






Si12-994

REMOVAL PROCEDURE



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

7.1/8.0 kW Class 18000 Btu/h Class

-  Outdoor Unit
-  Inverter
-  Multi Type



Service Manual Removal Procedure

Outdoor Unit

●Heat Pump

2MXS18GVJU

3MXS80EV2C

PMXS3GV2C

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Note:

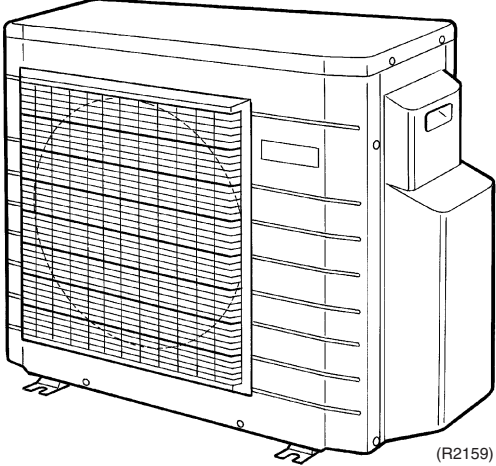

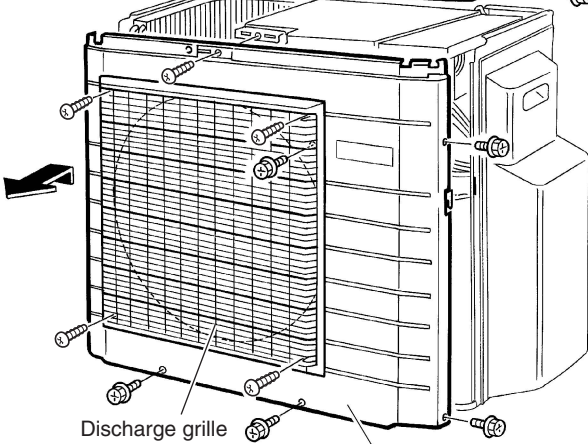
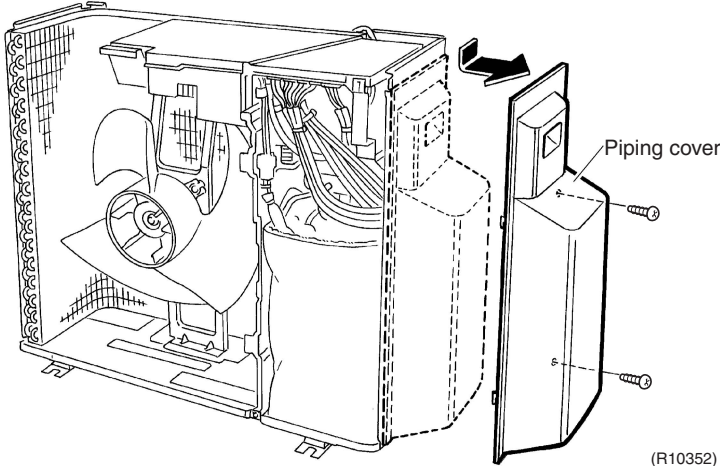
♦ The illustrations may be slightly different depending on the model.

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.

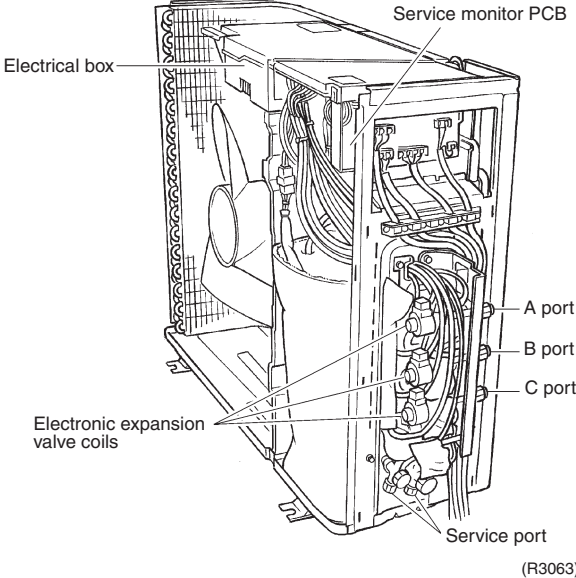
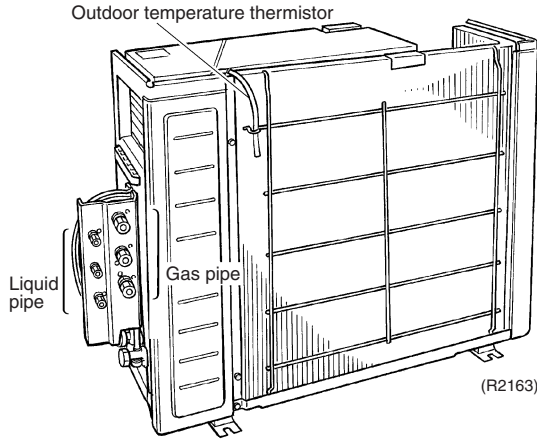
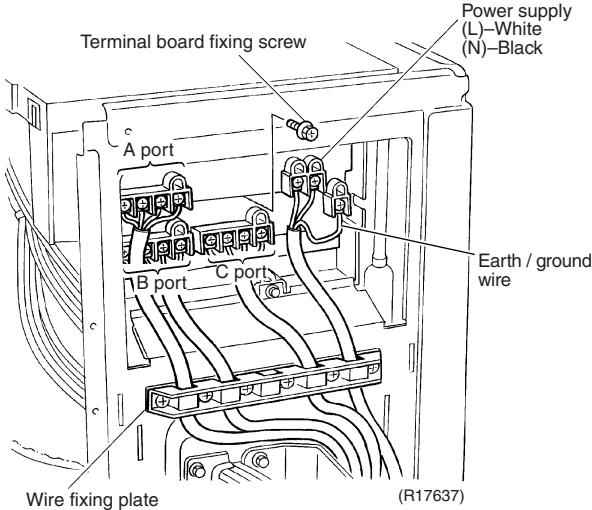
Step	Procedure	Procedure	Points
1	External appearance	 <p>(R2159)</p>	
2	Remove the 4 screws of the top panel and the 6 screws of the front panel.	 <p>Top panel</p>	
3	Remove the 4 screws of the discharge grille.	 <p>Discharge grille</p> <p>Front panel (R10351)</p>	
4	Remove the 2 screws of the piping cover.	 <p>Piping cover</p> <p>(R10352)</p>	

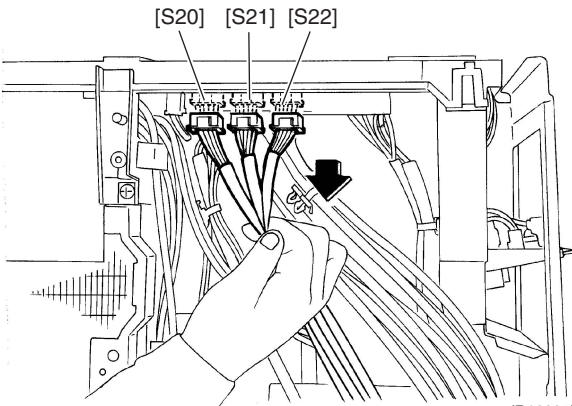
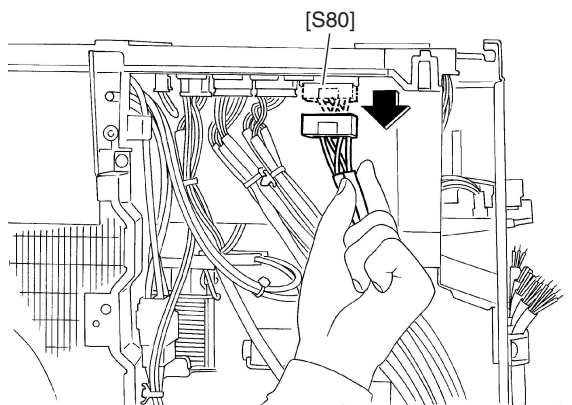
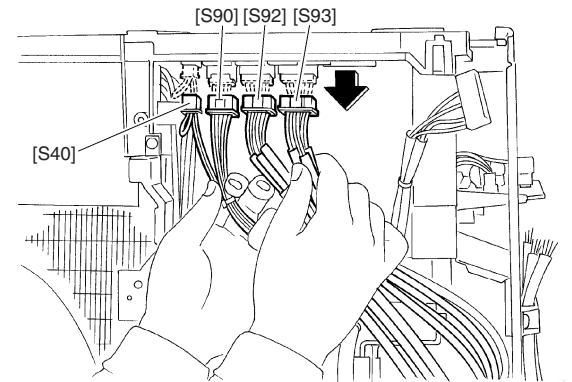
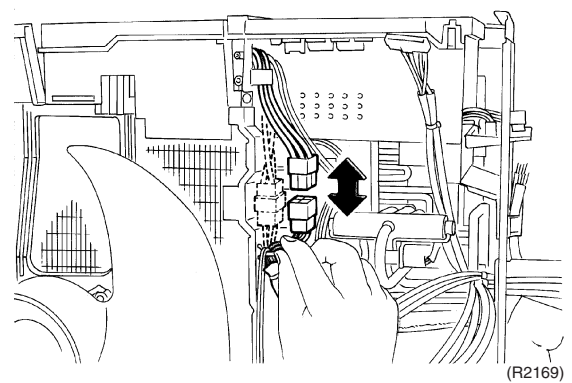
2. Removal of Electrical Box (Pattern 1)

