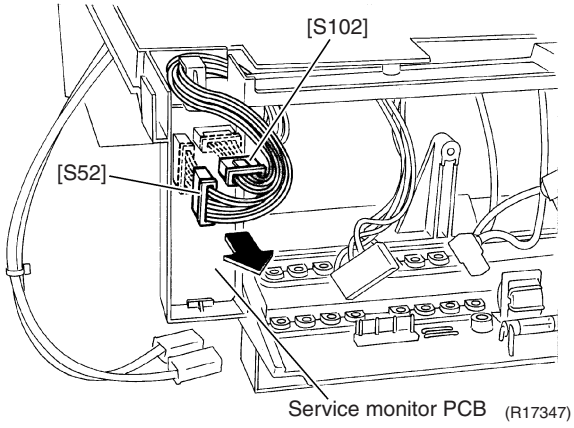
Step	Procedure		Points
4	Disconnect the relay connector of the compressor.	 (R2169)	
5	Remove the reactor lead wires.	 Reactor (R2170)	
3. Remove the wire fixing plate.			
1	Remove the 2 screws of the wire fixing plate.	 Wire fixing plate (R11309)	
4. Remove the electrical box.			
1	Remove the screw of the electrical box.	 (R2172)	

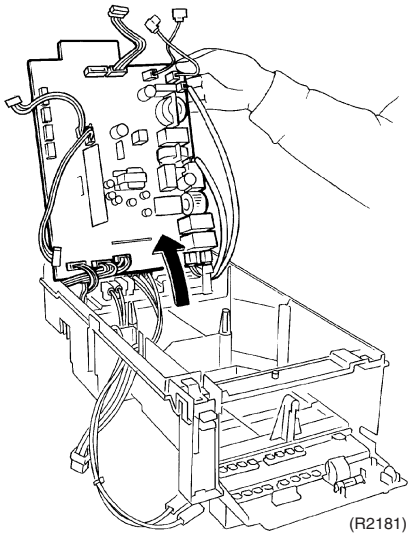
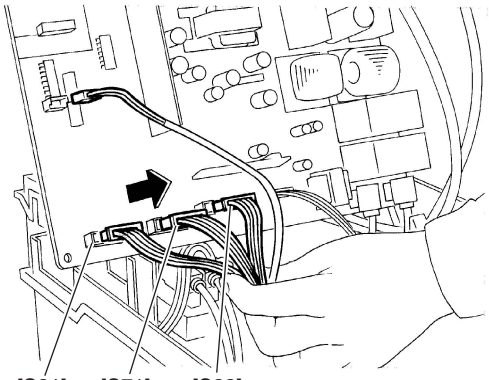
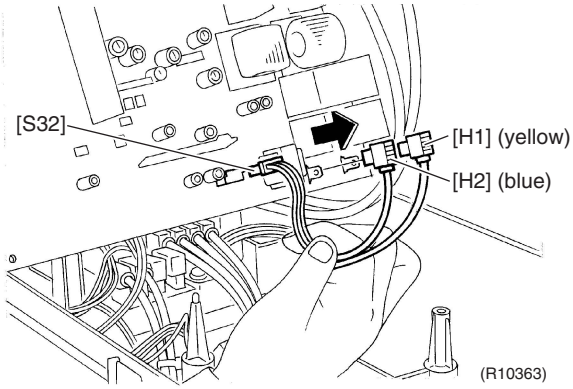
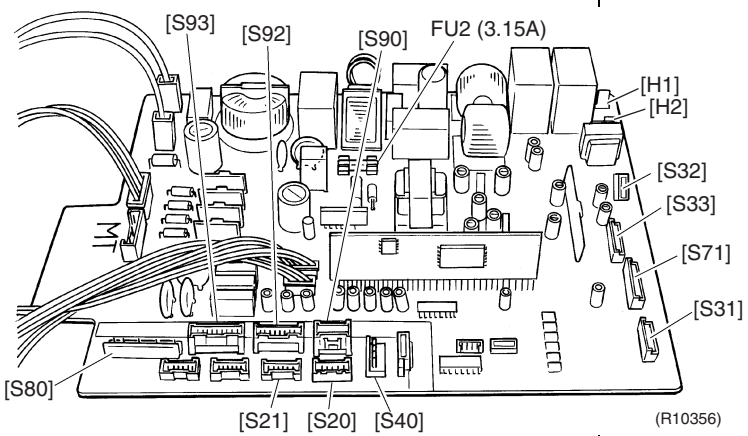
Step	Procedure		Points
2	Remove the screw of the electrical box.	 (R2173)	
3	Remove the drip proof cover.	 (R2174)	
4	Disconnect the connector for the fan motor [S70] from the inverter PCB.	 (R2175)	
5	Lift up the electrical box and dismount it.	 (R2176)	

