ESIE-1301



Service Manual (Draft)

VRV IV non-continuous heating
RXYQ-T7

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4-3. Additional Refrigerant Charging

If refrigerant cannot be fully charged due to outdoor unit shutdown, be sure to add refrigerant to cover the shortfall by this charging. An inadequate refrigerant charging will result in troubles.

Charging Procedure

① Connect a charge hose and valve to the service port of the gas stop valve.

② Fully open both the gas-side and liquid-side stop valves.

③ Turn ON the power supply of the indoor and outdoor units, respectively.
To protect the compressor, be sure to turn ON the power supplies six hours before starting operation.

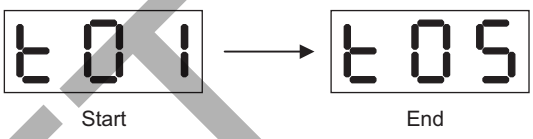
④ Set “Additional Refrigerant Charge” to “ON” in setting mode with the outdoor unit shutdown, and then open the refrigerant cylinder valve (see *1).

∗ 1. Adjust the valve opening so that the refrigerant charging rate will come to 1 kg/min.

∗ 2. The system will automatically start operation and the seven-segment display will switch the display as shown to the right, and “TEST OPERATION” and “CENTRALIZED CONTROL” will appear on the remote controller.(Example) 0.17MPa⇒

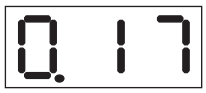
∗ 3. “LOW PRESSURE” may appear on the display, but operation can be continued.

Seven-segment display under test operation/centralized control (SEG1 to 3)



Start End

Seven-segment display (SEG1 to 3)



⑤ Uponcompletion of charging a specified amount of refrigerant, close the refrigerant cylinder valve, and then press the RETURN button (BS3).

- The system will stop operation. (The system will operate for a maximum of 30 minutes after startup, and then automatically stop.)
  If the additional refrigerant charging is not completed, perform additional refrigerant charging again.
- If the equipment starts, but immediately stops operation, refrigerant may have been excessively charged.
  In this case, immediately quit additional refrigerant charging, and then recheck the charge amount.

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1 Field Settings of Outdoor Unit

1-1. List of Field Setting Items

This Section shows a list of field setting items. For details of DIP switch setting and setting mode, refer to information on one after the following page onwards.

(1) Function setting items

NO.1	Setting item	Description	Overview of setting procedure	Reference page
1	Setting of COOL/HEAT selection control	○ Used to select a COOL/HEAT selection control mode from the following: (1) Control by outdoor unit from the indoor unit remote controller (2) Control by outdoor unit from the cooling/heating selection remote controller (3) Unified control by outdoor unit group from the indoor unit remote controller (4) Unified control by outdoor unit group from the COOL/HEAT selection remote controller (5) Control of multiple groups from the centralized cooling/heating remote controller	○ In order to use the COOL/HEAT selection remote controller, set the DS1-1 on the outdoor unit PC board to "OUT." ○ To operate the system under the outdoor unit group control, set the system to "BATCH MASTER" or "SLAVE" using "Setting mode." Then, make setting of COOL/HEAT batch address number.	P.95
2	Setting of low noise operation	A. Used to reduce operation noise level through reduction of the upper limit of the fan using internal input. (Use Step 8 for normal operation.) (1) Level 1: Not higher than Step 7 (2) Level 2: Not higher than Step 5 (3) Level 3: Not higher than Step 5	○ Use the "External control adapter." Set "Setting mode No. 12" to "ON" and select a mode with No. 25. Set "Setting mode No. 29: Capacity priority setting" to "ON," as appropriate.	P.100
		B. Used to perform automatic nighttime low noise operation. Start time: Selectable from 20:00 to 24:00 hours by the hour. End time: Selectable from 06:00 to 08:00 hours by the hour. (The start and end time listed above is just an example. Note that the said time is estimated according to outdoor temperature.)	○ Make this setting with the use of "Setting mode." Select a mode with "Setting mode No. 22," start time with No. 26, and end time with No. 27. Set "Setting mode No. 29: Capacity priority setting" to "ON," as appropriate.	P.100
3	Setting of demand operation	○ Used to put limits on the compressor operating frequency to suppress the upper limit of power consumption. (1) Level 1 of Demand 1: Not higher than 60% of the rating (2) Level 2 of Demand 1: Not higher than 65% of the rating (3) Level 3 of Demand 1: Not higher than 70% of the rating (4) Level 4 of Demand 1: Not higher than 75% of the rating (5) Level 5 of Demand 1: Not higher than 80% of the rating (6) Level 6 of Demand 1: Not higher than 85% of the rating (7) Level 7 of Demand 1: Not higher than 90% of the rating (8) Level 8 of Demand 1: Not higher than 95% of the rating (9) Level 1 of Demand 2: Not higher than 40% of the rating (10) Level 2 of Demand 2: Not higher than 50% of the rating (11) Level 3 of Demand 2: Not higher than 55% of the rating (12) Demand 3: Forced thermostat OFF	○ To make this setting with the use of "external control adapter", select Demand 1 to 3 depending on the method for short-circuiting the terminal block (TeS1),	P.102
			○ To make this setting only with the use of "Setting mode," set "Setting mode No. 32" to "Demand 1" or "Demand 2." When setting it to "Demand 1," set No. 30 to "Level 1" to "Level 3."	P.102
4	Setting of AirNet address	○ Used to make address setting of AirNet when it is connected.	○ Set AirNet to an intended address with "Setting mode No. 13."	P.84
5	Setting of hot water heater	○ Used to make setting of hot water heater in order to perform heating operation using this heater.	○ Set "Setting mode No. 16" to "ON."	P.85
6	Setting of high static pressure	○ Used to make setting of high static pressure in order to operate the system with diffuser duct connected in high static pressure mode. (used at concealment installation on upper floors and balconies) ※ Remove outdoor fan cover to install diffuser duct.	○ Set "Setting mode No. 18" to "ON."	P.85

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(2) Service setting items

NO.1	Setting item	Description	Overview of setting procedure	Reference page
1	Indoor unit fan forced H operation	○ Used to operate the indoor unit in the stopped state in forced H operation mode.	○ Set “Setting mode No. 5” to “Indoor forced fan H.”	P.84
2	Indoor unit forced operation	○ Used to operate the indoor unit in forced operation mode.	○ Set “Setting mode No. 6” to “Indoor forced operation.”	P.84
3	Change of targeted evaporating temperature (for cooling)	○ Used to make setting of targeted evaporating temperature for compressor capacity control in cooling operation.	○ Set “Setting mode No. 8” to “High” or “Low.”	P.84
4	Change of targeted condensing temperature (for heating)	○ Used to make setting of targeted condensing temperature for compressor capacity control in heating operation.	○ Set “Setting mode No. 9” to “High” or “Low.”	P.84
5	Setting of defrost selection	○ Used to make setting of temperature at which the system initiates defrost operation, making it easier or harder to initiate defrosting.	○ Set “Setting mode No. 10” to “Quick” or “Slow.”	P.84
6	Emergency operation	○ Used, in the event of a compressor failure, to prohibit the relevant compressor or outdoor unit from operating and allow the system to perform emergency operation only using operable compressor(s) or outdoor unit(s).	○ Use Setting mode No. 38, No. 39, or No. 40.	P.104
7	Airtightness test	○ Used to conduct airtightness tests fully opening the expansion valves of outdoor and indoor units and turning ON some of solenoid valves.	○ Set “Setting mode No. 21” to “ON.”	P.103
8	Refrigerant recovery mode	○ Used to recover refrigerant on site. Prohibit indoor and outdoor units from operating, and then fully open the expansion valves of the units.	○ Set “Setting mode No. 21” to “ON.”	P.103
9	Vacuuming mode	○ Used to conduct vacuuming on site. To conduct vacuuming, fully open the expansion valves on indoor and outdoor units, turn ON some of solenoid valves, and use a vacuum pump.	○ Set “Setting mode No. 21” to “ON.”	P.103
10	ENECUT test operation	○ Used to forcedly turn ON the ENECUT. (Be noted that ENECUT is not functional when the indoor unit remote controller turns ON.)	○ Set “Setting mode No. 24” to “ON.”	P.85
11	Power transistor check mode	○ Used to troubleshoot DC compressors. This setting allows for determining through inverter output waveforms whether the relevant trouble has resulted from the compressor or PC board.	○ Set “Setting mode No. 28” to “ON.”	P.85
12	Setting of model with spare PC board	○ To replace the PC board with spare PC board, be sure to make model setting.	○ Make setting of DS1-1 to DS1-4 and DS2-1 to DS2-4 on the PC board according to the set model.	P.81

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1-2. Settings by DIP switches

A. Factory settings

Make field settings using DIP switches on the PC board. However, do not make any factory setting change except for DS1-1.

DIP switch		Setting item	Description
No.	Setting		
DS1-1	ON	COOL/HEAT selection	Used to make a COO/HEAT selection using the remote controller equipped to the outdoor unit.
	OFF (Factory setting)		
DS1-2 ~DS1-4	ON	N/A	Do not make any factory setting change.
	OFF (Factory setting)		

B. DIP switch setting after replacing the PC board with spare PC board

⚠ CAUTION

After replacement with spare PC board, be sure to make settings shown in the table below.
The procedure for making settings of spare PC board is different from that used for factory settings described above. Be sure to refer to the table shown below in order to make settings of spare PC board after replacement.

Initial setting of DIP switches



DS No.	Setting item	Description	
DS1-1	COOL/HEAT selection	ON	Used to make a COO/HEAT selection using the remote controller equipped to the outdoor unit.
		OFF (Factory setting of spare PC board)	Used to make a COO/HEAT selection using the remote controller equipped to the indoor unit.
DS1-2	Power supply setting	ON	Used to operate the system with 200V power line (mainly in Japan).
		OFF (Factory setting of spare PC board)	Used to operate the system with 400V power line (mainly in foreign countries).
DS1-3	Cooling only/ Heat pump setting	ON	Used to operate the system in cooling only mode.
		OFF (Factory setting of spare PC board)	Used to operate the system in both cooling and heating modes.
DS1-4	Multiunit setting	ON	Do not make any factory setting change.
		OFF (Factory setting of spare PC board)	RXYP ~ C
DS2-1 DS2-2 DS2-3 DS2-4	Model setting	Make the following settings according to the model of outdoor unit. (Factory setting of all models: OFF)	

	RXYP140C	RXYP160C	RXYP224C RXMP224C RXUP224C	RXYP280C RXMP280C RXUP280C	RXYP335C RXMP335C RXUP335C
DS2-1	OFF	ON	OFF	ON	OFF
DS2-2	OFF	OFF	ON	ON	OFF
DS2-3	OFF	OFF	OFF	OFF	ON
DS2-4	OFF	OFF	OFF	OFF	ON

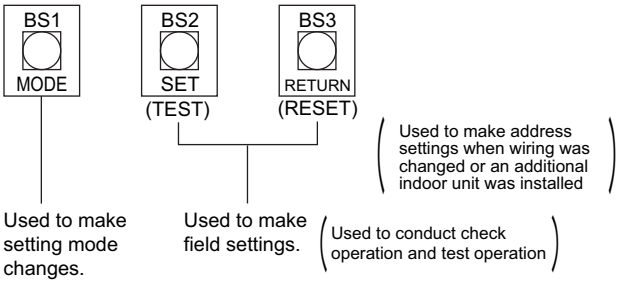
	RXYP400C RXMP400C RXUP400C	RXYP450C RXMP450C	RXYP500C RXMP500C	RXYP560C RXMP560C
DS2-1	ON	OFF	ON	OFF
DS2-2	OFF	ON	ON	OFF
DS2-3	ON	ON	ON	OFF
DS2-4	OFF	OFF	OFF	ON

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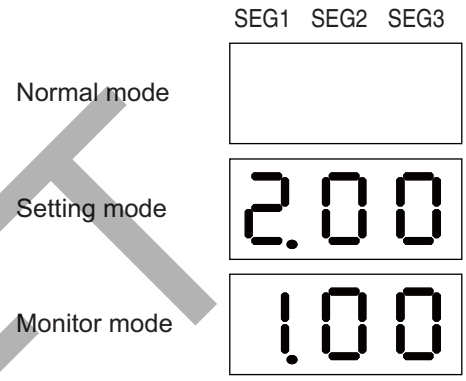
1-3. Settings by pushbutton switches

The following settings can be made using the pushbutton switches on the PC board.
In case of a multi outdoor unit system, make these settings with the master outdoor unit. (Settings made with a slave unit are disabled.)

Pushbutton switches



Seven-segment display (SEG1 to SEG3)



The following three setting modes are available:

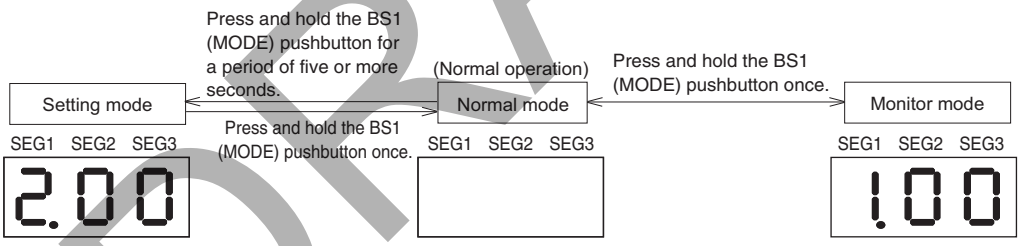
(1) Normal mode……Initial state (for normal operation)
Used to display I/O transmission status, and malfunction descriptions.

(2) Setting mode……Used to make changes to operating status and make address settings mainly for servicing the system.

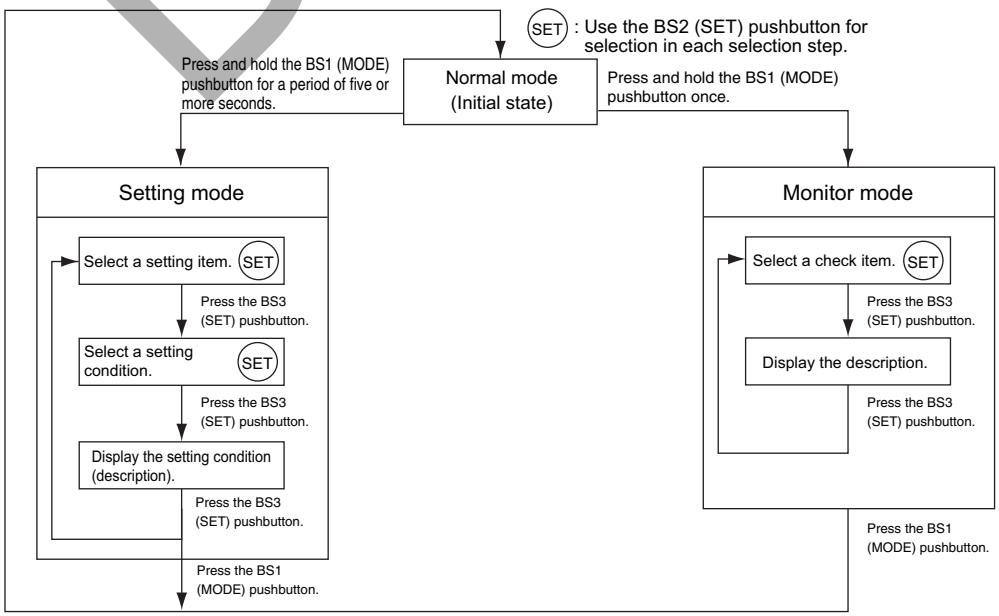
(3) Monitor mode……Used to verify the contents set with setting modes.

■Mode changing procedure

Modes can be changed using the MODE pushbutton as shown below:



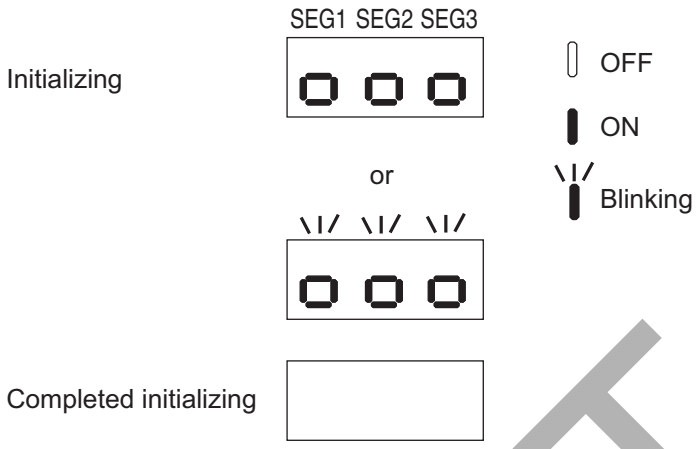
■Mode changing steps



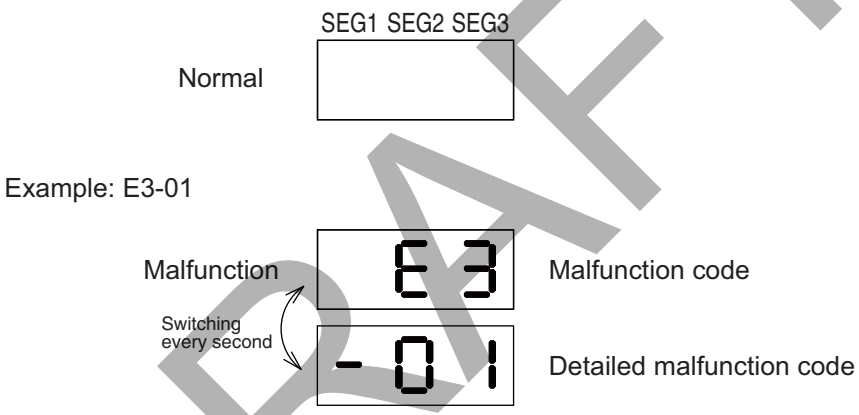
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(1) Normal mode

1. I/O transmission status····· Used to check for the initial status of I/O transmission.



2. Malfunction description·····Malfunction description: Used to display a malfunction description.



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(2) Setting mode

This mode is used to make changes to operating status and make address settings.

<Setting procedure>

Press and hold the MODE (BS1) pushbutton for a period of five or more seconds to set to "Setting mode."

<Selecting setting item>

Press the SET (BS2) pushbutton to set the seven-segment display to any of the setting items listed in the table below.

↓

Press the RETURN (BS3) pushbutton to enter the setting item. (The current set condition display will blink.)

<Selecting setting condition>

Press the SET (BS2) pushbutton to set the seven-segment display to a setting condition you want to select.

↓

Press the RETURN (BS3) pushbutton to enter the setting condition.

Press the RETURN (BS3) pushbutton to set "Setting mode" to the initial state.

※ If you lose setting in progress, press the MODE (BS1) pushbutton. You should return to "normal mode."

Setting item						Setting condition				
No.	Item	Description	Seven-segment display			Description	Seven-segment display ∗Factory setting			
			SEG1	SEG2	SEG3		SEG1	SEG2	SEG3	
0	COOL/HEAT selection	Used to make setting changes in order to make a COOL/HEAT selection by unified outdoor unit group. • COOL/HEAT selection (IND): Used to make a COOL/HEAT selection by individual outdoor unit (factory set). • COOL/HEAT selection (MASTER): Used to make a COOL/HEAT selection by outdoor unit group with the master unit. • COOL/HEAT selection (SLAVE): Used to make a COOL/HEAT selection by outdoor unit group with the slave unit.	2	0	0	Individual Unified master Unified slave			0 1 2	
1	COOL/HEAT unified address	Used to make address setting for unified cooling/heating operation.	2	0	1	Address 0 – 31		3	0 – 1	
2	Low noise/ Demand address	Used to make address setting for low noise/ demand operation.	2	0	2	Address 0 – 31		3	0 – 1	
5	Indoor unit forced fan H	Used to forcedly operate the fan of indoor unit that is in a stopped state. (H tap)	2	0	5	Normal operation Indoor forced fan H			0 1	
6	Indoor unit forced operation	Used to forcedly operate indoor unit. (Forced thermostat ON)	2	0	6	Normal operation Indoor forced operation			0 1	
8	Te setting	Used to make setting of targeted evaporating temperature for cooling operation.	2	0	8	Low (Level L) Normal (Level M) High ① High ② High ③ (Level H) High ④ High ⑤			1 2 3 4 5 6 7	
9	Tc setting	Used to make setting of targeted condensing temperature for heating operation.	2	0	9	Low ① Low ② Low ③ Low ④ Low ⑤ Normal High			1 2 3 4 5 6 7	
10	Defrost selection setting	Used to select a temperature at which the system initiates defrost operation, making it easier or harder to initiate defrosting.	2	1	0	Slow defrost Normal Quick defrost			0 1 2	
12	External low noise/Demand setting	Used to receive external low noise or demand signal.	2	1	2	External low noise/ demand: NO External low noise/ demand: YES			0 1	
13	AirNet address	Used to make address setting of AirNet.	2	1	3	Address 0 – 63		6	0 – 3	

Numbers in the "No." column represent the number of times to press the SET (BS2) pushbutton.

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Setting item						Setting condition				
No.	Item	Description	Seven-segment display			Description	Seven-segment display ∗Factory setting			
			SEG1	SEG2	SEG3		SEG1	SEG2	SEG3	
16	Hot water heater setting	Used to make setting of hot water heater in order to perform heating operation using this heater.	2	1	6	OFF ON			0 1	∗
18	High static pressure setting	Used to make setting of high static pressure in order to operate the system with diffuser duct connected in high static pressure mode.	2	1	8	High static pressure setting: OFF High static pressure setting: ON			0 1	∗
20	Additional refrigerant charge setting	Used to perform additional refrigerant charging operation.	2	2	0	Refrigerant charging: OFF Refrigerant charging: ON			0 1	∗
21	Refrigerant collection Vacuuming mode setting	Used to set the system to refrigerant collection mode.	2	2	1	Refrigerant collection: OFF Refrigerant collection: ON			0 1	∗
22	Nighttime low noise level setting	Used to make simple setting of automatic nighttime low noise operation. Time for the operation is subject to the start and end time settings.	2	2	2	OFF Level 1 Level 2 Level 3			0 1 2 3	∗
24	ENECUT test operation	Used to forcedly turn ON ENECUT. (Be noted that ENECUT is only functional when outdoor unit is in the stopped state.)	2	2	4	ENECUT output OFF ENECUT output forced ON			0 1	∗
25	External low operating noise level setting	Used to make setting of low operating noise level when the external low noise signal is inputted.	2	2	5	Level 1 Level 2 Level 3			1 2 3	∗
26	Nighttime low noise operation start setting	Used to make setting of time to start nighttime low noise operation. ("Nighttime low noise level setting" should also be made.)	2	2	6	About 20:00 About 22:00 About 24:00			1 2 3	∗
27	Nighttime low noise operation end setting	Used to make setting of time to end nighttime low noise" operation. ("Nighttime low noise level setting should also be made.)	2	2	7	About 06:00 About 07:00 About 08:00			1 2 3	∗
28	Power transistor check mode	Used to troubleshoot DC compressor. Since inverter waveforms are output even without making wire connections to the compressor, it is useful to determine whether the relevant trouble has resulted from the compressor or PC board.	2	2	8	OFF ON			0 1	∗
29	Capacity priority setting	This setting makes it possible to automatically cancel the low noise level control if capacity is required while low noise operation or nighttime low noise operation is in progress.	2	2	9	OFF ON			0 1	∗
30	Demand 1 level setting	Used to make a change to the targeted power consumption level when the demand 1 control signal is inputted.	2	3	0	Level 1 (60% demand) Level 2 (65% demand) Level 3 (70% demand) Level 4 (75% demand) Level 5 (80% demand) Level 6 (85% demand) Level 7 (90% demand) Level 8 (95% demand)			1 2 3 4 5 6 7 8	∗
31	Demand level setting	Used to make a change to the targeted power consumption level when the demand 2 control signal is inputted.	2	3	1	Level 1 (40% demand) Level 2 (50% demand) Level 3 (55% demand)			1 2 3	∗
32	Constant demand setting	Used to constantly exert demand 1 or 2 control without inputting any external signal. (It is useful to prevent trouble that causes a circuit breaker with small capacity to get tripped when a large load is applied.)	2	3	2	OFF Demand 1 Demand 2			0 1 2	∗
38	Emergency operation (Master)	Used to prohibit the compressor of the master unit or the relevant outdoor unit from operating. Since this setting temporarily prohibits it from operating, immediately replace the compressor or other components.	2	3	8	OFF Master INV 1 unit operation: Prohibited Master INV 2 unit operation: Prohibited Master unit operation: Prohibited			0 1 2 3	∗
39	Emergency operation (Slave 1)	Used to prohibit the compressor of the slave 1 unit or the relevant outdoor unit from operating. Since this setting temporarily prohibits it from operating, immediately replace the compressor or other components.	2	3	9	OFF Slave 1 INV 1 unit operation: Prohibited Slave 1 INV 2 unit operation: Prohibited Slave 1 unit operation: Prohibited			0 1 2 3	∗
40	Emergency operation (Slave 2)	Used to prohibit the compressor of the slave 2 unit or the relevant outdoor unit from operating. Since this setting temporarily prohibits it from operating, immediately replace the compressor or other components.	2	4	0	OFF Slave 2 INV 1 unit operation: Prohibited Slave 2 INV 2 unit operation: Prohibited Slave 2 unit operation: Prohibited			0 1 2 3	∗
51	Master/Slave setting for multi outdoor unit system	Used to make setting of master and slave units when multi outdoor units are connected. (After completion of this setting, press and hold the BS3 (RESET) pushbutton for a period of five or more seconds.)	2	5	1	Auto judgment Master unit Slave 1 unit Slave 2 unit			0 1 2 3	∗

Numbers in the "No." column represent the number of times to press the SET (BS2) pushbutton.

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(3) Monitor mode

To enter “monitor mode,” press the MODE (BS1) pushbutton while in “normal mode.”

<Selecting monitoring item>

Press the SET (BS2) pushbutton to set the seven-segment display to any of the monitoring items listed in the table below.

<Checking for description of data>

Press the RETURN (BS3) pushbutton. Data on the monitoring item selected will appear on the seven-segment display.

Press the RETURN (BS3) pushbutton to set “Monitoring mode” to the initial state.

★ Pressing the MODE (BS1) pushbutton will return the mode to “normal mode.”

No.	Monitoring item				Data display			
	Item	Seven-segment display			Description	Seven-segment display		
		SEG1	SEG2	SEG3		SEG1	SEG2	SEG3
0	Master/Slave outdoor unit	1.	0	0	Undefined Master unit Slave 1 unit Slave 2 unit			- 0 1 2
1	Low noise operation state	1.	0	1	In normal operation In low noise operation			0 1
2	Demand operation state	1.	0	2	In normal operation In demand operation			0 1
3	Backup operation state	1.	0	3	OFF ON			0 1
4	Defrost selection setting	1.	0	4	Slow defrost Normal Quick defrost			0 1 2
5	Te setting	1.	0	5	Low Normal High ① to ⑤			0 1 2
6	Tc setting	1.	0	6	Low ① to ⑤ Normal High			0 1 2
7	COOL/HEAT unified address	1.	0	7				
8	Low noise/Demand address	1.	0	8				
9	AirNet address	1.	0	9				
10	Number of indoor unit connected (See ∗1)	1.	1	0	Number of units			
12	Number of units in connection zone (Fixed to “0”)	1.	1	2				
13	Number of outdoor units (See ∗2)	1.	1	3				
15	Number of units in zone	1.	1	5				
16	Number of terminal units (See ∗3)	1.	1	6				
17	Description of malfunction (Latest)	1.	1	7	See information on the following page.			
18	Description of malfunction (1 cycle before)	1.	1	8				
19	Description of malfunction (2 cycles before)	1.	1	9				
23	Description of retry (Latest)	1.	2	3				
24	Description of retry (1 cycle before)	1.	2	4				
25	Description of retry (2 cycles before)	1.	2	5				
28	Number of outdoor units connected to a multi system	1.	2	8	Number of units			

Numbers in the "No." column represent the number of times to press the SET (BS2) pushbutton.

※1: Number of indoor units connected
Represents the number of indoor units connected to a single outdoor unit.

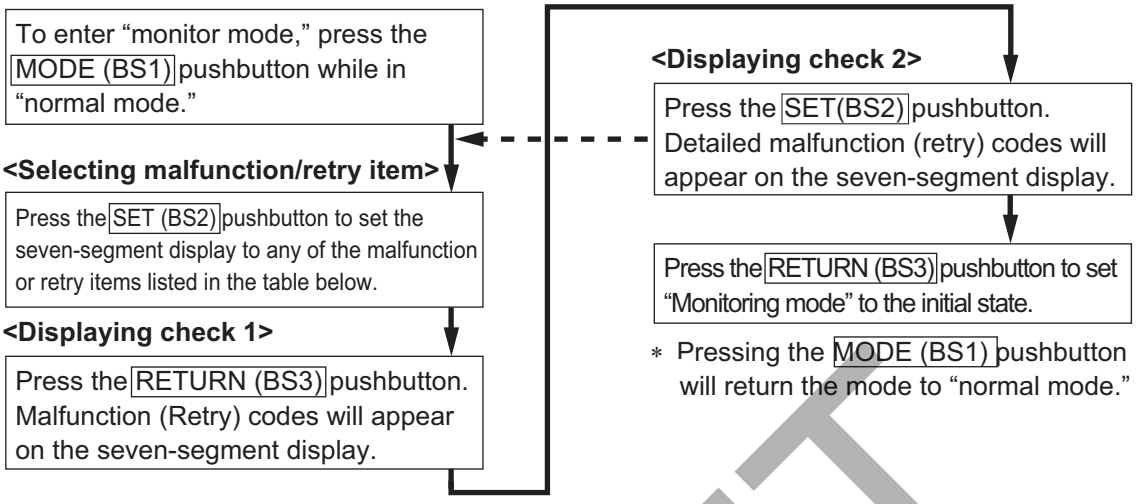
※2: Number of outdoor units
Represents the number of outdoor units connected to a single DIII-NET that is a communication line.

※3: Number of terminal units
Represents the number of indoor units connected to a single DIII-NET that is a communication line.

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■Check for descriptions of malfunctions/retries

Check for descriptions of malfunctions/retries following the procedure described below.



Malfunction code	Description of malfunction	Malfunction code			Detailed malfunction code		
		SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
E1 - 01	Malfunction of outdoor unit PC board	E	1		-	0	1
- 02	Faulty outdoor unit PC board				-	0	2
E2 - 01	Ground leakage detection error (Master)	E	2		-	0	1
- 02	Ground leakage detection error (Slave 1)				-	0	2
- 03	Ground leakage detection error (Slave 2)				-	0	3
- 06	Malfunction due to missing of ground leakage detection core (Master)				-	0	6
- 07	Malfunction due to missing of ground leakage detection core (Slave 1)				-	0	7
- 08	Malfunction due to missing of ground leakage detection core (Slave 2)				-	0	8
E3 - 01	Actuation of high pressure switch (Master)	E	3		-	0	1
- 02					-	0	2
- 03	Actuation of high pressure switch (Slave 1)				-	0	3
- 04					-	0	4
- 05	Actuation of high pressure switch (Slave 2)				-	0	5
- 06					-	0	6
- 07	Malfunction of high-pressure standby latch circuit E3 (Unified system)				-	0	7
- 13	Liquid stop valve check error (Master)				-	1	3
- 14	Liquid stop valve check error (Slave 1)				-	1	4
- 15	Liquid stop valve check error (Slave 2)				-	1	5
- 18	Overall retry of high pressure switch				-	1	8
E4 - 01	Malfunction of low pressure sensor (Master)	E	4		-	0	1
- 02	Malfunction of low pressure sensor (Slave 1)				-	0	2
- 03	Malfunction of low pressure sensor (Slave 2)				-	0	3
E5 - 01	Inverter compressor 1 lock (Master)	E	5		-	0	1
- 02	Inverter compressor 1 lock (Slave 1)				-	0	2
- 03	Inverter compressor 1 lock (Slave 2)				-	0	3
- 07	Inverter compressor 2 lock (Master)				-	0	7
- 08	Inverter compressor 2 lock (Slave 1)				-	0	8
- 09	Inverter compressor 2 lock (Slave 2)				-	0	9

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Malfunction code			Description of malfunction	Malfunction code			Detailed malfunction code		
				SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
E6	-	11	Malfunction of compressor due to damage (Master INV. 1)		E	6	-	1	1
	-	12	Malfunction of compressor due to damage (Master INV. 2)				-	1	2
	-	13	Malfunction of compressor due to damage (Slave 1 INV. 1)				-	1	3
	-	14	Malfunction of compressor due to damage (Slave 1 INV. 2)				-	1	4
	-	15	Malfunction of compressor due to damage (Slave 2 INV. 1)				-	1	5
	-	16	Malfunction of compressor due to damage (Slave 2 INV. 2)				-	1	6
	-	17	Compressor damage alarm (Master INV. 1)				-	1	7
	-	18	Compressor damage alarm (Master INV. 2)				-	1	8
	-	19	Compressor damage alarm (Slave 1 INV. 1)				-	1	9
	-	20	Compressor damage alarm (Slave 1 INV. 2)				-	2	0
	-	21	Compressor damage alarm (Slave 2 INV. 1)				-	2	1
	-	22	Compressor damage alarm (Slave 2 INV. 2)				-	2	2
E7	-	01	Fan motor 1 lock (Master unit)		E	7	-	0	1
	-	02	Fan motor 1 lock (Master unit)				-	0	2
	-	05	Fan motor 1 momentary overcurrent (Master)				-	0	5
	-	06	Fan motor 2 momentary overcurrent (Master)				-	0	6
	-	09	Fan motor 1 IPM error (Master)				-	0	9
	-	10	Fan motor 2 IPM error (Master)				-	0	9
	-	13	Fan motor 1 lock (Slave 1)				-	1	3
	-	14	Fan motor 1 lock (Slave 1)				-	1	4
	-	17	Fan motor 1 momentary overcurrent (Slave 1)				-	1	7
	-	18	Fan motor 2 momentary overcurrent (Slave 1)				-	1	8
	-	21	Fan motor 1 IPM error (Slave 1)				-	2	1
	-	22	Fan motor 2 IPM error (Slave 1)				-	2	2
	-	25	Fan motor 1 lock (Slave 2)				-	2	5
	-	26	Fan motor 1 lock (Slave 2)				-	2	6
	-	29	Fan motor 1 momentary overcurrent (Slave 2)				-	2	9
	-	30	Fan motor 2 momentary overcurrent (Slave 2)				-	3	0
	-	33	Fan motor 1 IPM error (Slave 2)				-	3	3
	-	34	Fan motor 2 IPM error (Slave 2)				-	3	4
E9	-	01	Malfunction of motorized valve 2 coil (Y2E) (Master)		E	9	-	0	1
	-	04	Malfunction of motorized valve 1 coil (Y1E) (Master)				-	0	4
	-	05	Malfunction of motorized valve 2 coil (Y2E) (Slave 1)				-	0	5
	-	07	Malfunction of motorized valve 1 coil (Y1E) (Slave 1)				-	0	7
	-	08	Malfunction of motorized valve 2 coil (Y2E) (Slave 2)				-	0	8
	-	10	Malfunction of motorized valve 1 coil (Y1E) (Slave 2)				-	1	0
	-	20	Failure detection - Failure of motorized valve 1 coil (Y1E) (Master)				-	2	0
	-	21	Failure detection - Failure of motorized valve 1 coil (Y1E) (Slave 1)				-	2	1
	-	22	Failure detection - Failure of motorized valve 1 coil (Y1E) (Slave 2)				-	2	2
	-	23	Failure detection - Failure of motorized valve 2 coil (Y1E) (Master)				-	2	3
	-	24	Failure detection - Failure of motorized valve 2 coil (Y1E) (Slave 1)				-	2	4
	-	25	Failure detection - Failure of motorized valve 2 coil (Y1E) (Slave 2)				-	2	5
F3	-	01	Discharge pipe high temperature error (Master)		F	3	-	1	1
	-	03	Discharge pipe high temperature error (Slave 1)				-	1	3
	-	05	Discharge pipe high temperature error (slave 2)				-	1	5
	-	20	Compressor overheat error (Master)				-	2	0
	-	21	Compressor overheat error (Slave 1)				-	2	1
	-	22	Compressor overheat error (Slave 2)				-	2	2