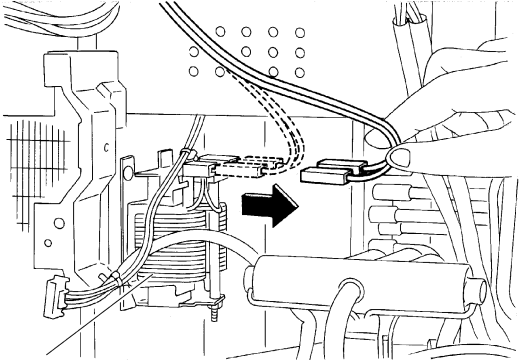
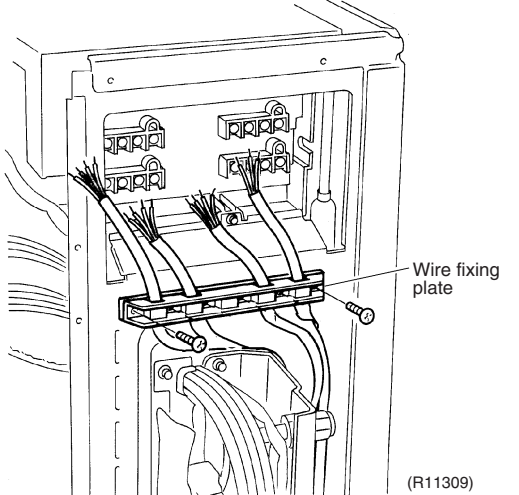
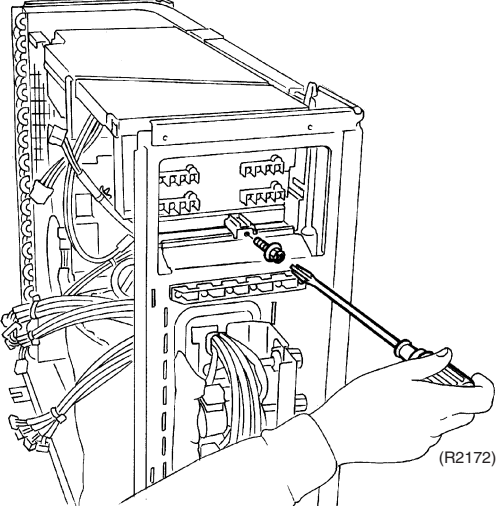
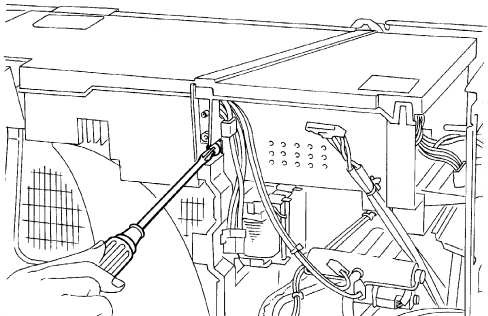
Procedure



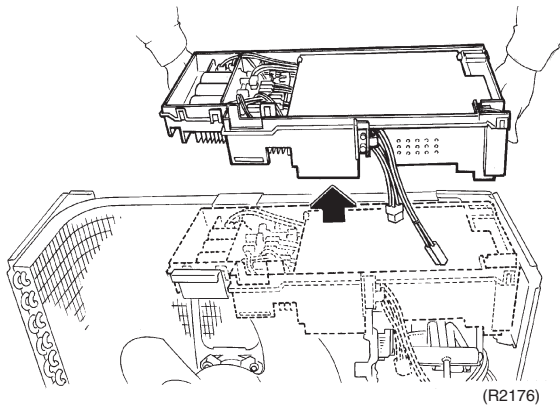
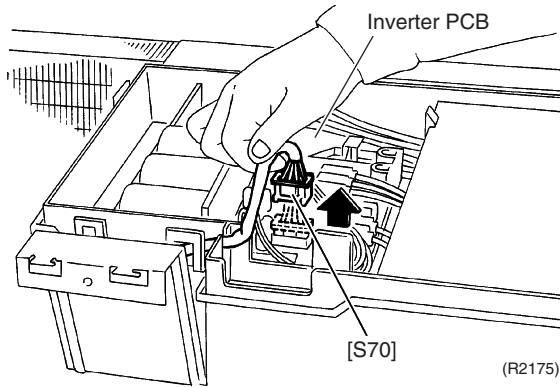
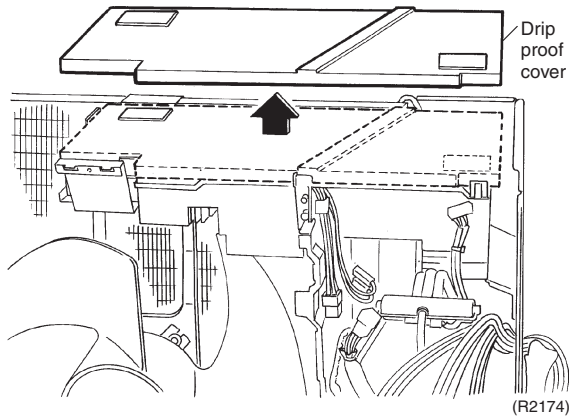
Warning Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
<p>1. Remove the connecting wires.</p> <p>1 The figure shows the connecting wires.</p>	 	
<p>2 Remove the terminal board fixing screw.</p>		<ul style="list-style-type: none"> ■ Match the colors of the connection wires to A, B and C ports as follows. <ul style="list-style-type: none"> (1) Black: Power supply (2) White: Power supply (3) Red: Transmission ■ The wires are fixed to the terminal board with screws.

Step	Procedure	Points
<p>2. Remove the harnesses.</p> <p>1</p>	<p>Disconnect the connectors for the electronic expansion valve coils. [S20] [S21] [S22].</p>  <p>(R16025)</p>	
<p>2</p>	<p>Remove the connector for the four way valve coil [S80].</p>  <p>(R11729)</p>	
<p>3</p>	<p>Disconnect the connectors for the thermistors [S90] [S92] [S93] and the connector for the overload protector [S40].</p>  <p>(R2168)</p>	<p>[S40]: Overload protector [S90]: Thermistor (outdoor temperature, outdoor heat exchanger, discharge pipe) [S92]: Gas pipe thermistor [S93]: Liquid pipe thermistor</p>
<p>4</p>	<p>Disconnect the relay connector of the compressor.</p>  <p>(R2169)</p>	

Step	Procedure	Points
5	<p>Remove the reactor lead wires.</p>  <p>Reactor (R2170)</p>	
3.	<p>Remove the wire fixing plate.</p>	
1	<p>Remove the 2 screws of the wire fixing plate.</p>  <p>Wire fixing plate (R11309)</p>	
4.	<p>Remove the electrical box.</p>	
1	<p>Remove the screw of the electrical box.</p>  <p>(R2172)</p>	
2	<p>Remove the screw of the electrical box.</p>  <p>(R2173)</p>	

Step	Procedure	Points
3	Remove the drip proof cover.	
4	Disconnect the connector for the fan motor [S70] from the inverter PCB.	
5	Lift up the electrical box and dismount it.	