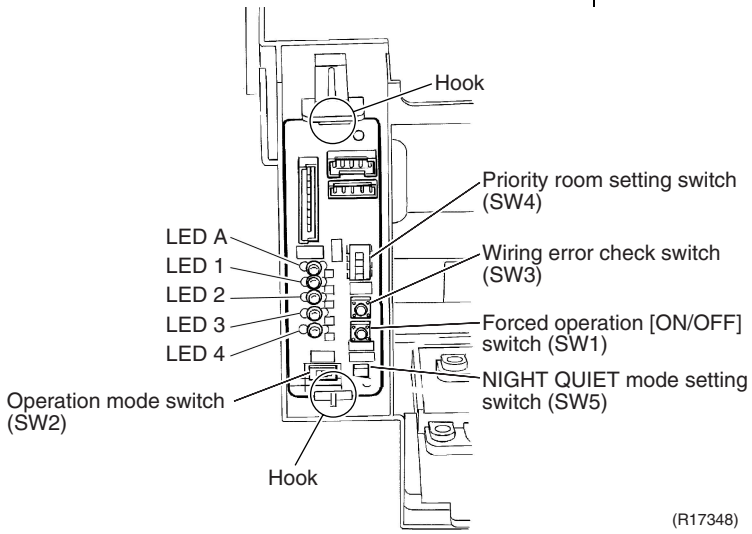
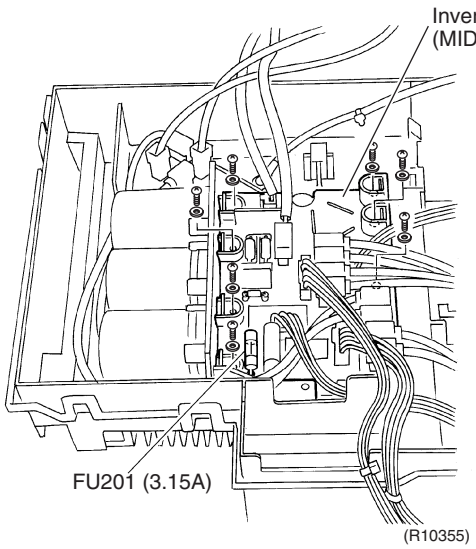
3. Removal of PCBs

Procedure

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

Step	Procedure	Points
1. Remove the service monitor PCB and the main PCB.		■ When reassembling, insert the base bar into the hole of the main PCB.
1 Remove the screw of the main PCB, and unfasten the 2 hooks.		
2 Unfasten the hook of the terminal board, and open the terminal board.		
3 Disconnect each connector [S11] [HE] [HL] [HN] on the back of the terminal board.		
4 Disconnect the connectors [S52] [S102] from the service monitor PCB.		