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Malfunction code	Description of malfunction	Malfunction code			Detailed malfunction code		
		SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
F4 - 01	Wet alarm		F	4	-	0	1
02	Failure detection - Wet alarm INV1 (Master)				-	0	2
03	Failure detection - Wet alarm INV2 (Master)				-	0	3
04	Failure detection - Wet alarm INV1 (Slave 1)				-	0	4
05	Failure detection - Wet alarm INV2 (Slave 1)				-	0	5
06	Failure detection - Wet alarm INV1 (Slave 2)				-	0	6
07	Failure detection - Wet alarm INV2 (Slave 2)				-	0	7
08	Failure detection - Wet error INV1 (Master)				-	0	8
09	Failure detection - Wet error INV2 (Master)				-	0	9
10	Failure detection - Wet error INV1 (Slave 1)				-	1	0
11	Failure detection - Wet error INV2 (Slave 1)				-	1	1
12	Failure detection - Wet error INV1 (Slave 2)				-	1	2
13	Failure detection - Wet error INV2 (Slave 2)				-	1	3
14	Failure detection - Indoor unit failure alarm				-	1	4
F6 - 02	Refrigerant overcharged		F	6	-	0	2
H3 - 02	Harness malfunction (Control PC board ⇔ INV. PC board 1 (A3P)) (Master)		H	3	-	0	2
- 03	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A6P)) (Master)				-	0	3
- 04	Harness malfunction (Control PC board ⇔ INV. PC board 1 (A3P)) (Slave 1)				-	0	4
- 05	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A6P)) (Slave 1)				-	0	5
- 06	Harness malfunction (Control PC board ⇔ INV. PC board 1 (A3P)) (Slave 2)				-	0	6
- 07	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A6P)) (Slave 2)				-	0	7
H7 - 01	Fan motor 1 signal detection error (Master)		H	7	-	0	1
- 02	Fan motor 2 signal detection error (Master)				-	0	2
- 05	Fan motor 1 signal detection error (Slave 1)				-	0	5
- 06	Fan motor 2 signal detection error (Slave 1)				-	0	6
- 09	Fan motor 1 signal detection error (Slave 2)				-	0	9
- 10	Fan motor 2 signal detection error (Slave 2)				-	1	0
H9 - 01	Faulty outdoor air thermistor (Master)		H	9	-	0	1
- 02	Faulty outdoor air thermistor (Slave 1)				-	0	2
- 03	Faulty outdoor air thermistor (Slave 2)				-	0	3
J3 - 16	Faulty discharge pipe 1 thermistor (Master: Open)		J	3	-	1	6
- 17	Faulty discharge pipe 1 thermistor (Master: Short)				-	1	7
- 22	Faulty discharge pipe 1 thermistor (Slave 1: Open)				-	2	2
- 23	Faulty discharge pipe 1 thermistor (Slave 1: Short)				-	2	3
- 28	Faulty discharge pipe 1 thermistor (Slave 2: Open)				-	2	8
- 29	Faulty discharge pipe 1 thermistor (Slave 2: Short)				-	2	9
J3 - 18	Faulty discharge pipe 2 thermistor (Master: Open)		J	3	-	1	8
- 19	Faulty discharge pipe 2 thermistor (Master: Short)				-	1	9
- 24	Faulty discharge pipe 2 thermistor (Slave 1: Open)				-	2	4
- 25	Faulty discharge pipe 2 thermistor (Slave 1: Short)				-	2	5
- 30	Faulty discharge pipe 2 thermistor (Slave 2: Open)				-	3	0
- 31	Faulty discharge pipe 2 thermistor (Slave 2: Short)				-	3	1
J3 - 47	Faulty compressor surface thermistor (Master: Open)		J	3	-	4	7
- 48	Faulty compressor surface thermistor (Master: Short)				-	4	8
- 49	Faulty compressor surface thermistor (Slave 1: Open)				-	4	9
- 50	Faulty compressor surface thermistor (Slave 1: Short)				-	5	0
- 51	Faulty compressor surface thermistor (Slave 2: Open)				-	5	1
- 52	Faulty compressor surface thermistor (Slave 2: Short)				-	5	2
J3 - 56	Discharge pipe warning (Master)		J	3	-	5	6
- 57	Discharge pipe warning (Slave 1)				-	5	7
- 58	Discharge pipe warning (Slave 2)				-	5	8

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Malfunction code			Description of malfunction	Malfunction code			Detailed malfunction code		
				SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
J5	-	01	Faulty accumulator inlet thermistor (Master)		J	5	-	0	1
	-	03	Faulty accumulator inlet thermistor (Slave 1)				-	0	3
	-	05	Faulty accumulator inlet thermistor (Slave 2)				-	0	5
	-	15	Failure detection - Failure of accumulator inlet thermistor (Master)				-	1	5
	-	16	Failure detection - Failure of accumulator inlet thermistor (Slave 1)				-	1	6
	-	17	Failure detection - Failure of accumulator inlet thermistor (Slave 2)				-	1	7
J6	-	01	Faulty heat exchanger thermistor (Master)		J	6	-	0	1
	-	02	Faulty heat exchanger thermistor (Slave 1)				-	0	2
	-	03	Faulty heat exchanger thermistor (Slave 2)				-	0	3
J7	-	06	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Master)		J	7	-	0	6
	-	07	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Slave 1)				-	0	7
	-	08	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Slave 2)				-	0	8
J8	-	01	Faulty heat exchanger liquid pipe thermistor (R4T) (Master)		J	8	-	0	1
	-	02	Faulty heat exchanger liquid pipe thermistor (R4T) (Slave 1)				-	0	2
	-	03	Faulty heat exchanger liquid pipe thermistor (R4T) (Slave 2)				-	0	3
J9	-	01	Faulty supercool heat exchanger outlet thermistor (Master)		J	9	-	0	1
	-	02	Faulty supercool heat exchanger outlet thermistor (Slave 1)				-	0	2
	-	03	Faulty supercool heat exchanger outlet thermistor (Slave 2)				-	0	3
	-	08	Failure detection - Failure of supercool heat exchanger outlet thermistor (Master)				-	0	8
	-	09	Failure detection - Failure of supercool heat exchanger outlet thermistor (Slave 1)				-	0	9
	-	10	Failure detection - Failure of supercool heat exchanger outlet thermistor (Slave 2)				-	1	0
JA	-	06	Faulty high pressure sensor (Master) (Open)		J	A	-	0	6
	-	07	Faulty high pressure sensor (Master) (Short)				-	0	7
	-	08	Faulty high pressure sensor (Slave 1) (Open)				-	0	8
	-	09	Faulty high pressure sensor (Slave 1) (Short)				-	0	9
	-	10	Faulty high pressure sensor (Slave 2) (Open)				-	1	0
	-	11	Faulty high pressure sensor (Slave 2) (Short)				-	1	1
JC	-	06	Faulty low pressure sensor (Master) (Open)		J	C	-	0	6
	-	07	Faulty low pressure sensor (Master) (Short)				-	0	7
	-	08	Faulty low pressure sensor (Slave 1) (Open)				-	0	8
	-	09	Faulty low pressure sensor (Slave 1) (Short)				-	0	9
	-	10	Faulty low pressure sensor (Slave 2) (Open)				-	1	0
	-	11	Faulty low pressure sensor (Slave 2) (Short)				-	1	1
L1	-	01	Faulty INV. PC board on master unit		L	1	-	0	1
		02					-	0	2
		03					-	0	3
		04					-	0	4
		05					-	0	5
		17					-	1	7
		18					-	1	8
		19					-	1	9
		20					-	2	0
		21					-	2	1
		28					-	2	8
		29					-	2	9
		36					-	3	6
		37					-	3	7
		47					-	4	7
		48					-	4	8

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Malfunction code	Description of malfunction	Malfunction code			Detailed malfunction code		
		SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
L1 - 07	Faulty INV. PC board on slave 1 unit	L	1		-	0	7
08					-	0	8
09					-	0	9
10					-	1	0
15					-	1	5
22					-	2	2
23					-	2	3
24					-	2	4
25					-	2	5
26					-	2	6
32					-	3	2
33					-	3	3
38					-	3	8
39					-	3	9
49					-	4	9
50					-	5	0
11	Faulty INV. PC board on slave 2 unit				-	1	1
12					-	1	2
13					-	1	3
14					-	1	4
16					-	1	6
34					-	3	4
35					-	3	5
40					-	4	0
41					-	4	1
42					-	4	2
43					-	4	3
44					-	4	4
45					-	4	5
46					-	4	6
51					-	5	1
52					-	5	2
L2 - 01	Momentary power failure (Master)	L	2		-	0	1
02	Momentary power failure (Slave 1)				-	0	2
03	Momentary power failure (Slave 2)				-	0	3
04	Power ON (Master)				-	0	4
05	Power ON (Slave 1)				-	0	5
06	Power ON (Slave 2)				-	0	6
L3 - 01	Reactor temperature rise (Master: INV. PC board 1)	L	3		-	0	1
- 02	Reactor temperature rise (Master: INV. PC board 2)				-	0	2
- 03	Reactor temperature rise (Slave 1: INV. PC board 1)				-	0	3
- 04	Reactor temperature rise (Slave 1: INV. PC board 2)				-	0	4
- 05	Reactor temperature rise (Slave 2: INV. PC board 1)				-	0	5
- 06	Reactor temperature rise (Slave 2: INV. PC board 2)				-	0	6
L4 - 01	Radiator fin temperature rise (Master: INV. PC board 1)	L	4		-	0	1
- 02	Radiator fin temperature rise (Slave 1: INV. PC board 1)				-	0	2
- 03	Radiator fin temperature rise (Slave 2: INV. PC board 1)				-	0	3
- 09	Radiator fin temperature rise (Master: INV. PC board 2)				-	0	9
- 10	Radiator fin temperature rise (Slave 1: INV. PC board 2)				-	1	0
- 11	Radiator fin temperature rise (Slave 2: INV. PC board 2)				-	1	1

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Malfunction code			Description of malfunction	Malfunction code			Detailed malfunction code		
				SEG1	SEG1	SEG2	SEG3	SEG2	SEG3
L5	-	03	Inverter compressor 1 momentary overcurrent (Master)		L	5	-	0	3
	-	05	Inverter compressor 1 momentary overcurrent (Slave 1)				-	0	5
	-	07	Inverter compressor 1 momentary overcurrent (Slave 2)				-	0	7
	-	14	Inverter compressor 2 momentary overcurrent (Master)				-	1	4
	-	15	Inverter compressor 2 momentary overcurrent (Slave 1)				-	1	5
	-	16	Inverter compressor 2 momentary overcurrent (Slave 2)				-	1	6
L8	-	03	Inverter compressor 1 overcurrent (Master)		L	8	-	0	3
	-	06	Inverter compressor 1 overcurrent (Slave 1)				-	0	6
	-	07	Inverter compressor 1 overcurrent (Slave 2)				-	0	7
	-	11	Inverter compressor 2 overcurrent (Master)				-	1	1
	-	12	Inverter compressor 2 overcurrent (Slave 1)				-	1	2
	-	13	Inverter compressor 2 overcurrent (Slave 2)				-	1	3
L9	-	01	Faulty Inverter compressor 1 startup (Master)		L	9	-	0	1
	-	05	Faulty Inverter compressor 1 startup (Slave 1)				-	0	5
	-	06	Faulty Inverter compressor 1 startup (Slave 2)				-	0	6
	-	10	Faulty Inverter compressor 2 startup (Master)				-	1	0
	-	11	Faulty Inverter compressor 2 startup (Slave 1)				-	1	1
	-	12	Faulty Inverter compressor 2 startup (Slave 2)				-	1	2
LC	-	14	Transmission error [Between outdoor units, INV. 1] (Master)		L	C	-	1	4
	-	15	Transmission error [Between outdoor units, INV. 1] (Slave 1)				-	1	5
	-	16	Transmission error [Between outdoor units, INV. 1] (Slave 2)				-	1	6
	-	19	Transmission error [Between outdoor units, Fan 1] (Master)				-	1	9
	-	20	Transmission error [Between outdoor units, Fan 1] (Slave 1)				-	2	0
	-	21	Transmission error [Between outdoor units, Fan 1] (Slave 2)				-	2	1
	-	24	Transmission error [Between outdoor units, Fan 2] (Master)				-	2	4
	-	25	Transmission error [Between outdoor units, Fan 2] (Slave 1)				-	2	5
	-	26	Transmission error [Between outdoor units, Fan 2] (Slave 2)				-	2	6
	-	30	Transmission error [Between outdoor units, INV. 2] (Master)				-	3	0
	-	31	Transmission error [Between outdoor units, INV. 2] (Slave 1)				-	3	1
	-	32	Transmission error [Between outdoor units, INV. 2] (Slave 2)				-	3	2
	-	33	Transmission error [Between outdoor units, Sub PC board] (Master)				-	3	3
	-	34	Transmission error [Between outdoor units, Sub PC board] (Slave 1)				-	3	4
	-	35	Transmission error [Between outdoor units, Sub PC board] (Slave 2)				-	3	5
P1	-	01	Inverter 1 power supply unbalanced voltage (Master)		P	1	-	0	1
	-	02	Inverter 1 power supply unbalanced voltage (Slave 1)				-	0	2
	-	03	Inverter 1 power supply unbalanced voltage (Slave 2)				-	0	3
	-	07	Inverter 2 power supply unbalanced voltage (Master)				-	0	7
	-	08	Inverter 2 power supply unbalanced voltage (Slave 1)				-	0	8
	-	09	Inverter 2 power supply unbalanced voltage (Slave 2)				-	0	9
P3	-	01	Faulty reactor thermistor 1 (Master: INV. PC board 1)		P	3	-	0	1
	-	02	Faulty reactor thermistor 1 (Slave 1: INV. PC board 1)				-	0	2
	-	03	Faulty reactor thermistor 1 (Slave 2: INV. PC board 1)				-	0	3
	-	04	Faulty reactor thermistor 2 (Master: INV. PC board 1)				-	0	4
	-	05	Faulty reactor thermistor 2 (Slave 1: INV. PC board 1)				-	0	5
	-	06	Faulty reactor thermistor 2 (Slave 2: INV. PC board 1)				-	0	6
	-	07	Faulty reactor thermistor 1 (Master: INV. PC board 2)				-	0	7
	-	08	Faulty reactor thermistor 1 (Slave 1: INV. PC board 2)				-	0	8
	-	09	Faulty reactor thermistor 1 (Slave 2: INV. PC board 2)				-	0	9
	-	10	Faulty reactor thermistor 2 (Master: INV. PC board 2)				-	1	0
	-	11	Faulty reactor thermistor 2 (Slave 1: INV. PC board 2)				-	1	1
	-	12	Faulty reactor thermistor 2 (Slave 2: INV. PC board 2)				-	1	2

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Malfunction code			Description of malfunction	Malfunction code			Detailed malfunction code		
				SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
P4	-	01	Faulty thermistor of radiator fin [heat exchanger plate] (Master: INV. PC board 1)		P	4	-	0	1
	-	04	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 1: INV. PC board 1)				-	0	4
	-	05	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 2: INV. PC board 1)				-	0	5
	-	06	Faulty thermistor of radiator fin [heat exchanger plate] (Master: INV. PC board 2)				-	0	6
	-	07	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 1: INV. PC board 2)				-	0	7
	-	08	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 2: INV. PC board 2)				-	0	8
PJ	-	04	Incorrect type of inverter PC board [INV.1] (Master)		P	J	-	0	4
	-	05	Incorrect type of inverter PC board [INV.1] (Slave 1)				-	0	5
	-	06	Incorrect type of inverter PC board [INV.1] (Slave 2)				-	0	6
	-	09	Incorrect type of inverter PC board [Fan 1] (Master)				-	0	9
	-	10	Incorrect type of inverter PC board [Fan 2] (Master)				-	1	0
	-	12	Incorrect type of inverter PC board [INV.2] (Master)				-	1	2
	-	13	Incorrect type of inverter PC board [INV.2] (Slave 1)				-	1	3
	-	14	Incorrect type of inverter PC board [INV.2] (Slave 2)				-	1	4
	-	15	Incorrect type of inverter PC board [Fan 1] (Slave 1)				-	1	5
	-	16	Incorrect type of inverter PC board [Fan 1] (Slave 2)				-	1	6
	-	17	Incorrect type of inverter PC board [Fan 2] (Slave 1)				-	1	7
	-	18	Incorrect type of inverter PC board [Fan 2] (Slave 2)				-	1	8
U0	-	05	Gas shortage alarm		U	0	-	0	5
	-	06	Gas shortage alarm				-	0	6
	-	08	Gas shortage (Master)				-	0	8
	-	09	Gas shortage (Slave 1)				-	0	9
	-	10	Gas shortage (Slave 2)				-	1	0
U1	-	01	Negative phase/Open phase of power supply (Master)		U	1	-	0	1
	-	04	Negative phase of power supply [when power ON] (Master)				-	0	4
	-	05	Negative phase/Open phase of power supply (Slave 1)				-	0	5
	-	06	Negative phase of power supply [when power ON] (Slave 1)				-	0	6
	-	07	Negative phase/Open phase of power supply (Slave 2)				-	0	7
	-	08	Negative phase of power supply [when power ON] (Slave 2)				-	0	8
U2	-	01	Shortage of inverter 1 power supply voltage (Master)		U	2	-	0	1
	-	02	Open phase of inverter 1 power supply (Master)				-	0	2
	-	03	Malfunction of capacitor in inverter 1 main circuit (Master)				-	0	3
	-	08	Shortage of inverter 1 power supply voltage (Slave 1)				-	0	8
	-	09	Open phase of inverter 1 power supply (Slave 1)				-	0	9
	-	10	Malfunction of capacitor in inverter 1 main circuit (Slave 1)				-	1	0
	-	11	Shortage of inverter 1 power supply voltage (Slave 2)				-	1	1
	-	12	Open phase of inverter 1 power supply (Slave 2)				-	1	2
	-	13	Malfunction of capacitor in inverter 1 main circuit (Slave 2)				-	1	3
	-	22	Shortage of inverter 2 power supply voltage (Master)				-	2	2
	-	23	Open phase of inverter 2 power supply (Master)				-	2	3
	-	24	Malfunction of capacitor in inverter 2 main circuit (Master)				-	2	4
	-	25	Shortage of inverter 2 power supply voltage (Slave 1)				-	2	5
	-	26	Open phase of inverter 2 power supply (Slave 1)				-	2	6
	-	27	Malfunction of capacitor in inverter 2 main circuit (Slave 1)				-	2	7
	-	28	Shortage of inverter 2 power supply voltage (Slave 2)				-	2	8
	-	29	Open phase of inverter 2 power supply (Slave 2)				-	2	9
	-	30	Malfunction of capacitor in inverter 2 main circuit (Slave 2)				-	3	0
U3	-	02	First installation alarm		U	3	-	0	2
	-	03	Test operation not conducted				-	0	3
	-	04	Abnormal end of test operation				-	0	4
	-	05	Premature end of test operation (during initial transmission)				-	0	5
	-	06	Premature end of test operation (during normal transmission)				-	0	6
	-	07	Premature end of test operation (due to transmission error)				-	0	7
	-	08	Premature end of test operation (due to transmission error of all units)				-	0	8

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Malfunction code	Description of malfunction	Malfunction code			Detailed malfunction code		
		SEG1	SEG2	SEG3	SEG1	SEG2	SEG3
U4 - 01	Transmission error between indoor and outdoor units		U	4	-	0	1
- 03	Transmission error between indoor unit and system				-	0	3
U7 - 01	Error when external control adapter is installed		U	7	-	0	1
- 02	Alarm when external control adapter is installed				-	0	2
- 03	Transmission error between master and slave 1 units				-	0	3
- 04	Transmission error between master and slave 2 units				-	0	4
- 05	Multi system malfunction				-	0	5
- 06	Error in address settings of slave 1 and 2				-	0	6
- 07	Connection of four or more outdoor units in the same system				-	0	7
- 11	Error in indoor unit connection capacity for test operation				-	1	1
U9 - 01	Malfunction of other indoor units		U	9	-	0	1
UA - 17	Connection of excessive indoor units		U	A	-	1	7
- 18	Connection of wrong models of indoor units				-	1	8
- 20	Improper combination of outdoor units				-	2	0
- 21	Connection error				-	2	1
- 31	Multiunit combination error				-	3	1
UF - 01	Wrong wiring check error		U	F	-	0	1
- 05	Malfunction of shut-off valve for test operation				-	0	5
UH - 01	Wiring error		U	H	-	0	1
UJ - 01	Malfunction of active filter (Master)		U	J	-	0	1
- 02	Malfunction of active filter (Slave 1)				-	0	2
- 03	Malfunction of active filter (Slave 2)				-	0	3

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2-2. List of Setting Items

■Applications of field settings

Mode No.	Setting Switch No.	Setting item	Applicable Model: Clean Air Conditioner for Hospital (FBXYP)	Floor Standing Duct Type (FVYCP)	Wall Mounted Type (FXYAP)	Double Flow Type (FXYCP)	Slim Duct Type (FXYDP)	Round Flow Type (FXYFP ~MC)	Sensing Flow Type (FXYFP ~B)	Ceiling Suspended Type (FXYHP)	Corner Type (FXYKP)	Floor Standing Lowboy Type (FXYLP)	Floor Standing Lowboy (Concealed) (FXYLMP)	Concealed Ceiling Mounted Duct Type (FXYMP 45~160AA)	Concealed Ceiling Mounted Duct Type (FXYMP 224·280M)	Ceiling Built-in Type (FXYSP)	Kitchen use (FXYTP)	Ceiling Universal Type (FXYUP)	Wall Mounted Built-in Type (FXYWP)	Wall Mounted Built-in Floor Diffuser Type (FXYWUP)	Outdoor Air Treatment: Concealed Ceiling (FXYMP)	Outdoor Air Treatment: Wall Mounted (FXYWP)
10 (20)	0	Filter sign display interval	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	1	Long life filter type	—	○	—	○	—	○	○	—	—	—	—	—	—	—	—	○	○	—	○	○
	2	Remote controller thermostat	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○ (See Note 1)	—	—
	3	Non display of filter sign	○	○	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	—	○	○
	6	Control of remote controller thermostat for group control	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	—	—	—
	7	Unattended area detection time	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
11 (21)	3	Fan speed setting for heating operation	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	Setting of motion detection sensitivity	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	Setting of automatic fan speed control	—	—	—	—	—	—	—	—	—	—	—	○		—	—	—	—	—	—	—
	8	Correction of temperature near person	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	9	Correction of floor temperature	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
12 (22)	0	Option output selection	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	1	ON/OFF input from outside	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	—	○	○	○	○
	2	Thermostat differential changeover	○	—	—	○	○	○	○	○	○	—	—	—	—	—	—	—	—	—	—	—
	3	Fan speed setting for heating with thermostat OFF	○	—	○	○	○	○	○	○	○	○	○	○	○	○	○	○	—	—	○	—
	5	Automatic startup after power failure recovery	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	6	Fan speed setting for cooing with thermostat OFF	—	—	—	—	—	○	○	○	—	—	—	—	—	—	—	—	—	—	—	—
13 (23)	0	Increased fan speed for high-ceiling applications	—	—	—	—	—	○	○	○ (See Note 2)	—	—	—	—	—	—	—	○	—	—	—	—
	1	Selection of air flow direction	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	○	—	—	—	—
	2	Swing pattern setting	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	Field adjustment of air flow direction (when decorative plate is mounted on the air outlet)	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—
	4	Setting of air flow direction adjustment range	—	—	—	○	—	○	○	○	○	—	—	—	—	—	—	—	—	—	—	—
	5	Field fan speed setting (for phase control)	—	—	—	—	○	○	○	○	—	—	—	—	—	—	—	○	—	—	—	—
	6	Outside static pressure setting	—	—	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
14 (24) (See Note 3)	2	Dust collection sign display interval	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	Filter replacement sign display interval	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	4	Display/Non-display of panel indication lamp (green)	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	Automatic control operation fix mode setting to ON or OFF	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	○	—	—	—
	9	Dust amount setting to Standard or Abundant	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
15 (25)	1	Humidifier ON for heating with thermostat OFF	—	○	○	○	○	○	○	—	○	○	○	○	○	○	○	—	○	○	○	○
	2	Setting of direct duct connection	—	—	—	—	—	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	Interlock of humidifier with drain pump	—	—	○	○	○	○	○	—	○	○	○	○	○	○	—	—	—	○	○	○
	5	Individual Ventiare operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1b (See Note 4)	3	Display of contact center	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	4	Display of malfunction codes on remote controller	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	12	Key lock pattern setting	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	14	Setting of air block “Prohibited/ Permitted”	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
1c (See Note 4)	0	Display of room temperature	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Note 1: Setting positions 01 and 02 are only available to make settings.

Note 2: “Increased fan speed setting” is only allowed on FXYHP36A to 112A models.

Note 3: Only enabled with the auto clean panel (option) installed.

Note 4: Setting is only allowed with the wired remote controller BRC1E3.

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■Field setting mode numbers

□: Factory setting

Mode No. (See Note 1)	Setting Switch No.	Setting Item (See Note 2)		Setting Position No. 01	02	03	04	Detailed discription No.
10 (20)	0	"Clean the filter" sign display interval	Long life filter	Approx. 2,500 hours	Approx. 1,250 hours	-	-	(1)
			Ultra-long life filter	Approx. 10,000 hours	Approx. 5,000 hours	-	-	
	1	Long life filter type		Long life filter	Ultra-long life filter	-	-	(2)
	2	Thermistor selection		Remote controller thermistor Suction air thermistor	Suction air thermistor	Remote controller thermistor	-	(3)
	3	Display/Non-display of "Clean the filter" sign		Display	Non-display	-	-	(5)
	6	Control of remote controller thermostat for group control		Remote controller thermostat control not permitted	Remote controller thermostat control permitted	-	-	(4)
	7	Unattended area detection time		30 minutes	60 minutes	-	-	(6)
11 (21)	3	Fan speed setting for heating operation		Standard	Slightly increased	Increased	-	(7)
	6	Setting of motion detection sensitivity		High sensitivity	Low sensitivity	Standard	Motion detection disabled	(8)
	7	Setting of automatic fan speed control		OFF	Fan speed adjustment completed	Fan speed adjustment initiated	-	(9)
	8	Correction of temperature near person		Floor temp. sensor disabled	Suction air temperature prioritized	Standard	Floor temperature prioritized	(10)
	9	Correction of floor temperature		-4 ℃	2 ℃	± 0 ℃	+2 ℃	(11)
12 (22)	0	Option output selection		Indoor unit thermostat ON	-	Operation output	Malfunction output	(12)
	1	ON/OFF input from outside		Forced OFF	ON/OFF	Protection device input	-	(13)
	2	Thermostat differential changeover (when remote sensor is used)		1 ℃	0.5 ℃	-	-	(14)
	3	Fan speed setting for heating with thermostat OFF		LL fan speed	Set fan speed	-	-	(15)
	5	Automatic startup after power failure recovery		Auto startup disabled	Auto startup enabled	-	-	(16)
	6	Fan speed for cooing with thermostat OFF		LL fan speed	Set fan speed	-	-	(17)
13 (23)	0	Normal fan speed setting		Standard	Slightly increased	Increased	-	(18)
	1	Selection of air flow direction		4 directions	3 directions	2 directions	-	(19)
	2	Swing pattern setting		Sync swing in all directions	-	Swing in the opposing directions	-	(20)
	3	Downflow flap motion: Equipped/Not equipped		Equipped	Not equipped	-	-	(21)
	4	Setting of air flow direction adjustment range (See Note 6)		Draft prevention	Standard	Ceiling contamination prevention	-	(22)
	5	Fan speed setting when option is installed		Standard	Oil guard filter	-	-	(23)
	6	Outside static pressure setting		01: - / 02: 50Pa / 03: 60Pa / 04: 70Pa / 05: 80Pa / 06: 90Pa / 07: 100Pa / 08: 110Pa / 09: 120Pa / 10: 130Pa / 11: 140Pa / 12: 150Pa / 13: 160Pa / 14: 180Pa / 15: 200Pa / -				(24)
14 (24) (See Note 5)	2	Dust collection sign display interval		Approx. 1,250 hours	Approx. 2,500 hours	Approx. 5,000 hours	-	(25)
	3	Filter replacement sign display interval		Non-display	Approx. 32,000 hours	Approx. 48,000 hours	Approx. 72,000 hours	(26)
	4	Display/Non-display of panel indication lamp (green)		Display in both air conditioning and auto filter cleaning operation modes	Display only in auto filter cleaning operation mode	Non-display in air conditioning and auto filter cleaning operation modes	-	(27)
	8	Automatic control operation fix mode setting to ON or OFF		ON	OFF	-	-	(28)
	9	Dust amount setting to Standard or Abundant		Standard	Abundant	-	-	(29)
15 (25)	1	Humidifier ON for heating with thermostat OFF (See Note 7)		OFF	ON	-	-	(30)
	2	Setting of direct duct connection		Not available	Available	-	-	(31)
	3	Interlock of humidifier with drain pump		Individual	Interlocked	-	-	(32)
	5	Individual ventilation setting (when Ventiare is incorporated)		Normal	Individual ventilation	-	-	(33)
1b (2b)	3	Display of Contact Center		Display	Non-display	-	-	(34)
	4	Display of malfunction codes on remote controller		-	2-digit display	-	4-digit display	(35)
	12	Key lock pattern setting		All operations prohibited (with displaying message)	All operations prohibited (without displaying message)	Menu operation prohibited (without displaying message)	Menu operation constantly prohibited	(36)
	14	Setting of air block "Prohibited/Permitted"		01: Permitted / 02: - / 03: - / 04: - / 05: Prohibited / 06: -				(37)
1c (2c)	0	Display of room temperature		Non-display	Display	-	-	(38)

Note 1: Settings are normally made by unified group, but selecting Mode No. in parentheses allows for making individual settings by indoor unit.
However, setting changes can be checked only in individual mode in parentheses. (Even if setting changes are made by unified group, "01" will be always displayed.)

Note 2: For details of setting items, refer to information on the following page onwards.

Note 3: Any of the Mode Nos. listed above will not be displayed if the relevant function is not incorporated in the indoor unit.

Note 4: When returning setting mode to normal mode, "88" may appear on the screen in order to initialize the remote controller. However, this is not a failure.

Note 5: Enabled when option (auto clean panel) is installed.

Note 6: For FXYHP~MA models, Setting Position No. is set to "03."

Note 7: For Outdoor air treatment FXYMP and FXYWP models, Setting Position No. is set to "02."

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2-3. Detailed Description of Setting Items

(1) "Clean the filter" sign display interval

When operating the system for a given period of time, the remote controller will display "Clean the filter" on the LCD. Use this setting item to select intervals of time to display the "Clean the filter" sign in cases where the filter has got very dirty.

Mode No.	Setting Switch No.	Setting Position No.	"Clean the filter" sign display interval (hours) ※		Remark
			Long life	Ultra-long life	
10 (20)	0	01	2,500	10,000	When the filter is not so dirty
		02	1,250	5,000	When the filter has got very dirty

※ Switch between the long life type and the ultra-long life type using the Setting Item "(2) Long life filter type" described below.

(2) Long life filter type

Use this setting item to make filter type setting change in order to mount a long life filter or an ultra-long life filter.
(The indication lamp turns ON according to the setting of (1) "Clean the filter" sign display interval.)

Mode No.	Setting Switch No.	Setting Position No.	Remark
10(20)	1	01	Long life filter
		02	Ultra-long life filter

※ When the auto clean panel (option) is installed, this item will be disabled.

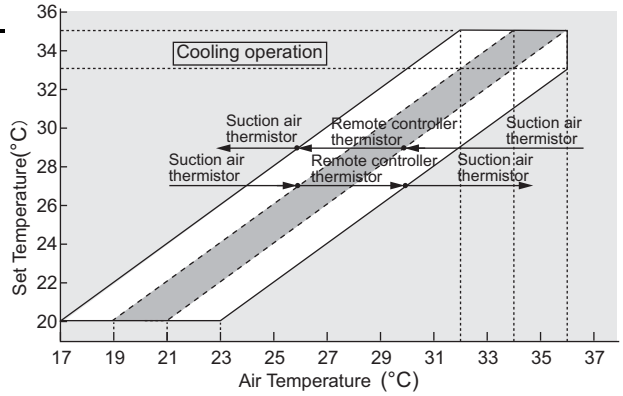
(3), (4), (10) Thermistor selection

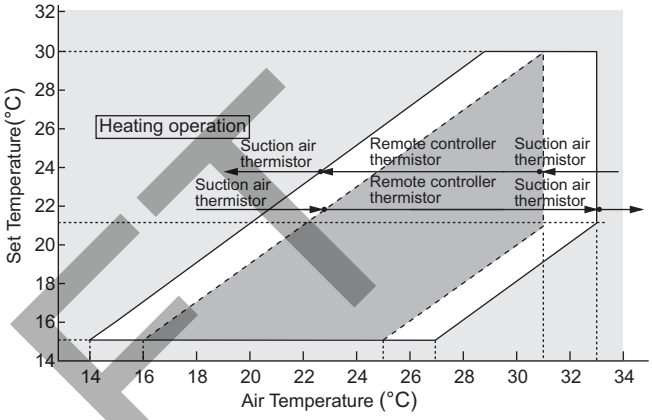
Use these setting items to select a thermistor that controls room temperature.

■For any models other than FXYFP to B models

Mode No.	Setting Switch No.	Setting Position No.	Thermistor used to control room temperature
10(20)	2	01	Indoor air thermistor of remote controller and suction air thermistor of indoor unit
		02	Only the suction air thermistor of indoor unit
		03	Only the indoor air thermistor of remote controller

The factory setting of "Setting Position No." is made to "01," which controls room temperature using the thermistor of the remote controller and the suction air thermistor of the indoor unit. (For details, refer to the graphs shown in the upper right portion.
If you want to control room temperature only using the thermistor of the indoor unit or the remote controller, change the setting of "Setting Position No" to "02" or "03."





■For FXYFP to B models

Mode No.	Setting Switch No.	Setting Position No.					
10(20)	2	01	02	02	02	02	03
11(21)	8	01	01	02	03	04	01
Thermistors to use ↓		↓	↓	↓	↓	↓	↓
Remote controller thermistor		○	–	–	–	–	○
Suction air thermistor		○	○	○	○	○	–
Floor temperature sensor		–	–	○	○	○	–
		No floor temperature thermistor is used.		Suction air temperature prioritized (*)		Floor temperature prioritized (*)	
		Only the suction air thermistor is used.		Standard setting (Factory setting)		Only the remote controller thermistor used.	

※ For details, refer to information in "(10) Correction of temperature near person."

★ If you set "Setting Position No." to "01" for group control, the mode will be automatically switched to "control only using the suction air thermistor of the indoor unit."
If you want to use the remote controller thermistor for group control, set "Setting Switch No." to "6" and "Setting Position No." to "02."

Mode No.	Setting Switch No.	Setting Position No.	Remark
10(20)	6	01	Group control using the remote controller thermostat is not permitted.
		02	Group control using the remote controller thermostat is permitted.

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(5) Display/Non-display of "Clean the filter" sign

Use this setting item to select whether or not to display the "Clean the filter" sign after operating the system for a given period of time.

Mode No.	Setting Switch No.	Setting Position No.	Display of "Clean the filter" sign
10(20)	3	01	Display
		02	Non-display

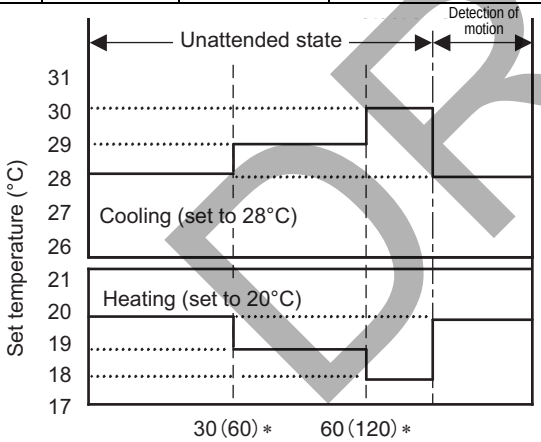
※ When the auto clean panel (option) is installed, this item will be disabled.

(6) Unattended area detection time (Only for the sensing flow models)

If an unattended state continues for a given period of time, a targeted air conditioning temperature will be shifted in steps of 1°C (2°C at maximum) to save energy side.

- Even if the targeted temperature is shifted, the set temperature displayed on the remote controller will remain unchanged.
- This control will be canceled (reset) at the time when motion is detected in the controlled area during a temperature shift.

Mode No.	Setting Switch No.	Setting Position No.	Setting (Unattended state detection time)
10(20)	7	01	30 minutes
		02	60 minutes



* Figures in parentheses represent time when "Setting Position No." is set to "02."

(7) Fan speed setting for heating operation

Use this item to select fan revolutions for heating operation in order to ensure a distance that hot air reaches in heating operation. Make this setting according to the installation environment.

Mode No.	Setting Switch No.	Setting Position No.		
		01	02	03
11(21)	3	Standard	Slightly increased	Increased

This setting is only enabled for heating operation.

(8) Setting of motion detection sensitivity (Only for the sensing flow models)

Use this setting item to make sensitivity setting of the motion detection sensor.

- Setting "Setting Position No." to "04" makes it possible to disable the motion detection sensor.
  Note: When the motion detection sensor is disabled, the auto draft reduction function, unattended energy-saving operation function, and unattended stop function will no longer be displayed in the menu of the remote controller.

Mode No.	Setting Switch No.	Setting Position No.	Setting
11(21)	6	01	High sensitivity
		02	Low sensitivity
		03	Standard sensitivity
		04	Motion detection sensor disabled

(9) Setting of automatic fan speed control (Only for FXYMP45 to 140A models)

This setting allows automatic control of discharge air flow rate at the rating (within approx. 10%).
Make this setting before starting outdoor unit test operation.

Setting procedure:

(1) Ensure the completion of wirings and duct installation.
(Particularly when shutoff dampers are installed in ducts, ensure that the dampers are open, and that an air filter locally procured is installed in the suction air passage.)

(2) If a number of air inlets and outlets are provided, make adjustment of the throttles so that the ratio of air flow rate between each air inlet and outlet will meet the design ratio of air flow rate.
For this adjustment, set the operation mode to "Vent" to operate the system. (To change air flow rate, press the fan speed control button on the remote controller to select "Rapid," "High," or "Low.")

(3) Set the operation mode to "Vent," and then stop the system operating. Subsequently, set "Setting Position No." to "03" (Fan speed adjustment initiated) as in the table on the following page.

(4) After completion of the setting, return the operation mode to "normal mode" (to the "Basic window" for the BRC1E type), and then press the "ON" button.
The operation indication lamp will turn ON to start ventilation operation for automatic fan speed adjustment.
(Do not make adjustment of the air inlet and outlet throttles while the automatic fan speed adjustment is in progress.)

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After operating for a period of one to eight minutes, the system will automatically complete the fan speed adjustment, turn OFF the operation indication lamp, and stop operating.

(5) After the system stops, ensure by indoor unit shown in the “Mode No.” column that “Setting Position No.” shown in the table below is set to “02” (Fan speed adjustment completed). If not, make setting once again from Step 3).

Mode No.	Setting Switch No.	Setting Position No.		
		01	02	03
11(21)	7	OFF	Fan speed adjustment completed	Fan speed adjustment initiated

Note 1: Before making this setting, ensure that the outside static pressure falls within the specified range. Static pressure outside of the range will disable automatic fan speed adjustment, resulting in inadequate air flow rate or water leakage.

Note 2: If any change is made to the ventilation passage such as ducts or air outlets after completion of fan speed adjustment, be sure to make “automatic fan speed adjustment” once again.

(10) Correction of temperature near person (Only for the sensing flow models)

Use this setting item to select a ratio between suction temperature and floor temperature used to calculate a temperature near a person.

A temperature near a person is calculated from the readings of the suction air thermistor and floor temperature sensor. The factory setting of this item is made to “Standard” (to which the average value of suction and floor temperatures applies). Making this setting change makes it possible to select the contribution ratio of the suction air thermistor and floor temperature sensor to temperature near a person.