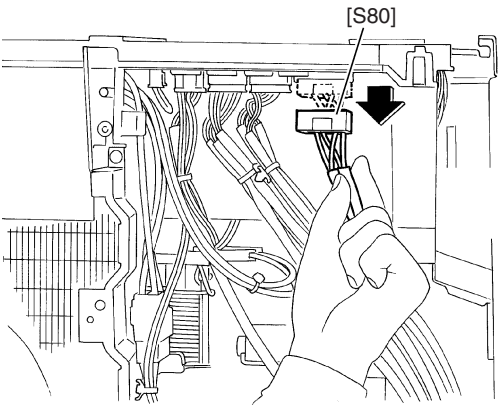
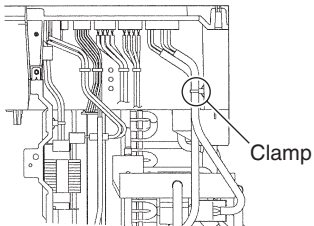
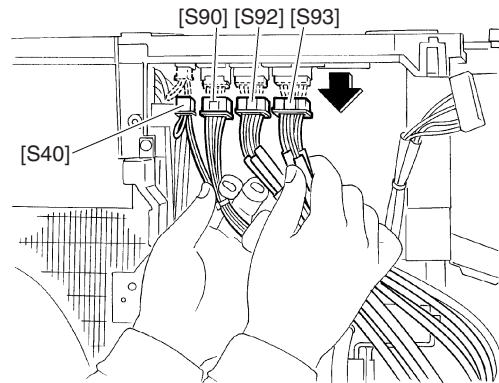
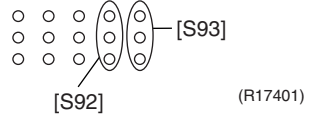
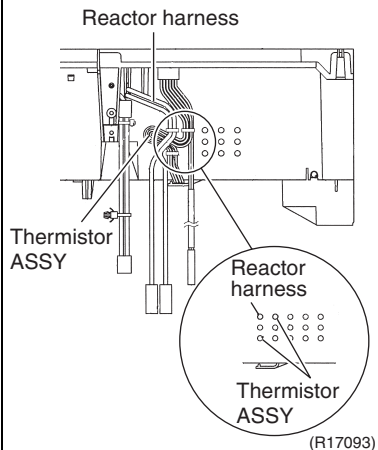
3. Removal of Electrical Box (Pattern 2)

Procedure

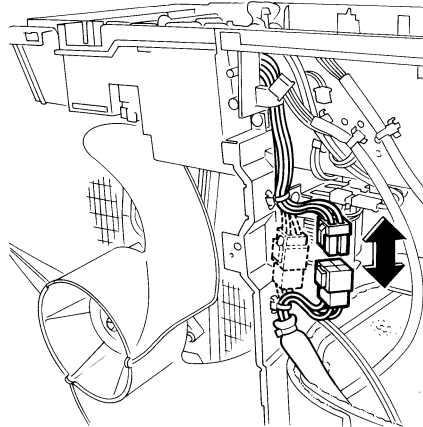


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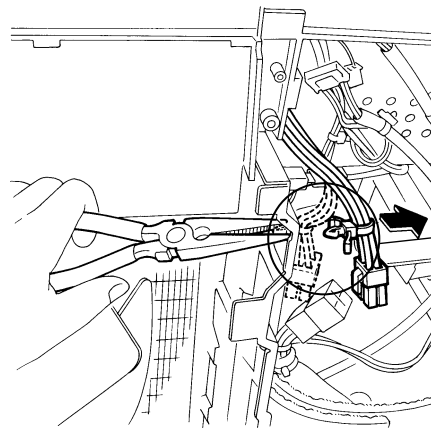
Step	Procedure	Points
<p>1. Disconnect the connecting wires.</p> <p>1 Remove the terminal board fixing screw.</p> <p>2 Remove all the screws of the connecting wires and the power supply wires.</p> <p>3 Remove the screw of the earth / ground wire.</p>		<ul style="list-style-type: none"> ■ The US model has a protection plate on the right side panel. Remove the 2 screws to remove the protection plate. <ul style="list-style-type: none"> ■ The wires are fixed to the terminal board with screws.
<p>2. Remove the harnesses.</p> <p>1 Disconnect the 2 connectors for the electronic expansion valve coil [S20] [S21].</p>		<p>[S20]: White [S21]: Red</p> <ul style="list-style-type: none"> ■ Bundle the harnesses of the electronic expansion valve coil with clamp. ■ Pull out the clamp. ■ When reassembling, insert the clamp into one of the holes.

Step	Procedure	Procedure	Points
2	Disconnect the connector for the four way valve coil [S80].	 <p style="text-align: right;">(R17398)</p>	<ul style="list-style-type: none"> ■ When reassembling, insert the clamp into the hole as below.  <p style="text-align: right;">(R17397)</p>
3	Disconnect the connectors for the thermistors [S90] [S92] [S93] and the overload protector [S40].	 <p style="text-align: right;">(R17399)</p>	<p>[S40]: overload protector [S90]: thermistors (outdoor temperature, outdoor heat exchanger, discharge pipe) [S92]: gas pipe thermistors [S93]: liquid pipe thermistors</p> <ul style="list-style-type: none"> ■ Pull out the clamp. ■ When reassembling, insert each clamp of the thermistors into one of the holes as below.  <p style="text-align: right;">(R17401)</p> <ul style="list-style-type: none"> ■ When reassembling, insert each clamp into the holes. ■ When reassembling, the thermistor harness should be placed between the electrical box and the reactor harness as below.  <p style="text-align: right;">(R17093)</p>

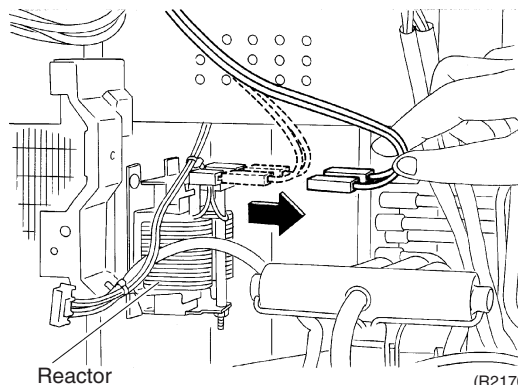
Step	Procedure	Points
4	Disconnect the relay connector of the compressor.	
5	Release the clamp with pliers.	
6	Disconnect the reactor lead wires.	



(R17065)

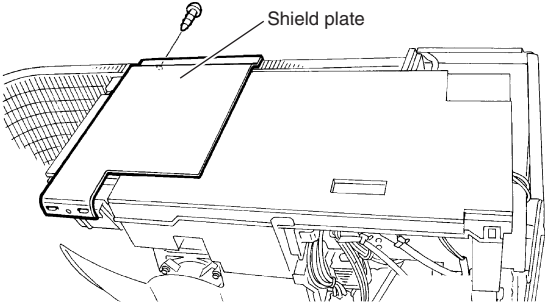
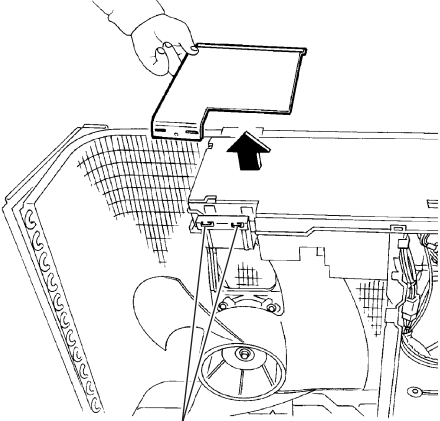
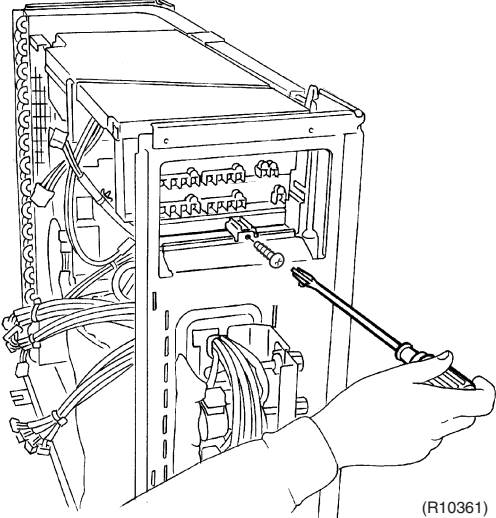
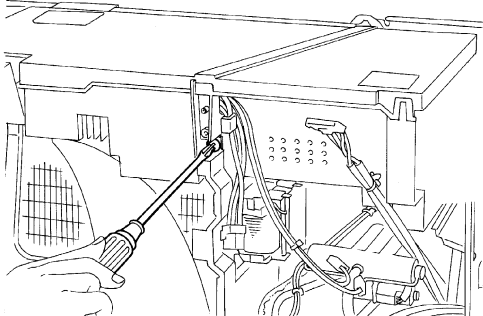