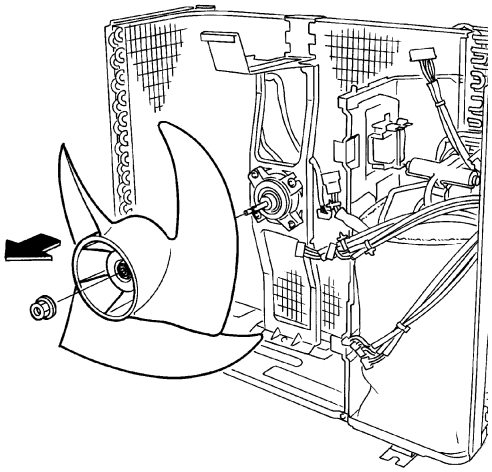
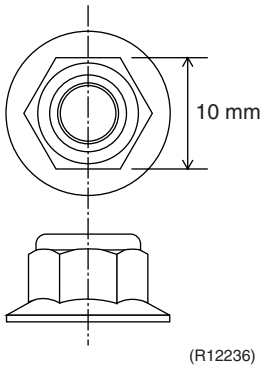
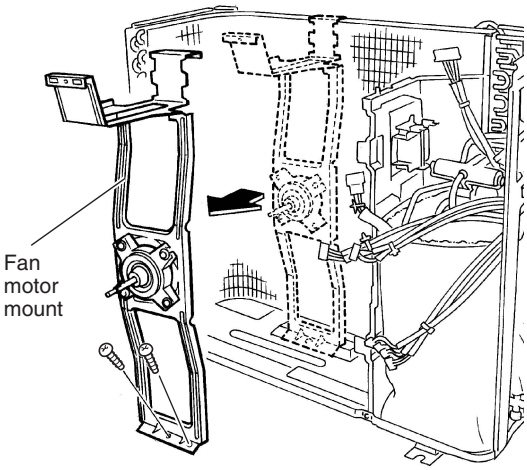
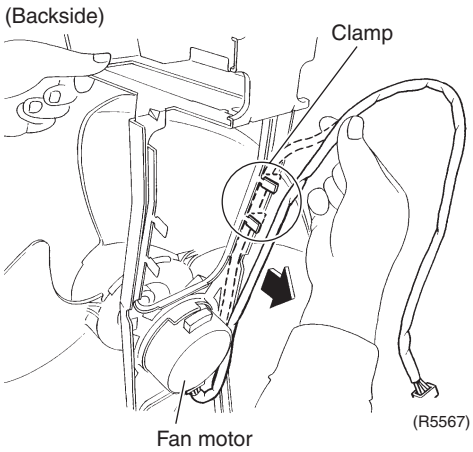
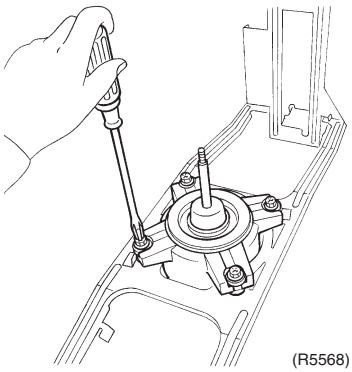
Step	Procedure		Points
5	Lift up the main PCB.	 (R2181)	
6	Disconnect the connectors [S31] [S32] [S33] [S71] [H1] [H2].	 [S31] [S71] [S33] (R10362)	
		 [S32] [H1] (yellow) [H2] (blue) (R10363)	
7	The figure shows the main PCB.	 [S93] [S92] [S90] FU2 (3.15A) [H1] [H2] [S32] [S33] [S71] [S31] [S80] [S21] [S20] [S40] (R10356)	

Step	Procedure		Points
8	Unfasten the 2 hooks and remove the service monitor PCB.		
2. Remove the inverter PCB (MID2).			
1	Remove the 7 screws and remove the inverter PCB (MID2).		

4. Removal of Fan Motor

Procedure

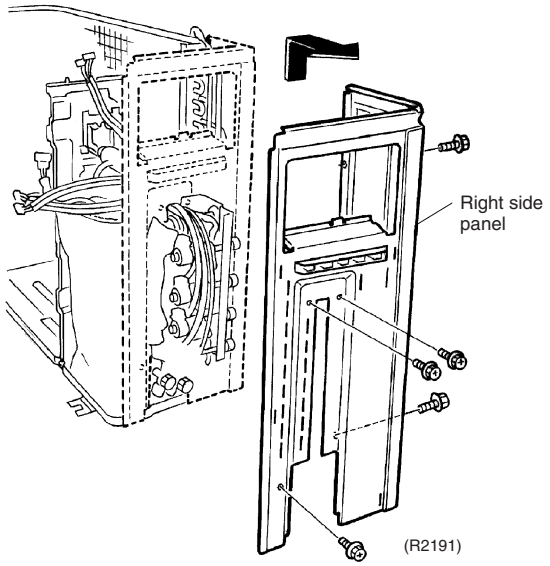
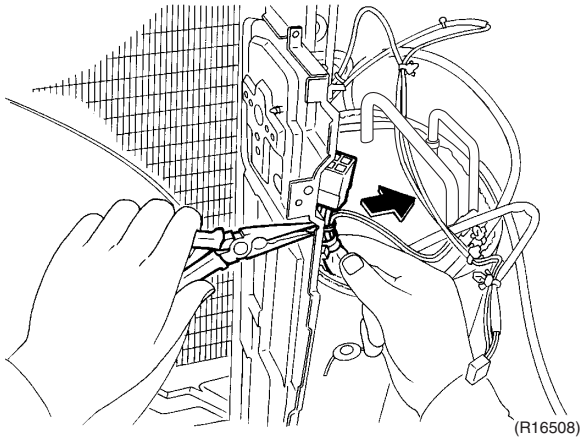
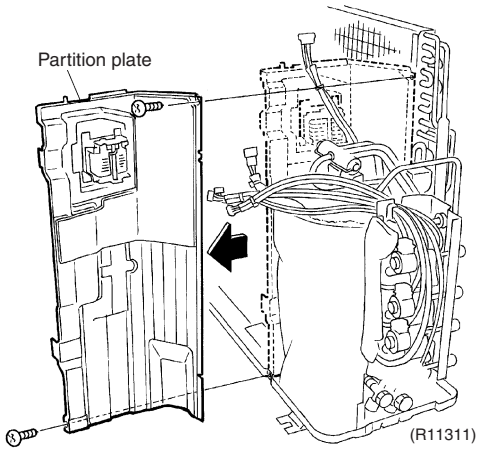
⚠ **Warning** **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