- If you want to incorporate temperature effects near ceiling, set “Setting Position No.” to “02” (Suction air temperature prioritized).
- If you want to incorporate temperature effects near floor surface, set “Setting Position No.” to “04” (Floor temperature prioritized).
- Setting “Setting Position No.” to “01” (Only suction air temperature) makes it possible to disable the floor temperature sensor.

Mode No.	Setting Switch No.	Setting Position No.	Setting
11(21)	8	01	Only suction air temperature
		02	Suction air temperature prioritized
		03	Standard
		04	Floor temperature prioritized

(11) Correction of floor temperature (Only for the sensing flow models)

Use this setting item to correct a floor surface temperature according to that detected by the floor temperature sensor. For example, when the system is installed against a wall, make this setting to detect actual floor surface temperature.

Mode No.	Setting Switch No.	Setting Position No.	Setting
11(21)	9	01	-4°C
		02	-2°C
		03	0°C
		04	2°C

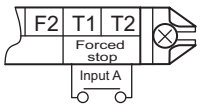
(12) Option output selection

This setting allows for importing “operation output signal” and “malfunction output signal.” These signals are outputted between X1 and X2 pins of option component “wiring conversion adapter.”

Mode No.	Setting Switch No.	Setting Position No.	Remark
12(22)	0	01	Used to import indoor unit thermostat ON/OFF signal.
		03	Used to import output signal interlocked with pressing of the “ON/OFF” button on the remote controller.
		04	Used to import output signal when “Malfunction display” appears on the remote controller.

(13) ON/OFF input from outside

Use this setting to perform “ON/OFF operation” and “Protection device input” from the outside of the system. Signals are inputted between T1 and T2 terminals of the operation terminal block in the electrical components box.



Mode No.	Setting Switch No.	Setting Position No.	Operation according to signal inputted in “Input A” terminal
12(22)	1	01	ON: Forced stop (Remote controller prohibited) OFF: Remote controller permitted
		02	OFF→ON: Run ON →OFF: Stop
		03	ON: Run OFF: System stop to display “A0”

(14) Thermostat differential changeover

Use this item setting to select a differential value for the thermostat ON/OFF control. (For details, refer to information in “2. Detailed Description of Functions - (2) Thermostat control.”)

Mode No.	Setting Switch No.	Setting Position No.	Differential Value
12(22)	2	01	1°C
		02	0.5°C

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(15) Fan speed setting for heating with thermostat OFF

Use this setting item to make fan speed setting for heating with thermostat OFF.

※ To operate the system in increased fan speed setting with thermostat OFF, give consideration to installation locations due to concerns about draft. For heating operation, this setting is given priority over the setting of "Fan stop when thermostat turns OFF."

● Using this setting will be useful to support the increased capacity of electric dust collector unit.

Mode No.	Setting Switch No.	Setting Position No.	Setting
12(22)	3	01	LL fan speed
		02	Set fan speed

(16) Automatic startup after power failure recovery

A system to which the function: "Automatic startup after power failure recovery" is set (on site by the remote controller) will return to the "operation status before the power failure" after recovery from power failure. In other words, a system to which this function is not set (i.e., the system remains in a state of the factory setting) will remain in the stopped state even if power supply is automatically reset after recovery from power failure or the main power supply turns OFF and then ON again. However, a system that has been set so as to make use of the said function will automatically start operation after recovery from power failure or turning ON the main power supply again.

Then, be thoroughly noted that the following events will occur if the system is set so as to make use of the function: "Automatic startup after power failure recovery."

1. The system suddenly starts operation after recovery from power failure or turning ON the main power supply again. This may cause user to be surprised (and wonder why it suddenly started operation).
2. For example, if the main power supply turns OFF while the system is still in operation in order to service the system, and then turns ON again after completion of servicing, the system will start operation (start the fan rotating).

(17) Fan speed setting for cooing with thermostat OFF

Use this setting item to set fan speed for cooling with thermostat OFF to "LL fan speed."

Mode No.	Setting Switch No.	Setting Position No.	Setting
12(22)	6	01	LL fan speed
		02	Set fan speed

(18) Normal fan speed setting

Make this setting as shown below according to installation height.

■For FXYAP models

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	0	01	Wall mounted type: Standard
		02	Wall mounted type: Slightly increased
		03	Wall mounted type: Increased

■For FXYFP28 to 160 models

		P28 to P90 models				P112 to P160 models			
		All-around air outlet	4-way air outlet	3-way air outlet	2-way air outlet	All-around air outlet	4-way air outlet	3-way air outlet	2-way air outlet
Ceiling height	Standard	2.7m	3.1m	3.0m	3.5m	3.2m	3.4m	3.6m	4.2m
	High ceiling (1)	3.0m	3.4m	3.3m	3.8m	3.6m	3.9m	4.0m	4.2m
	High ceiling (2)	3.5m	4.0m	3.5m	—	4.2m	4.5m	4.2m	—

Note 1: The factory settings are made to "Standard" and "All-round air outlet." Make setting of "High ceiling (1)" and "High ceiling (2)" by default using the remote controller.

Note 2: To use 4-, 3-, and 2-way air outlet systems, the outlet plug kit (option) should be provided.

■For FXYHP36 to 112MA models

Mode No.	Setting Switch No.	Setting Position No.	Applicable Model	
			36 to 80MA	90/112MA
13(23)	0	01	Height: Not higher than 2.7 m	Height: Not higher than 3.8 m
		02	Height: 2.7 to 3.5 m	Height: 3.8 to 4.3 m

(19) Selection of air flow direction

Make settings of individual air flow directions of the indoor unit as described in the table below. (Make these settings in order to use air outlet plug kits.)

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	1	01	F: 4-way air outlet
		02	T: 3-way air outlet
		03	W: 2-way air outlet

(20) Swing pattern setting (Only for the sensing flow models)

Use this setting item to make setting of flap motion while in swing mode.

Factory setting (swing in the opposing directions) is designed to swing flaps in such a way that the motions of flaps oppsing each other will be synchronized and subsequently, adjacent flaps will move in the conflicting directions.

This field setting allows for switching to the conventional swing motion (sync swing in all directions).

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	2	01	Sync swing in all directions
		03	Swing in the opposing directions

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(21) Downflow flap motion: Equipped/Not equipped (Only for FXYKP models)

Use this item only for front air outlet models to make setting of availability of the downflow swing flap motion.

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	3	01	Downflow flap motion: Equipped
		02	Downflow flap motion: Not equipped

(22) Setting of air flow direction adjustment range

Make air flow direction setting according to individual purposes.

■For FXYCP, FXYFP, and FXYKP models

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	4	01	Draft prevention (Upward setting)
		02	Standard
		03	Ceiling contamination prevention (Downward setting)

※ Some models do not include the draft prevention (i.e., upward setting) function.

■For FXYHP ~ MA models

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	4	01	Draft prevention (Upward setting for both cooling and heating)
		02	Condensation prevention (Upward setting only for cooling)
		03	Standard (Downward setting both for cooling and heating)

(23) Fan speed setting when option is installed

When option (e.g. high-efficiency filter or auto clean panel) is installed, use this setting item to select fan revolutions in order to ensure air flow rate.
For setting numbers, follow the instruction manual of the relevant option.

(24) Outside static pressure setting

The following settings should be made depending on ceiling height or the resistance of duct to connect.

■For FXYMP45 to 160AA models

Mode No.	Setting Switch No.	Setting Position No.	Setting
13(23)	6	01	100Pa
		02	50Pa
		03	60Pa
		04	70Pa
		05	80Pa
		06	90Pa
		07	100Pa
		08	110Pa
		09	120Pa
		10	130Pa
		11	140Pa
		12	150Pa
		13	160Pa
		※14	180Pa
		※15	200Pa

Note 1: Setting Position Numbers marked with ∗ are not available for FXYMP45/56AA models.
Note 2: Ensure that “(9) Setting of automatic fan speed control is set to Setting Position No. “01” (OFF).

(25) Dust collection sign display interval

When option (auto clean panel) is installed, use this setting item to select intervals of time (upper limit) to display the collection sign.
Make this setting based on the cumulative operation hours of the fan according to the installation environment.

Mode No.	Setting Switch No.	Setting Position No.		
		01	02	03
14(24)	2	Approx. 1,250 hours (Amount of dust: Abundant)	Approx. 2,500 hours (Amount of dust: Standard)	Approx. 5,000 hours (Amount of dust: Less)

At the same time, make “(29) Dust amount setting: Standard/Abundant” according to the installation environment.
Intervals of time to display the dust collection sign are corrected by the learning function on an as-needed basis.
The set interval is controlled as the upper limit value of the said intervals of time.

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(26) Filter replacement sign display interval

When option (auto clean panel) is installed, use this setting item to select intervals of time to display the filter replacement time sign.
Make this setting based on the cumulative operation hours of the fan according to the installation environment.

Mode No.	Setting Switch No.	Setting Position No.			
		01	02	03	04
14(24)	3	Non-display	Approx. 32,000 hours	Approx. 48,000 hours	Approx. 72,000 hours

When this item is set to any Setting Position No. other than "01": Non-display, a message prompting you to check for the filter conditions will appear on the remote controller after the system operates for the set period of time.

(27) Display/Non-display of panel indication lamp (green)

When option (auto clean panel) is installed, use this setting item to select whether or not to display the panel indication lamp (green). The panel indication lamp (green) indicates operation mode as show in the table below.

Status of indication lamp (green)	Operation mode
ON	Air-conditioning mode
Blinks	Automatic filter cleaning mode

Make setting change according to the installation environment.

Mode No.	Setting Switch No.	Setting Position No.		
		01	02	03
14(24)	4	Display in both air conditioning and auto filter cleaning operation modes	Display only in auto filter cleaning operation mode	Non-display in both air conditioning and auto filter cleaning operation modes

Be noted that the indication lamp (red) prompting dust collection is not subject to setting to "Non-display."

(28) Fixed automatic control operation mode setting to ON or OFF

When option (auto clean panel) is installed, use this setting item to fix auto filter cleaning operation mode to "Automatic control operation" (Auto cleaning), not to specify a time zone to clean the filter.
Auto filter cleaning operation modes are as follows:

Operation mode	Function
Time-zone-specified operation	Used to clean the filter on a time zone specified from eight time zones.
Automatic control operation (Auto cleaning)	Used to clean the filter according to the criterion of the system when cleaning conditions are met.

To fix the operation mode to the automatic control operation (auto cleaning) without specifying any time zone, set "Setting Position No." to "01" (ON).

※ Regardless of this setting, if remote controller time setting is not made or is reset, the system will be set to automatic control operation (auto cleaning) mode.

Mode No.	Setting Switch No.	Setting Position No.	Fixed automatic control operation mode	Remote controller time setting	
				Not set	Already set
14(24)	8	01	ON	Automatic control operation (Auto cleaning)	Automatic control operation (Auto cleaning)
		02	OFF	Automatic control operation (Auto cleaning)	Time-zone-specified operation

(29) Dust amount setting

When option (auto clean panel) is installed, use this setting item to select amount of indoor dust.
Setting this item to "Abundant amount of dust" performs fine-tuned filter cleaning.
Select amount of dust according to the installation environment.

Mode No.	Setting Switch No.	Setting Position No.	
		01	02
14(24)	9	Standard amount of dust	Abundant amount of dust

Standard amount of dust: General offices
Abundant amount of dust: Sales stores/shops handling fiber products

At the same time, make setting of "(25) Dust collection sign display interval" according to the installation environment.
Furthermore, setting this item to "Abundant amount of dust" will result in longer operating time (approximately two times as long as that when setting it to "Standard amount of dust") or shorter life of functional components. Make this setting while seeing the situation.

(30) Humidifier ON for heating with thermostat OFF

Setting this item to "ON" will turn ON the humidifier when the heating thermostat turns ON and suction air temperature is 20°C or higher. The humidifier turns OFF when the temperature falls to 18°C or under.

Mode No.	Setting Switch No.	Setting Position No.	Setting
15(25)	1	01	OFF
		02	ON

(31) Setting of direct duct connection

Make this setting when "Fresh air intake kit with fan" is installed. Indoor fan performs residual operation for a period of one minute after the thermostat turns OFF (to prevent the fall of dust attached to the air filter).

Mode No.	Setting Switch No.	Setting Position No.	Setting
15(25)	2	01	No direct connection of dust
		02	Direct connection of dust with fan

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(32) Interlock of humidifier with drain pump

Make this setting to interlock the operation of the humidifier with that of the drain pump. This setting is not required to drain water to outside of the system.

Mode No.	Setting Switch No.	Setting Position No.	Setting
15(25)	3	01	Individually operate humidifier
		02	Interlock humidifier with drain pump

(33) Individual ventilation setting

When Ventiare is incorporated in the system, make this setting to individually operate Ventiare using the remote controller of centralized device.
(This setting is only enabled when Ventiare is incorporated in the system.)

Mode No.	Setting Switch No.	Setting Position No.	Setting
15(25)	5	01	Normal
		02	Individual ventilation

(34) Display of Contact Center (Only for BRC1E3 model)

This setting disables displaying “Daikin Contact Center” as “Service Contact.”

Mode No.	Setting Switch No.	Setting Position No.	Setting
1b(2b)	3	01	Display
		02	Non-display

(35) Display of malfunction codes on remote controller (Only for BRC1E3 model)

Used this setting to display detailed malfunction codes (4 digits) for limited models.
If you do not want to display the codes in 4-digit figures, set to “ 2-digit display” according to the table shown below.

Mode No.	Setting Switch No.	Setting Position No.	Setting
1b(2b)	4	02	2-digit display
		04	4-digit display

<Applicable models>
- Indoor units: FXYFP28 to 160B
  FXYFP28MC to 160MC
  FXYHP36MA to 160MA
  FXYMP45AA to 160AA
- Outdoor units: RXYP-C
  RXMP-C
  RXUP-C

(36) Key lock pattern setting (Only for BRC1E series)

Use this item to make setting of a pattern for key lock of the remote controller.

Mode No.	Setting Switch No.	Setting Position No.	Setting	Remark
1b	12	01	All operations prohibited (with displaying resetting method)	All BRC1E series models
		02	All operations prohibited (without displaying resetting method)	Only BRC1E3 model
		03	Menu operation prohibited	
		04	Menu operation constantly prohibited	

※Setting “Setting Position No.” to “04” will disable menu operation without key lock by pressing and holding the Menu button. To unlock the key, set “Setting Position No.” to any number other than “04.”

(37) Setting of air block “Prohibited/ Permitted” (Only for Sensing Flow Type)

Due to concerns about condensation, the air block function is not allowed to use in combination with outlet plug kit, fresh air intake kit, natural/separate type of evaporative humidifier, and branch duct.
Making this setting prevents accidental setting of the air block function.
To use the system with any of the options aforementioned, be sure to set this item to “Air block prohibited.”

Mode No.	Setting Switch No.	Setting Position No.	Setting
1b	14	01	Air block permitted
		05	Air block prohibited

(38) Display of room temperature (Only for BRC1E3 model)

The display window can be switched to the “Detailed Display Window.” If you do not want to display room temperature on the “Detailed Display Window,” make this setting.

Mode No.	Setting Switch No.	Setting Position No.	Setting
1c(2c)	0	01	Non-display of room temperature
		02	Display

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4 List of Malfunction Codes

4-1. List of Malfunctions Codes

For the purposes of this system, malfunctions are ranked on a scale of "Malfunction occur," "Alarm," and "Caution." Operating status and method for displaying on the remote controller vary with ranking. Make full use of information in this Section for troubleshooting, checks, and repair through thorough understanding of it.

Ranking	Indication in List of Malfunction Codes	Operating Status	Display on Remote Controller	
Malfunction occur	Black	Stop operation (*1)	For BRC1E3	The Operation Lamp (green) will blink and a message saying, “Error: Press Menu Button,” will appear while blinking at the bottom of the screen. (Press the “Menu/Enter” button to ensure the malfunction code.)
			For BRC1C1	The Operation Lamp (red) will blink, and Malfunction code and Malfunctioning unit No. will appear.
Alarm	Black	Continuous operation	For BRC1E3	The Operation Lamp (green) will remain ON and a message saying, “Error: Press Menu Button,” will appear while blinking at the bottom of the screen. (Press the “Menu/Enter” button to ensure the malfunction code.)
			For BRC1C1	The Operation Lamp (red) will remain ON, and Malfunction code and Malfunctioning unit No. will appear.
Caution	white	Continuous operation	For BRC1E3	The Operation Lamp (green) will remain ON and other displays will remain the same as those while in normal operation. (Select “Service Contact Info” in “Main menu mode” to check Caution.)
			For BRC1C1	The Operation Lamp (red) will remain ON and other displays will remain the same as those while in normal operation. (Press the RETURN/TEST button to check Caution.)

*1: In case of “Malfunction occur” on VRV indoor unit, the system may just turn OFF the thermostat of the relevant unit without stopping operation.

(1) Indoor unit

Malfunction code/item		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Detailed reference page
	Applicable model	FBXYP	FVYCP	FVYCP	FXYAP	FXYCP	FXYDP	FXYFP	FXYFP	FXYHP	FXYKP	FXYLP	FXYLMP	FXYMP	FXYMP	FXYMP	FXYSP	FXYTP	FXYUP	FXYWP	FXYWP	VKMP	
		45 · 71 M(P)	140 M	224 ~ 560 M	28 ~ 71 M	22 ~ 160 M	22 ~ 71 M	28 ~ 160 B	28 ~ 160 MC	36~ 160 MA	22 ~ 71 B	28 ~ 71 M	28 ~ 71 M	45~ 160 AA	224 • 280 M	140 ~ 280 MF	22 ~ 140 M	80 · 140 M	80 ~ 140 B	140 ~ 280 M	140 ~ 280 MF	50~ 100 GA M	
A0	Malfunction of external protection device	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.186
A1	Faulty indoor unit PC board	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.187
A3	Malfunction of drain level control system	○	–	–	–	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.188
A6	Indoor fan motor lock	–	–	–	○	–	–	○	○	※1 (○)	○	–	–	※1 (○)	○	–	–	–	–	–	–	–	P.189
A6		–	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P.191
A6		–	–	–	–	–	–	–	–	※2 (○)	–	–	–	※2 (○)	–	–	–	–	–	–	–	–	P.192
A6		–	–	–	–	–	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–	P.194
A7	Malfunction of swing motor flap	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P.195
A8	Abnormal power supply voltage	–	–	–	–	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	P.196
A9	Malfunction of electronic expansion valve coil and dust caught	–	–	–	–	–	–	○	○	–	○	–	–	–	–	–	–	–	–	–	–	–	P.197
A9	Malfunction of electronic expansion valve coil	○	○	○	○	○	○	–	–	○	–	○	○	○	○	○	○	○	○	○	○	○	P.198
AF	Malfunction of dehumidifier system	○	–	○	–	○	–	○	○	○	○	○	○	○	○	○	○	–	○	○	○	○	P.199
AH	Malfunction of auto clean panel	–	–	–	–	–	–	○	○	–	–	–	–	–	–	–	–	–	–	–	–	–	P.200
AH	Malfunction of air purifier	–	–	–	–	–	–	○	○	–	–	–	–	–	–	–	–	–	–	–	–	–	P.210
AH		–	–	–	–	–	–	○	○	–	–	–	–	–	–	–	–	–	–	–	–	–	P.212
AH		–	–	–	–	–	–	–	○	–	–	–	–	○	–	–	○	–	–	–	–	–	P.214
AH		–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P.216
AJ	Faulty capacity setting	–	–	–	○	–	○	○	○	○	○	–	–	○	–	–	–	–	○	–	–	–	P.217
C1	Transmission error (between indoor unit PC board and adapter PC board)	–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P.218
	Transmission error (between indoor unit PC board and fan PC board)	–	–	–	–	–	–	–	–	※3 (○)	–	–	–	○	–	–	–	–	–	–	–	–	P.219
C4	Malfunction of liquid pipe thermistor for heat exchanger	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.220
C5	Malfunction of gas pipe thermistor for heat exchanger	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.220
C6	Improper combination (of indoor unit PC board and fan PC board)	–	–	–	–	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	P.221

*1. Applicable models: FXYHP36MA to 140MA, and FXYMP45A and 56A
*2. Applicable models: FXYHP160MA and FXYMP71A to 140A
*3. Applicable models: Only FXYHP160MA

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Malfunction code/item		Applicable model	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Detailed reference page
			FBXYP	FVYCP	FVYCP	FXYAP	FXYCP	FXYDP	FXYFP	FXYFP	FXYHP	FXYKP	FXYLP	FXYLMP	FXYMP	FXYMP	FXYMP	FXYSP	FXYTP	FXYUP	FXYWP	FXYWP	VKMP	
			45・71M(P)	140M	224~560M	28~71M	22~160M	22~71M	28~160B	28~160MC	36~160MA	22~71B	28~71M	28~71M	45~160AA	224・280M	140~280MF	22~140M	80・140M	80~140B	140~280M	140~280MF	50~100GAM	
C9	Malfunction of suction air thermistor		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.220
CA	Malfunction o of discharge air thermistor		–	–	–	–	–	–	–	–	–	–	–	–	○	–	○	–	○	–	–	○	–	P.222
CE	Malfunction of motion/floor temperature sensor		–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P.223
CJ	Malfunction of remote controller sensor		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.228
U4	Transmission error (between indoor and outdoor units)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.271
U5	Transmission error (between indoor unit and remote controller)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.273
U8	Transmission error (between master and slave remote controllers)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.279
U9	Transmission error (between other indoor and outdoor units)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.280
UA	Faulty field setting switch		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.281
UC	Address duplication of central controllers		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.285
UE	Transmission error (between indoor unit and central controllers		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.286
UF	Transmission error (Between indoor and outdoor units)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.288
UH	System error		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	P.289

(2) Outdoor unit

Malfunction code/item		Applicable model	1	2	3	4	Detailed reference page
			RXYP140·160C	RXYP224~560C	RXMP	RXUP	
E1	Faulty outdoor unit PC board		○	○	○	○	P.229
E2	Ground leakage detection error		○	○	○	○	P.230, 231
E3	Activation of high pressure switch		○	○	○	○	P.232
E4	Activation of low pressure switch		○	○	○	○	P.233
E5	Inverter compressor lock		○	○	○	○	P.234
E6	Malfunction of compressor due to damage		○	○	○	○	P.236
E7	Fan motor lock		○	○	○	○	P.238
E9	Malfunction of electronic expansion valve coil		○	○	○	○	P.240
F3	Discharge pipe high temperature error		○	○	○	○	P.241
F4	Wet alarm		○	○	○	○	P.242
F6	Refrigerant overcharged		○	○	○	○	P.243
H3	Harness malfunction (between control PC board and inverter PC board)		○	○	○	○	P.244
H7	Fan motor signal error		○	○	○	○	P.245
H9	Faulty outdoor air thermistor		○	○	○	○	P.246
J3	Faulty discharge pipe thermistor		○	○	○	○	P.247
J5	Faulty accumulator inlet thermistor		○	○	○	○	P.247
	Faulty suction pipe thermistor		○	○	○	○	P.247
J6	Faulty heat exchanger thermistor		○	○	○	○	P.247
J7	Faulty liquid pipe thermistor		○	○	○	○	P.247
J8	Faulty heat exchanger liquid pipe thermistor		○	○	○	○	P.247
J9	Faulty supercool heat exchanger gas/liquid thermistor		–	○	○	○	P.247
JA	Faulty high pressure sensor		○	○	○	○	P.248
JC	Faulty low pressure sensor		○	○	○	○	P.249
L1	Faulty inverter PC board on master unit		○	○	○	○	P.250
L3	Reactor temperature rise		○	(○)	○	○	P.251
L4	Radiator fin temperature rise		○	○	○	○	P.252
L5	Inverter compressor instantaneous overcurrent		○	○	○	○	P.253
L8	Inverter compressor overcurrent		○	○	○	○	P.255
L9	Faulty Inverter compressor startup		○	○	○	○	P.257

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Malfunction code/item \ Applicable model		1 RXYP140·160C	2 RXYP224~560C	3 RXMP	4 RXUP	Detailed reference page
LC	Transmission error (between inverter PC board and control PC board)	○	○	○	○	P.259
P1	Power supply voltage imbalance, open phase	○	○	○	○	P.261
P2	Refrigerant charge stop	○	○	○	○	—
P3	Faulty reactor surface thermistor	○	(○)	○	○	P.262
P4	Faulty radiator fin thermistor	○	○	○	○	P.263
P8	Heat exchanger freeze-up prevention	○	○	○	○	—
P9	Automatic refrigerant charge completion	○	○	○	○	—
PA	Empty refrigerant cylinder (Master)	○	○	○	○	—
PC	Empty refrigerant cylinder (Slave 2)	○	○	○	○	—
PE	Right before automatic refrigerant charge completion	○	○	○	○	—
PH	Empty refrigerant cylinder (Slave 1)	○	○	○	○	—
PJ	Improper combination of inverter and fan driver	○	○	○	○	P.264
U0	Gas shortage alarm	○	○	○	○	P.266
U1	Negative phase/Open phase	○	○	○	○	P.267
U2	Abnormal power supply voltage/momentary blackout	○	○	○	○	P.268
U3	Check operation not conducted	○	○	○	○	P.270
U4	Transmission error (between indoor and outdoor units)	○	○	○	○	P.271
U7	Transmission error (between outdoor units)	○	○	○	○	P.274
U9	Transmission error (between other indoor units and outdoor unit)	○	○	○	○	P.280
UA	Improper combination of indoor and outdoor	○	○	○	○	P.281
UF	System not set	○	○	○	○	P.288
UH	System error	○	○	○	○	P.289

(3) Centralized control equipment

Malfunction code	Description	Detailed reference page
M1	Faulty PC board	P.290
M8	Transmission error (between centralized control equipment)	P.291
MA	Improper combination of centralized control equipment	P.292
MC	Address duplication, faulty setting	P.293
UE	Transmission error (between indoor unit and centralized control equipment)	P.286
—	Operation lamp blinks	P.294
—	“Under centralized control” indication lamp blinks (repeats blinking once)	P.295
—	“Under centralized control” indication lamp blinks (repeats blinking twice)	P.297

(4) Ventiare

Malfunction code	Other displays		Description	Detailed reference page
	Operation lamp	Check display		
60	○	●	Malfunction of external protection device (when Field setting [18-8]: Set Position No. is set to “02” (Unified alarm))	P.298
60	◑	◑	Malfunction of external protection device (when Field setting [18-8]: Set Position No. is set to “03” (Unified malfunction))	P.298
64	○	●	Malfunction of indoor unit air thermistor (R1T)	P.299
65	○	●	Malfunction of outdoor unit air thermistor (R2T)	P.299
6A	○	●	Malfunction of damper system	P.300
6A	◑	◑	Malfunction of damper system + Malfunction of thermistor	P.301
6F	◑	◑	Malfunction of simplified remote controller	P.302
U5	◑	◑	Transmission error (between Ventiare and remote controller)	P.303
U8	◑ or ●	◑	Transmission error (between master remote controller and slave remote controller)	P.304
UA	◑	◑	Improper combination of Ventiare and remote controller, improper combination of outdoor unit, indoor unit, and remote controller	P.305
UE	◑	◑	Transmission error (between Ventiare and centralized control equipment)	P.306

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4-2. List of Detailed Malfunction Codes

(1) Indoor unit

Malfunction code	Troubleshooting		Applicable model			
	Item	Description	FXYFP28 ~ 160B FXYFP28 ~ 160MC	FXYMP45 ~ 160AA	FXYHP36 ~ 140MA	FXYHP160MA
A6 — 01	Fan motor lock	Fan motor lock current is detected. Rotate the fan by hand to check for the connection of connectors.	—	○	—	○
— 10	Fan motor overcurrent	Fan motor overcurrent is detected. ⇒ Check for the connection of connector between the fan motor and the fan PC board. If no abnormalities are detected, replace the fan motor. If the overcurrent is still detected, replace the fan PC board.	—	○	—	○
— 11	Fan position detection error	An error in detecting the fan motor position ⇒ Check for the connection of connector between the fan motor and the fan PC board. If no abnormalities are detected, replace the fan motor. If the error still continues, replace the fan PC board.	—	○	—	○
A8 — 01	Abnormal power supply voltage	Check for voltage inputted in the fan motor.	—	○	—	○
A9 — 01	Malfunction of electronic expansion valve	Malfunction of electronic expansion valve coil or connector coming off	○	○	○	○
— 02	Refrigerant leak detection error	The electronic expansion valve is closed, but refrigerant still leaks. Replace the electronic expansion valve.	○	○	○	○
AH — 01	Malfunction of air purifier [when an air purifier is installed]	Malfunction signal is detected from the air purifier. ⇒ Follow the troubleshooting chart to check for the air purifier.	○	○	—	—
— 02	Malfunction of deodorizer [when a streamer deodorizer is installed]	Malfunction signal is detected from the deodorizer. ⇒ Follow the troubleshooting chart to check for the deodorizer.	○	○	—	—
— 03	Transmission error (between auto clean panel and indoor unit) [when the auto clean panel is installed]	Check for the connection of harness and connectors between the panel PC board and the outdoor unit PC board.	○	—	—	—
— 04	Malfunction of dust detection sensor [when the auto clean panel is installed]	Check for the connection of connector X12A on the panel PC board, and connectors X18A and X19A on the sensor PC board, respectively.	○	—	—	—
— 05	Dust collection sign [when the auto clean panel is installed]	Check for clogging caused by dust (at the dust collection port and in the brush unit, S-shaped pipe, and dust box). Furthermore, check for any stains on the light receiving and emitting portions of the infrared unit.	○	—	—	—
— 06	Abnormal air filter rotation [when the auto clean panel is installed]	Check for any interference with filter rotation (e.g. disconnected filter or gear portion clogged with foreign matters).	○	—	—	—
— 07	Abnormal damper operation [when the auto clean panel is installed]	The damper does not open and close normally. ⇒ Check for foreign matters around the damper and for the conditions of the gear and limit switches.	○	—	—	—
— 08	Abnormal automatic filter cleaning operation [when the auto clean panel is installed]	Automatic filter cleaning operation has not been completed although a given period of time elapsed. ⇒ Check for any external noise and others.	○	—	—	—
— 09	Automatic filter operation startup disabled [when the auto clean panel is installed]	Automatic filter cleaning operation is disabled due to continuous air-conditioning operation. ⇒ Check for the operation status.	○	—	—	—

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Malfunction code	Troubleshooting		Applicable model			
	Item	Description	FXYFP28 ~ 160B FXYFP28 ~ 160MC	FXYMP45 ~ 160AA	FXYHP36 ~ 140MA	FXYHP160MA
AJ — 01	Capacity setting error	An error in making capacity setting of the indoor PC board	○	○	○	○
— 02	Motorized valve setting error	An error in making setting of the gear/direct acting type motorized valve	○	—	—	—
C1 — 01	Transmission error (between indoor unit PC board and fan PC board)	Check for status of transmission between the indoor unit PC board and the fan PC board.	—	○	—	○
C6 — 01	Improper combination of indoor unit PC board and fan PC board	Improper combination of the indoor unit PC board and the fan PC board Check whether or not the capacity setting adapter is correct and the type of the fan PC board is correct.	—	○	—	○
CE — 01	Malfunction of motion sensor	It is detected that the motion sensor outputs no signal. Check for any disconnection of connectors and for any broken wire in the harness.	(○) ※ 1	—	—	—
— 02	Malfunction of floor temperature sensor	Broken wire is detected in the temperature compensation circuit (thermistor) of the floor temperature sensor. Check for any disconnection of connectors.	(○) ※ 1	—	—	—
— 03	Malfunction of floor temperature sensor	Short circuit is detected in the temperature compensation circuit (thermistor) of the floor temperature sensor. Check for any contact of connector pins with each other and any short circuit caused by foreign matters on PC board.	(○) ※ 1	—	—	—
— 04	Malfunction of floor temperature sensor	Malfunction of the floor temperature sensor is detected due to any causes other than those listed above. Check whether there is anything in the vicinity of the sensor that becomes extremely hot or makes noises.	(○) ※ 1	—	—	—
U4 — 01	Transmission error between indoor and outdoor units	Refer to “U4” flow chart.	○	○	○	○
UA — 13	Refrigerant type error	Different types of refrigerants are used for indoor and outdoor units.	○	○	○	○
— 15	Lack of support for auto clean panel [when the auto clean panel is installed]	Outdoor unit that does not support the use of the auto clean panel is connected.	○	—	—	—

。1. Applicable models marked with “ ○ ” are only FXYFP28B to 160B.