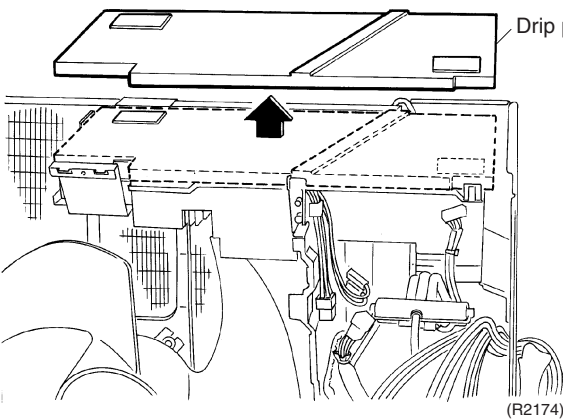
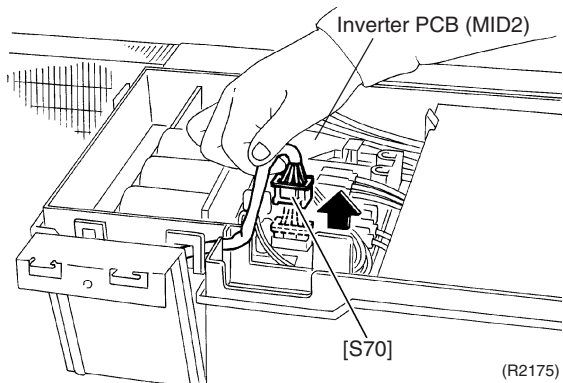
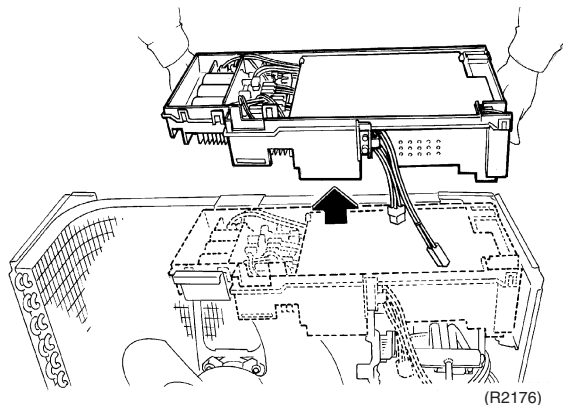
(R17066)



Reactor

(R2170)

Step	Procedure	Points
3.	Remove the electrical box.	
1	Remove the screw of the shield plate.	 <p>(R17345)</p>
2	Unfasten the 2 hooks and remove the shield plate.	 <p>(R17346)</p>
3	Remove the screw on the right side of the electrical box.	 <p>(R10361)</p>
4	Remove the screw on the front side of the electrical box.	 <p>(R17402)</p>

Step	Procedure	Points
5	<p>Remove the drip proof cover.</p>  <p>(R2174)</p>	
6	<p>Disconnect the connector for the fan motor [S70] from the inverter PCB (MID2). Release the fan motor lead wire from the hooks.</p>  <p>(R2175)</p>	
7	<p>Remove the electrical box.</p>  <p>(R2176)</p>	

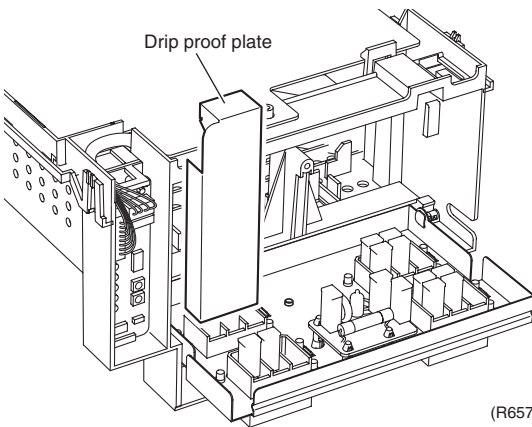
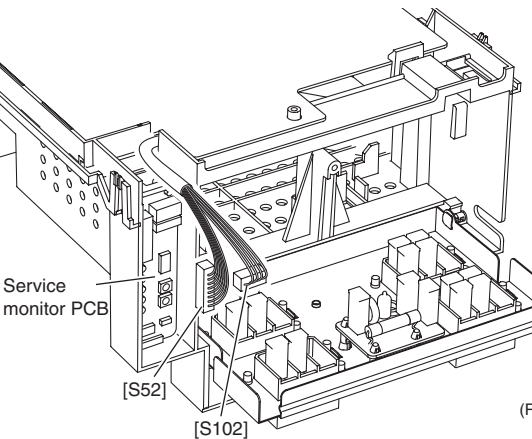
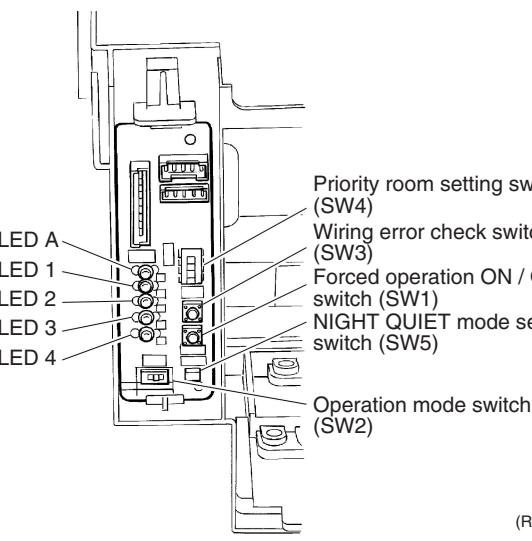
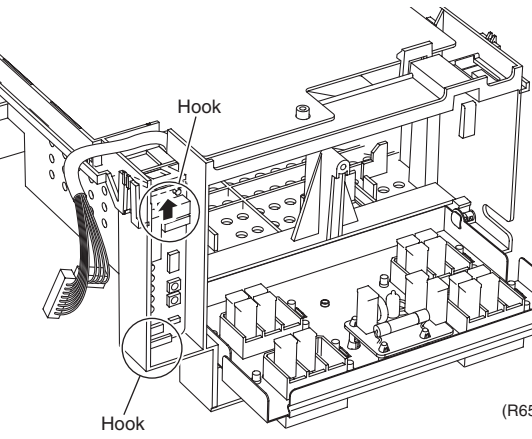
4. Removal of PCBs (Pattern 1)

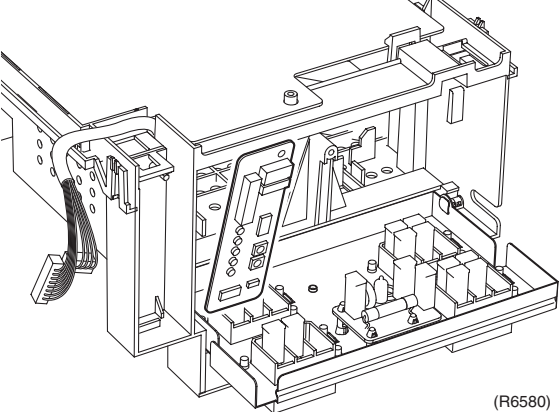
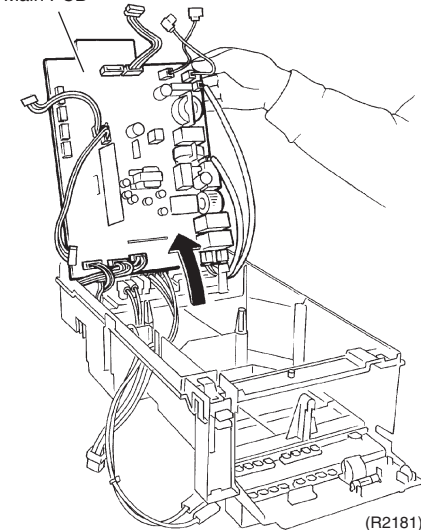
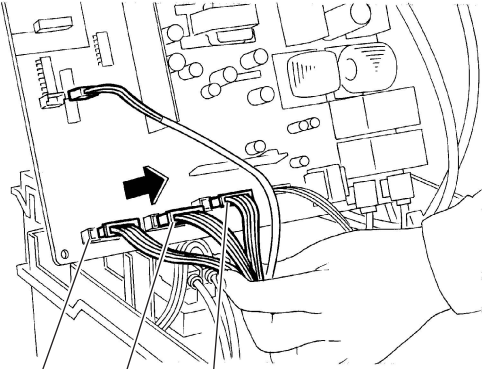
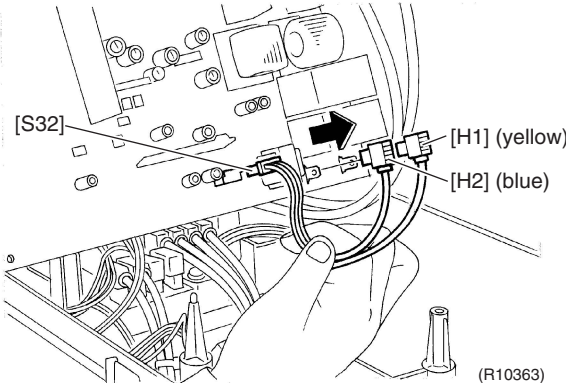
Procedure