Step	Procedure		Points
1	Remove the nut and remove the outdoor fan.	 (R10362)	**Preparation** ■ Disconnect the connector for the fan motor. ■ Nut size : M6  (R12236)
2	Remove the 2 screws of the fan motor mount.	 (R10363)	■ When reassembling, align the ▼ mark of the outdoor fan with the D-cut section of the motor shaft. ■ When reassembling, fix the fan motor lead wire to the clamps to avoid contact with the outdoor fan.
3	Disconnect the for motor lead wire by releasing the 2 clamps fixing the wire. Remove the 4 screws to remove the fan motor.	 (R5567)  (R5568)	

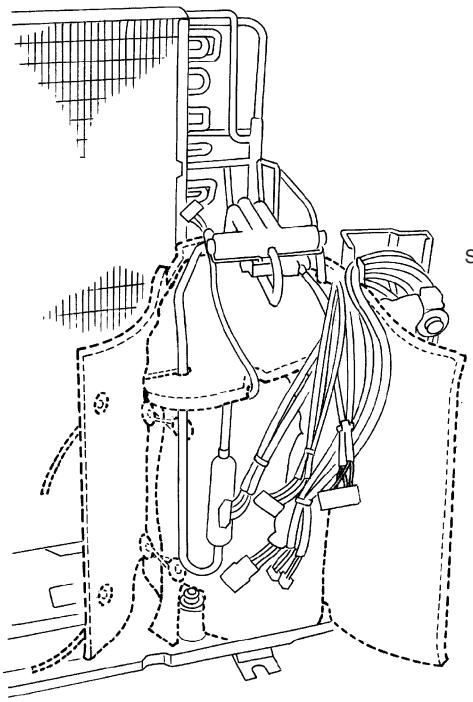
5. Removal of Sound Blankets

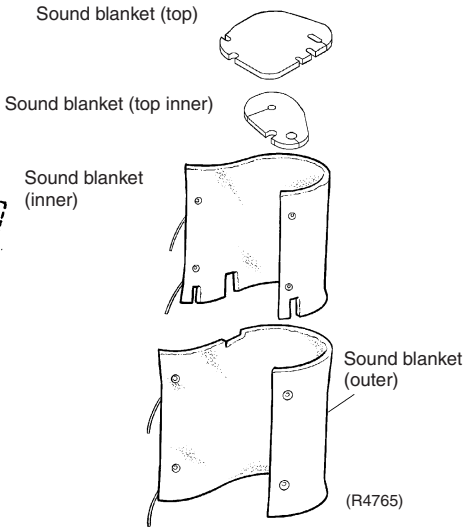
Procedure

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

Step	Procedure		Points
1	Remove the 5 screws of the right side panel.		
2	Release the clamp with pliers.		■ Some models do not have the clamp.
3	Remove the 2 screws of the partition plate, and remove the plate.		

Step	Procedure	Points
4	Remove the sound blanket (top upper, top inner, outer, inner).	■ Carefully remove the sound blanket, which is easily torn in the piping section.