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(2) Outdoor unit

Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140°§160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
E1 — 01	Malfunction of outdoor unit PC board	Refer to “E1” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Faulty outdoor unit PC board		○	○	○	○	○
E2 — 01	Ground leakage detection error (Master)	Refer to “E2” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Ground leakage detection error (Slave 1)		—	—	○	—	○
— 03	Ground leakage detection error (Slave 2)		—	—	○	—	○
— 06	Malfunction due to missing of ground leakage detection core (Master)		○	○	○	○	○
— 07	Malfunction due to missing of ground leakage detection core (Slave 1)		—	—	○	—	○
— 08	Malfunction due to missing of ground leakage detection core (Slave 2)		—	—	○	—	○
E3 — 01	Activation of high pressure switch (Master)	Refer to “E3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02			○	○	○	○	○
— 03	Activation of high pressure switch (Slave 1)		—	—	○	—	○
— 04			—	—	○	—	○
— 05	Activation of high pressure switch (Slave 2)		—	—	○	—	○
— 06			—	—	○	—	○
— 07	Malfunction of high-pressure standby latch circuit E3 (System in a batch)		○	○	○	○	○
— 13	Liquid stop valve check error (Master)		○	○	○	○	○
— 14	Liquid stop valve check error (Slave 1)		—	—	○	—	○
— 15	Overall retry of high pressure switch (Slave 2)		—	—	○	—	○
— 18	Overall retry of high pressure switch		○	○	○	○	○
E4 — 01	Malfunction of low pressure sensor (Master)	Refer to “E4” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Malfunction of low pressure sensor (Slave 1)		—	—	○	—	○
— 03	Malfunction of low pressure sensor (Slave 2)		—	—	○	—	○
E5 — 01	Inverter compressor 1 lock (Master)	Refer to “E5” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Inverter compressor 1 lock (Slave 1)		—	—	○	—	○
— 03	Inverter compressor 1 lock (Slave 2)		—	—	○	—	○
— 07	Inverter compressor 2 lock (Master)		—	—	—	○	○
— 08	Inverter compressor 2 lock (Slave 1)		—	—	—	—	○
— 09	Inverter compressor 2 lock (Slave 2)		—	—	—	—	○

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Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140°§160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
E6 – 11	Malfunction of compressor due to damage (Master INV. 1)	Refer to “E6” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
– 12	Malfunction of compressor due to damage (Master INV. 2)		–	–	–	○	○
– 13	Malfunction of compressor due to damage (Slave 1 INV. 1)		–	–	○	–	○
– 14	Malfunction of compressor due to damage (Slave 1 INV. 2)		–	–	–	–	○
– 15	Malfunction of compressor due to damage (Slave 2 INV. 1)		–	–	○	–	○
– 16	Malfunction of compressor due to damage (Slave 2 INV. 2)		–	–	–	–	○
– 17	Compressor damage alarm (Master INV. 1)		○	○	○	○	○
– 18	Compressor damage alarm (Master INV. 2)		–	–	–	○	○
– 19	Compressor damage alarm (Slave 1 INV. 1)		–	–	○	–	○
– 20	Compressor damage alarm (Slave 1 INV. 2)		–	–	–	–	○
– 21	Compressor damage alarm (Slave 2 INV. 1)		–	–	○	–	○
– 22	Compressor damage alarm (Slave 2 INV. 2)		–	–	–	–	○
E7 – 01	Fan motor 1 lock (Master)	Refer to the following to troubleshoot the fan motor used in the relevant unit. ○In the event of fan motor lock: (01, 02, 13, 14, 25, 26) ○In the event of momentary overcurrent: (05, 06, 17, 18, 29, 30) ○In the event of IPM error: (09, 10, 21, 22, 33, 34)	○	○	○	○	○
– 02	Fan motor 2 lock (Master)		–	–	–	○	○
– 05	Fan motor 1 momentary overcurrent (Master)		○	○	○	○	○
– 06	Fan motor 2 momentary overcurrent (Master)		–	–	–	○	○
– 09	Fan motor 1 IPM error (Master)		○	○	○	○	○
– 10	Fan motor 2 IPM error (Master)		–	–	–	○	○
– 13	Fan motor 1 lock (Slave 1)		–	–	○	–	○
– 14	Fan motor 1 lock (Slave 1)		–	–	–	–	○
– 17	Fan motor 1 momentary overcurrent (Slave 1)		–	–	○	–	○
– 18	Fan motor 2 momentary overcurrent (Slave 1)		–	–	–	–	○
– 21	Fan motor 1 IPM error (Slave 1)		–	–	○	–	○
– 22	Fan motor 2 IPM error (Slave 1)		–	–	–	–	○
– 25	Fan motor 1 lock (Slave 2)		–	–	○	–	○
– 26	Fan motor 1 lock (Slave 2)		–	–	–	–	○
– 29	Fan motor 1 momentary overcurrent (Slave 2)		–	–	○	–	○
– 30	Fan motor 2 momentary overcurrent (Slave 2)		–	–	–	–	○
– 33	Fan motor 1 IPM error (Slave 2)		–	–	○	–	○
– 34	Fan motor 2 IPM error (Slave 2)		–	–	–	–	○

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Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140°S160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
E9 — 01	Malfunction of motorized valve 2 coil (Y2E) (Master)	Refer to “E9” flow chart to troubleshoot the relevant motorized valve used in the relevant unit.	○	○	○	○	○
— 04	Malfunction of motorized valve 1 coil (Y1E) (Master)		○	○	○	○	○
— 05	Malfunction of motorized valve 2 coil (Y2E) (Slave 1)		—	—	○	—	○
— 07	Malfunction of motorized valve 1 coil (Y1E) (Slave 1)		—	—	○	—	○
— 08	Malfunction of motorized valve 2 coil (Y2E) (Slave 2)		—	—	○	—	○
— 10	Malfunction of motorized valve 1 coil (Y1E) (Slave 2)		—	—	○	—	○
— 20	Failure detection - Failure of motorized valve 1 coil (Y1E) (Master)		○	○	○	○	○
— 21	Failure detection - Failure of motorized valve 1 coil (Y1E) (Slave 1)		—	—	○	—	○
— 22	Failure detection - Failure of motorized valve 1 coil (Y1E) (Slave 2)		—	—	○	—	○
— 23	Failure detection - Failure of motorized valve 2 coil (Y2E) (Master)		○	○	○	○	○
— 24	Failure detection - Failure of motorized valve 2 coil (Y2E) (Slave 1)		—	—	○	—	○
— 25	Failure detection - Failure of motorized valve 2 coil (Y2E) (Slave 2)		—	—	○	—	○
F3 — 01	Discharge pipe high temperature error (Master)	Refer to “F3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 03	Discharge pipe high temperature error (Slave 1)		—	—	○	—	○
— 05	Discharge pipe high temperature error (slave 2)		—	—	○	—	○
— 20	Compressor overheat error (Master)		—	(○)	(○)	(○)	(○)
— 21	Compressor overheat error (Slave 1)		—	—	(○)	—	(○)
— 22	Compressor overheat error (Slave 2)		—	—	(○)	—	(○)
F4 — 01	Wet alarm	Refer to “F4” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Failure detection - Wet alarm INV1 (Master)		○	○	○	○	○
— 03	Failure detection - Wet alarm INV2 (Master)		—	—	—	○	○
— 04	Failure detection - Wet alarm INV1 (Slave 1)		—	—	○	—	○
— 05	Failure detection - Wet alarm INV2 (Slave 1)		—	—	—	—	○
— 06	Failure detection - Wet alarm INV1 (Slave 2)		—	—	○	—	○
— 07	Failure detection - Wet alarm INV2 (Slave 2)		—	—	—	—	○
— 08	Failure detection - Wet error INV1 (Master)		○	○	○	○	○
— 09	Failure detection - Wet error INV2 (Master)		—	—	—	○	○
— 10	Failure detection - Wet error INV1 (Slave 1)		—	—	○	—	○
— 11	Failure detection - Wet error INV2 (Slave 1)		—	—	—	—	○
— 12	Failure detection - Wet error INV1 (Slave 2)		—	—	○	—	○
— 13	Failure detection - Wet error INV2 (Slave 2)		—	—	—	—	○
— 14	Failure detection - Indoor unit failure alarm		○	○	○	○	○
F6 — 02	Refrigerant overcharge error	Overcharged refrigerant is detected during test operation.	○	○	○	○	○

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Malfunction code	Item	Description	Applicable model				
			RXYP140°S160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
H3 — 02	Harness malfunction (Control PC board ⇔ INV. PC board 1 (A3P)) (Master)	Refer to “H3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 04	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A3P)) (Slave 1)		—	—	○	—	○
— 06	Harness malfunction (Control PC board ⇔ INV. PC board 1 (A3P)) (Slave 2)		—	—	○	—	○
— 03	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A6P)) (Master)		—	—	—	○	○
— 05	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A3P)) (Slave 1)		—	—	—	—	○
— 07	Harness malfunction (Control PC board ⇔ INV. PC board 2 (A6P)) (Slave 2)		—	—	—	—	○
H7 — 01	Fan motor 1 signal detection error (Master)	Refer to “H7” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Fan motor 2 signal detection error (Master)		—	—	—	○	○
— 05	Fan motor 1 signal detection error (Slave 1)		—	—	○	—	○
— 06	Fan motor 2 signal detection error (Slave 1)		—	—	—	—	○
— 09	Fan motor 1 signal detection error (Slave 2)		—	—	○	—	○
— 10	Fan motor 2 signal detection error (Slave 2)		—	—	—	—	○
H9 — 01	Faulty outdoor air thermistor (Master)	Refer to “H9” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Faulty outdoor air thermistor (Slave 1)		—	—	○	—	○
— 03	Faulty outdoor air thermistor (Slave 2)		—	—	○	—	○
J3 — 16	Faulty discharge pipe 1 thermistor (Master: Open)	Refer to “J3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 17	Faulty discharge pipe 1 thermistor (Master: Short)		○	○	○	○	○
— 22	Faulty discharge pipe 1 thermistor (Slave 1: Open)		—	—	○	—	○
— 23	Faulty discharge pipe 1 thermistor (Slave 1: Short)		—	—	○	—	○
— 28	Faulty discharge pipe 1 thermistor (Slave 2: Open)		—	—	○	—	○
— 29	Faulty discharge pipe 1 thermistor (Slave 2: Short)		—	—	○	—	○
J3 — 18	Faulty discharge pipe 2 thermistor (Master: Open)	Refer to “J3” flow chart to troubleshoot the relevant unit.	—	—	—	○	○
— 19	Faulty discharge pipe 2 thermistor (Master: Short)		—	—	—	○	○
— 24	Faulty discharge pipe 2 thermistor (Slave 1: Open)		—	—	—	—	○
— 25	Faulty discharge pipe 2 thermistor (Slave 1: Short)		—	—	—	—	○
— 30	Faulty discharge pipe 2 thermistor (Slave 2: Open)		—	—	—	—	○
— 31	Faulty discharge pipe 2 thermistor (Slave 2: Short)		—	—	—	—	○
J3 — 47	Faulty compressor surface thermistor (Master: Open)	Refer to “J3” flow chart to troubleshoot the relevant unit.	—	(○)	(○)	(○)	(○)
— 48	Faulty compressor surface thermistor (Master: Short)		—	(○)	(○)	(○)	(○)
— 49	Faulty compressor surface thermistor (Slave 1: Open)		—	—	(○)	—	(○)
— 50	Faulty compressor surface thermistor (Slave 1: Short)		—	—	(○)	—	(○)
— 51	Faulty compressor surface thermistor (Slave 2: Open)		—	—	(○)	—	(○)
— 52	Faulty compressor surface thermistor (Slave 2: Short)		—	—	(○)	—	(○)
J3 — 56	Discharge pipe warning (Master)	Refer to “J3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 57	Discharge pipe warning (Slave 1)		—	—	○	—	○
— 58	Discharge pipe warning (Slave 2)		—	—	○	—	○

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Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140 • 160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
J5 — 01	Faulty accumulator inlet thermistor (Master)	Refer to “J5” flow chart to troubleshoot the relevant thermistor used in the relevant unit.	○	○	○	○	○
— 03	Faulty accumulator inlet thermistor (Slave 1)		—	—	○	—	○
— 05	Faulty accumulator inlet thermistor (Slave 2)		—	—	○	—	○
J5 — 15	Failure detection - Failure of accumulator inlet thermistor (Master)	Refer to “J5” flow chart to troubleshoot the relevant thermistor used in the relevant unit.	○	○	○	○	○
— 16	Failure detection - Failure of accumulator inlet thermistor (Slave 1)		—	—	○	—	○
— 17	Failure detection - Failure of accumulator inlet thermistor (Slave 2)		—	—	○	—	○
J6 — 01	Faulty heat exchanger thermistor (Master)	Refer to “J6” flow chart to troubleshoot the relevant thermistor.	○	○	○	○	○
— 02	Faulty heat exchanger thermistor (Slave 1)		—	—	○	—	○
— 03	Faulty heat exchanger thermistor (Slave 2)		—	—	○	—	○
J7 — 06	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Master)	Refer to “J7” flow chart to troubleshoot the relevant thermistor.	○	○	○	○	○
— 07	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Slave 1)		—	—	○	—	○
— 08	Faulty supercool heat exchanger liquid pipe thermistor (R5T) (Slave 2)		—	—	○	—	○
J8 — 01	Faulty heat exchanger liquid pipe thermistor (R4T) (Master)	Refer to “J8” flow chart to troubleshoot the relevant thermistor.	○	○	○	○	○
— 02	Faulty heat exchanger liquid pipe thermistor (R4T) (Slave 1)		—	—	○	—	○
— 03	Faulty heat exchanger liquid pipe thermistor (R4T) (Slave 2)		—	—	○	—	○
J9 — 01	Faulty supercool heat exchanger outlet thermistor (Master)	Refer to “J9” flow chart to troubleshoot the relevant thermistor.	—	○	○	○	○
— 02	Faulty supercool heat exchanger outlet thermistor (Slave 1)		—	—	○	—	○
— 03	Faulty supercool heat exchanger outlet thermistor (Slave 2)		—	—	○	—	○
J9 — 08	Failure detection - Failure of supercool heat exchanger outlet thermistor (Master)	Refer to “J9” flow chart to troubleshoot the relevant thermistor.	—	○	○	○	○
— 09	Failure detection - Failure of supercool heat exchanger outlet thermistor (Slave 1)		—	—	○	—	○
— 10	Failure detection - Failure of supercool heat exchanger outlet thermistor (Slave 2)		—	—	○	—	○
JA — 06	Faulty high pressure sensor (Master) (Open)	Refer to “JA” flow chart to troubleshoot the relevant thermistor.	○	○	○	○	○
— 07	Faulty high pressure sensor (Master) (Short)		○	○	○	○	○
— 08	Faulty high pressure sensor (Slave 1) (Open)		—	—	○	—	○
— 09	Faulty high pressure sensor (Slave 1) (Short)		—	—	○	—	○
— 10	Faulty high pressure sensor (Slave 2) (Open)		—	—	○	—	○
— 11	Faulty high pressure sensor (Slave 2) (Short)		—	—	○	—	○
JC — 06	Faulty low pressure sensor (Master) (Open)	Refer to “JC” flow chart to troubleshoot the relevant thermistor.	○	○	○	○	○
— 07	Faulty low pressure sensor (Master) (Short)		○	○	○	○	○
— 08	Faulty low pressure sensor (Slave 1) (Open)		—	—	○	—	○
— 09	Faulty low pressure sensor (Slave 1) (Short)		—	—	○	—	○
— 10	Faulty low pressure sensor (Slave 2) (Open)		—	—	○	—	○
— 11	Faulty low pressure sensor (Slave 2) (Short)		—	—	○	—	○

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Malfunction code		Troubleshooting		Applicable model				
		Item	Description	RXYP140°§160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
L1	—	01、02、03、04、05、17、18、19、20、21、28、29、 36、37、47、48	Refer to “L1” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
		Faulty INV. PC board on master unit						
	—	07、08、09、10、15、22、23、24、25、26、32、33、38、39、49、50		—	—	○	—	○
		Faulty INV. PC board on slave 1 unit						
	—	11、12、13、14、16、34、35、40、41、42、43、44、45、46、51、52		—	—	○	—	○
		Faulty INV. PC board on slave 2 unit						
L2	— 01	Momentary power failure (Master)	Check whether the power supply voltage is normal.	○	○	○	○	○
	— 02	Momentary power failure (Slave 1)		—	—	○	—	○
	— 03	Momentary power failure (Slave 2)		—	—	○	—	○
	— 04	Power ON (Master)		○	○	○	○	○
	— 05	Power ON (Slave 1)		—	—	○	—	○
	— 06	Power ON (Slave 2)		—	—	○	—	○
L3	— 01	Reactor temperature rise (Master: INV. PC board 1)	Refer to “L3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
	— 02	Reactor temperature rise (Master: INV. PC board 2)		—	—	—	○	○
	— 03	Reactor temperature rise (Slave 1: INV. PC board 1)		—	—	○	—	○
	— 04	Reactor temperature rise (Slave 1: INV. PC board 2)		—	—	—	—	○
	— 05	Reactor temperature rise (Slave 2: INV. PC board 1)		—	—	○	—	○
	— 06	Reactor temperature rise (Slave 2: INV. PC board 2)		—	—	—	—	○
L4	— 01	Radiator fin temperature rise (Master: INV. PC board 1)	Refer to “L4” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
	— 02	Radiator fin temperature rise (Slave 1: INV. PC board 1)		—	—	○	—	○
	— 03	Radiator fin temperature rise (Slave 2: INV. PC board 1)		—	—	○	—	○
	— 09	Radiator fin temperature rise (Master: INV. PC board 2)		—	—	—	○	○
	— 10	Radiator fin temperature rise (Slave 1: INV. PC board 2)		—	—	—	—	○
	— 11	Radiator fin temperature rise (Slave 2: INV. PC board 2)		—	—	—	—	○
L5	— 03	Inverter compressor 1 momentary overcurrent (Master)	Refer to “L5” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
	— 05	Inverter compressor 1 momentary overcurrent (Slave 1)		—	—	○	—	○
	— 07	Inverter compressor 1 momentary overcurrent (Slave 2)		—	—	○	—	○
	— 14	Inverter compressor 2 momentary overcurrent (Master)		—	—	—	○	○
	— 15	Inverter compressor 2 momentary overcurrent (Slave 1)		—	—	—	—	○
	— 16	Inverter compressor 2 momentary overcurrent (Slave 2)		—	—	—	—	○

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Malfunction code	Item	Description	Applicable model				
			RXYP140*$160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
L8 – 03	Inverter compressor 1 overcurrent (Master)	Refer to “L8” flow chart to troubleshoot the compressor used in the relevant unit.	○	○	○	○	○
– 06	Inverter compressor 1 overcurrent (Slave 1)		–	–	○	–	○
– 07	Inverter compressor 1 overcurrent (Slave 2)		–	–	○	–	○
– 11	Inverter compressor 2 overcurrent (Master)		–	–	–	○	○
– 12	Inverter compressor 2 overcurrent (Slave 1)		–	–	–	–	○
– 13	Inverter compressor 2 overcurrent (Slave 2)		–	–	–	–	○
L9 – 01	Faulty Inverter compressor 1 startup (Master)	Refer to “L8” flow chart to troubleshoot the compressor used in the relevant unit.	○	○	○	○	○
– 05	Faulty Inverter compressor 1 startup (Slave 1)		–	–	○	–	○
– 06	Faulty Inverter compressor 1 startup (Slave 2)		–	–	○	–	○
– 10	Faulty Inverter compressor 2 startup (Master)		–	–	–	○	○
– 11	Faulty Inverter compressor 2 startup (Slave 1)		–	–	–	–	○
– 12	Faulty Inverter compressor 2 startup (Slave 2)		–	–	–	–	○
LC – 14	Transmission error [Between outdoor units, INV. 1] (Master)	Refer to “LC” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
– 15	Transmission error [Between outdoor units, INV. 1] (Slave 1)		–	–	○	–	○
– 16	Transmission error [Between outdoor units, INV. 1] (Slave 2)		–	–	○	–	○
– 19	Transmission error [Between outdoor units, Fan 1] (Master)		○	○	○	○	○
– 20	Transmission error [Between outdoor units, Fan 1] (Slave 1)		–	–	○	–	○
– 21	Transmission error [Between outdoor units, Fan 1] (Slave 2)		–	–	○	–	○
– 24	Transmission error [Between outdoor units, Fan 2] (Master)		–	–	–	○	○
– 25	Transmission error [Between outdoor units, Fan 2] (Slave 1)		–	–	–	–	○
– 26	Transmission error [Between outdoor units, Fan 2] (Slave 2)		–	–	–	–	○
– 30	Transmission error [Between outdoor units, INV. 2] (Master)		–	–	–	○	○
– 31	Transmission error [Between outdoor units, INV. 2] (Slave 1)		–	–	–	–	○
– 32	Transmission error [Between outdoor units, INV. 2] (Slave 2)		–	–	–	–	○
– 33	Transmission error [Between outdoor units, Sub PC board] (Master)		○	○	○	○	○
– 34	Transmission error [Between outdoor units, Sub PC board] (Slave 1)		–	–	○	–	○
– 35	Transmission error [Between outdoor units, Sub PC board] (Slave 2)		–	–	○	–	○
P1 – 01	Inverter 1 power supply voltage imbalance (Master)	Refer to “P1” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
– 02	Inverter 1 power supply voltage imbalance (Slave 1)		–	–	○	–	○
– 03	Inverter 1 power supply voltage imbalance (Slave 2)		–	–	○	–	○
– 07	Inverter 2 power supply voltage imbalance (Master)		–	–	–	○	○
– 08	Inverter 2 power supply voltage imbalance (Slave 1)		–	–	–	–	○
– 09	Inverter 2 power supply voltage imbalance (Slave 2)		–	–	–	–	○

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Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140°S160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
P3 — 01	Faulty reactor thermistor 1 (Master: INV. PC board 1)	Refer to “P3” flow chart to troubleshoot the relevant unit.	—	(○)	(○)	(○)	(○)
— 02	Faulty reactor thermistor 1 (Slave 1: INV. PC board 1)		—	—	(○)	—	(○)
— 03	Faulty reactor thermistor 1 (Slave 2: INV. PC board 1)		—	—	(○)	—	(○)
— 04	Faulty reactor thermistor 2 (Master: INV. PC board 1)		—	(○)	(○)	(○)	(○)
— 05	Faulty reactor thermistor 2 (Slave 1: INV. PC board 1)		—	—	(○)	—	(○)
— 06	Faulty reactor thermistor 2 (Slave 2: INV. PC board 1)		—	—	(○)	—	(○)
— 07	Faulty reactor thermistor 1 (Master: INV. PC board 2)		—	—	—	(○)	(○)
— 08	Faulty reactor thermistor 1 (Slave 1: INV. PC board 2)		—	—	—	—	(○)
— 09	Faulty reactor thermistor 1 (Slave 2: INV. PC board 2)		—	—	—	—	(○)
— 10	Faulty reactor thermistor 2 (Master: INV. PC board 2)		—	—	—	(○)	(○)
— 11	Faulty reactor thermistor 2 (Slave 1: INV. PC board 2)		—	—	—	—	(○)
— 12	Faulty reactor thermistor 2 (Slave 2: INV. PC board 2)		—	—	—	—	(○)
P4 — 01	Faulty thermistor of radiator fin [heat exchanger plate] (Master: INV. PC board 1)	Refer to “P4” flow chart to troubleshoot the relevant unit.	(○)	(○)	(○)	(○)	(○)
— 04	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 1: INV. PC board 1)		—	—	(○)	—	(○)
— 05	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 2: INV. PC board 1)		—	—	(○)	—	(○)
— 06	Faulty thermistor of radiator fin [heat exchanger plate] (Master: INV. PC board 2)		—	—	—	(○)	(○)
— 07	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 1: INV. PC board 2)		—	—	—	—	(○)
— 08	Faulty thermistor of radiator fin [heat exchanger plate] (Slave 2: INV. PC board 2)		—	—	—	—	(○)
PJ — 04	Incorrect type of inverter PC board [INV.1] (Master)	Refer to “PJ” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 05	Incorrect type of inverter PC board [INV.1] (Slave 1)		—	—	○	—	○
— 06	Incorrect type of inverter PC board [INV.1] (Slave 2)		—	—	○	—	○
— 09	Incorrect type of inverter PC board [Fan 1] (Master)		○	○	○	○	○
— 10	Incorrect type of inverter PC board [Fan 2] (Master)		—	—	—	○	○
— 12	Incorrect type of inverter PC board [INV.2] (Master)		—	—	—	○	○
— 13	Incorrect type of inverter PC board [INV.2] (Slave 1)		—	—	—	—	○
— 14	Incorrect type of inverter PC board [INV.2] (Slave 2)		—	—	—	—	○
— 15	Incorrect type of inverter PC board [Fan 1] (Slave 1)		—	—	○	—	○
— 16	Incorrect type of inverter PC board [Fan 1] (Slave 2)		—	—	○	—	○
— 17	Incorrect type of inverter PC board [Fan 2] (Slave 1)		—	—	—	—	○
— 18	Incorrect type of inverter PC board [Fan 2] (Slave 2)		—	—	—	—	○

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Malfunction code	Item	Description	RXYP140°S160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
		Troubleshooting	Applicable model				
U0 – 05	Gas shortage alarm	Refer to “U0” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
U0 – 06	Gas shortage alarm		○	○	○	○	○
U0 – 08	Gas shortage (Master)		○	○	○	○	○
U0 – 09	Gas shortage (Slave 1)		–	–	○	–	○
U0 – 10	Gas shortage (Slave 2)		–	–	○	–	○
U1 – 01	Negative phase/Open phase of power supply (Master)	Refer to “U1” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
– 04	Negative phase of power supply [when power ON] (Master)		○	○	○	○	○
– 05	Negative phase /Open phase of power supply (Slave 1)		–	–	○	–	○
– 06	Negative phase of power supply [when power ON] (Slave 1)		–	–	○	–	○
– 07	Negative phase /Open phase of power supply (Slave 2)		–	–	○	–	○
– 08	Negative phase of power supply [when power ON] (Slave 2)		–	–	○	–	○
U2 – 01	Shortage of inverter 1 power supply voltage (Master)	Refer to the following to troubleshoot the relevant unit. ○ Shortage of power supply voltage If shortage of power supply voltage is also detected on other units, this may have resulted from unstable power supply voltage during operation. In this case, check for the power supply conditions. If the unit independently malfunctions, this may have resulted from the malfunction of 52C. In this case, follow “U2” flow chart to check for the relevant unit. ○ Power supply open phase This may have resulted from the disconnection of wiring from the power supply to the inverter PC board. Check whether the power supply cable is connected to the terminal block, wiring from the terminal block to the PC board has any broken wire in it or is disconnected, and reactor wiring is connected. If no abnormalities are detected, follow “U2” flow chart to check for the relevant unit. ○ Malfunction of capacitor in main circuit This may have resulted from damage and short circuit between P and N of the inverter PC board (e.g. in electrolytic capacitor or power element), and also from the malfunction of current-limiting relay or the disconnection of wiring between the reactor and PC board. In this case, make measurement of resistance between P and N of the inverter to check for any short circuit. If no abnormalities are detected, follow “U2” flow chart to check for the relevant unit.	○	○	○	○	○
– 02	Open phase of inverter 1 power supply (Master)		○	○	○	○	○
– 03	Malfunction of capacitor in inverter 1 main circuit (Master)		○	○	○	○	○
– 08	Shortage of inverter 1 power supply voltage (Slave 1)		–	–	○	–	○
– 09	Open phase of inverter 1 power supply (Slave 1)		–	–	○	–	○
– 10	Malfunction of capacitor in inverter 1 main circuit (Slave 1)		–	–	○	–	○
– 11	Shortage of inverter 1 power supply voltage (Slave 2)		–	–	○	–	○
– 12	Open phase of inverter 1 power supply (Slave 2)		–	–	○	–	○
– 13	Malfunction of capacitor in inverter1 main circuit (Slave 2)		–	–	○	–	○
– 22	Shortage of inverter 2 power supply voltage (Master)		–	–	–	○	○
– 23	Open phase of inverter 2 power supply (Master)		–	–	–	○	○
– 24	Malfunction of capacitor in inverter 2 main circuit (Master)		–	–	–	○	○
– 25	Shortage of inverter 2 power supply voltage (Slave 1)		–	–	–	–	○
– 26	Open phase of inverter 2 power supply (Slave 1)		–	–	–	–	○
– 27	Malfunction of capacitor in inverter 2 main circuit (Slave 1)		–	–	–	–	○
– 28	Shortage of inverter 2 power supply voltage (Slave 2)		–	–	–	–	○
– 29	Open phase of inverter 2 power supply (Slave 2)		–	–	–	–	○
– 30	Malfunction of capacitor in inverter 2 main circuit (Slave 2)		–	–	–	–	○

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Malfunction code	Troubleshooting		Applicable model				
	Item	Description	RXYP140°§160C	RXYP224~335C	RXMP224~335C	RXYP400~560C	RXMP400~560C
U3 — 02	First installation alarm	Refer to “U3” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 03	Test operation not conducted		○	○	○	○	○
— 04	Abnormal end of test operation		○	○	○	○	○
— 05	Premature end of test operation (during initial transmission)		○	○	○	○	○
— 06	Premature end of test operation (during normal transmission)		○	○	○	○	○
— 07	Premature end of test operation (due to transmission error)		○	○	○	○	○
— 08	Premature end of test operation (due to transmission error of all units)		○	○	○	○	○
U4 — 01	Transmission error between indoor and outdoor units	Refer to “U4” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 03	Transmission error between indoor unit and system		○	○	○	○	○
U7 — 01	Error when external control adapter is installed	Refer to “U4” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Alarm when external control adapter is installed		○	○	○	○	○
— 03	Transmission error between master and slave 1 units		—	—	○	—	○
— 04	Transmission error between master and slave 2 units		—	—	○	—	○
— 05	Multi system malfunction		—	—	○	—	○
— 06	Error in address settings of slave 1 and 2		—	—	○	—	○
— 07	Connection of four or more outdoor units in the same system		—	—	○	—	○
— 11	Error in indoor unit connection capacity for test operation		○	○	○	○	○
U9 — 01	Malfunction of other indoor unit system	Refer to “U9” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
UA — 17	Connection of excessive indoor units	Refer to “UA” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 18	Connection of wrong models of indoor units		○	○	○	○	○
— 20	Improper combination of outdoor units		—	—	○	—	○
— 21	Connection error		○	○	○	○	○
— 31	Multiunit combination error		○	○	○	○	○
UF — 01	Wrong wiring check error	Refer to “UF” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 05	Malfunction of motorized valve for test operation		○	○	○	○	○
UH — 01	Wiring error	Refer to “UH” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
UJ — 01	Malfunction of active filter (Master)	Refer to “UJ” flow chart to troubleshoot the relevant unit.	○	○	○	○	○
— 02	Malfunction of active filter (Slave 1)		—	—	○	—	○
— 03	Malfunction of active filter (Slave 2)		—	—	○	—	○

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5 Troubleshooting Flow Charts (Indoor and Outdoor Units)

Remote Controller Display

A0

Malfunction of External Protection Device

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Detect open or short circuit between external input terminals of the indoor unit.

3 Conditions for Determining To Be Malfunction

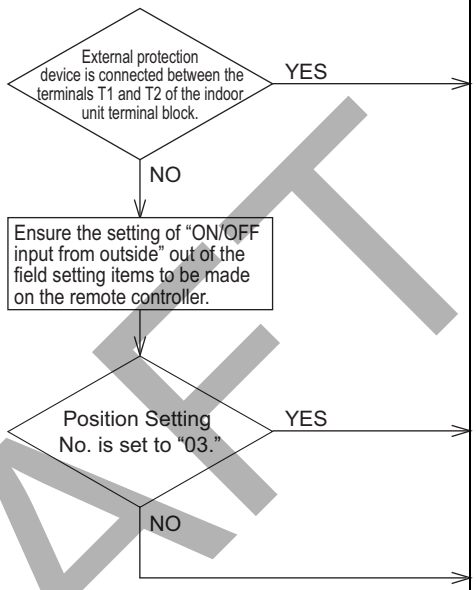
When an open circuit is caused between the external input terminals with setting of “ON/OFF input from outside” made on the remote controller

4 Supposed Causes

- Activation of external protection device
- Faulty field setting
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis



Counter-measures

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Remote Controller Display

A1

Malfunction of Indoor unit PC board

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Check data from E^2PROM.

3 Conditions for Determining Malfunction

When the system could not properly receive data from E^2PROM

E^2PROM: A type of nonvolatile memory that saves memory data even when power is cut.

4 Supposed Causes

- External factor (e.g. noise)
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
Turn OFF the power supply once, and then turn it ON again.	
Does the system return to normal? YES	The indoor unit PC board is normal. (Check for any factor (e.g. noise) other than malfunction.
NO	Replace the indoor unit PC board.

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Remote Controller Display

A3

Malfunction of Drain Level Control System

1 Applicable Models

Indoor unit

FBXYP, FXYCP, FXYDP, FXYFP, FXYHP, FXYKP, FXYLP, FXYLMP, FXYMP, FXYSP, FXYUP, FXYWP, VKMP

2 Method for Detecting Malfunction

Detect through turning-OFF of the float switch.

3 Conditions for Determining Malfunction

When the float switch turns OFF under the condition that does not cause the water level to rise

4 Supposed Causes

- Power supply voltage is not 200V
- Faulty float switch or short-circuit connector
- Faulty drain pump
- Clogged or inversely tapered drain pipe
- Faulty indoor unit PC board
- Faulty connection of connector

5 Troubleshooting

Diagnosis	Counter-measures
Is the power supply voltage 200V? NO	Apply a 200V power supply voltage.
The float switch is connected to the connector X8A or X15A on the indoor unit PC board. NO / A short-circuit connector is connected to X8A or X15A. NO	Connect a short-circuit connector or a float switch, and then restart operating the system.
The float switch contact is in the short-circuited state. (Disconnect X8A or X15A to check for continuity.) YES / The contact returns to normal when directly short-circuiting X8A or X15A on the indoor unit PC board. NO	Faulty indoor unit PC board
	Faulty connection of connector
Water fills the drain pan. NO / The float switch operates normally. NO	Replace the float switch.
	Rectify the jerky movement of the float switch, and then restart operating the system.
Except FXYFP~B: The drain pump wiring is connected between the terminals Y1 and Y2 or to the connector X25A on the indoor unit PC board. NO / Only FXYFP~B: The drain pump wiring is connected to the connector X10A on the indoor unit PC board (A2P). NO	Connect the drain pump wiring, and then restart operating the system.
The drain pump rotates when resetting the power supply of the indoor unit. YES	Check for clogging and inverse taper of the drain piping.
Except FXYFP~B: Voltages applied to the terminals Y1 and Y2 and the X25A connector are 200V. (Make measurement of voltage within 5 minutes after resetting the power supply.) NO / Only FXYFP~B: Voltage applied to the connector X10A is 13V. (Make measurement of voltage within 5 minutes after resetting the power supply.) NO	Replace the indoor unit PC board.
	Replace the drain pump or check whether the drain pump bites dust.

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Remote Controller Display

A6

Indoor Unit Fan Motor Lock

1 Applicable Models

Indoor unit
FXYAP28M to 71M
FXYFP28B to 160B
FXYFP28MC to 160MC
FXYHP36MA to 140MA
FXYMPE45AA to 56AA

2 Method for Detecting Malfunction

Detect abnormal fan revolutions by a signal outputted from the fan motor.

3 Conditions for Determining Malfunction

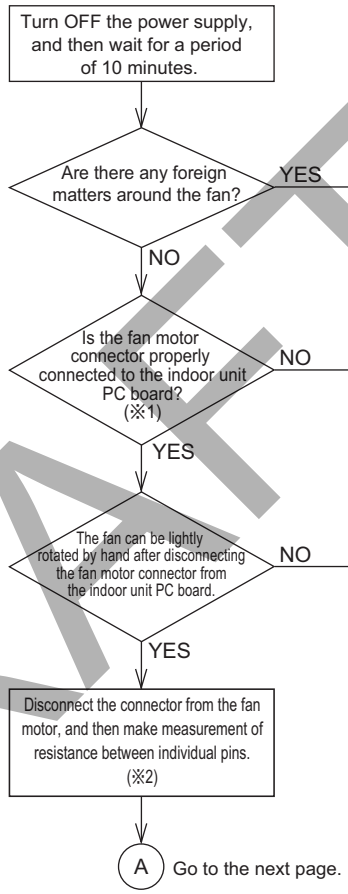
When the fan revolutions do not increase

4 Supposed Causes

- Disconnected wiring or short circuit in, or disconnection of connector from the fan motor harness
- Faulty fan motor (due to disconnected wiring or insulation failure)
- Abnormal signal from fan motor (due to circuit failure)
- Faulty PC board
- Momentary disturbance in power supply voltage
- Fan motor lock (due to the fan motor itself or external factor)
- Foreign matters entangled in the fan disabled it to rotate
- Disconnection of connector between high-current PC board (A1P) and low-current PC board (A2P)

5 Troubleshooting

Diagnosis



Counter-measures

Remove the foreign matters.

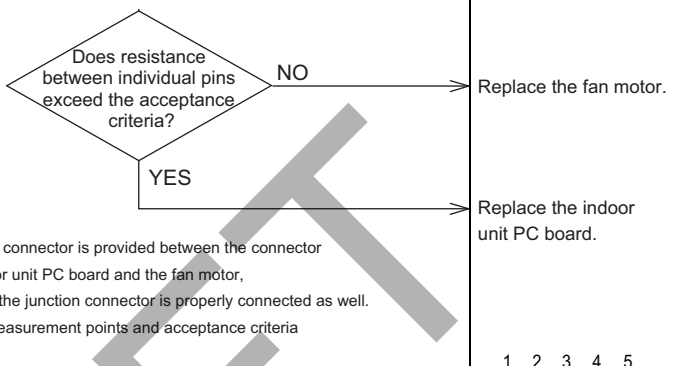
Properly connect the connector.

Replace the fan motor.

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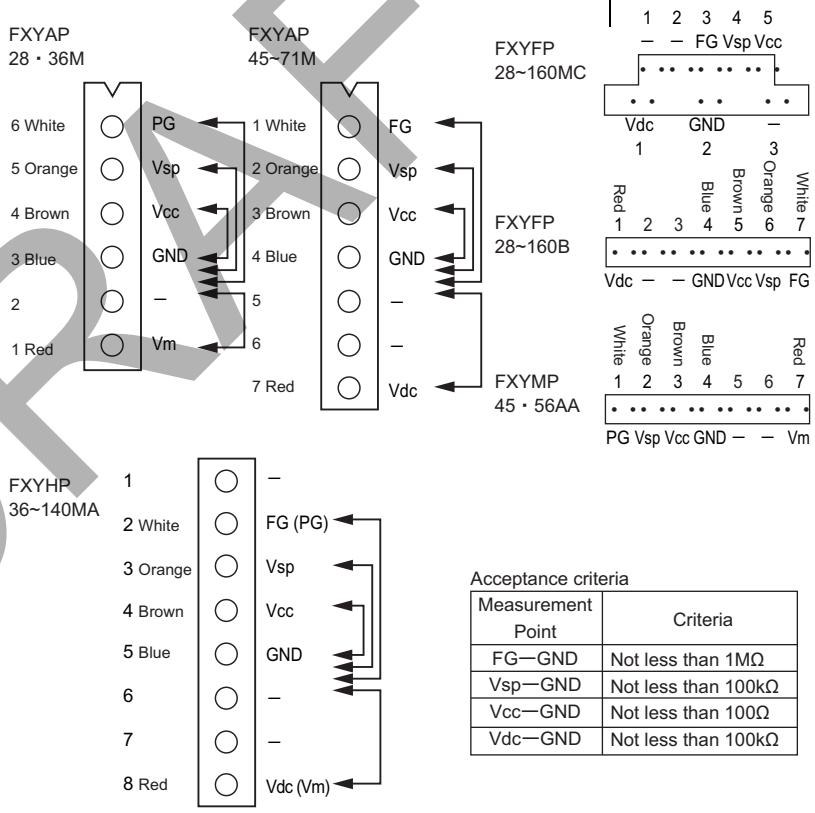
5 Troubleshooting

Diagnosis	Counter-measures



∗ 1: If any junction connector is provided between the connector on the indoor unit PC board and the fan motor, ensure that the junction connector is properly connected as well.

∗ 2: Resistance measurement points and acceptance criteria



Acceptance criteria

Measurement Point	Criteria
FG—GND	Not less than 1MΩ
Vsp—GND	Not less than 100kΩ
Vcc—GND	Not less than 100Ω
Vdc—GND	Not less than 100kΩ

DRAFT

Remote Controller Display

A6

Indoor Unit Fan Motor Lock

1 Applicable Models

Indoor unit
FXYDP

2 Method for Detecting Malfunction

Detect through no revolution detect signal output from the fan motor.

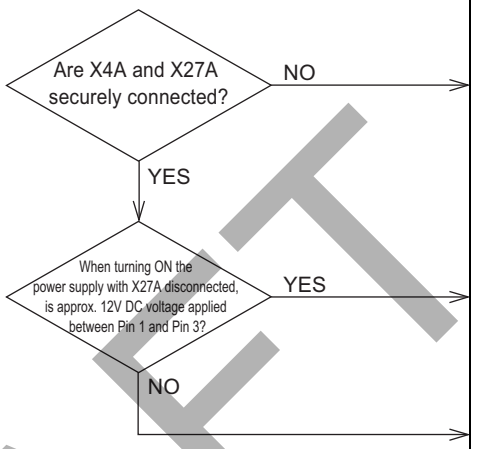
3 Conditions for Determining Malfunction

When fan revolutions cannot be detected even when output voltage to the fan reaches its maximum

4 Supposed Causes

- Faulty indoor unit fan motor
- Wiring disconnection
- Loose connection

5 Troubleshooting

Diagnosis	Counter-measures
	Properly connect the connectors. (Check for any loose connection and wiring disconnection of the connectors as well.) Check for the wiring systems of the indoor unit fan motor and other motors. Replace the indoor unit PC board.

DRAFT

Remote Controller Display

A6

Indoor Unit Fan Motor Lock

1 Applicable Models

Indoor unit
FXYHP160MA
FXYMP71AA to 160AA

2 Method for Detecting Malfunction

① Detect by the value of current flowing through the fan PC board.
② Detect by revolutions read by the fan motor revolution counter.
③ Detect by a position signal outputted from the fan motor.
④ Detect by the value of current flowing through the fan PC board when the fan motor starts up.