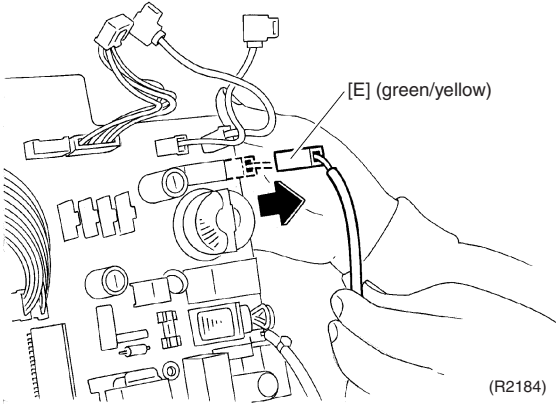
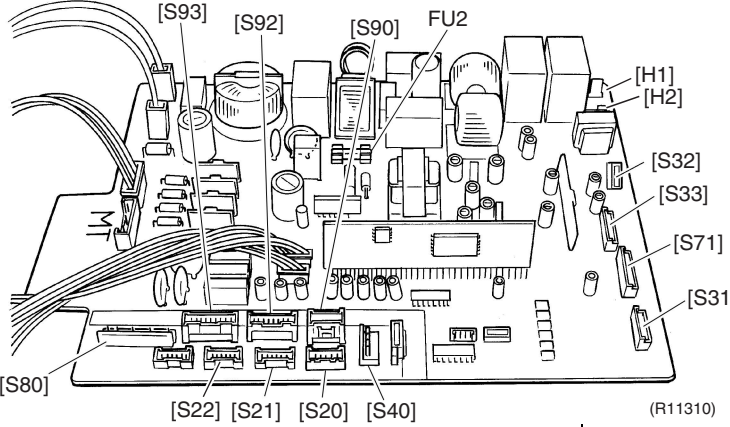
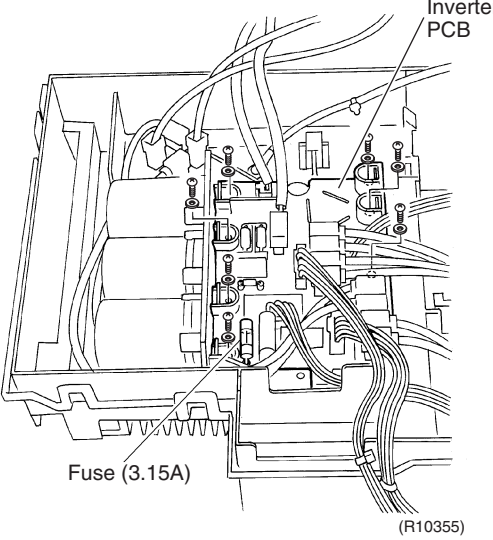


Warning Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
<p>1. Remove the service monitor PCB and the main PCB.</p>	<p>(R2177)</p>	
<p>1 Remove the screw of the main PCB, and release the 2 hooks.</p>	<p>(R11731)</p>	
<p>2 Remove the screw and release the hook of the terminal board, and open the terminal board.</p>	<p>(R6575)</p>	
<p>3 Disconnect each connector on the back of the terminal board.</p>	<p>(R6576)</p>	
<p>4 Detach the fixing tape for the drip proof plate.</p>		

Step	Procedure	Points
5	Remove the drip proof plate.	
	 <p>Drip proof plate</p> <p>(R6577)</p>	
6	Disconnect the connectors [S52] [S102] from the service monitor PCB.	
	 <p>Service monitor PCB</p> <p>[S52]</p> <p>[S102]</p> <p>(R6578)</p>	
7	The figure shows the service monitor PCB.	
	 <p>LED A</p> <p>LED 1</p> <p>LED 2</p> <p>LED 3</p> <p>LED 4</p> <p>Priority room setting switch (SW4)</p> <p>Wiring error check switch (SW3)</p> <p>Forced operation ON / OFF switch (SW1)</p> <p>NIGHT QUIET mode setting switch (SW5)</p> <p>Operation mode switch (SW2)</p> <p>(R3064)</p>	
8	Release the 2 hooks to remove the service monitor PCB.	
	 <p>Hook</p> <p>Hook</p> <p>(R6579)</p>	

Step		Procedure	Points
9	Remove the service monitor PCB.	 <p>(R6580)</p>	
10	Lift up the main PCB.	<p>Main PCB</p>  <p>(R2181)</p>	
11	Disconnect the connectors [S31] [S32] [S33] [S71] [H1] [H2].	 <p>[S31] [S71] [S33] (R10362)</p>  <p>[S32] [H1] (yellow) [H2] (blue) (R10363)</p>	

Step	Procedure	Points
<p>12 Disconnect the connector [E].</p>		
<p>13 The figure shows the main PCB.</p>		
<p>2. Remove the inverter PCB (MID2).</p>	<p>1 Remove the 7 screws to remove the inverter PCB (MID2).</p> 	

5. Removal of PCBs (Pattern 2)

Procedure

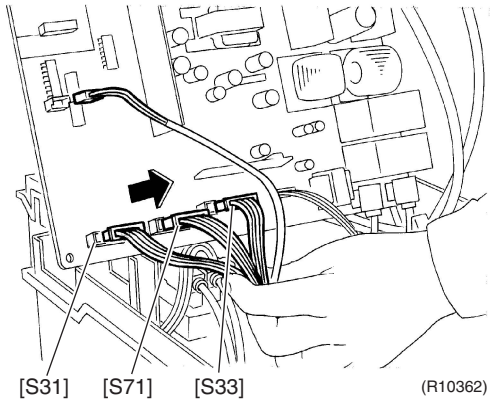
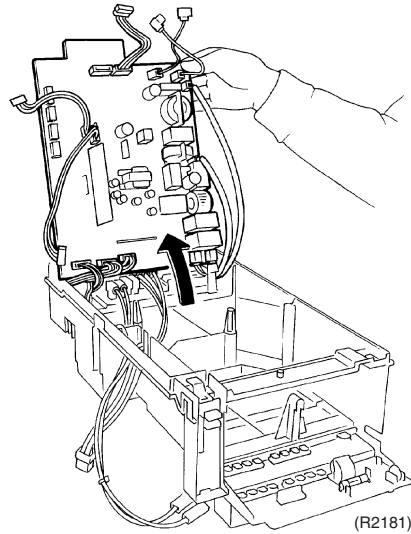


Warning

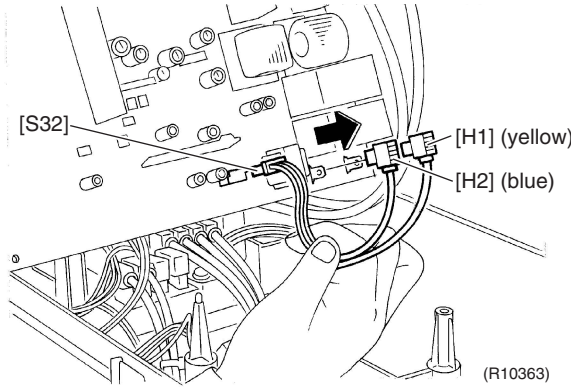
Be sure to wait for 10 minutes or more after turning off all power supplies before disassembling work.