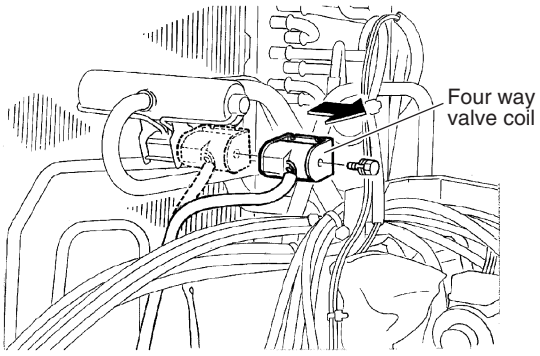
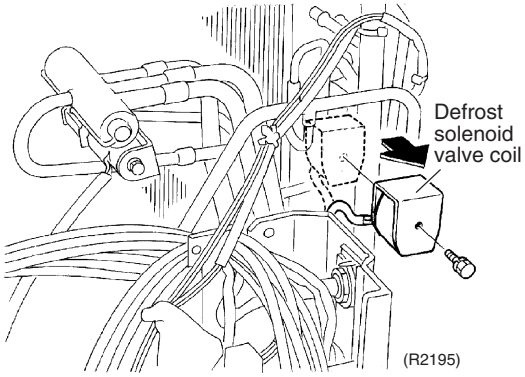
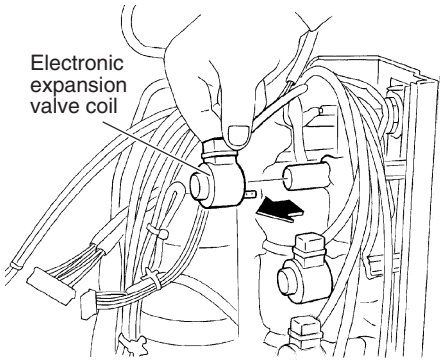
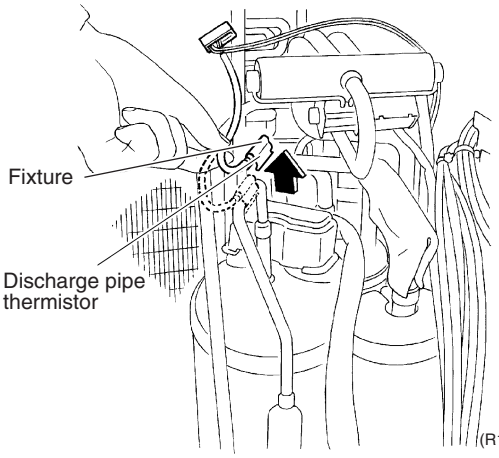
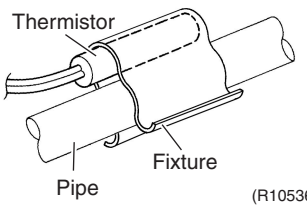


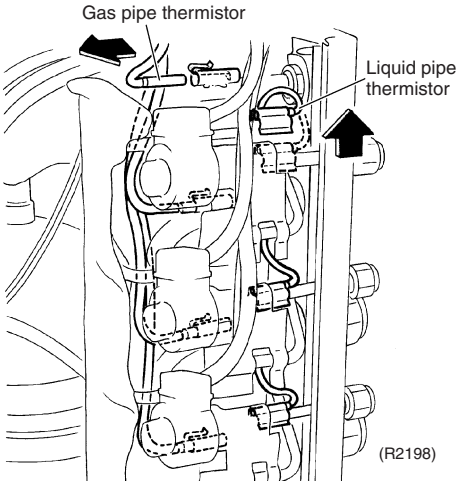
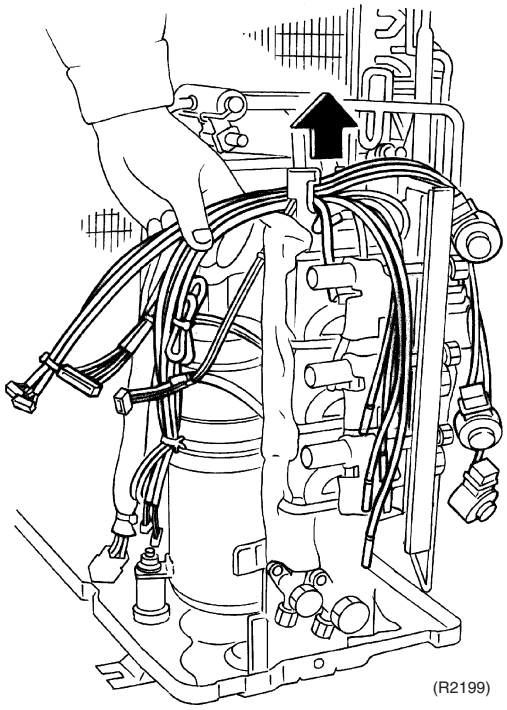