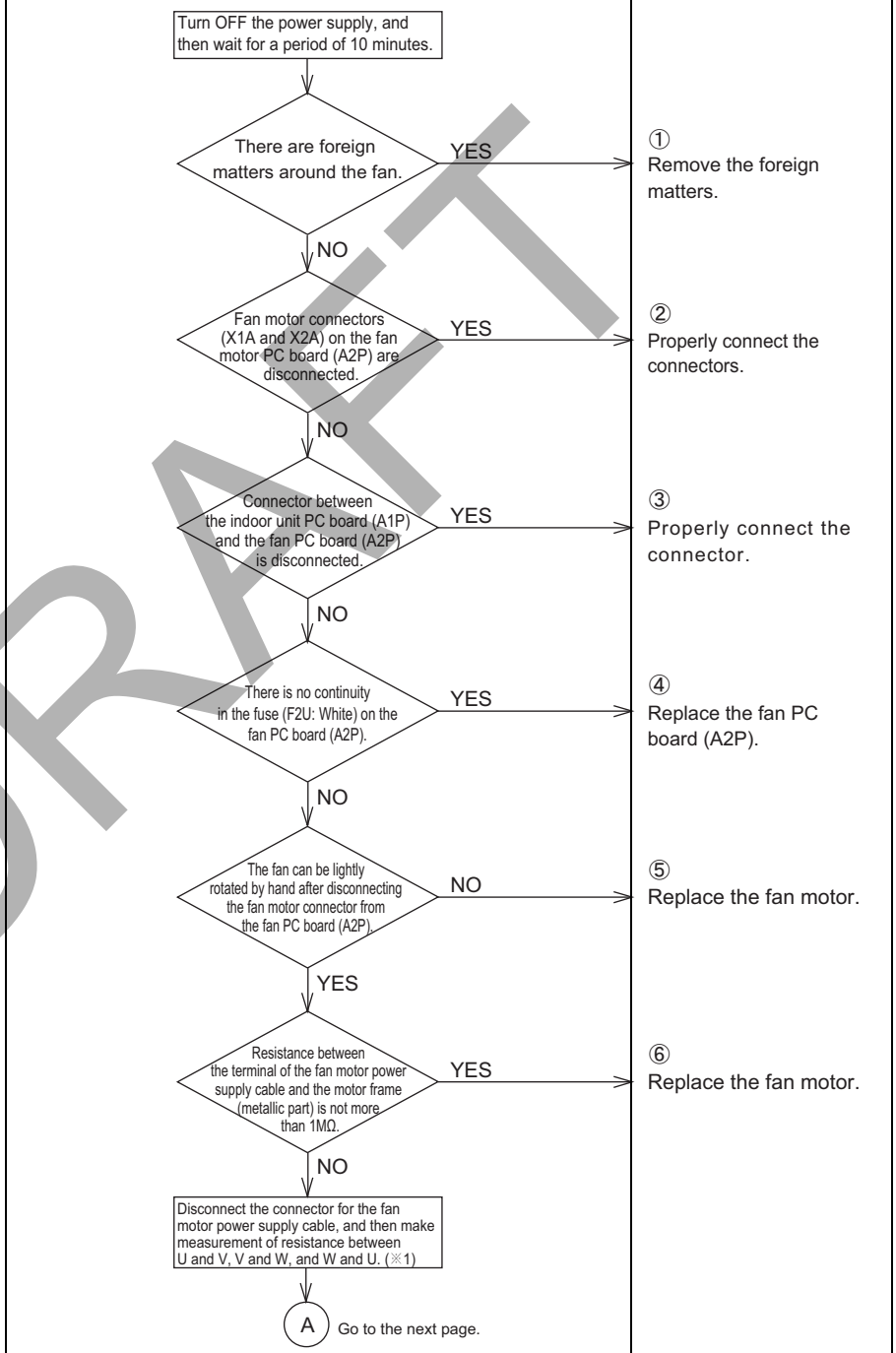
3 Conditions for Determining Malfunction

① When overcurrent flows
② When the fan rotates at the number of revolutions less than that specified for a period of 6 seconds
③ When rotor displacement continues for a period of 5 seconds or more
④ When overcurrent flows

4 Supposed Causes

① Foreign matters entangled in the fan
② Disconnection of fan motor connectors (X1A and X2A)
③ Disconnection of connector between the indoor unit PC board (A1P) and the fan PC board (A2P)
④ Faulty fan PC board (A2P)
⑤ Faulty fan motor

5 Troubleshooting



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures

From the previous page (A)

Resistance among U, V, and W phases has lost balance or a short circuit has been established there.
- YES → ⑤ Replace the fan motor.
- NO →

Disconnect the signal cable connector from the fan motor, and then check resistance. (※2)

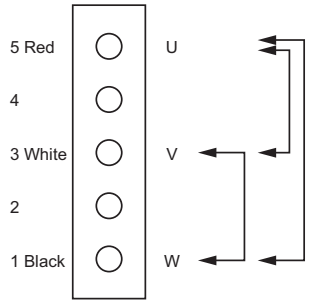
Short circuit has been established between Vcc and GND, and between Hw, Hv, and Hu and GND.
- YES → ⑤ Replace the fan motor.
- NO →

Turn ON the power supply.

HAP lamp on the indoor unit PC board (A1P) blinks, but that on the fan PC board (A2P) does not blink.
- YES → ② Replace the fan PC board (A2P).
- NO → ⑤ Replace the fan motor.

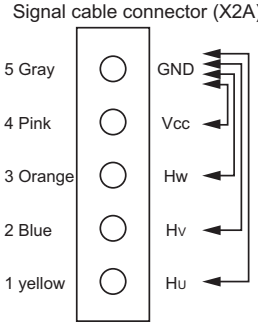
※1. Measurement at the power supply cable connector
Disconnect the connector X1A from the fan PC board (A2P), and then make measurement of resistance between U and V, V and W, and W and U of the connector (5 cores) on the motor side to check whether resistance between individual phases is in balance (within the range of ±20%).

Power supply cable connector (X1A)



※2. Measurement at the signal cable connector
Disconnect the connector X2A, and then make measurement of resistance between Vcc and GND, and between Hw, Hv, and Hu and GND.

Signal cable connector (X2A)



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Remote Controller Display

A6

Indoor Unit Fan Motor Overload, Overcurrent, Lock

1 Applicable Models

Indoor unit
FXYMP224M and 280M

2 Method for Detecting Malfunction

Detect through turning-OFF of different power supply for the fan.

3 Conditions for Determining Malfunction

When it is not detected during operation that different power supply for the indoor unit fan turns ON

4 Supposed Causes

- Faulty power supply for the indoor unit fan motor
- Clogged drain piping
- Activation of indoor unit fan protection device
- Loose connection of fan wiring system

5 Troubleshooting

Diagnosis	Counter-measures
Is the power supply cable for the indoor unit fan properly connected? — NO	Properly connect the cable.
YES → Restart the system operating.	
Does the fan motor normally operate? — YES	The indoor unit fan motor is considered to have stopped operating due to overload, overcurrent, or lock.
NO	Replace the indoor unit PC board.

DRAFT

Remote Controller Display

A7

Malfunction of Swing Flap Motor

1 Applicable Models

Indoor unit
FXYCP, FXYUP

2 Method for Detecting Malfunction

Detect by the use of turning ON and OFF of limit switch when the motor starts rotating.

3 Conditions for Determining Malfunction

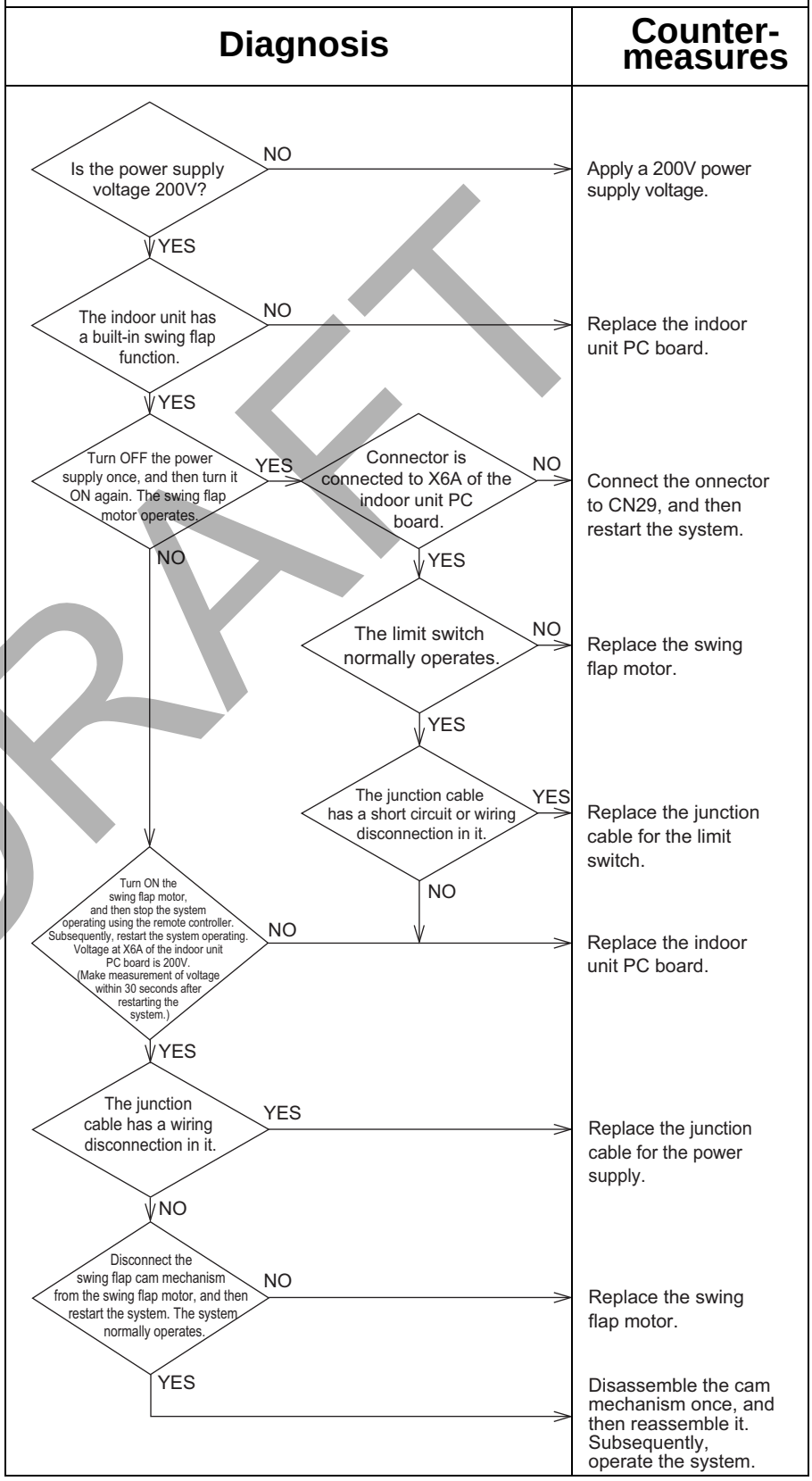
When the positioning limit switch cannot switch between ON and OFF even if power is applied to the swing flap motor for a given period of time (approximately 30 seconds)

★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty swing flap motor
- Faulty junction cable (between power supply and limit switch)
- Faulty swing flap cam mechanism
- Faulty indoor unit PC board

5 Troubleshooting



DRAFT

Remote Controller Display

A8

Abnormal Power Supply Voltage

1 Applicable Models

Indoor unit
FXYHP160MA
FXYMP45AA to 160aa

2 Method for Detecting Malfunction

Detect by voltage inputted in the fan motor.

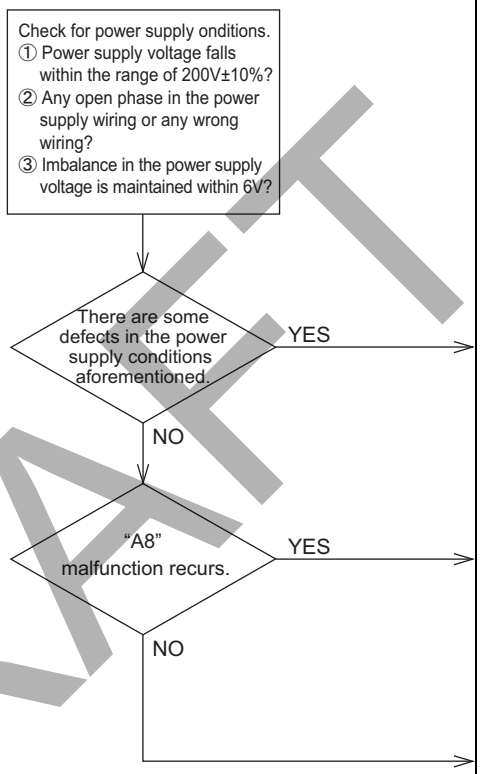
3 Conditions for Determining Malfunction

When voltage inputted in the fan motor falls below 150V or exceeds 386V

4 Supposed Causes

① Abnormal power supply voltage
② Faulty connection of signal cable
③ Wiring problem
④ Momentary power failure, etc.

5 Troubleshooting

Diagnosis	Counter-measures
	①② Correct the defects. ③ Check and correct wirings. ④ The malfunction is considered to have resulted from external factors, including a voltage drop or momentary power failure.

DRAFT

Remote Controller Display

A9

Malfunction of electronic expansion valve coil and dust caught

1 Applicable Models

Indoor unit
FXYFP28B to 160B
FXYFP28MC to 160MC

2 Method for Detecting Malfunction

- Use a microcontroller to check for the conditions of the electronic expansion valve coil.
- Use a microcontroller to check whether dust has got caught in the electronic expansion valve body.

3 Conditions for Determining Malfunction

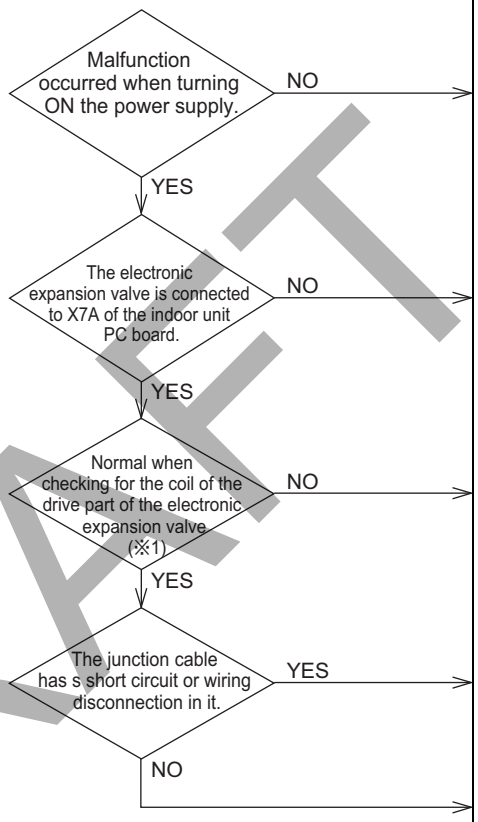
- When power input in the pin of the electronic expansion valve coil is not normal during the initialization of the microcontroller
- When the system comes to either of the following states while it stops operating:
  - Suction air temperature (R1T) - Heat exchanger liquid pipe temperature (R2T) > 8°C
  - Heat exchanger liquid pipe temperature (R2T) < A given temperature

4 Supposed Causes

- Faulty drive part of electronic expansion valve
- Faulty indoor unit PC board
- Faulty junction cable

5 Troubleshooting

Diagnosis



Counter-measures

Replace the electronic expansion valve.

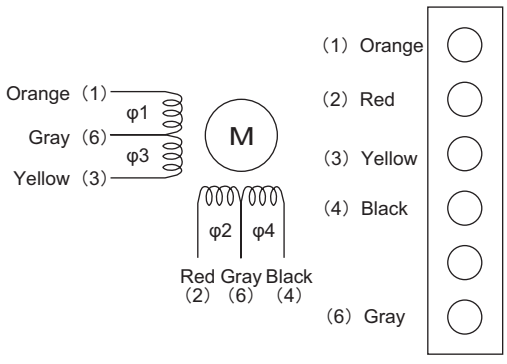
Connect the valve to X7A. Subsequently, turn OFF the power supply once, and then turn it ON again to restart the system operating.

Replace the electronic expansion valve coil.

Replace the junction cable.

If the malfunction cannot be solved even by turning OFF the power supply once, and then turning it ON again, and subsequently restarting the system operating, replace the indoor unit PC board.

※1: Method for checking for the coil of the drive part of the electronic expansion valve
Disconnect the connector (X7A) for the electronic expansion valve from the indoor unit PC board, and then make measurement of resistance and continuity check between the connector pins to make judgment.



The following conditions are normal:
①No continuity between (1) and (2)
②Resistance between (1) and (3) is approximately 300Ω.
③Resistance between (1) and (6) is approximately 150Ω.
④Resistance between (2) and (4) is approximately 300Ω.
⑤Resistance between (2) and (6) is approximately 150Ω.

DRAFT

Remote Controller Display

A9

Malfunction of Electronic Expansion Valve Coil

1 Applicable Models

Indoor unit
Any models other than FXYFP

2 Method for Detecting Malfunction

Use a microcontroller to check for the conditions of the electronic expansion valve coil.

3 Conditions for Determining Malfunction

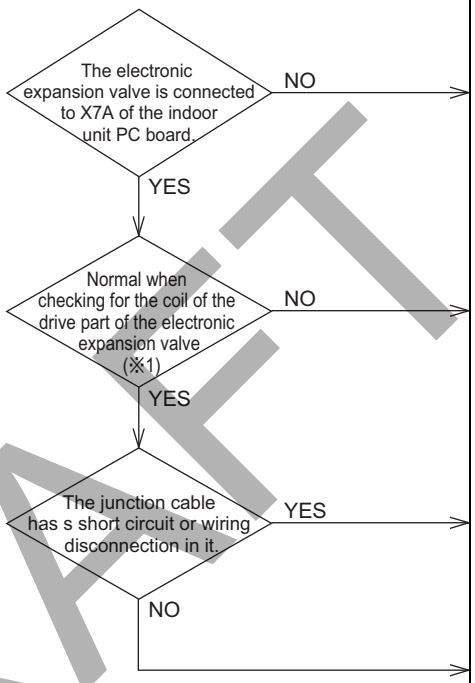
When power input in the pin of the electronic expansion valve coil is not normal during the initialization of the microcontroller

4 Supposed Causes

- Faulty drive part of electronic expansion valve
- Faulty indoor unit PC board
- Faulty junction cable

5 Troubleshooting

Diagnosis



Counter-measures

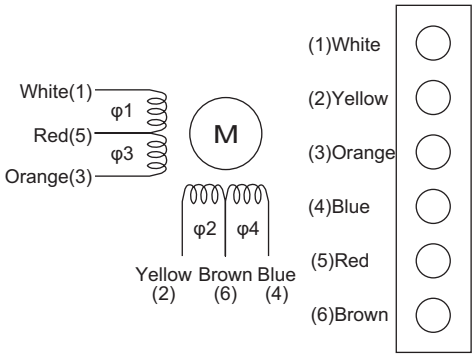
Connect the valve to X7A. Subsequently, turn OFF the power supply once, and then turn it ON again to restart the system operating.

Replace the electronic expansion valve coil.

Replace the junction cable.

If the malfunction cannot be solved even by turning OFF the power supply once, and then turning it ON again, and subsequently restarting the system operating, replace the indoor unit PC board.

※1: Method for checking for the coil of the drive part of the electronic expansion valve
Disconnect the connector (X7A) for the electronic expansion valve from the indoor unit PC board, and then make measurement of resistance and continuity check between the connector pins to make judgment.



The following conditions are normal:
①No continuity between (1) and (2)
②Resistance between (1) and (3) is approximately 300Ω.
③Resistance between (1) and (5) is approximately 150Ω.
④Resistance between (2) and (4) is approximately 300Ω.
⑤Resistance between (2) and (6) is approximately 150Ω.

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Remote Controller Display

AF

Malfunction of Dehumidifier Unit

1 Applicable Models

Indoor unit
Any models other than FVYCP140M and FXYAP

2 Method for Detecting Malfunction

Detect water leaks from the dehumidifier unit through turning ON and OFF of the float switch while the compressor stops running.

3 Conditions for Determining Malfunction

When the float switch turns OFF from ON while the compressor stops running
★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Water leaks from the dehumidifier unit (option)
- Defective installation of drain piping (e.g. inverse taper)
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
There are some defects in field drain piping installation, including inverse tape. — YES	Modify the drain piping.
NO → Indoor unit has a built-in dehumidifier unit (option). — YES	Check for any water leaks from the dehumidifier unit.
NO	Faulty indoor unit PC board

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Remote Controller Display

AH

Malfunction of Auto Clean Panel

1 Applicable Models

Indoor unit
FXYFP28B to 160B
[with Eco auto clean panel (BYCP160BGF) installed]
FXYFP28MC to 160MC
[with Auto clean panel (BYCP160KGF/KAGF)]

2 Method for Detecting Malfunction

Detect by inputting a malfunction signal outputted from the auto clean panel.

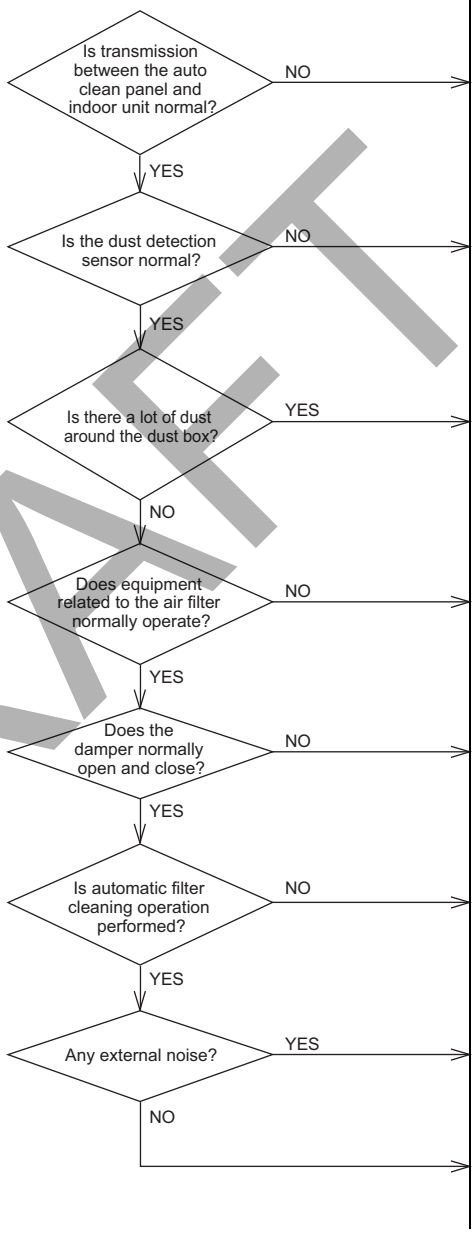
3 Conditions for Determining Malfunction

When any of the following conditions is met during operation:
① Failure of transmission with the auto clean panel
② Short circuit in the dust detection sensor (on the light receiver side)
③ Cumulative fan operation hours from the display of the duct collection sign exceeds a specified period of time.
④ The limit switch does not detect during the air filter is rotating or the air filter does not rotate.
⑤ The limit switch does not detect when the damper is open (or closed), or the damper does not operate.
⑥ Automatic filter cleaning operation is not completed although a given period of time has elapsed.
⑦ Automatic filter cleaning operation is not initiated although a given period of time has elapsed.

4 Supposed Causes

① Transmission error (between auto clean panel and indoor unit)
② Malfunction of dust detection sensor
③ Dust collection sign
④ Abnormal air filter rotation
⑤ Abnormal damper opening/closing
⑥ Automatic filter cleaning operation error
⑦ Disabled startup of automatic filter cleaning operation

5 Troubleshooting



∗1 to ∗7
Operating the remote controller (BRC1E3) makes it possible to confirm detailed malfunction codes (4 digits). (For the confirmation procedure, refer to information on page 170.)

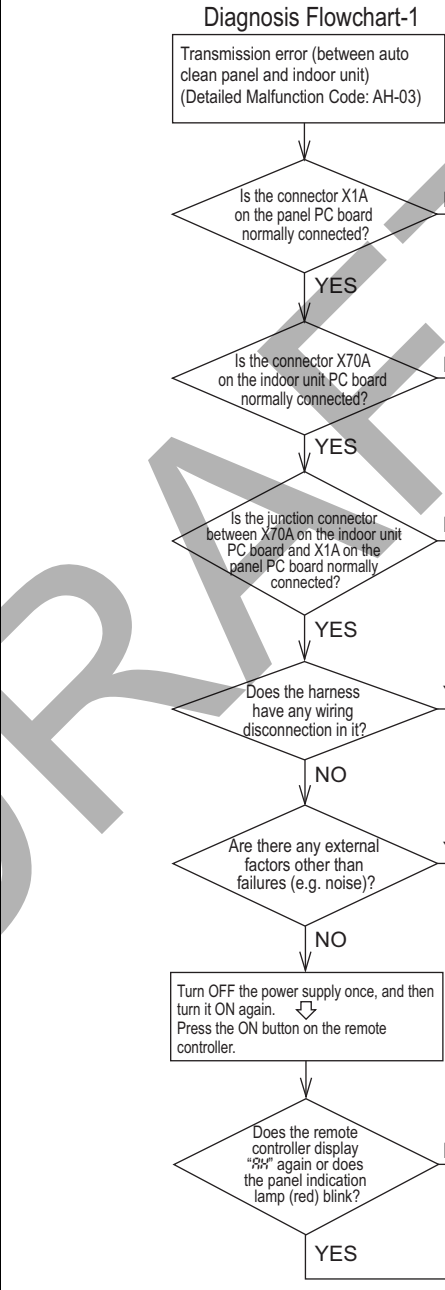
↓

Upon completion of confirming the detailed malfunction code, follow the Diagnosis Flowchart ∗1 to ∗7 according to the table shown to the right.

Detailed Malfuncton Code	Diagnosis
AH-03	Diagnosis Flowchart-1 (page 201)
AH-04	Diagnosis Flowchart-2 (page 202)
AH-05	Diagnosis Flowchart-3 (page 203)
AH-06	Diagnosis Flowchart-4 (page 204)
AH-07	Diagnosis Flowchart-5 (page 206)
AH-08	Diagnosis Flowchart-6 (page 208)
AH-09	Diagnosis Flowchart-7 (page 209)

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5 Troubleshooting

Diagnosis	Counter-measures
	●The malfunction is considered to have resulted from other causes. Check for all items in the order of AH−05→−04→−06→−07→−08→−09. ●Check for the panel PC board and the indoor unit PC board.

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5 Troubleshooting

Diagnosis	Counter-measures
Diagnosis Flowchart-2	
Malfunction of dust detection sensor (Detailed Malfunction Code: AH-04)	
Is the connector X1A on the panel PC board normally connected? NO	Properly connect the connector.
YES	
Are the connectors X18A and X19A on the infrared sensor PC board normally connected? NO	Properly connect the connector.
YES	
Does the harness have any short circuit in it? YES	Replace the harness.
NO	
Are there any external factors other than failures (e.g. noise)? YES	Eliminate the external factors.
NO	
Turn OFF the power supply once, and then turn it ON again. ⇩ Press the ON button on the remote controller.	
Does the remote controller display "88" again or does the panel indication lamp (red) blink? NO	Normal operation
YES	● The malfunction is considered to have resulted from other causes. Check for all items in the order of AH-05→-03→-6→-07→-08→-09. ● Check for the panel PC board and the indoor unit PC board.

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5 Troubleshooting

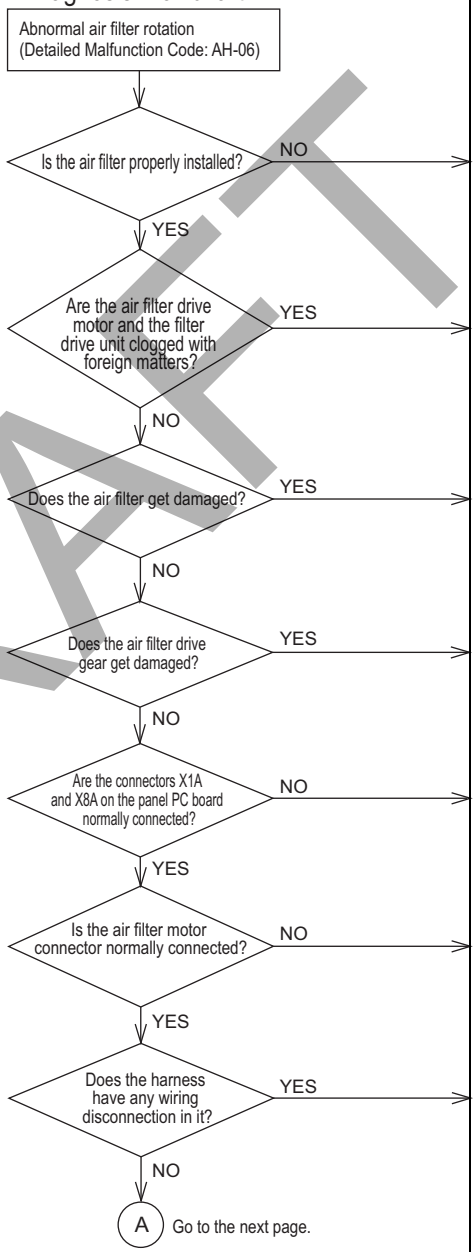
Diagnosis	Counter-measures
Diagnosis Flowchart-3	
Dust collection sign (Detailed Malfunction Code: AH-05)	
Is the dust collection port packed with dust? YES	Remove dust from the dust collection port.
NO	
Is the brush unit packed with dust? YES	Remove dust from the brush unit.
NO	
Is the S-shaped pipe clogged up with dust? YES	Remove dust from the S-shaped pipe.
NO	
Is there a lot of dust in the dust box? YES	Remove dust from the dust box. (Note: This is not trouble.)
NO	
Are the light emitting and receiving parts of the infrared sensor stained? YES	Clean the light emitting and receiving parts of the infrared unit.
NO	
Are the connectors X18A and X19A on the infrared sensor PC board normally connected? NO	Properly connect the connector.
YES	
Does the harness have any short circuit in it? YES	Replace the harness.
NO	
Are there any external factors other than failures (e.g. noise)? YES	Eliminate the external factors.
NO	
Turn OFF the power supply once, and then turn it ON again. ⇩ Press the ON button on the remote controller.	
	Normal operation
Does the remote controller display "R4" again or does the panel indication lamp (red) blink? NO	● The malfunction is considered to have resulted from other causes. Check for all items in the order of AH-05→-03→-06→-07→-08→-09. ● Check for the panel PC board and the indoor unit PC board.
YES	

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5 Troubleshooting

Diagnosis	Counter-measures

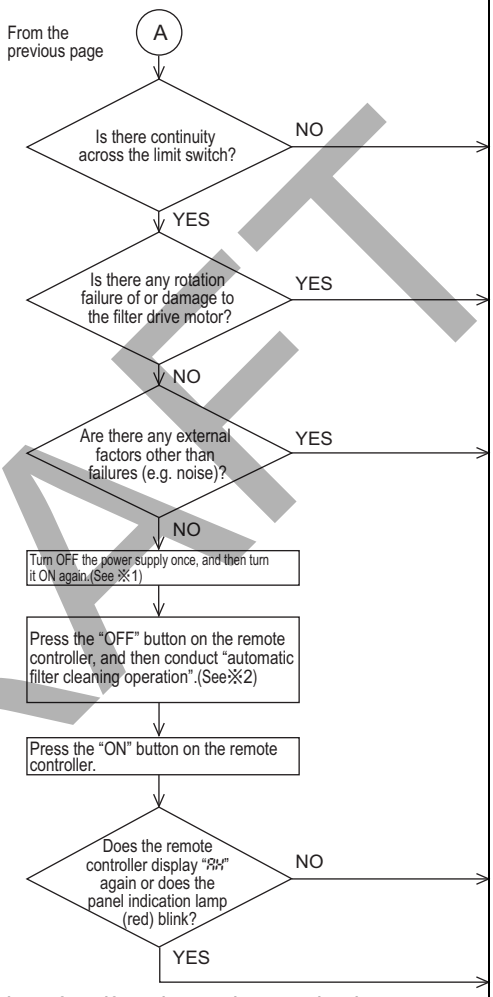
Diagnosis Flowchart-4



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5 Troubleshooting

Diagnosis



Counter-measures

Replace the limit switch.

Replace the filter drive motor.

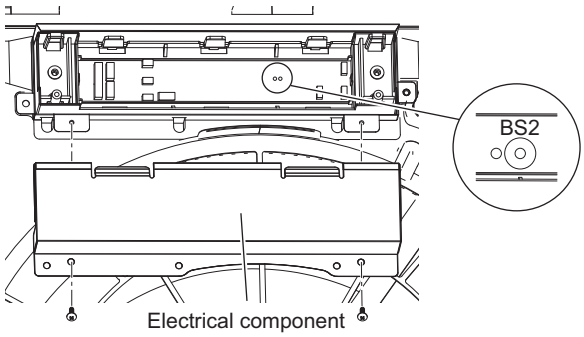
Eliminate the external factors.

Normal operation

●The malfunction is considered to have resulted from other causes. Check for all items in the order of AH-05→-03→-04→-07→-08→-09.

●Check for the panel PC board and the indoor unit PC board.

∗1. The display of malfunction code can also be temporarily reset by pressing the pushbutton switch (BS2) on the auto clean panel control PC board.

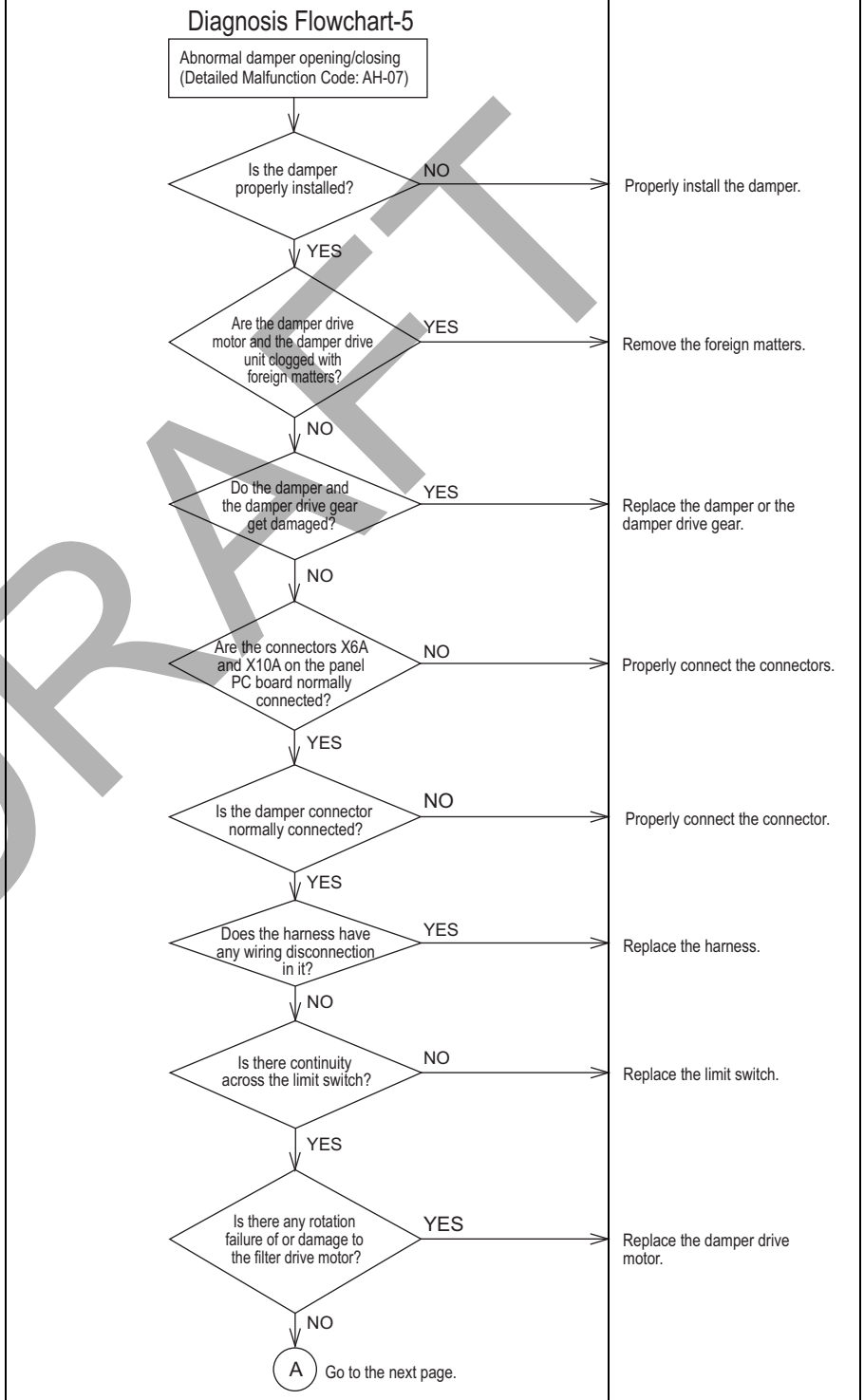


∗2. For the procedure for giving an instruction to conduct automatic filter cleaning operation, refer to information on page 147.

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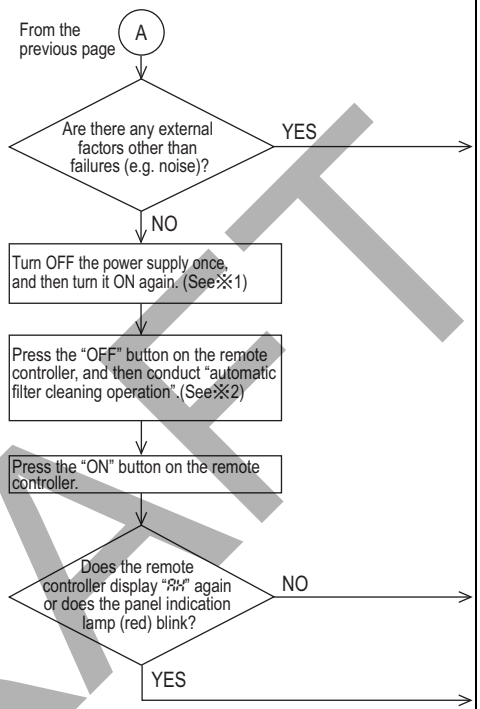
5 Troubleshooting

Diagnosis	Counter-measures



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5 Troubleshooting

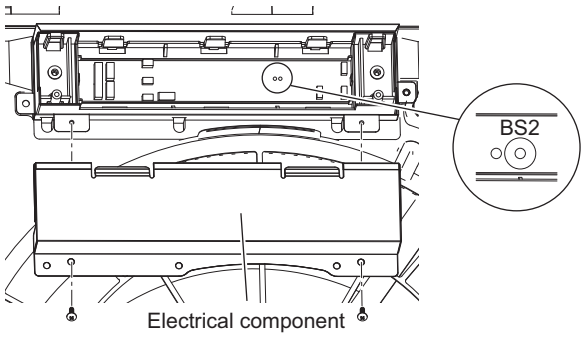
Diagnosis	Counter-measures
	

Eliminate the external factors.