Step	Procedure	Points
<p>1. Remove the service monitor PCB and the main PCB.</p>		<ul style="list-style-type: none"> When reassembling, insert the base bar into the hole of the main PCB.
<p>1 Remove the screw of the main PCB, and unfasten the 2 hooks.</p>		
<p>2 Unfasten the hook of the terminal board, and open the terminal board.</p>		
<p>3 Disconnect each connector [S11] [HE] [HL] [HN] on the back of the terminal board.</p>		
<p>4 Disconnect the connectors [S52] [S102] from the service monitor PCB.</p>	<p>Service monitor PCB (R17347)</p>	

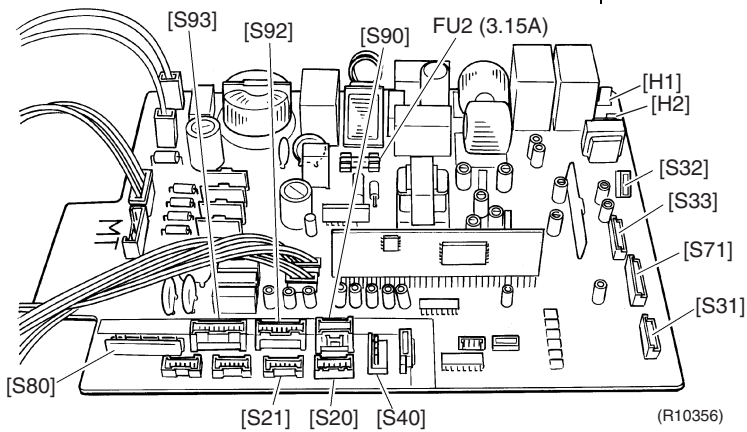
Step	Procedure	Points
5	Lift up the main PCB.	
6	Disconnect the connectors [S31] [S32] [S33] [S71] [H1] [H2].	
7	The figure shows the main PCB.	



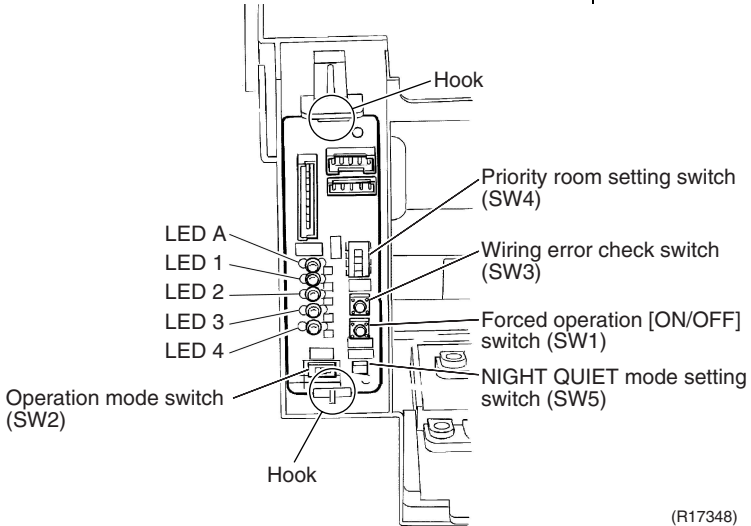
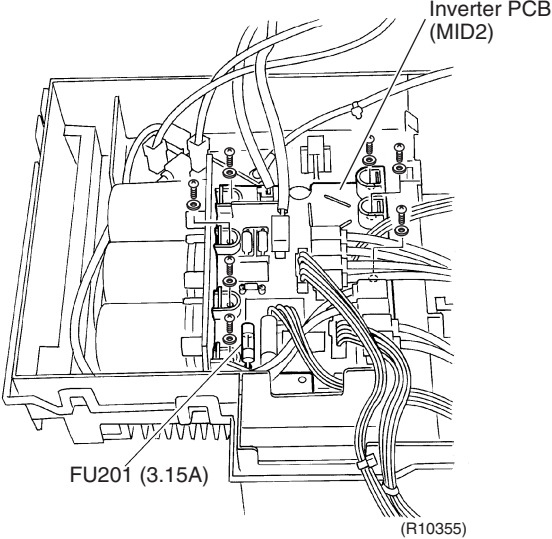
[S31] [S71] [S33] (R10362)



(R10363)



(R10356)

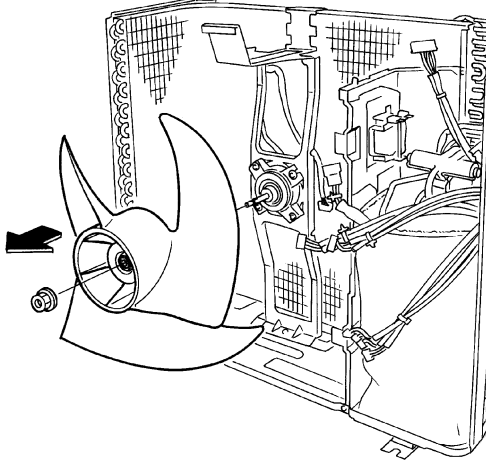
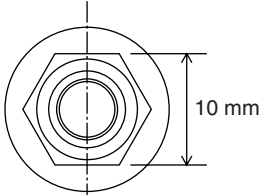
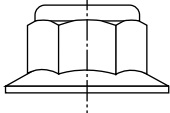
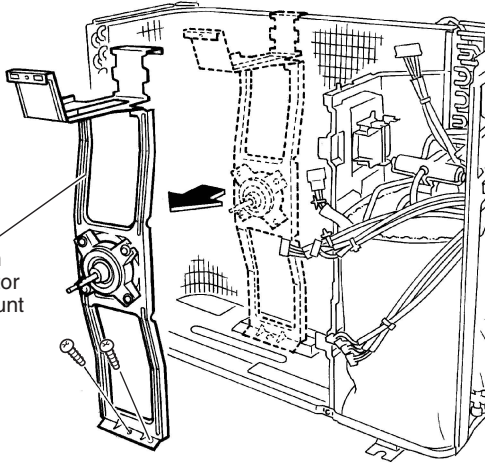
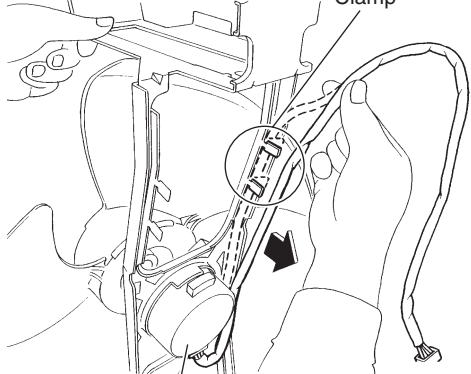
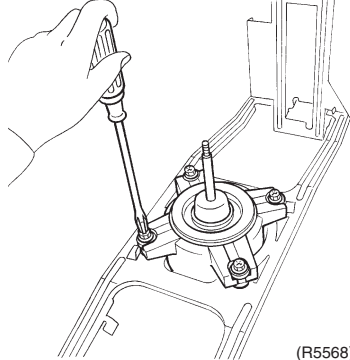
Step	Procedure	Points
8	<p>Unfasten the 2 hooks and remove the service monitor PCB.</p> 	<p>(R17348)</p>
2.	<p>Remove the inverter PCB (MID2).</p> <p>1 Remove the 7 screws and remove the inverter PCB (MID2).</p> 	<p>(R10355)</p>

6. 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	Procedure	Points
1	Remove the nut and remove the outdoor fan.	 <p style="text-align: right;">(R10362)</p>	<p>Preparation</p> <ul style="list-style-type: none"> ■ Disconnect the connector for the fan motor. ■ Nut size : M6  <p style="text-align: right;">10 mm</p>  <p style="text-align: right;">(R12236)</p>
2	Remove the 2 screws of the fan motor mount.	 <p style="text-align: right;">(R10363)</p>	<ul style="list-style-type: none"> ■ 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 fan motor lead wire by releasing the 2 clamps fixing the wire. Remove the 4 screws to remove the fan motor.	<p>(Backside)</p>  <p style="text-align: right;">(R5567)</p>	 <p style="text-align: right;">(R5568)</p>