6. Removal of Coils / Thermistors

Procedure

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

Step	Procedure		Points
1	Remove the screw of the four way valve coil.	 (R2194)	■ Some models do not have a four way valve coil.
2	Remove the screw and remove the defrost solenoid valve coil.	 (R2195)	
3	Remove the electronic expansion valve coil for each room.	 (R2196)	
4	Release the fixture and remove the discharge pipe thermistor.	 (R10367)	■ Place the thermistor so that its end comes up to the end of the fixture. ■ Be careful not to lose the fixture for the discharge pipe thermistor.  (R10536)

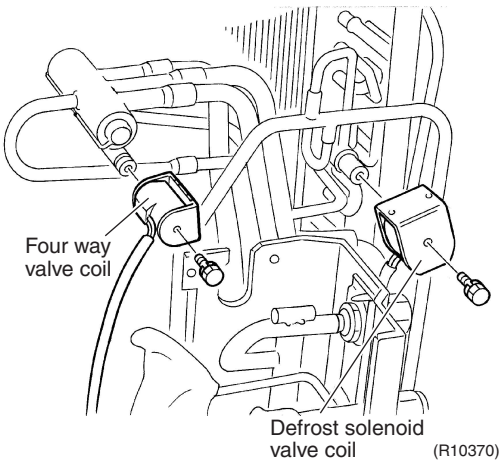
Step	Procedure		Points
5	Peel off the putty and pull out the thermistors.		■ Place the thermistor so that its end comes up to the end of the fixture. ■ Be careful not to lose the clip or fixtures for the liquid and gas pipe thermistor.
6	Remove the wire harness.		■ [S90]: Outdoor temperature thermistor (Blue) Heat exchanger thermistor (Gray) Discharge pipe thermistor (Black) ■ [S92]: Gas pipe thermistor Room A (Black) Room B (Gray) Room C (Brown) ■ [S93]: Liquid pipe thermistor Room A (Black) Room B (Gray) Room C (Yellow)

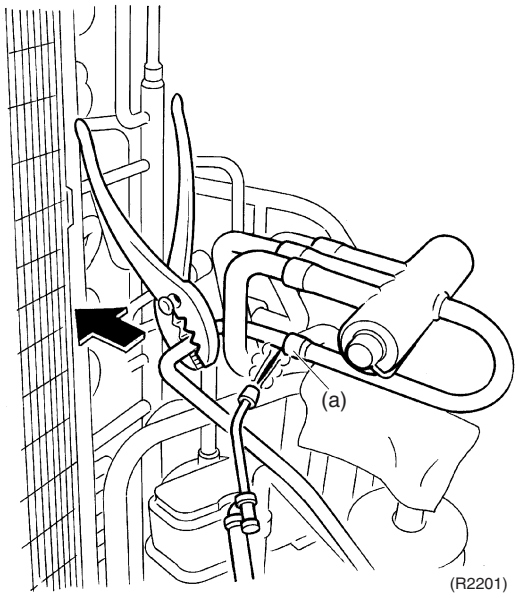
7. Removal of Four Way Valve / Defrost Solenoid Valve