Normal operation

- The malfunction is considered to have resulted from other causes. Check for all items in the order of AH-05→-03→-04→-06→-08→-09.
- Check for the panel PC board and the indoor unit PC board.

∗1. The display of malfunction code can also be temporarily reset by pressing the pushbutton switch (BS2) on the auto clean panel control PC board.



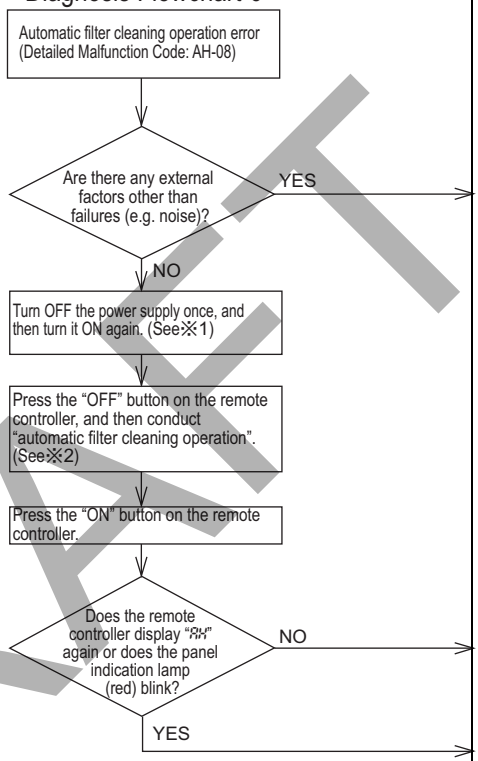
∗2. For the procedure for giving an instruction to conduct automatic filter cleaning operation, refer to information on page 147.

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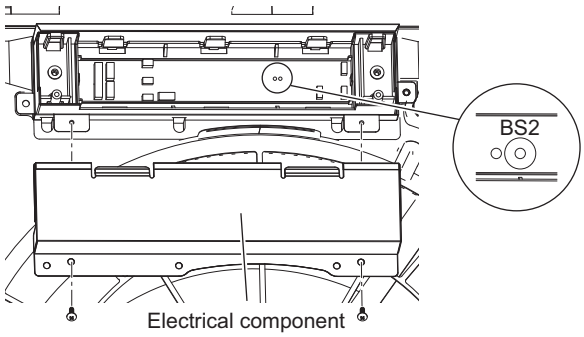
5 Troubleshooting

Diagnosis	Counter-measures

Diagnosis Flowchart-6



∗1. The display of malfunction code can also be temporarily reset by pressing the pushbutton switch (BS2) on the auto clean panel control PC board.



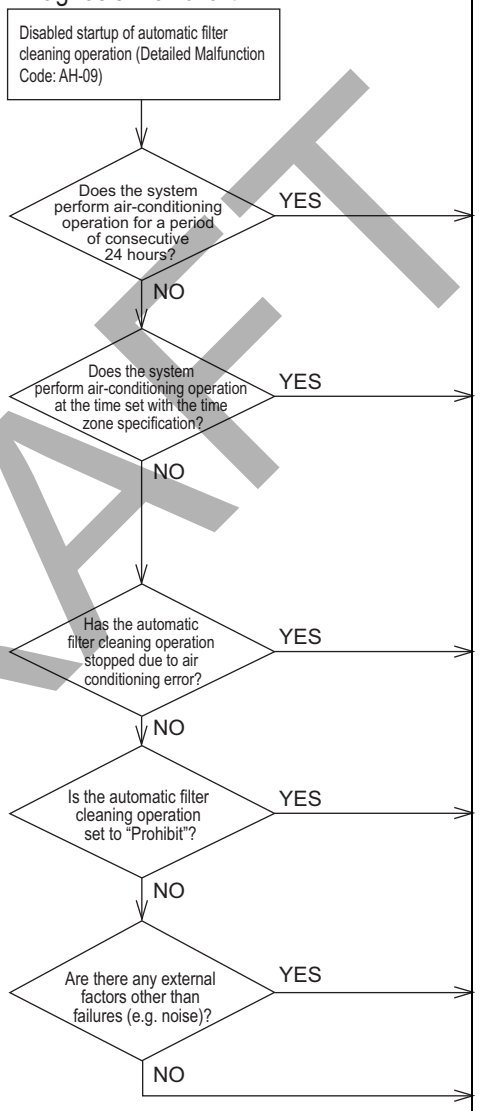
∗2. For the procedure for giving an instruction to conduct automatic filter cleaning operation, refer to information on page 147.

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5 Troubleshooting

Diagnosis

Diagnosis Flowchart-7



*1. If automatic filter cleaning operation mode is set to "Specified time zone mode", conduct automatic filter cleaning operation following the procedure shown below to clear the display of malfunction code.
If the mode is not set to "Specified time zone mode", the system will automatically conduct automatic filter cleaning operation after stopping air conditioning operation. In this case, the following operation is not required.

① Display "Main Menu" screen on the remote controller ==> Select "Filter Auto Cleaning Setting" ==> Select "Auto Cleaning Time Zone Setting" ==> Check for the set time zone. (Example: 00:00 - 03:00)

② Display "Main Menu" screen on the remote controller ==> Select "Time Setting" ==> Set the current time to 1 minute earlier than the set start time that was checked in Step (1).
(Example: If the set time zone is "00:00 - 03:00," set the current time 1 minute earlier than 00:00, i.e., set to 23:59.)

③)The system conducts automatic filter cleaning operation after a lapse of approximately 1 minute. (At this time, the malfunction code "AH" is cleared.)

④ Ensure that the automatic filter cleaning operation is completed, and then reset the time changed in Step (2) to the regular time.

Counter-measures

Stop air conditioning operation, and then conduct automatic filter cleaning operation.(See ※1)
(Provide a time Zone to stop air conditioning operation for a period of approximately 20 minutes on a daily basis.)

Stop air conditioning operation, and then conduct automatic filter cleaning operation.(See ※1)
(Provide a time Zone to stop air conditioning operation for a period of approximately 20 minutes or make setting of automatic filter cleaning operation mode to time at which air conditioning operation is disabled.)

Identify the location of the error, and then eliminate the causes. Subsequently, stop air conditioning operation, and then conduct automatic filter cleaning operation.(See ※1)

Set “Auto Filter Clean Prohibit” in the field setting menu on the remote controller to “Prohibit/Disable”. Subsequently, stop air conditioning operation, and then conduct automatic filter cleaning operation.(See ※1)

Eliminate the external factors.

- The malfunction is considered to have resulted from other causes. Check for all items in the order of AH-03→-04→-05→-06→-07→-08.
- Check for the panel PC board and the indoor unit PC board.

DRAFT

Remote Controller Display

AH

Malfunction of Air Purifier

1 Applicable Models

Indoor unit
FXYFP28B to 160B
[with Air Purifier (BAEP55B80/160) installed]
FXYFP28MC to 160MC
[with Air Purifier (BAEP55K80/160) installed]

2 Method for Detecting Malfunction

Detect by inputting a malfunction signal outputted from the air purifier.

* Even if a malfunction is detected, the system will only stop the air purifier operating without stopping air conditioning operation.

3 Conditions for Determining Malfunction

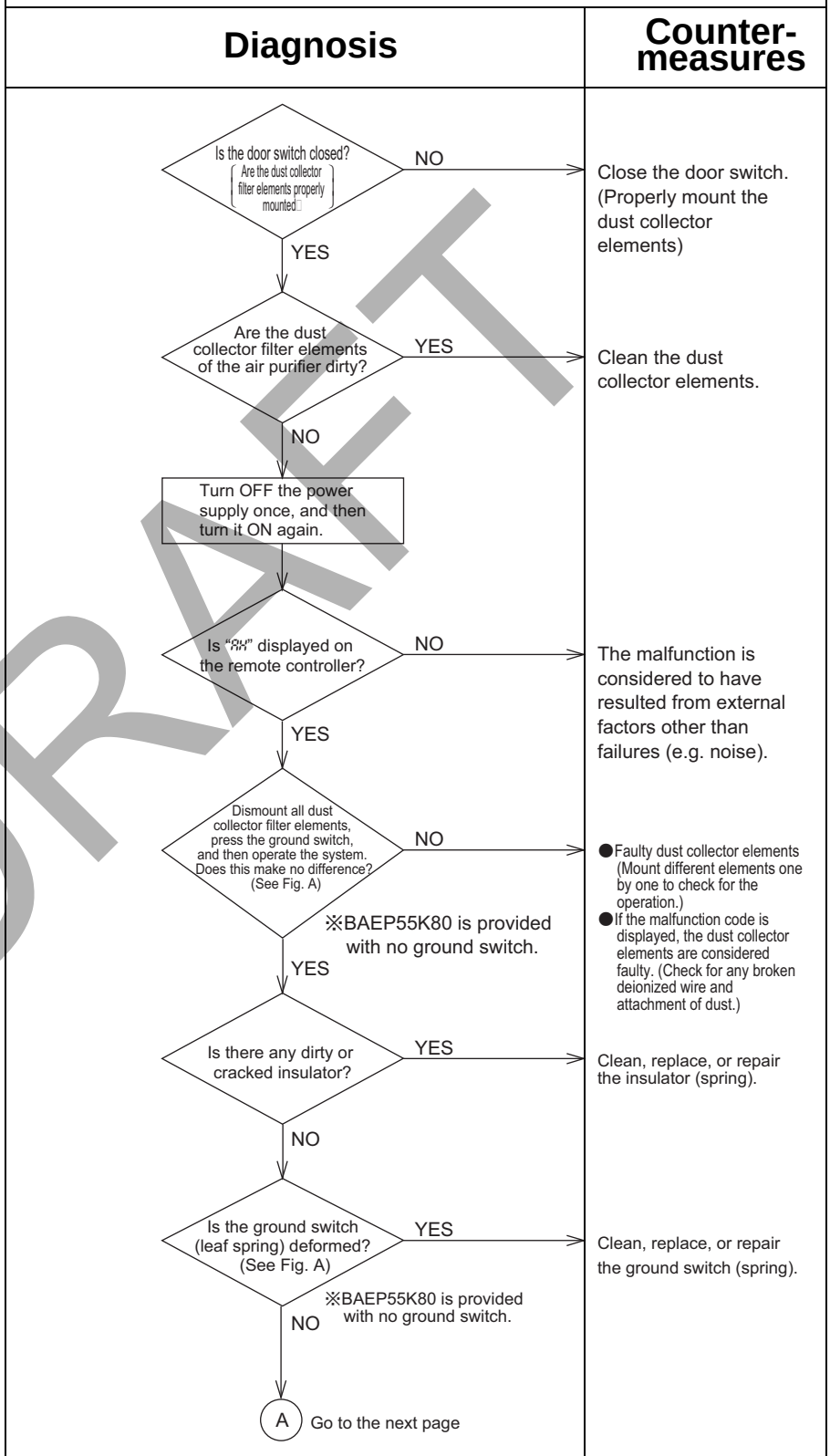
When the system is in operation and
(1) the air purifier transmits a discharge pulse 25 times; or
(2) the air purifier outputs no operation signal for a period of 20 seconds.

★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty door switch
- Dirty air purifier filter
- Faulty air purifier wiring
- Faulty air purifier PC board
- Faulty dust collector filter elements

5 Troubleshooting

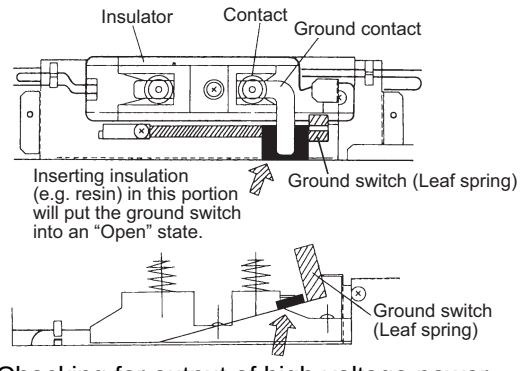


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5 Troubleshooting

Diagnosis	Counter-measures
From the previous page (A) → Is the power supply voltage 200V±20V?	NO → Check and correct the power supply voltage.
YES → Are the high-voltage power supply connectors CN1, CN2, and CN3 properly connected? Are there any connectors and pins disconnected?	NO → Correct the connection of the connectors.
YES → Is there continuity across the high-voltage power supply fuse?	NO → Replace the fuse.
YES → Check for voltage on the secondary side of the transformer (CN4). Is the voltage between or equal to 16V and 33VAC?	NO → Replace the transformer.
YES → Is the signal line voltage normal? (CN2)	NO → Replace the high-voltage power supply.
YES	Check for the control PC board on the air conditioner side.

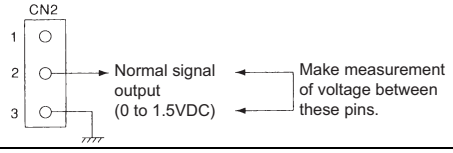
Fig. A



■ Checking for output of high-voltage power supply unit

(1)Checking for connection of connectors

(2)Checking for output of 0 to 1.5VDC signal



DRAFT

Remote Controller Display

AH

Malfunction of Deodorizing Unit

1 Applicable Models

Indoor unit
FXYFP28B to 160B
[with Streamer Deodorizing Unit (BAPWP55B160) installed]
FXYFP28MC to 160MC
[with Streamer Deodorizing Unit (BAPWP55H160) installed]

2 Method for Detecting Malfunction

Detect by inputting a malfunction signal outputted from the deodorizing unit.

* Even if a malfunction is detected, the system will only stop the deodorizing unit operating without stopping air conditioning operation.

3 Conditions for Determining Malfunction

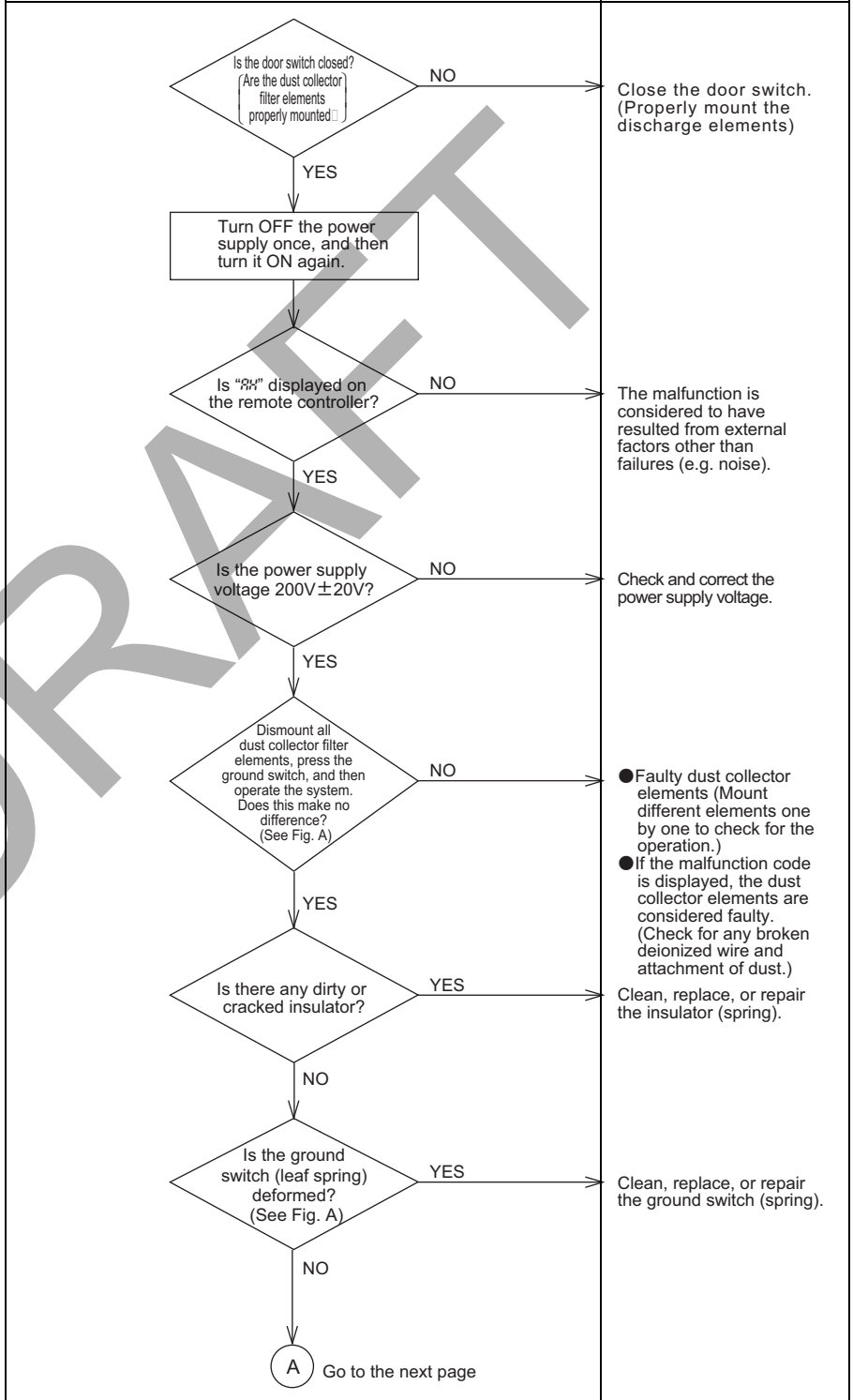
When the system is in operation and the deodorizing unit outputs no operation signal for a period of 20 seconds

★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty deodorizing unit PC board
- Faulty deodorizing unit wiring
- Faulty door switch

5 Troubleshooting



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5 Troubleshooting

Diagnosis	Counter-measures

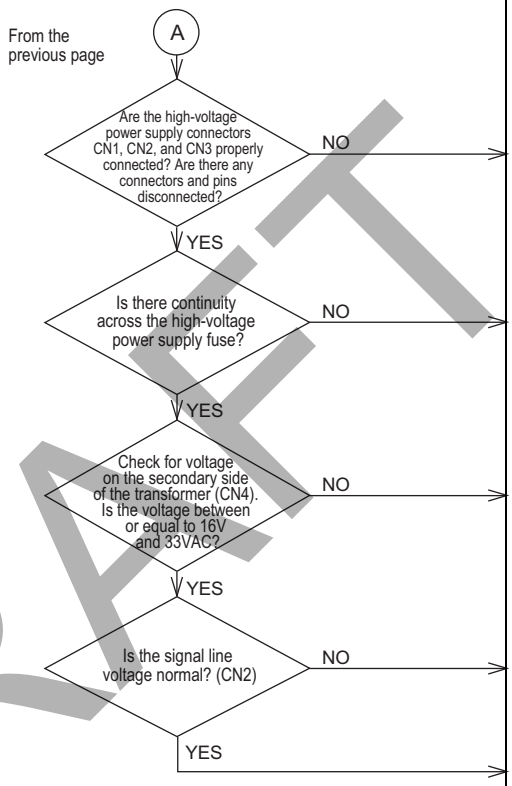
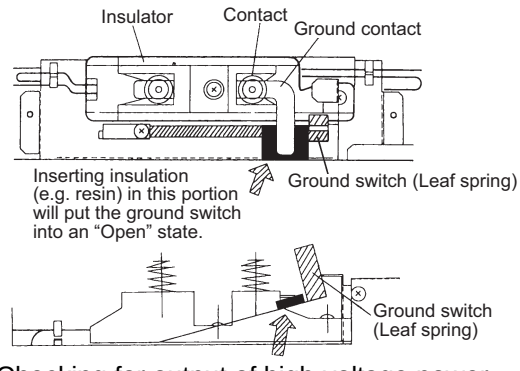


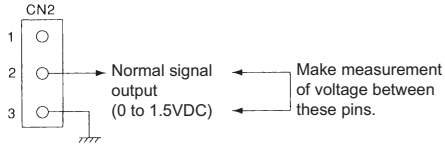
Fig. A



■ Checking for output of high-voltage power supply unit

(1)Checking for connection of connectors

(2)Checking for output of 0 to 1.5VDC signal



DRAFT

Remote Controller Display

RH

Malfunction of Air Purifier

1 Applicable Models

Indoor unit
FXYSP22M to 140M
FXYFP40MC to 160MC
FXYMP45A to 160A
[with Air Purifier (BAEP55H80/160) or Streamer Discharge Unit (BAPWP55H160) installed]

2 Method for Detecting Malfunction

Detect by inputting a malfunction signal/discharge pulse signal outputted from the air purifier.

* Even if a malfunction is detected, the system will only stop the air purifier operating without stopping air conditioning operation.

3 Conditions for Determining Malfunction

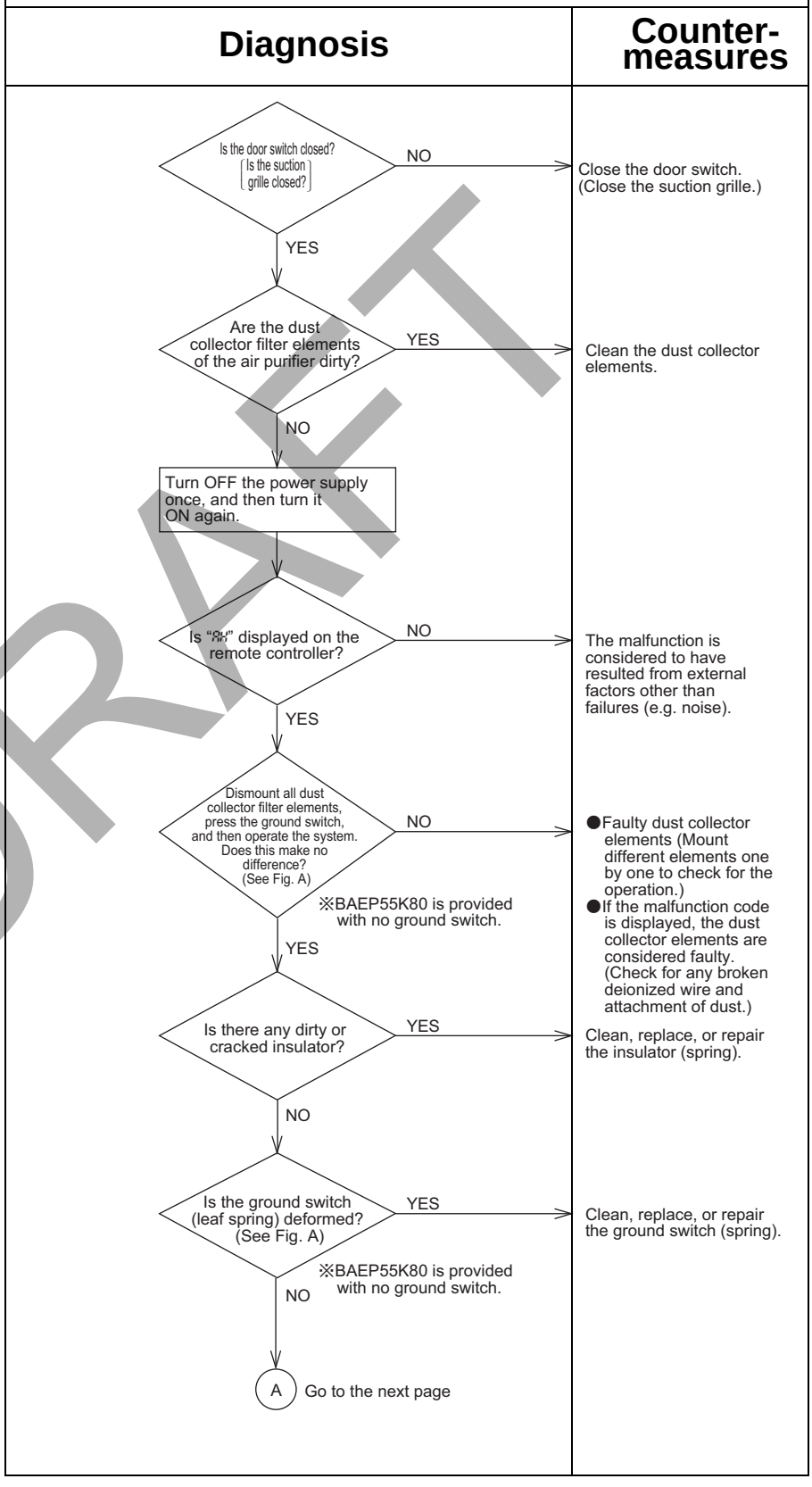
When the system is in operation and
(1) the air purifier transmits a discharge pulse 10 times; or
(2) the air purifier outputs no operation signal for a period of 20 seconds (only for the Multi Flow Type).

★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty air purifier
- Faulty air purifier wiring
- Faulty door switch
- Dirty air purifier filter

5 Troubleshooting

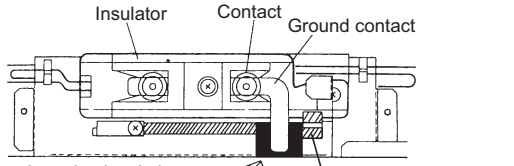


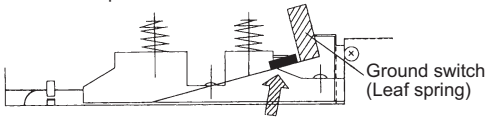
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5 Troubleshooting

Diagnosis	Counter-measures
From the previous page (A) → Is the power supply voltage 200V±20V?	
NO	Check and correct the power supply voltage.
YES → Are the high-voltage power supply connectors CN1, CN2, and CN3 properly connected? Are there any connectors and pins disconnected?	
NO	Correct the connection of the connectors.
YES → Is there continuity across the high-voltage power supply fuse?	
NO	Replace the fuse.
YES → Check for voltage on the secondary side of the transformer (CN4). Is the voltage between or equal to 16V and 33VAC?	
NO	Replace the transformer.
YES → Is the signal line voltage normal? (CN2)	
NO	Replace the high-voltage power supply.
YES	Check for the control PC board on the air conditioner side.

Fig. A

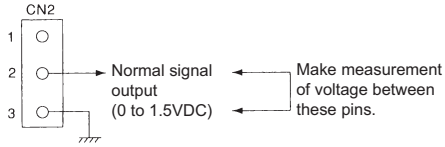




■ Checking for output of high-voltage power supply unit

(1)Checking for connection of connectors

(2)Checking for output of 0 to 1.5VDC signal



DRAFT

Remote Controller Display

AH

Malfunction of Air Purifier

1 Applicable Models

Indoor unit
FXYCP22M to 160M

2 Method for Detecting Malfunction

Detect by inputting a malfunction signal/discharge pulse signal outputted from the air purifier.

∗ Even if a malfunction is detected, the system will only stop the air purifier operating without stopping air conditioning operation.

3 Conditions for Determining Malfunction

When the system is in operation and

(1) the air purifier transmits a discharge pulse 10 times; or

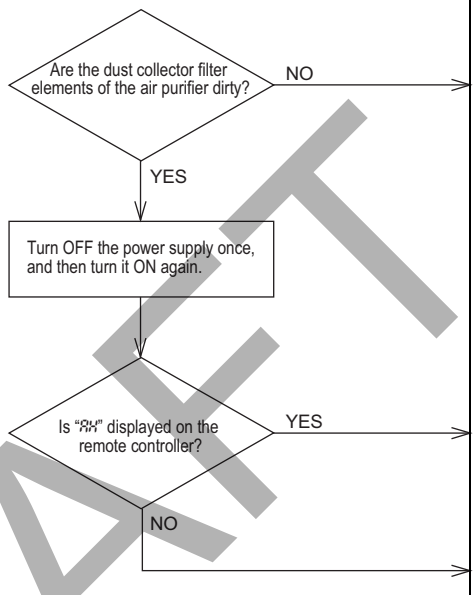
(2) the air purifier outputs no operation signal for a period of 20 seconds (only for the Multi Flow Type).

★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty air purifier
- Faulty air purifier wiring
- Faulty door switch
- Dirty air purifier filter

5 Troubleshooting

Diagnosis	Counter-measures
	

DRAFT

Remote Controller Display

A1

Indoor Unit Fan Motor Overload, Overcurrent, Lock

1 Applicable Models

Indoor unit
FXYAP, FXYDP, FXYFP, FXYHP, FXYUP

2 Method for Detecting Malfunction

Capacity is determined according to the resistance of the memory in the memory IC on the indoor unit PC board and the capacity setting adapter. Detect malfunctions by determining whether the resistance is normal or abnormal.

3 Conditions for Determining Malfunction

When the system is in operation and
(1) the capacity code is not saved in the PC board and the capacity setting adapter is not connected; or
(2) capacity that has nothing to do with the relevant model is set

4 Supposed Causes

- Neglect to mount the capacity setting adapter
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
The indoor unit PC board was replaced with a spare PC board. NO	Replace the indoor unit PC board.
YES → The model requires the capacity setting adapter to be mounted for the replacement of the PC board. NO	Replace the indoor unit PC board.
YES	Mount the capacity setting adapter.

DRAFT

Remote Controller Display

E1

Transmission Error (between Indoor Unit PC Board and Adapter PC Board)

1 Applicable Models

Indoor unit
FXYFP~B

2 Method for Detecting Malfunction

Check for the conditions of communication transmission between the indoor unit PC board (A1P) and the adapter PC board (A2P) using microcontroller.

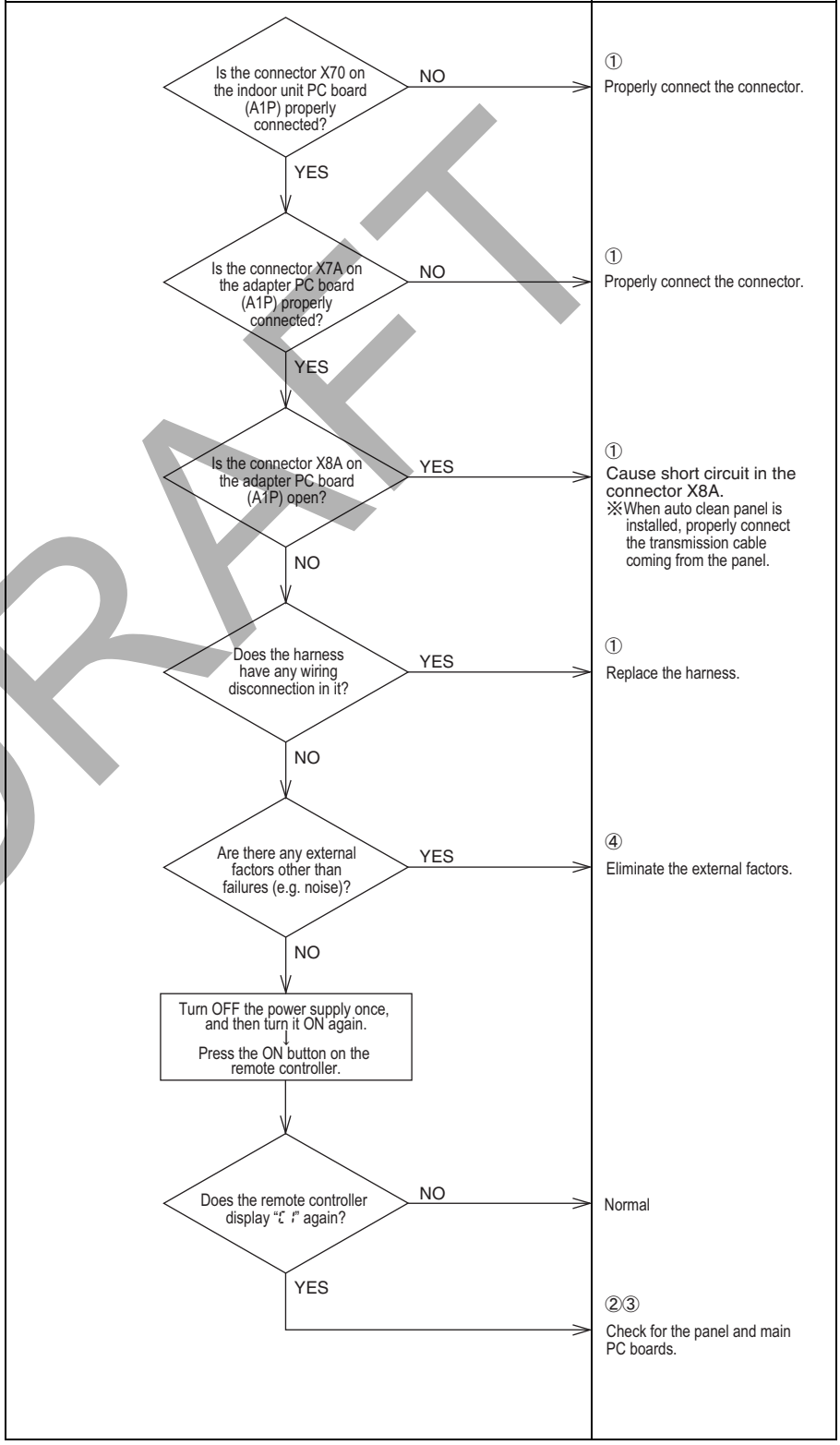
3 Conditions for Determining Malfunction

When communication transmission is ceased for a period of 15 seconds: After a lapse of 60 seconds, the malfunction code is displayed on the remote controller.

4 Supposed Causes

① Faulty connection of transmission connector between the indoor unit PC board (A1P) and the adapter PC board (A2P)
② Faulty indoor unit PC board (A1P)
③ Faulty adapter PC board (A2P)
④ External factors such as noise

5 Troubleshooting



DRAFT

Remote Controller Display

C1

Transmission Error (between Indoor Unit PC Board and Fan PC Board)

1 Applicable Models

Indoor unit
FXYHP160MA
FXYMP45AA to 160AA

2 Method for Detecting Malfunction

Check for the conditions of communication transmission between the indoor unit PC board (A1P) and the adapter PC board (A2P) using microcontroller.

3 Conditions for Determining Malfunction

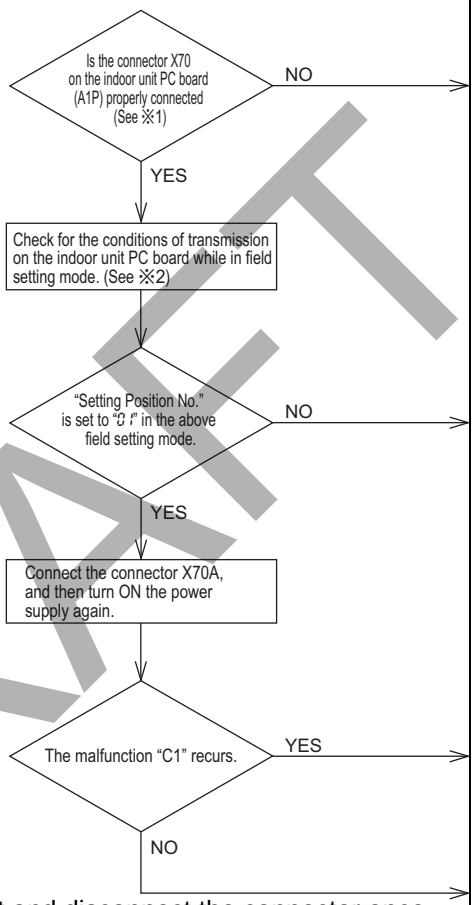
When normal communication transmission is ceased for a given period of time or longer

4 Supposed Causes

① Faulty connection of transmission connector between the indoor unit PC board (A1P) and the adapter PC board (A2P)
② Faulty indoor unit PC board (A1P)
③ Faulty adapter PC board (A2P)
④ External factors such as instantaneous power failure

5 Troubleshooting

Diagnosis



※1: Connect and disconnect the connector once to ensure that it is securely connected.

※2: Procedure for checking the transmission block of the indoor unit PC board

① Turn OFF the power supply, and then disconnect the connector X70A from the indoor unit PC board (A1P).
② Cause short circuit in the connector X70A.
③ Turn ON the power supply, and then ensure in field setting mode that the following number is displayed on the remote controller.
(Check: Setting Position No. for Setting Switch No. 21 of Mode No. 41?)

Judgment
- 01: Normal
- Any number other than 01: Transmission error on the indoor unit

★ After checking, turn OFF the power supply, reset short circuit in the connector X70A, and then connect the X70A to its original position.

Counter-measures

①
Properly connect the connector.
②
Replace the indoor unit PC board.
③
Replace the fan PC board (A2P).
④
Continue to operate the system. (The malfunction is considered to have resulted from causes such as instantaneous power failure.)

DRAFT

Remote Controller Display

C4 C5 C9

Malfunction of Indoor Unit Thermistor

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Detect malfunction according to temperature detected by thermistor.

3 Conditions for Determining Malfunction

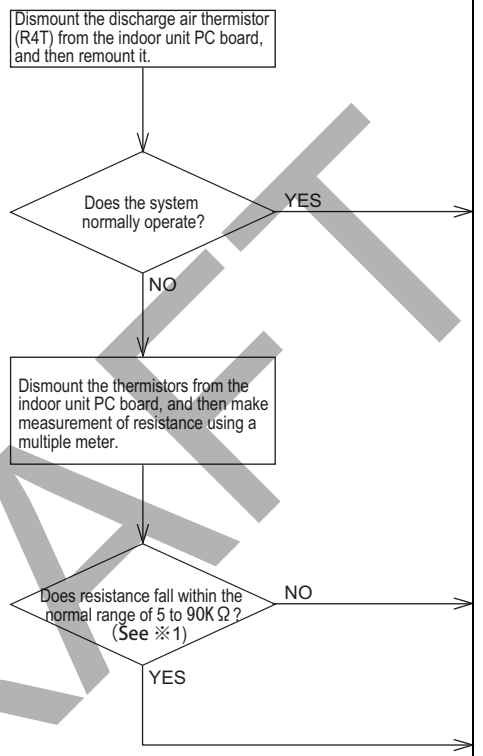
When the system is in operation and the relevant thermistor causes wiring disconnection or short circuit in it.

4 Supposed Causes

- Faulty thermistor connection
- Faulty thermistor
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis



※ 1: Malfunction codes and corresponding thermistors

Malfunction Code	Corresponding Thermistor	Electrical Symbol
C4	Heat exchanger liquid pipe thermistor	R2T
C5	Heat exchanger gas pipe thermistor	R3T
C9	Suction air thermistor	R1T

※ 2: For "Thermistor Temperature and Resistance Characteristics", refer to information on page 317.