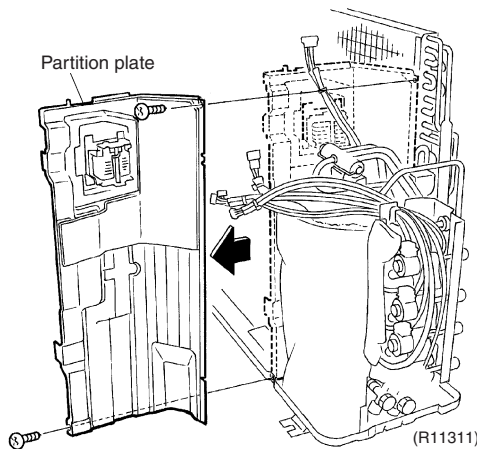
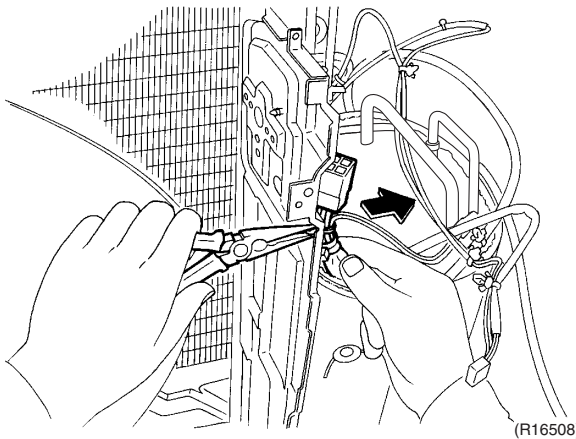
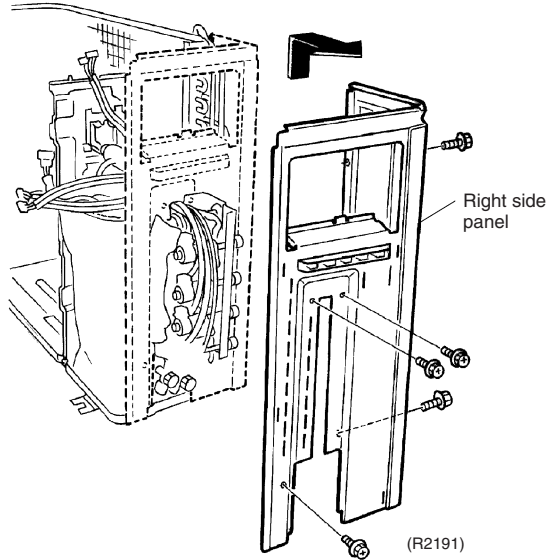
7. Removal of Sound Blankets

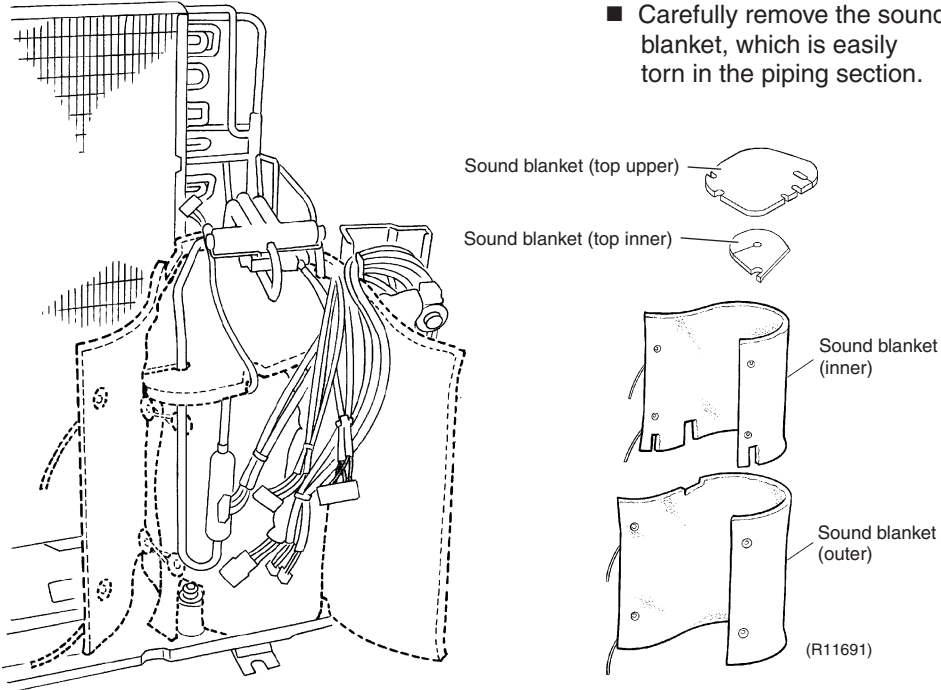
Procedure



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.	
3	Remove the 2 screws of the partition plate, and remove the plate.	



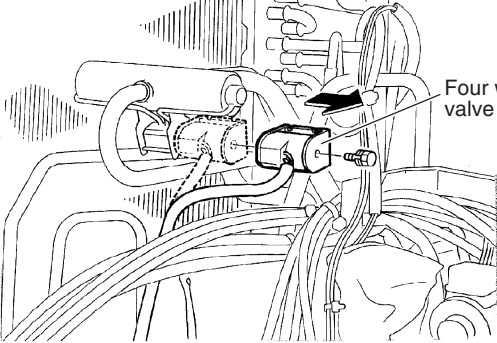
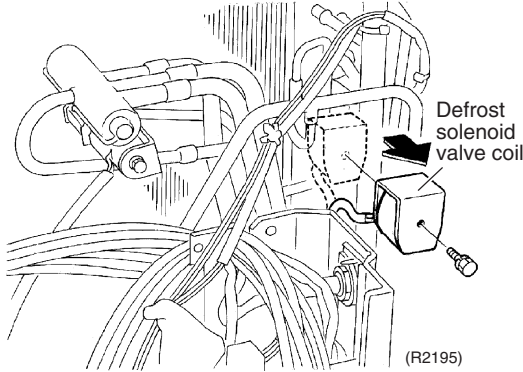
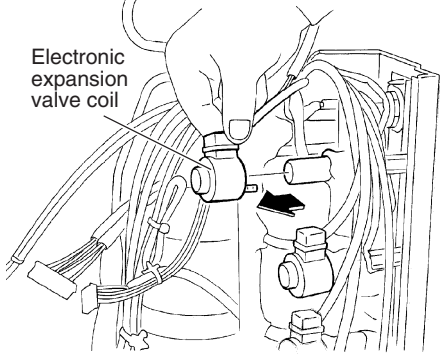
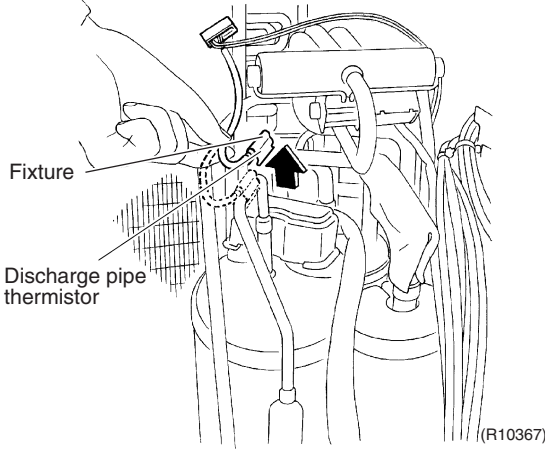
Step	Procedure	Points
<p>4</p>	<p>Remove the sound blanket (top upper, top inner, outer, inner).</p> 	<ul style="list-style-type: none"> ■ Carefully remove the sound blanket, which is easily torn in the piping section.

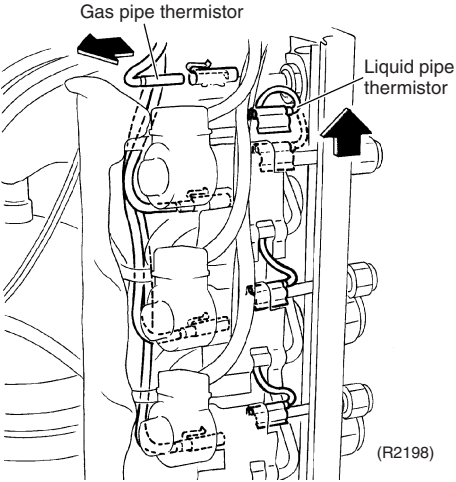
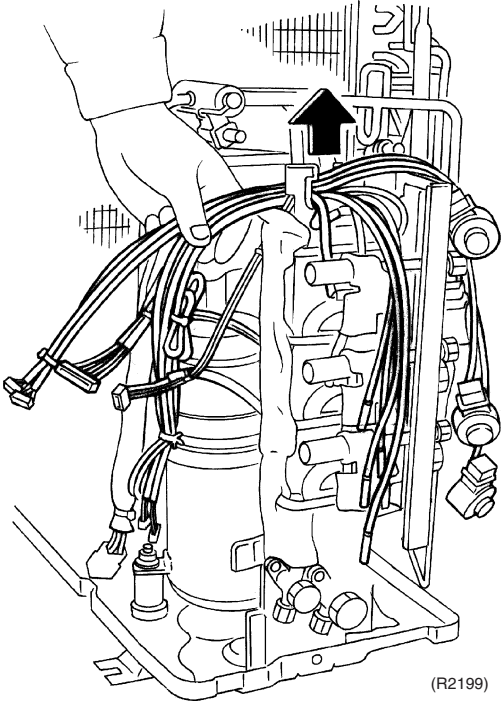
8. Removal of Coils / Thermistors