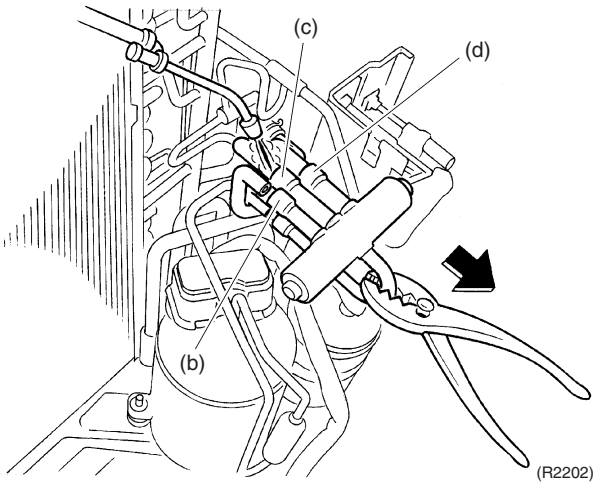
Procedure

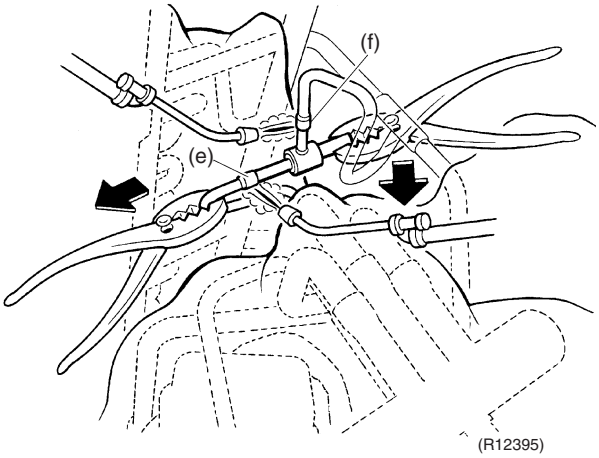
⚠ Warning **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

Step	Procedure	Points
1	Remove the screw and remove the four way valve coil.	■ The cooling only models do not have a four way valve coil and a defrost solenoid valve coil.
2	Remove the screw and remove the defrost solenoid valve coil.	**⚠ Warning** **Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.**
■ 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.		**⚠ Warning** **If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)**
3	Heat the 4 brazed points of the four way valve. Disconnect the point (a) first.	**⚠ 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.**
4	Disconnect the points (b) and (c).	**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.
5	Disconnect the point (d) and remove the four way valve.	**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.





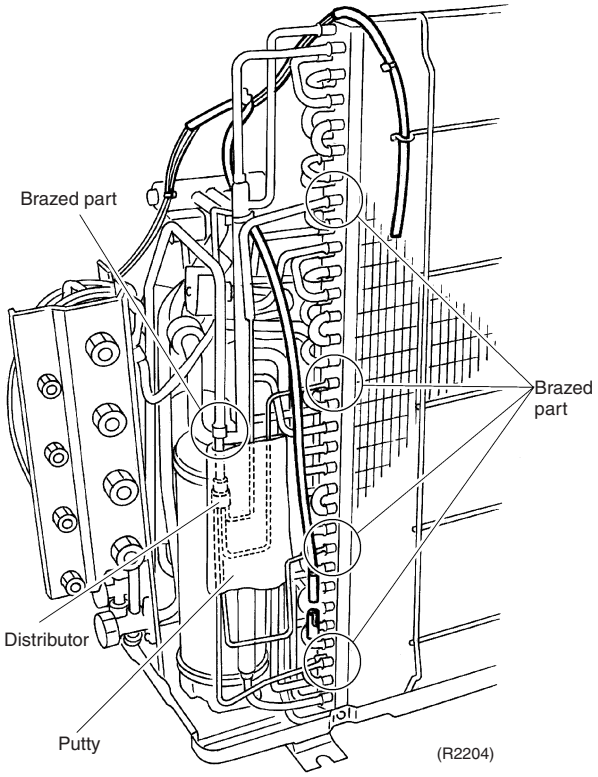


Step	Procedure		Points
6	Disconnect the 2 brazed points, first (e), and then (f). Remove the defrost solenoid valve.		**Note:** ■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit. ■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed. ■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries.