Counter-measures

DRAFT

Remote Controller Display

C6

Indoor Unit Fan Motor Overload, Overcurrent, Lock

1 Applicable Models

Indoor unit
FXYMP45AA to 160AA

2 Method for Detecting Malfunction

Detect the conditions of communication transmission with the fan PC board (A2P) on the indoor unit PC board (A1P).

3 Conditions for Determining Malfunction

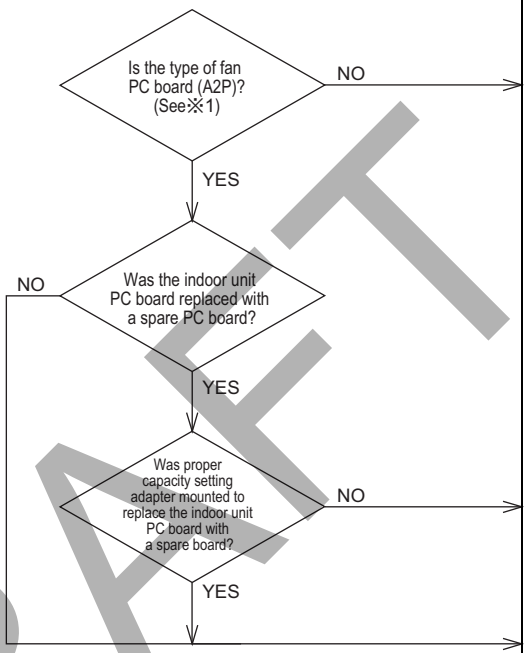
When communication data of the fan PC board (A2P) is determined to be incorrect

4 Supposed Causes

① Faulty fan PC board (A2P)
② Faulty connection of capacity setting adapter
③ Field setting error

5 Troubleshooting

Diagnosis



Counter-measures

① Replace with a correct fan PC board (A2P).

② Mount a correct capacity setting adapter.

③ Establish transmission between the indoor and outdoor units, and then restart the system operating to carry out diagnosis again.

※ 1: Types of fan PC boards

Applicable Model	Type of Fan PC Board
FXYMP45AA / 56AA	PC0719-1
FXYMP71AA	PC0609-2
FXYMP90AA to 160AA	PC0609-1

DRAFT

Remote Controller Display

C9

Malfunction of Indoor Unit Thermistor

1 Applicable Models

Indoor unit
FXYMP45AA to 160AA
FXYMP140MF to 280MF
FXYWP140MF to 280MF

2 Method for Detecting Malfunction

Detect malfunction according to temperature detected by thermistor.

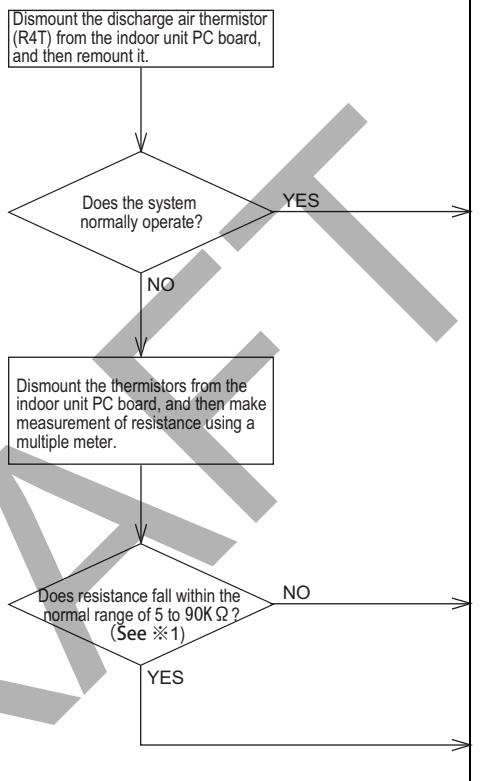
3 Conditions for Determining Malfunction

When the system is in operation and the relevant thermistor causes wiring disconnection or short circuit in it.

4 Supposed Causes

- Faulty thermistor connection
- Faulty thermistor
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
	

*1 For "Thermistor Temperature and Resistance Characteristics", refer to information on page 317.

DRAFT

Remote Controller Display

CE

Malfunction of Motion Sensor / Floor Temperature Sensor

1 Applicable Models

Indoor unit
FXYFP~B

2 Method for Detecting Malfunction

Detect by a signal outputted from the sensor.

3 Conditions for Determining Malfunction

When malfunction is detected by a signal outputted from the sensor

4 Supposed Causes

① Disconnection of connector from or failure of motion sensor [CE-01]
② Failure of floor temperature sensor (Wiring disconnection in temperature compensation circuit) [CE-02]
③ Failure of floor temperature sensor (Wiring disconnection in temperature compensation circuit) [CE-03]
④ Failure of floor temperature sensor element [CE-04]

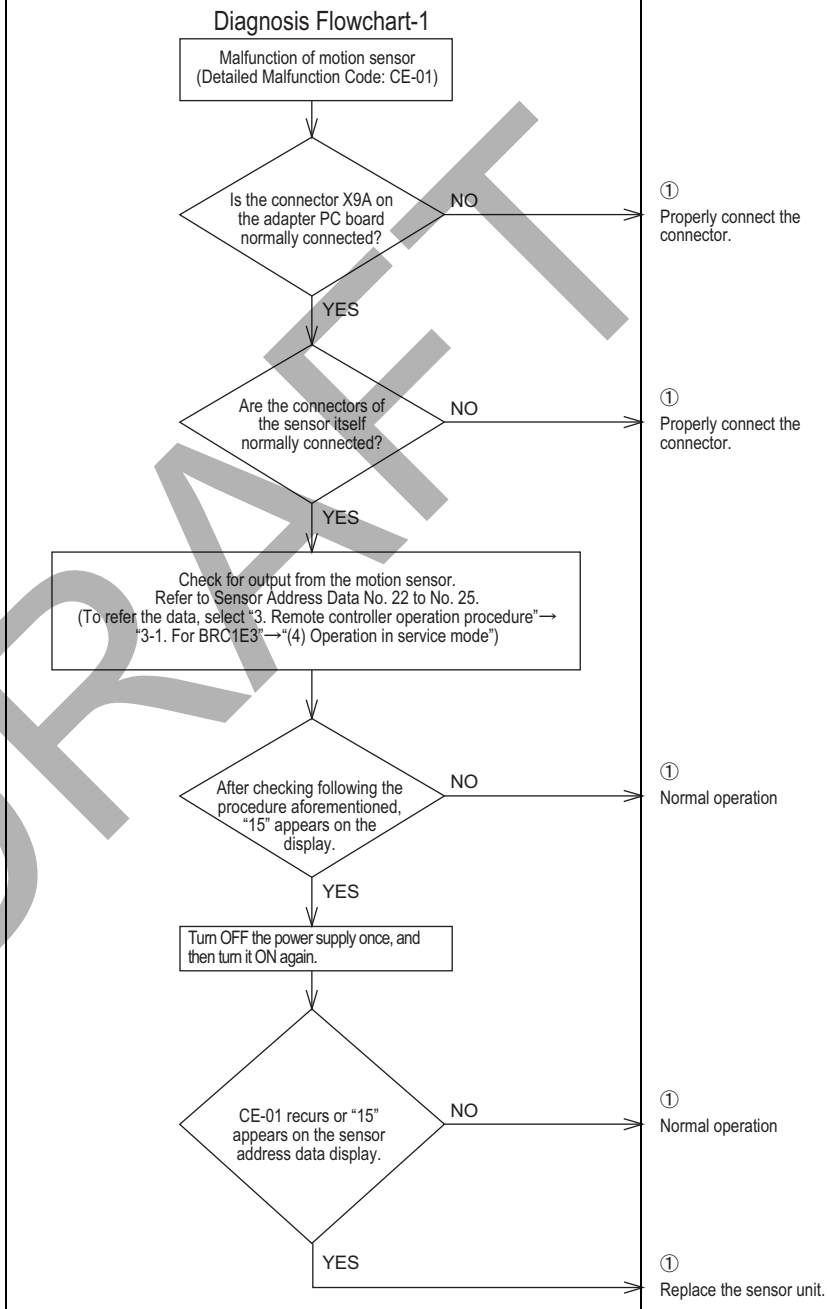
5 Troubleshooting

Diagnosis	Counter-measures
The contents of individual failures vary with detailed malfunction code. Ensure the detailed malfunction code, and then go to the relevant Diagnosis Flowchart.	
Detailed malfunction code **CE-01**	Go to Diagnosis Flowchart-1.
Detailed malfunction code **CE-02**	Go to Diagnosis Flowchart-2.
Detailed malfunction code **CE-03**	Go to Diagnosis Flowchart-3.
Detailed malfunction code **CE-04**	Go to Diagnosis Flowchart-4.

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5 Troubleshooting

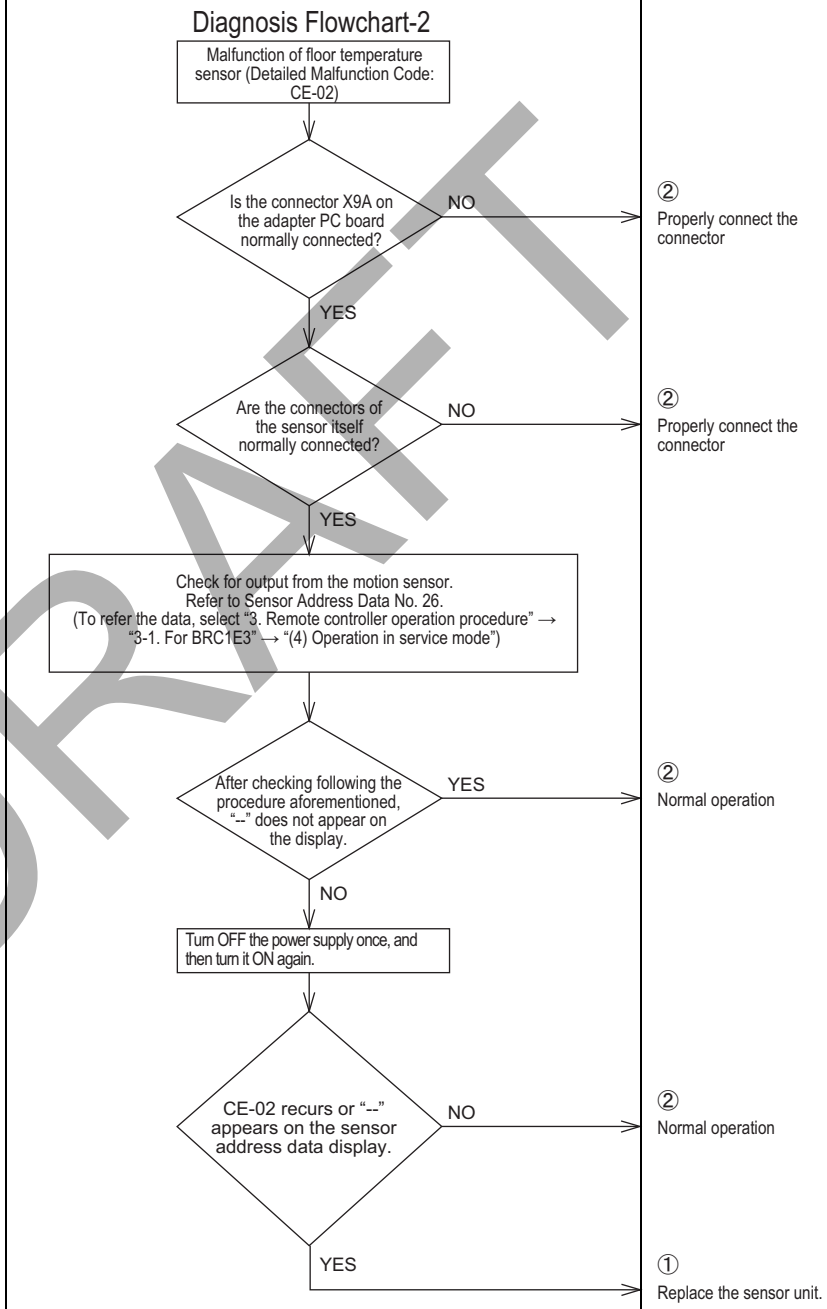
Diagnosis	Counter-measures



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5 Troubleshooting

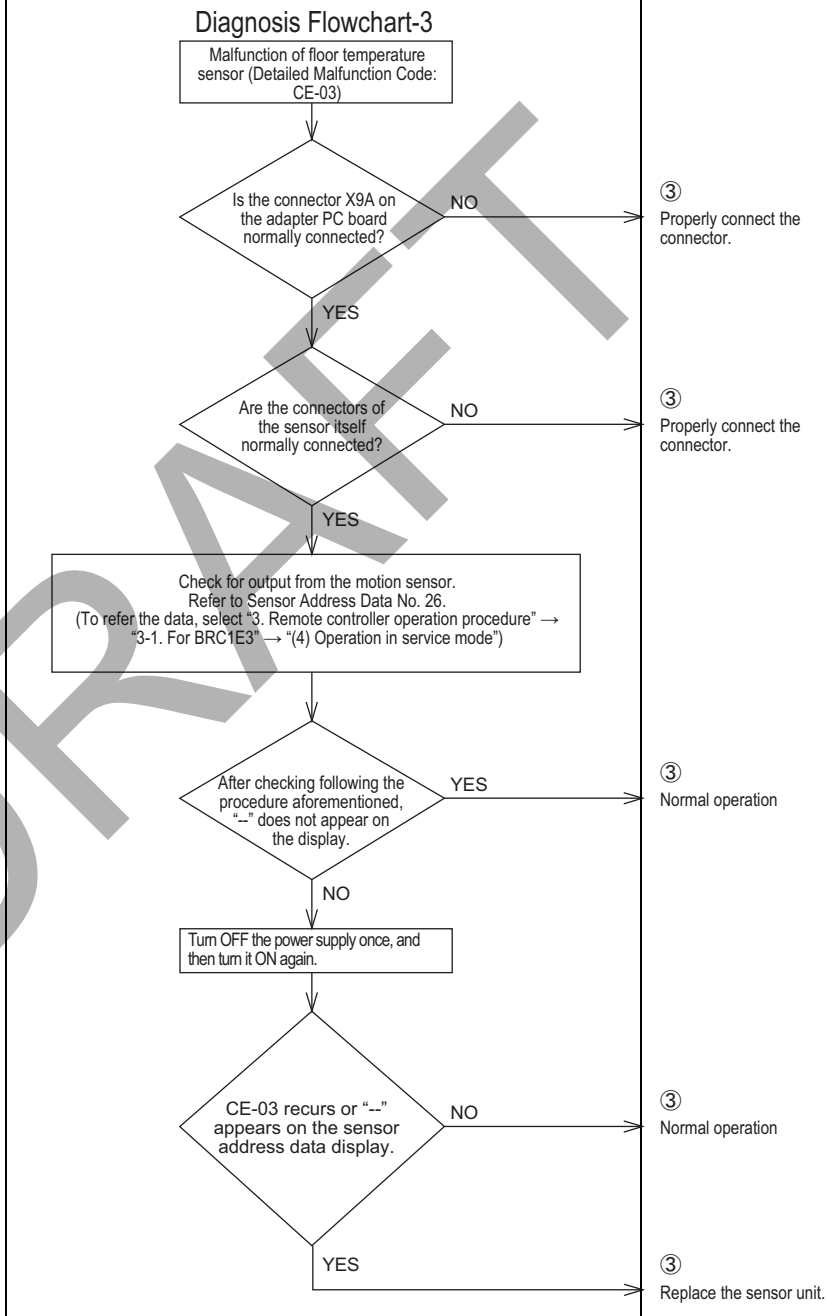
Diagnosis	Counter-measures



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5 Troubleshooting

Diagnosis	Counter-measures

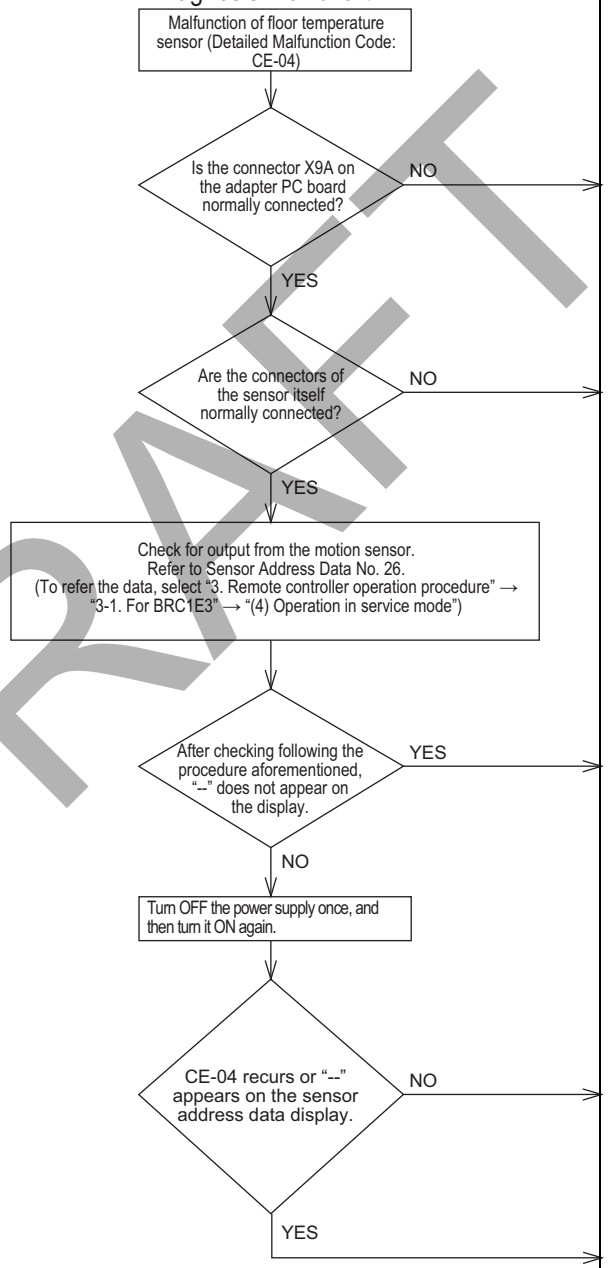


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5 Troubleshooting

Diagnosis	Counter-measures

Diagnosis Flowchart-4



DRAFT

Remote Controller Display

Malfunction of Remote Controller Thermistor

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Detect malfunction according to temperature detected by the indoor air thermistor in the remote controller.

3 Conditions for Determining Malfunction

When the system is in operation and the indoor air thermistor in the remote controller causes wiring disconnection or short circuit in it

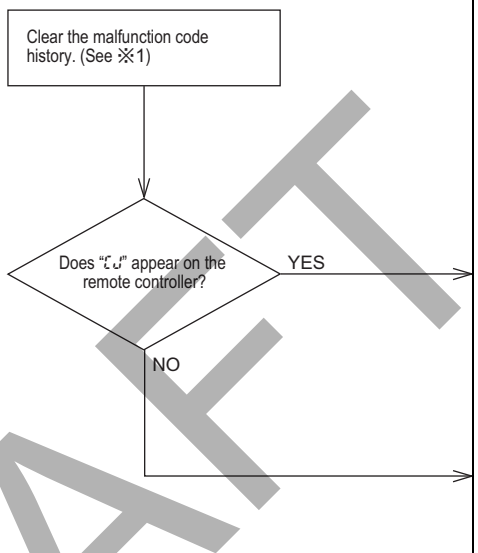
★ The malfunction code is displayed, but the system continues operating.

4 Supposed Causes

- Faulty remote controller thermistor
- Faulty remote controller PC board

5 Troubleshooting

Diagnosis



∗1 Procedure for clearing the "Malfunction code history"
Display the malfunction code in check mode, and then press and hold the ON/OFF button for a period of 4 seconds or more.

Counter-measures

DRAFT

Remote Controller Display

E1

Faulty Outdoor Unit PC Board

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to communication conditions between the indoor unit and the outdoor unit in terms of hardware.

3 Conditions for Determining Malfunction

When communication conditions between the indoor unit and the outdoor unit in terms of hardware are not normal

4 Supposed Causes

- Faulty control PC board (A1P)
- Faulty connection of communication line between indoor and outdoor units

5 Troubleshooting

Diagnosis	Counter-measures
Turn OFF the power supply once, and then turn it ON again.	
Does the communication condition return to normal? YES	The malfunction is considered to have resulted from external factors other than failures (e.g. noise).
Does the communication condition return to normal? NO	
Is the communication line between indoor and outdoor units disconnected from the outdoor unit control PC board? YES	Properly connect the communication line.
Is the communication line between indoor and outdoor units disconnected from the outdoor unit control PC board? NO	
	Replace the outdoor unit control PC board.

DRAFT

Remote Controller Display

E2

Ground Leakage Detection

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect leakage current in the ground leakage detection circuit and detect malfunction on the control PC board.

3 Conditions for Determining Malfunction

When leakage current is detected

4 Supposed Causes

- Ground fault
- Improper wiring passing through the current sensor
- Temporary liquid compression or penetration in compressor

5 Troubleshooting

Diagnosis	Counter-measures
Detailed malfunction code: E2-01 to -03	
Turn OFF the power supply, and then disconnect compressor leads.	
Is wiring passing through the current sensor (T1A) proper? NO	Pass proper wiring through the sensor.
YES	
Insulation failure of compressor YES	Replace the compressor.
NO	
Insulation failure of component except compressor YES	Replace the relevant component.
NO	
Reinstall wiring, and then turn ON the power supply again.	
	Normal (Continue operation) The malfunction is considered to have resulted from temporary liquid compression or penetration in the compressor. (Take care of the liquid when power is shut down over an extended period of time due to power failure or else.)

DRAFT

Remote Controller Display

E2

Missing of Ground Leakage Detection Core

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect malfunction according to whether or not there is continuity across the junction connector (X4A).

3 Conditions for Determining Malfunction

When no current flows at the time of turning ON the power supply

4 Supposed Causes

- Disconnection of junction connector (X4A)
- Wiring disconnection
- Faulty outdoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
Detailed malfunction code: E2-06 to -08.	
Turn OFF the power supply, and then disconnect compressor leads.	
Is the system reset to normal? YES	The malfunction is considered to have resulted from external factors other than failures (e.g. noise).
NO	
Ensure the unit corresponding to the malfunction code "E2" in monitor mode. E02-06: Master E02-07: Slave 1 E02-08: Slave 2	
Is X101A connected? NO	Properly connect the connector.
YES	Replace the outdoor unit control PC board.

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Remote Controller Display

E3

Activation of High Pressure Switch

1 Applicable Models

Outdoor unit
RXXP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect continuity across the high pressure switch in the protection device circuit.

3 Conditions for Determining Malfunction

When part of the protection device circuit opens
(Reference) Operating pressure of the high pressure switch
Operating pressure: 4.0MPa
Resetting pressure: 3.0MPa

4 Supposed Causes

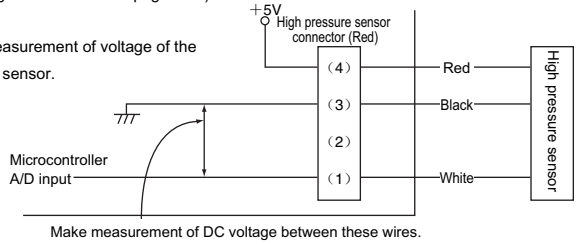
- Activation of high pressure switch
- Faulty high pressure switch
- Faulty control PC board (A1P)
- Momentary power failure
- Faulty high pressure sensor

5 Troubleshooting

Diagnosis	Counter-measures
Check for the following three points: ①Is the stop valve open? ②Is the high pressure switch connector properly connected to the control PC board? ③Is there continuity across the high pressure switch?	
Are the above three points OK? NO	Remedy faulty points.
YES	
(1)Mount a pressure gauge on the high pressure service port. (2)Reset the operation using the remote controller, and then restart the operation.	
Does the malfunction "E3" recur? YES → Is the operating pressure of the high pressure switch normal (4.0MPa)? NO	Replace the high pressure switch.
NO / YES	
Are the characteristics of the high pressure sensor normal? (See※1) NO	Replace the high pressure sensor.
YES	
Service Checker Connect the Service Checker, and then make a comparison between "high pressure" checked by the Service Checker and the measurement of the high pressure sensor (See ※1)	
Is the "high pressure" checked by the Service Checker same as the measurement of the high pressure sensor? NO	Replace the control PC board (A1P).
YES	
-The high pressure sensor is normal, and pressure detection with the control PC board is also normal. -The high pressure has really become high. **Check 1** With reference to information on page 307, eliminate factors that cause the high pressure to rise.	

※1: Make a comparison between voltage measured by the pressure sensor and that read by the pressure gauge. (The pressure sensor makes measurement of voltage at its connector block to convert it to pressure according to information on page 318.)

※2: Make measurement of voltage of the pressure sensor.



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Remote Controller Display

E4

Activation of Low Pressure Switch

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Make judgment of pressure detected by the low pressure sensor with the control PC board.

3 Conditions for Determining Malfunction

When low pressure caused a drop while the compressor is in operation
Operating pressure: 0.07MPa

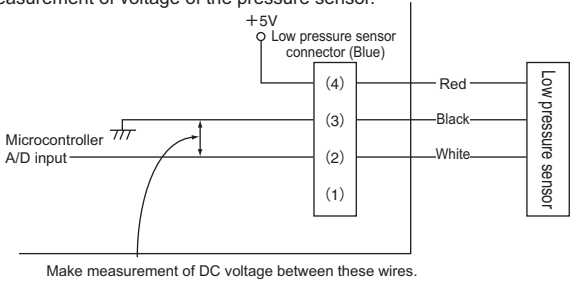
4 Supposed Causes

- Abnormally drop in low pressure
- Faulty low pressure sensor
- Faulty outdoor unit PC board
- Neglect to open the stop valve

5 Troubleshooting

Diagnosis	Counter-measures
Is the stop valve open? NO	Open the stop valve.
YES: ①Mount a pressure gauge on the low pressure service port. ②Reset the operation using the remote controller, and then restart the operation.	
Are the characteristics of the low pressure sensor normal? (See※1) NO	Replace the low pressure sensor.
YES: **Service Checker** Connect the Service Checker, and then make a comparison between "low pressure" checked by the Service Checker and the measurement of the low pressure sensor. (See※1)	
Is the "low pressure" checked by the Service Checker same as the measurement of the low pressure sensor? NO	Replace the control PC board (A1P).
YES: • The low pressure sensor is normal, and pressure detection with the control PC board is also normal. • The low pressure has really become low. **Check 2** With reference to information on page 308, eliminate factors that cause the low pressure to decrease.	

※1: Make a comparison between voltage measured by the pressure sensor and that read by the pressure gauge.
(The pressure sensor makes measurement of voltage at its connector block to convert it to pressure according to information on page 318.)
※2: Make measurement of voltage of the pressure sensor.



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Remote Controller Display
E5

Inverter Compressor Lock

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect malfunction according to abnormality in phase current waveforms observed in the circuit from the UVW line connected between the inverter and the compressor and the inverter PC board.

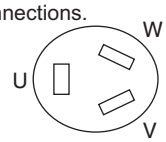
3 Conditions for Determining Malfunction

When the inverter compressor motor does not run even by starting it in forced startup mode

4 Supposed Causes

- Inverter compressor lock
- High differential pressure (0.5MPa or more)
- UVW connection error
- Faulty inverter PC board
- Neglect to open stop valve

5 Troubleshooting

Diagnosis	Counter-measures
Check in Monitor Mode P400 to P500 classes are equipped with two compressors. Check for the compressor 1 or 2 applicable to the malfunction code "E5" while in monitor mode of the outdoor unit PC board. (For the checking procedure, refer to information on pages 87 to 94.)	
Is the stop valve open? — NO	Field factor Open the stop valve.
YES	
Check for the connection wiring. ○For Compressor 1 Connection wiring on the M1C side ○For Compressor 2 Connection wiring on the M2C side	
Is the connection line of the relevant compressor normal? — NO	Replace the connection line, and then securely connect the connector.
YES	
Power OFF	
Are wire connections made to phases U, V, and W in the proper order and manner? — NO	Make proper wire connections. 
YES	
Are wire connections made according to the Wiring Diagram? — NO	Make proper wire connections.
YES	
The insulation resistance of the relevant compressor is low (i.e., 100kΩ or less). — YES	Replace the compressor.
NO	
The relevant compressor has a wiring disconnection in it. — YES	
NO	
A Go to the next page.	

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5 Troubleshooting

Diagnosis	Counter-measures
From the previous page (A)	
Power ON: Restart the compressor, and then check for the operation. Does the malfunction recur? — NO	Quit work. Pressure equalization failure may have occurred. Check for the refrigerant system.
YES	
Power ON: Has the compressor started up at high differential pressure (0.5MPa or more)? — YES	Pressure equalization failure Check for the refrigerant system.
NO	
Power OFF: Check 4 Is the power transistor normal? — NO	Replace the inverter PC board.
YES	
Power ON: The malfunction recurs at startup. — NO	Continue operation. (The malfunction could have resulted from instantaneous power failure.)
YES	
Power OFF: Replace the inverter PC board. (See ★1)	★1 Applicable PC boards ○For Compressor 1 P140C to 335C: A3P P400C to 560C: A3P ○For Compressor 2 P400C to 560C: A3P
Power ON: The malfunction recurs at startup. — NO	Continue operation.
YES	(This is not a failure of the inverter PC board. Reinstall the PC board.)

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Remote Controller Display
E6

Compressor Damage Alarm

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Determine the symptom to be malfunction by detecting the revolutions of the compressor and pressure values detected by the high and low pressure sensors, and further making a comparison between a theoretical current value of the compressor calculated from parameters detected and an actual current value detected by the power transistor.

3 Conditions for Determining Malfunction

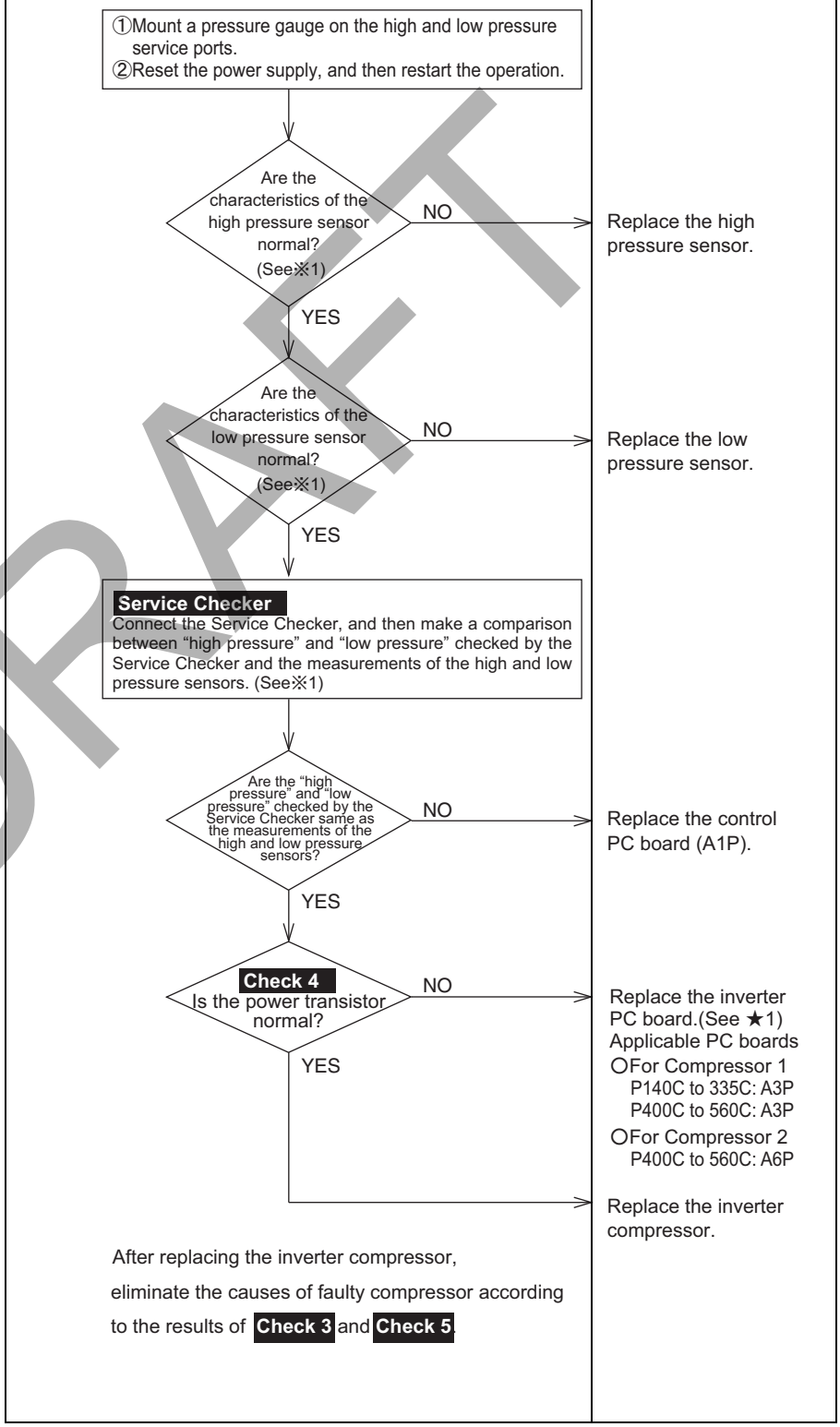
When a state in which the actual current value of the compressor is abnormally high (by 130% or more) compared to the theoretical current value continues for a period of 30 minutes.

※ In case of a system with multi outdoor units, the system will return an alarm if there is any operational unit other than that applicable to "E6," or determine to be malfunction if not

4 Supposed Causes

- Faulty compressor
- Malfunction of high pressure sensor
- Malfunction of low pressure sensor
- Faulty control PC board
- Faulty inverter PC board

5 Troubleshooting



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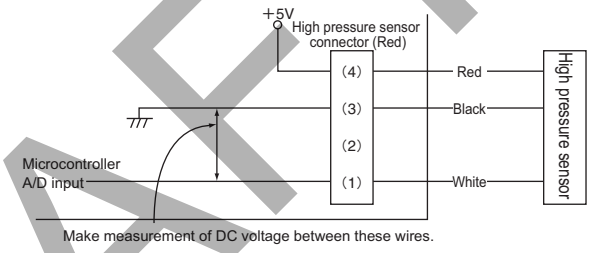
5 Troubleshooting

Diagnosis	Counter-measures

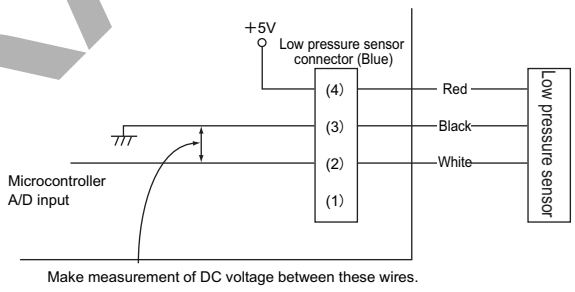
※ 1: Make a comparison between voltage measured by the pressure sensor and that read by the pressure gauge.
(The pressure sensor makes measurement of voltage at its connector block to convert it to pressure according to information on page 318.)

※ 2: Make measurement of voltage of the pressure sensor.

High pressure sensor:



Low pressure sensor:



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Remote Controller Display

E7

Outdoor Door Unit Fan Motor lock

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

① Detect according to the value of current flowing through the inverter PC board (or fan inverter PC board in case of Fan Motor 2).
② Detect malfunction of the fan motor system according to the fan revolutions detected by the hall IC during the fan motor runs.

3 Conditions for Determining Malfunction

① When overcurrent is detected from the inverter PC board (A3P) or the fan inverter PC board (A4P) (Detecting overcurrent 4 times will shut down the system.)
② When the fan revolutions fall below a given level for a period of 6 seconds while in fan motor rotation mode (Detecting shortage of revolutions will shut down the system.)

4 Supposed Causes

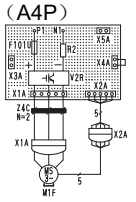
- Fan motor failure
- Neglect to connect or faulty connection of harness/ connector between the fan motor and the PC board
- Fan does not rotate due to foreign matters caught in it
- Clearing condition: Fan motor performs normal operation for a period of 5 minutes.

5 Troubleshooting

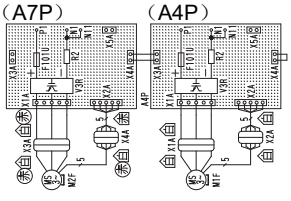
Diagnosis	Counter-measures
Check in Monitor Mode P400 to P560 classes are equipped with two compressors. Check for the compressor 1 or 2 applicable to the malfunction code "E7" while in monitor mode of the outdoor unit PC board. (For the checking procedure, refer to information on pages 87 to 94.)	
Turn OFF the power supply, and then wait for a period of 10 minutes.	
There are foreign matters around the applicable fan. — YES	Remove the foreign matters.
NO	
Check for Connection of Connector Check for the connections of all fan motor connectors. (See "※1: Wirings" shown below)	
Some connectors are disconnected. — YES	Insert the connector.
NO	
Check for Colors of Junction Connectors Check for any wire connection errors in two units of fan motors. ○Fan motor 1: Power supply cables and signal cables are all white. ○Fan motor 2: Power supply cables and signal cables are red on the PC board side and white on the motor side.	
There is a junction relay connection error. — YES	Correct the connection of the junction connector.
NO	
(A) Go to the next page.	