Procedure



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

Step	Procedure	Procedure	Points
1	Remove the screw of the four way valve coil.	 <p>Four way valve coil</p> <p>(R2194)</p>	
2	Remove the screw and remove the defrost solenoid valve coil.	 <p>Defrost solenoid valve coil</p> <p>(R2195)</p>	<ul style="list-style-type: none"> ■ Only for the U.S. model
3	Remove the electronic expansion valve coil for each room.	 <p>Electronic expansion valve coil</p> <p>(R2196)</p>	
4	Release the fixture and remove the discharge pipe thermistor.	 <p>Fixture</p> <p>Discharge pipe thermistor</p> <p>Thermistor</p> <p>Pipe</p> <p>Fixture</p> <p>(R10536)</p> <p>(R10367)</p>	<ul style="list-style-type: none"> ■ 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.

Step	Procedure	Points	
5	Peel off the putty and pull out the thermistors.	 <p>(R2198)</p>	<ul style="list-style-type: none"> ■ 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.	 <p>(R2199)</p>	<ul style="list-style-type: none"> ■ [S90]: <ul style="list-style-type: none"> Outdoor temperature thermistor (Blue) Outdoor heat exchanger thermistor (Gray) Discharge pipe thermistor (Black) ■ [S92]: Gas pipe thermistor <ul style="list-style-type: none"> Room A (Black) Room B (Gray) Room C (Brown) ■ [S93]: Liquid pipe thermistor <ul style="list-style-type: none"> Room A (Black) Room B (Gray) Room C (Yellow)

9. Removal of Four Way Valve / Defrost Solenoid Valve

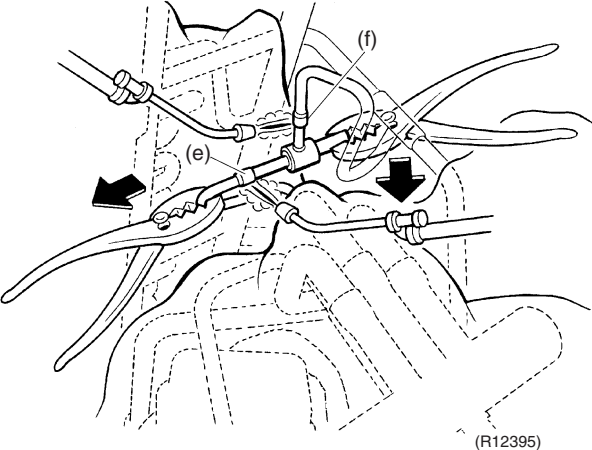
Procedure



Warning

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

Step	Procedure	Points
<p>1 Remove the screw and remove the four way valve coil.</p> <p>2 Remove the screw and remove the defrost solenoid valve coil (U.S. models only).</p>		<ul style="list-style-type: none"> ■ The defrost solenoid valve is only for the U.S. models. 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.
<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>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>3 Heat the 4 brazed points of the four way valve. Disconnect the point (a) first.</p> <p>4 Disconnect the points (b) and (c).</p> <p>5 Disconnect the point (d) and remove the four way valve.</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
6	<p>Disconnect the 2 brazed points, first (e), and then (f). Remove the defrost solenoid valve.</p>	 <p>(R12395)</p> <ul style="list-style-type: none"> ■ The defrost solenoid valve is only for the U.S. models. <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.


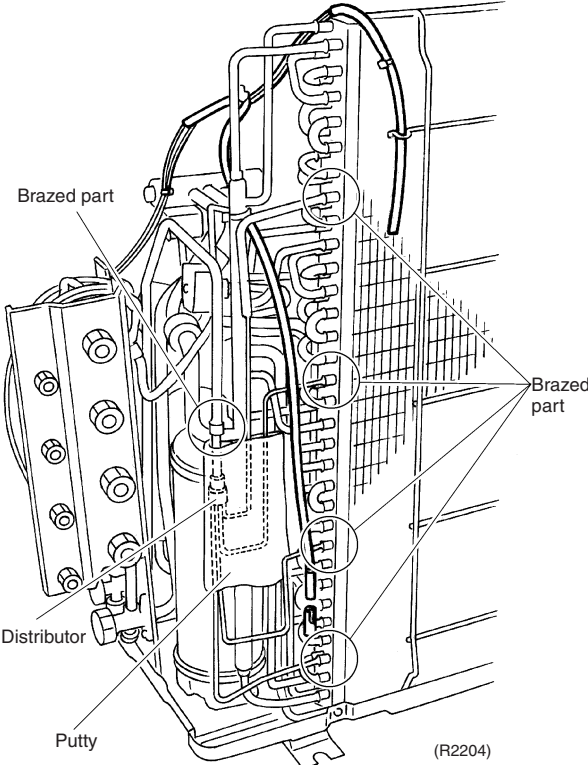


10. Removal of Distributor

Procedure



Warning

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

Step	Procedure	Points
<ul style="list-style-type: none"> ■ Before working, make sure that the refrigerant gas is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part. 		<p> Warning Be careful not to get yourself burnt with the pipes and other parts that are heated by the gas brazing machine.</p>
<p>1 Remove the putty.</p> <p>2 Heat up and disconnect the 5 brazed parts to remove the distributor.</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> <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>Note:</p> <ul style="list-style-type: none"> ■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit. ■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed. ■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries. 		<p>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.

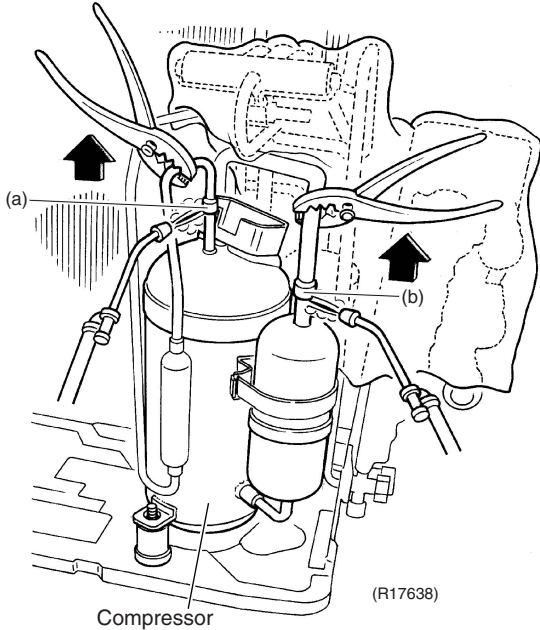
11. Removal of Compressor

Procedure



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

Step	Procedure	Procedure	Points
1	Remove the terminal cover.	<p>Terminal cover</p> <p>(R16026)</p>	
2	Disconnect the compressor lead wires.	<p>Compressor lead wire</p> <p>U (red) N (brown) V (yellow) W (blue)</p> <p>Terminal nameplate</p> <p>(R2205)</p>	
3	Remove the 2 sheets of putty.	<p>Putty</p> <p>(R10373)</p>	
4	Remove the 3 nuts.		

Step	Procedure	Points
<ul style="list-style-type: none"> ■ Before working, make sure that the refrigerant is empty in the circuit. ■ Be sure to apply nitrogen replacement when heating up the brazed part. 		
6	Disconnect the brazed part (b) at suction side of the compressor. 	<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>Warning Since it may happen that the refrigerant oil in the compressor catches fire, prepare wet cloth so as to extinguish fire immediately.</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> <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.
7	Remove the compressor.	<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.
Note: <ul style="list-style-type: none"> ■ Do not use a metal saw for cutting pipes by all means because the sawdust comes into the circuit. ■ When withdrawing the pipes, be careful not to pinch them firmly with pliers. The pipes may get deformed. ■ Provide a protective sheet or a steel plate so that the brazing flame cannot influence peripheries. ■ Be careful so as not to burn the compressor terminals, the name plate, the heat exchanger fin. 		

Revision History

Month / Year	Version	Revised contents
02 / 2013	Si12-994	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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