8. Removal of Distributor

Procedure

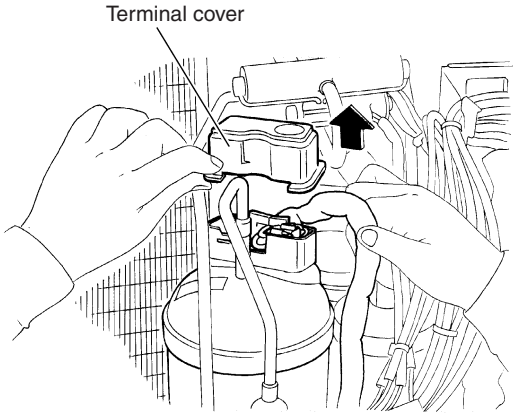
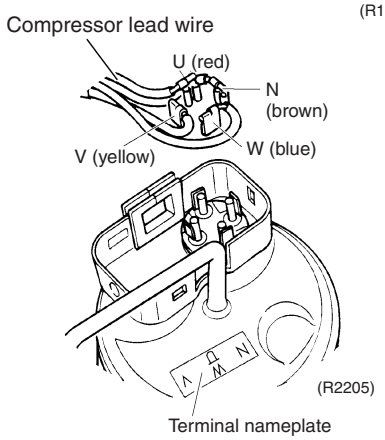
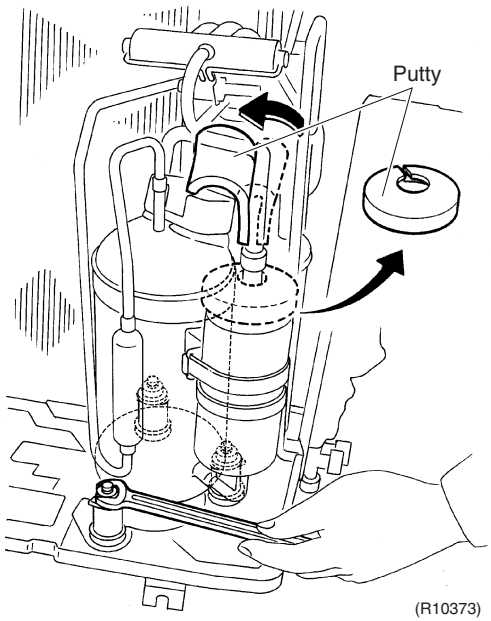
Warning **Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.**

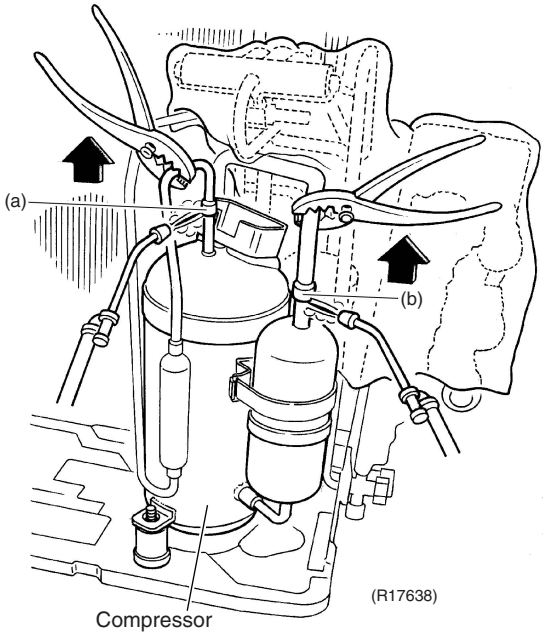
Step	Procedure	Points
■ Before working, make sure that the refrigerant gas is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part.		**Warning** **Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.** **Warning** **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.**
1 Remove the putty. 2 Heat up and disconnect the 5 brazed parts to remove the distributor.		**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: ■ 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.		**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.

9. Removal of Compressor

Procedure

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

Step	Procedure		Points
1	Remove the terminal cover.	 (R16026)	
2	Disconnect the compressor lead wires.	 (R2205) Terminal nameplate	
3	Remove the 2 sheets of putty.	 (R10373)	
4	Remove the 3 nuts.		

Step	Procedure	Points
■ Before working, make sure that the refrigerant is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part.		**Warning** **Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.** **Warning** **If the refrigerant gas leaks during work, ventilate the room. (If the refrigerant gas is exposed to flames, toxic gas may be generated.)** **Warning** **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.**
6 Disconnect the brazed part (b) at suction side of the compressor. 7 Remove the compressor.		**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: ■ 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.		**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.

Revision History

Month / Year	Version	Revised contents
07 / 2013	Si12-793	First edition

Warning

- Daikin products are manufactured for export to numerous countries throughout the world. Prior to purchase, please confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

Dealer

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

Si12-793
07/2013 AK.B