※1. Wirings

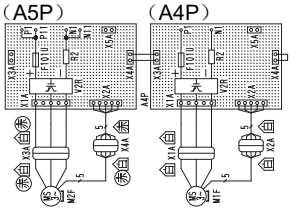
RXYP140～335C
RXMP224～335C



RXYP400～560C
RXMP400～560C
RXUP400C



RXUP224～335C



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5 Troubleshooting

Diagnosis	Counter-measures
From the previous page (A)	
There is no continuity across the fuse (F101U) on the fan inverter PC board. YES	Replace the fan inverter PC board.
NO	
The fan cannot be rotated by hand when disconnecting the connector from the fan motor. YES	Replace the relevant fan motor.
NO	
Resistance between the fan motor power supply cable terminal and the motor frame (metallic part) is not more than 1MΩ. YES	Replace the relevant fan motor.
NO	
Check for the connector (power supply cable) of the fan motor. U V W (Red) (White) (Black) ○ ○ ○	
Resistance between U, V, W phases of the fan motor power supply cable has lost balance or short circuit is caused between U, V, W phases. YES	Replace the relevant fan motor.
NO	
Check for the connector (power supply cable) of the fan motor. Gnd Vcc W V U (Gray) (Pink) (Orange) (Blue) (Yellow) ○ ○ ○ ○ ○	
Signal cable has caused short circuit between Vcc and Gnd, and between UVW and Gnd. YES	Replace the relevant fan motor.
NO	
Turn ON the power supply to check for the following LED lamps. ①HAP lamp on the compressor inverter PC board (A3P) ②HAP lamp on the fan inverter PC board (A4P)	
The HAP lamp on A3P blinks, but that on A4P does not blink. YES	Replace the fan inverter PC board.
NO	Replace the fan motor 2.

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Remote Controller Display
E9

Malfunction of Electronic Expansion Valve Coil

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to whether or not there is continuity across the electronic expansion valve coils (Y1E, Y2E).

3 Conditions for Determining Malfunction

When no current flows through common (COM[+]) at the time of turning ON the power supply

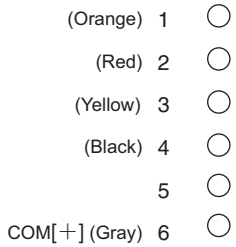
4 Supposed Causes

- Disconnection of connectors from electronic expansion valves (Y1E, Y2E)
- Faulty electronic expansion valve coil
- Faulty outdoor unit control PC board

5 Troubleshooting

Diagnosis	Counter-measures
Turn OFF the power supply once, and then turn it ON again.	
Return to normal? YES	Investigate external causes other than failures (e.g. noise).
NO	
Check for electronic expansion valves applicable to the malfunction code "E9" while in monitor mode. (For the checking procedure, refer to information on pages 87 to 94.) ○Detailed malfunction codes E9-01: Master (Y2E) E9-04: Master (Y1E) E9-05: Slave 1 (Y2E) E9-07: Slave 1 (Y1E) E9-08: Slave 2 (Y2E) E9-10: Slave 2 (Y1E)	
Connector for the electronic expansion valve of the outdoor unit PC board (A1P) is connected. NO	Properly and securely connect the connector.
YES	
The resistance of the electronic expansion valve coil is normal. (See※1) NO	Replace the electronic expansion valve.
YES	Replace the outdoor unit control PC board (A1P).

※1: Make measurement of resistance between individual pins to ensure that it falls within the range of 40 to 50Ω.



Measurement Point	Acceptance Criteria
1－6	40～50Ω
2－6	
3－6	
4－6	

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Remote Controller Display

F3

Abnormal Discharge Pipe Temperature

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to temperature detected with the discharge pipe or compressor surface temperature thermistor.

3 Conditions for Determining Malfunction

- When discharge pipe temperature becomes abnormally high (i.e., 135 C or more)
- When discharge pipe temperature sharply rises (remains at 120 C or more for a period of consecutive 10 minutes)
- When compressor surface temperature becomes abnormally high (i.e., 120 C or more)
- When compressor surface temperature sharply rises (remains at 110 C or more for a period of consecutive 10 minutes)

4 Supposed Causes

- Abnormal discharge pipe temperature
- Faulty discharge pipe thermistor
- Abnormal compressor surface temperature
- Faulty compressor surface temperature thermistor
- Faulty outdoor unit control PC board

5 Troubleshooting

Diagnosis

Connect the Service Checker. Reset the system operation, and then restart it.

Are the characteristics of the discharge pipe and compressor surface temperature thermistors normal? (See※1)

NO → Replace the relevant thermistor.

YES

Service Checker
Connect the Service Checker, and then make a comparison between “discharge pipe temperature” (or “compressor surface temperature” and “low pressure” checked by the Service Checker and the measurements of discharge pipe surface temperature (or “compressor surface temperature.”) (See※2)

Is the “temperature” checked by the Service Checker same as the measurement of the temperature?

NO → Replace the control PC board (A1P).

YES

- All thermistors are normal, and temperature detection with the control PC board is also normal.
- The discharge pipe temperature (or compressor surface temperature) has really become high.

⇩

Referring to **Check 3** (on page 309), eliminate the causes of superheat operation.

Counter-measures

※1:Thermistors and connector symbols

Malfunction Code	Applicable Thermistor	140 to 224 Class		280 to 335 Class		400 to 450 Class		500 to 560 Class	
		Electrical symbol	Connector	Electrical symbol	Connector	Electrical symbol	Connector	Electrical symbol	Connector
F3	Discharge pipe (M1C) thermistor	R2T	X29A	R2T	X29A (Unified thermistor)	R21T	X29A (Unified thermistor)	R21T	X29A (Unified thermistor)
	Discharge pipe (M2C) thermistor	—	—	—		R22T		R22T	
	Compressor surface temperature thermistor	—	—	R8T		—		R8T	

Make measurement of temperature using a surface pyrometer.
For thermistor temperature and resistance characteristics, refer to information on page 318.

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Remote Controller Display

F4

Wet Alarm

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

In cooling operation, detect the condition under which liquid refrigerant returns to the compressor, according to the temperature and pressure of each part.

3 Conditions for Determining Malfunction

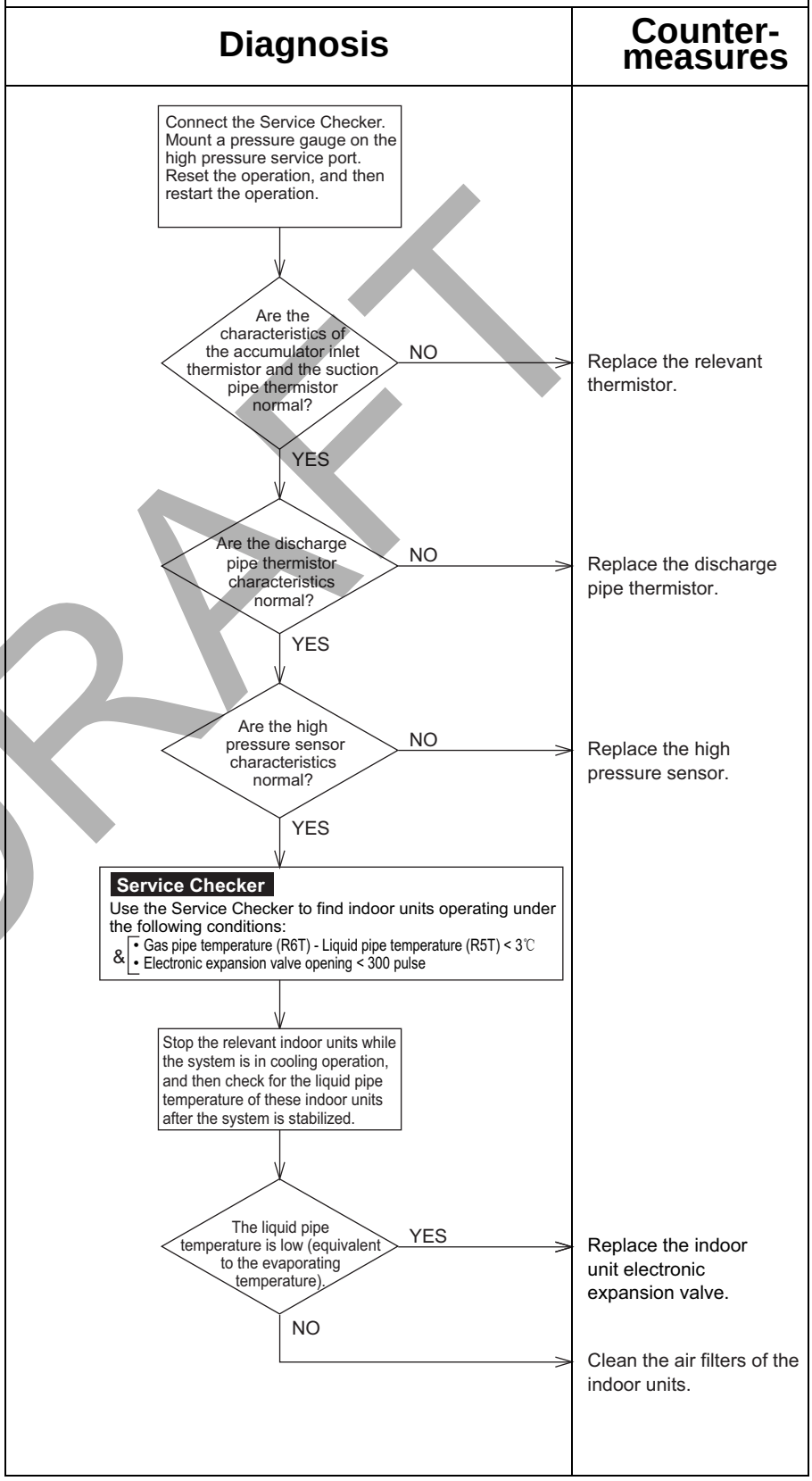
When the following wet state continues for a period of 30 minutes:

& [
- Wet state in outdoor units
- Wet state in some of indoor units

4 Supposed Causes

- Faulty suction pipe thermistor
- Faulty discharge pipe thermistor
- Faulty high pressure sensor
- Faulty indoor unit electronic expansion valve
- Dirty air filter

5 Troubleshooting



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Remote Controller Display
F6

Refrigerant Overcharged

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect overcharged refrigerant according to outdoor air temperature, heat exchanging deicer temperature, and liquid pipe temperature during check run.

3 Conditions for Determining Malfunction

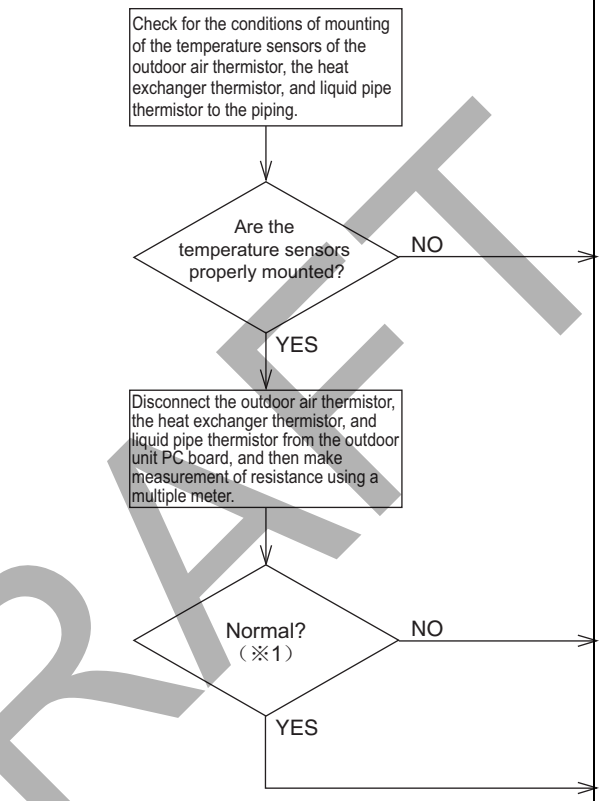
When the amount of refrigerant, which is calculated using outdoor air temperature, heat exchanging deicer temperature, and liquid pipe temperature during check run, exceeds the regular charge amount by 30% or more
(If refrigerant is charged slightly over the regular charge amount, "F6" may be displayed on the remote controller.)

4 Supposed Causes

- Refrigerant overcharged
- Disconnection of outdoor air thermistor
- Disconnection of heat exchanging deicer thermistor
- Disconnection of liquid pipe temperature thermistor

5 Troubleshooting

Diagnosis



※1: For thermistor temperature and resistance characteristics, refer to information on page 317.

Counter-measures

Properly connect the thermistors, and then operate the system.

Replace abnormal thermistors, and then operate the system.

Remedy refrigerant overcharging.

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Remote Controller Display
H3

Harness Malfunction (between Control PC Board and Inverter PC Board)

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Check for the transmission conditions of the following jumpers between the PC boards using microcontroller.

- P140 to P224 Class
  Between X28A (A1P) and X6A (A3P)
- P280 and 335 Class
  Between X28A (A1P) and X6A (A3P)
- P400 to P560 Class
  Between X28A (A1P) and X6A (A3P)
  Between X61A (A3P) and X6A (A6P)

3 Conditions for Determining Malfunction

When normal transmission between PC boards is disabled during the compressor stops running

4 Supposed Causes

- Faulty connection of jumpers between PC boards
- Faulty control PC board (A1P)
- Faulty inverter PC board

5 Troubleshooting

Diagnosis	Counter-measures
Check for the transmission conditions of the following jumpers between the PC boards: • P140 to P224 Class Between X28A (A1P) and X6A (A3P) • P280 and 335 Class Between X28A (A1P) and X6A (A3P) • P400 to P560 Class Between X28A (A1P) and X6A (A3P) Between X61A (A3P) and X6A (A6P)	
Harness malfunction → YES	Return the relevant harness to normal.
NO	
Replace the control PC board (A1P).	
"H3" malfunction recurs. → NO	Complete countermeasures.
YES	Replace the inverter PC board. (P140C to 335C: A3P P400C to 560C: A3P, A6P)

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Remote Controller Display

H7

Fan Motor Signal Detection Error

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect by an abnormal signal from the fan motor.

3 Conditions for Determining Malfunction

When an abnormal signal is detected at startup of the fan motor operation

4 Supposed Causes

- Abnormal signal from fan motor (Circuit failure)
- Disconnection/Short circuit in fan motor leads or disconnection of connector
- Faulty inverter PC board (A3P, A6P)

5 Troubleshooting

Diagnosis

Check for fan motor applicable to the malfunction code "H7" while in monitor mode. (For the checking procedure, refer to information on pages 87 to 94.)
○Detailed malfunction codes
H7-01: Fan motor 1 (M1F)
H7-02: Fan motor 2 (M2F)

↓

Turn OFF the power supply.

↓

Is the connector of signal cable of the relevant fan motor normally connected?

NO → Properly connect the connector.

YES ↓

Check for the connector of the fan motor. (See※1)

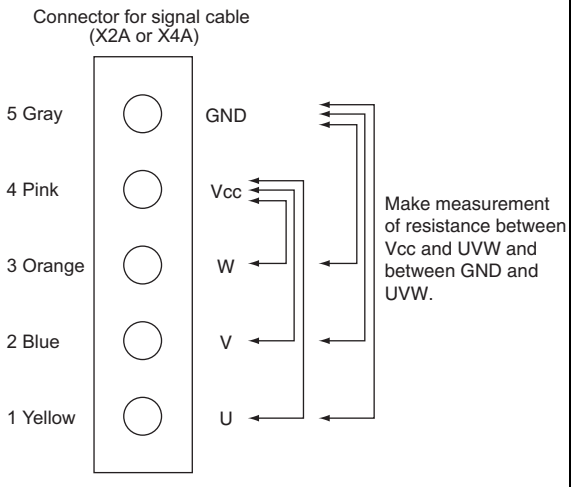
↓

Is resistance between Vcc and UVW and between GND and UVW of the fan motor lead in balance?

NO → Replace the fan motor.

YES → Replace the inverter PC board.
- For Fan motor 1, replace the inverter PC board A4P.
- For Fan motor 2, replace the fan inverter PC board A7P.

※1: Procedure for checking for the connector of the fan motor.
（1）Turn OFF the power supply.
（2）Disconnect the connector (X2A or X4A) from the PC board, and then make measurement of the following resistance.
Acceptance criteria: Resistance between phases falls within the range of ±20%.



Countermeasures

Properly connect the connector.

Replace the fan motor.

Replace the inverter PC board.
- For Fan motor 1, replace the inverter PC board A4P.
- For Fan motor 2, replace the fan inverter PC board A7P.

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Remote Controller Display

H9

Faulty Outdoor Air Thermistor

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to temperature detected with the outdoor air thermistor.

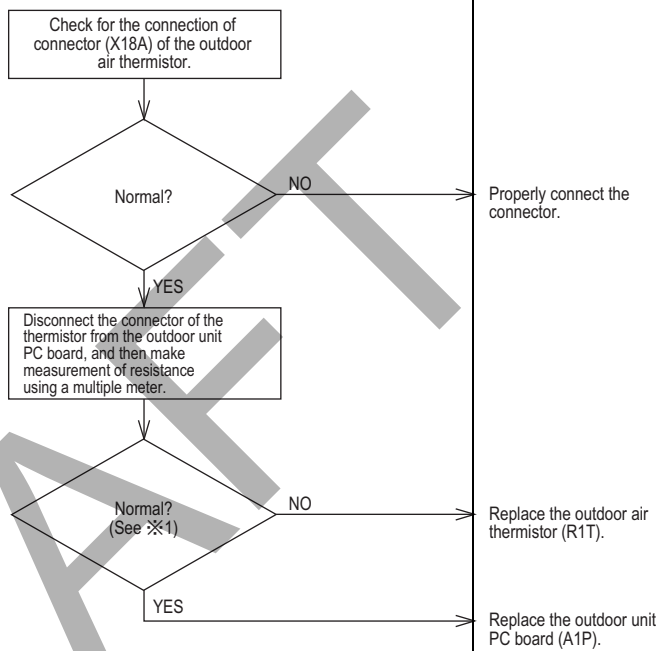
3 Conditions for Determining Malfunction

When the system is in operation and the thermistor causes wiring disconnection or short circuit in it

4 Supposed Causes

- Faulty connection of outdoor air thermistor
- Faulty outdoor air thermistor
- Faulty outdoor unit PC board (A1P)

5 Troubleshooting

Diagnosis	Counter-measures
	

DRAFT

Remote Controller Display
J3 J5 J6
J7 J8 J9

Faulty Outdoor Unit Thermistor

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to temperature detected with individual thermistors.

3 Conditions for Determining Malfunction

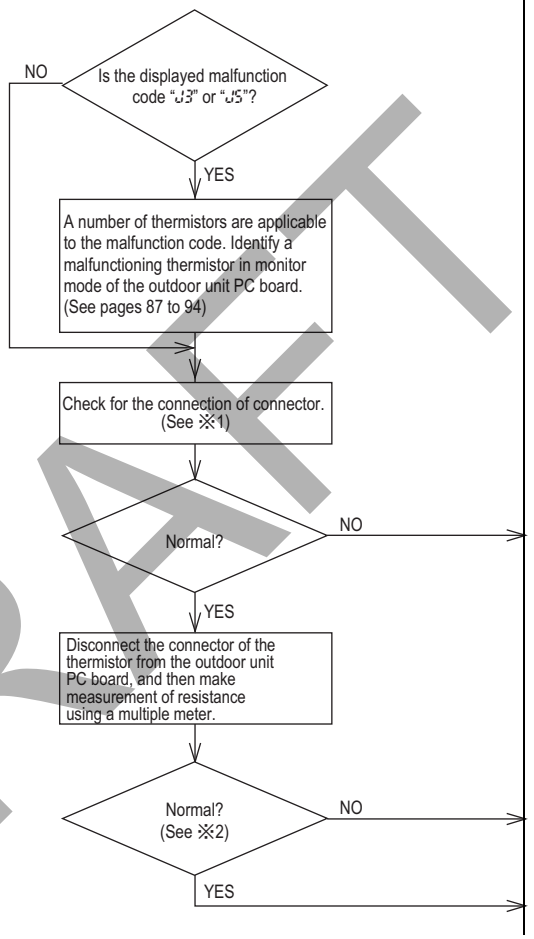
When the system is in operation and the thermistor causes wiring disconnection or short circuit in it

4 Supposed Causes

- Faulty connection of thermistor
- Faulty thermistor
- Faulty outdoor unit PC board

5 Troubleshooting

Diagnosis



Counter-measures

※1: Malfunction codes, description of malfunction, electrical symbols

Malfunction Code	Applicable Thermistor	140 / 160 / 224 Class		280、335 Class		400、450 Class		500、560 Class	
		Electrical symbol	Connector	Electrical symbol	Connector	Electrical symbol	Connector	Electrical symbol	Connector
J3	Discharge pipe	R2T	X29A	R2T	X29A (Unified thermistor)	R21T	X29A (Unified thermistor)	R21T	X29A (Unified thermistor)
	Discharge pipe (M2C) thermistor	—	—	—		R22T		R22T	
	Compressor surface temperature thermistor	—	—	R8T		—		R8T	
J5	Accumulator inlet thermistor	(140C and 160C are not equipped with R3T)	X30A (Unified thermistor)	R3T	X30A (Unified thermistor)	R3T	X30A (Unified thermistor)	R3T	X30A (Unified thermistor)
J6	Heat exchanging deicer thermistor	R6T		R6T		R6T		R6T	
J7	Supercool heat exchanger liquid pipe thermistor	R5T		R5T		R5T		R5T	
J8	Heat exchanger liquid pipe thermistor	R7T		R7T		R7T		R7T	
J9	Heat exchanger liquid pipe thermistor	R4T		R4T		R4T		R4T	

※2: For thermistor temperature and resistance characteristics, refer to information on page 318.

DRAFT

Remote Controller Display

U9

Faulty High Pressure Sensor

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to temperature detected with the high pressure sensor.

3 Conditions for Determining Malfunction

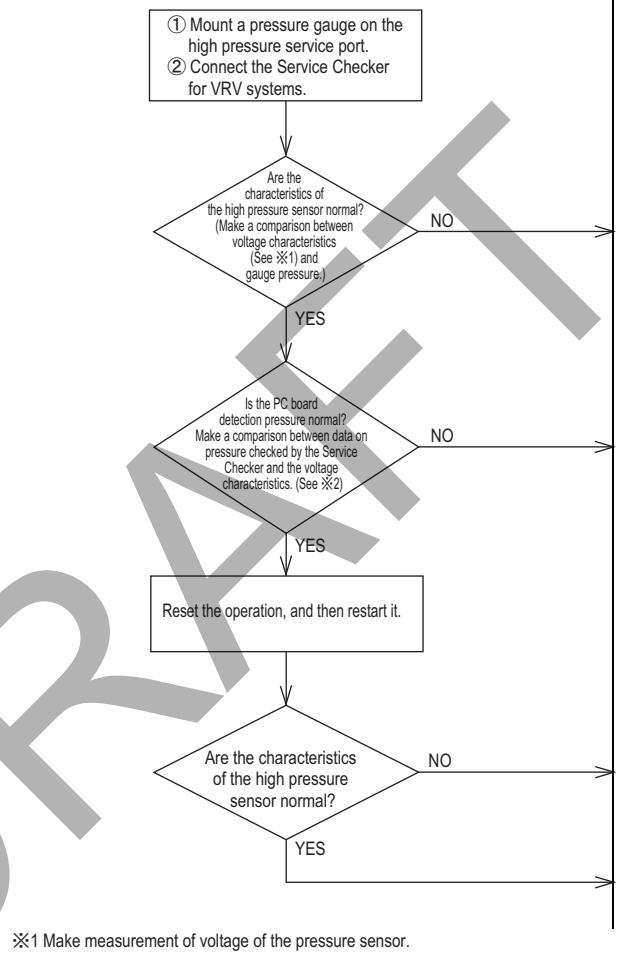
When the high pressure sensor causes wiring disconnection or open circuit (at pressure of not less than 4.22MPa or not more than 0.01MPa)

4 Supposed Causes

- Faulty high pressure sensor
- Connection of low pressure sensor in mistake for high pressure sensor
- Faulty outdoor unit PC board
- Faulty connection of high pressure sensor

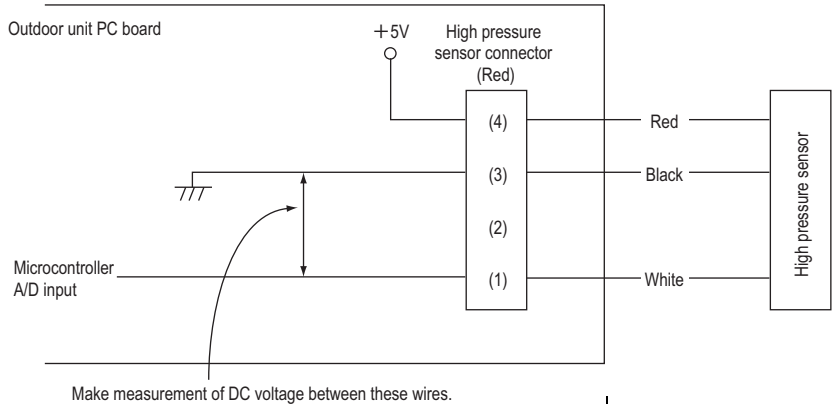
5 Troubleshooting

Diagnosis



Counter-measures

※1 Make measurement of voltage of the pressure sensor.



※2 See “Pressure sensor: Pressure vs. Voltage Characteristics Table” on page 318.

DRAFT

Remote Controller Display



Faulty Low Pressure Sensor

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to temperature detected with the low pressure sensor.

3 Conditions for Determining Malfunction

When the low pressure sensor causes wiring disconnection or open circuit (at pressure of not less than 1.77MPa or not more than 0.01MPa)

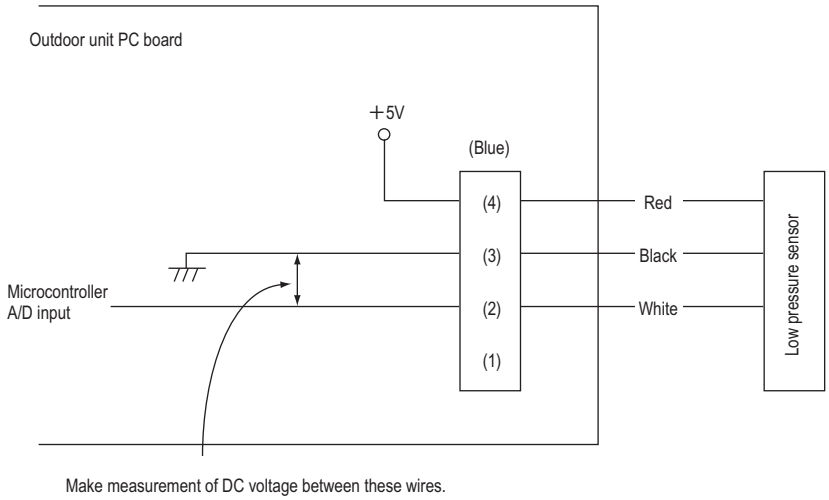
4 Supposed Causes

- Faulty low pressure sensor
- Connection of high pressure sensor in mistake for low pressure sensor
- Faulty outdoor unit PC board
- Faulty connection of low pressure sensor

5 Troubleshooting

Diagnosis	Counter-measures
① Mount a pressure gauge on the low pressure service port. ② Connect the Service Checker for VRV systems.	
Are the characteristics of the low pressure sensor normal? (Make a comparison between voltage characteristics (See ※1) and gauge pressure.) — NO	Replace the low pressure sensor.
YES	
Is the PC board detection pressure normal? Make a comparison between data on pressure checked by the Service Checker and the voltage characteristics. (See ※1) — NO	Replace the control PC board.
YES	
Reset the operation, and then restart it.	
Are the characteristics of the low pressure sensor normal? — NO	Replace the low pressure sensor.
YES	Replace the control PC board.

※1 Make measurement of voltage of the pressure sensor.



※2 See “Pressure sensor: Pressure vs. Voltage Characteristics Table” on page 318.

DRAFT

Remote Controller Display

L1

Faulty Inverter PC Board

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

- Detect according to current value detected during the output of waveform before compressor startup.
- Detect according to current value detected with the current sensor during sync operation for startup.

3 Conditions for Determining Malfunction

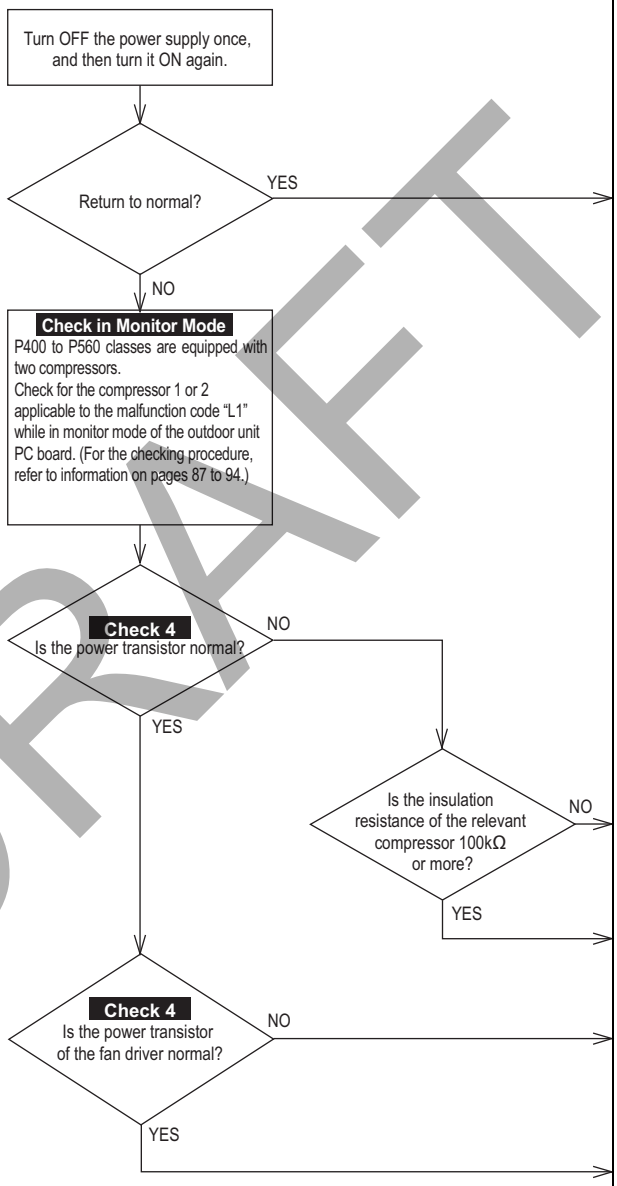
- When overcurrent (OCP) flows during the output of waveform
- When the current sensor malfunctions during sync operation
- When IPM error occurs

4 Supposed Causes

- Inverter PC board (A3P)
  - IPM failure
  - Current sensor failure
  - Drive circuit failure

5 Troubleshooting

Diagnosis



Counter-measures

The malfunction could have resulted from external factors other than failures (e.g. external noise or thunder).

Replace the compressor and the compressor inverter PC board together. (See ★1)

Replace the inverter PC board.(See ★1)

Replace the compressor inverter PC board (See ★1) and the fan inverter PC board (A4P).

Replace the inverter PC board. (See ★1)

★1
Applicable PC boards
○ For Compressor 1:
P140C to 335C: A3P
P400C to 560C: A3P

○ For Compressor 2:
P480C to 560C: A6P

DRAFT

Remote Controller Display

L3

Reactor Temperature Rise

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect reactor temperature with the reactor surface temperature thermistor.

3 Conditions for Determining Malfunction

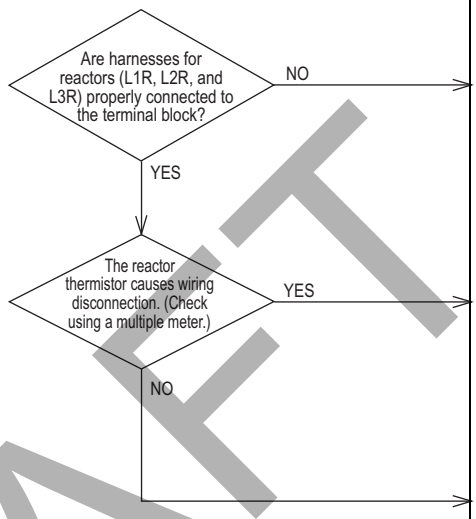
When temperature detected with the reactor surface temperature thermistor (R1T or R2T) exceeds a certain set temperature

4 Supposed Causes

- Faulty connection of harness
- Faulty reactor surface temperature thermistor
- Faulty inverter PC board

5 Troubleshooting

Diagnosis



Counter-measures

Properly connect the harnesses.

Replace the reactor surface temperature thermistor.
↓
If the malfunction "L3" recurs when turning ON the power supply and restarting operation, replace the PC board.

Replace the inverter PC board.

DRAFT

Remote Controller Display

L4

Radiator Fin Temperature Rise

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect radiator fin temperature of the compressor inverter PC board with the thermistor.

3 Conditions for Determining Malfunction

① Radiator fin thermistor
② Thermistor located in PC board circuit
③ Heatsink thermistor

4 Supposed Causes

① Coating of silicone grease not applied to the entire surface of the heatsink
② Heatsink not fixed with screws
③ "U0" malfunction
④ Faulty inverter PC board
⑤ High outdoor air temperature

5 Troubleshooting

Diagnosis

Check in Monitor Mode

P400 to P560 classes are equipped with two compressors.
Check for the compressor 1 or 2 applicable to the malfunction code "L4" while in monitor mode of the outdoor unit PC board. (For the checking procedure, refer to information on pages 87 to 94.)

Check for the cooling conditions of heatsink used to cool the inverter.
① Is a coating of silicone grease applied to the heatsink in a proper way?
② Is the heatsink fixed with screws?
③ Malfunction code "U0" is displayed on the Malfunction History screen.

Normal?

NO → ①②③ Rectify troubles.

YES

For systems with compressor JT150 installed

For systems with compressor JT100 installed

Connect and disconnect the fin thermistor connector (X7A) on the fan PC board (A6P) to properly connect it.

Turn ON the power supply, and then press the ON button continuously. Does the malfunction recur?

YES → ④ Replace the inverter PC board.

NO → ⑤ Continue operation.
- Field factor. Radiator fin temperature may have risen due to high outdoor air temperature.

※1: List of applicable thermistors

	Thermistor 1	Thermistor 2
P140 to 224 Class	Heatsink thermistor	—
P280 / 335 Class	(Thermistor located in the PC board circuit)	—
P400 / 450 Class	Heatsink thermistor 1	Heatsink thermistor 2
P500 / 560 Class	Heatsink thermistor	(Thermistor located in the PC board circuit)

Counter-measures

DRAFT

Remote Controller Display

L5

Inverter Compressor Instantaneous Overcurrent

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect current flowing through the power transistor.

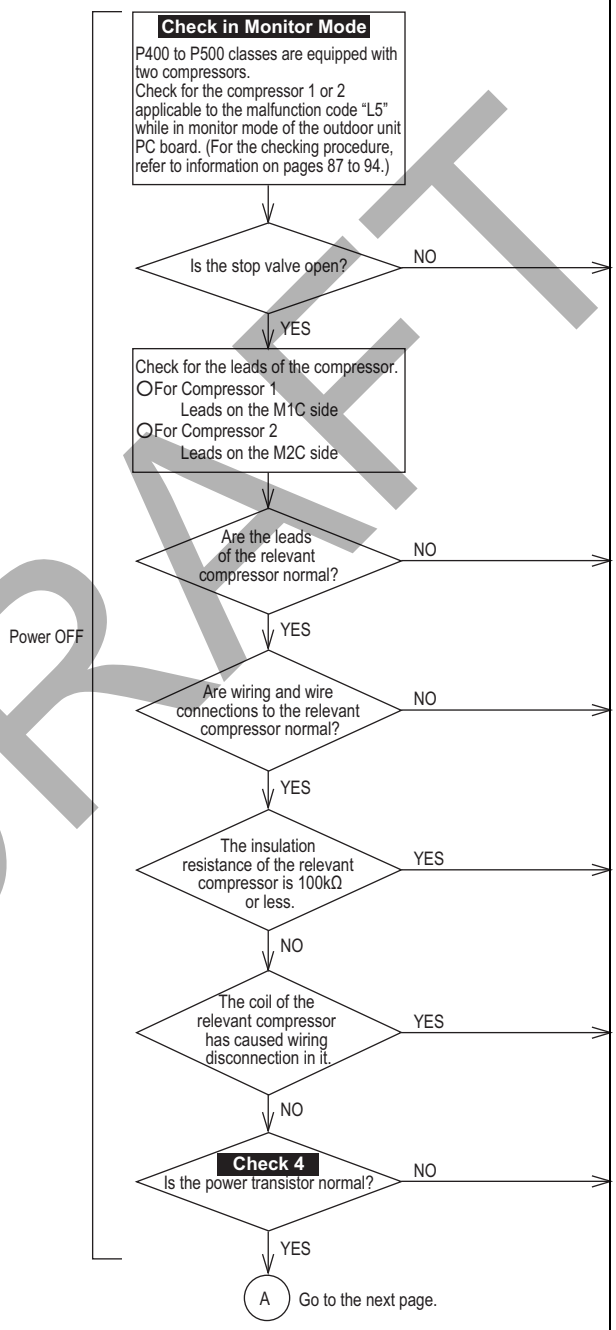
3 Conditions for Determining Malfunction

When overcurrent (59.1A) flows even instantaneously through the power transistor

4 Supposed Causes

- Faulty compressor coil (such as wiring disconnection or insulation failure)
- Compressor startup failure (Mechanical lock)
- Faulty inverter PC board

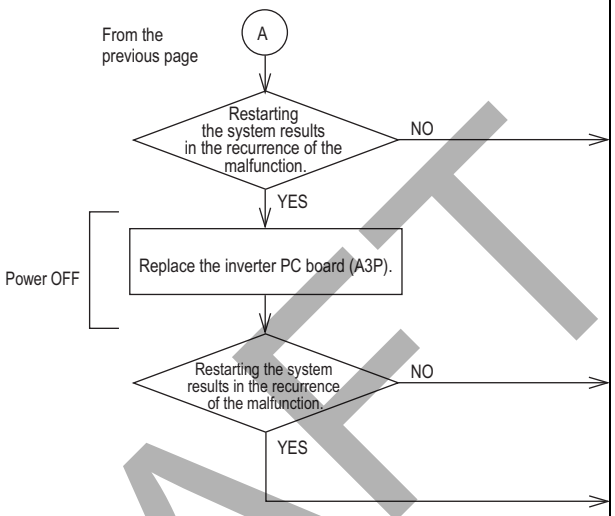
5 Troubleshooting



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures



DRAFT

Remote Controller Display

L8

Inverter Compressor Overcurrent

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect current flowing through the power transistor.

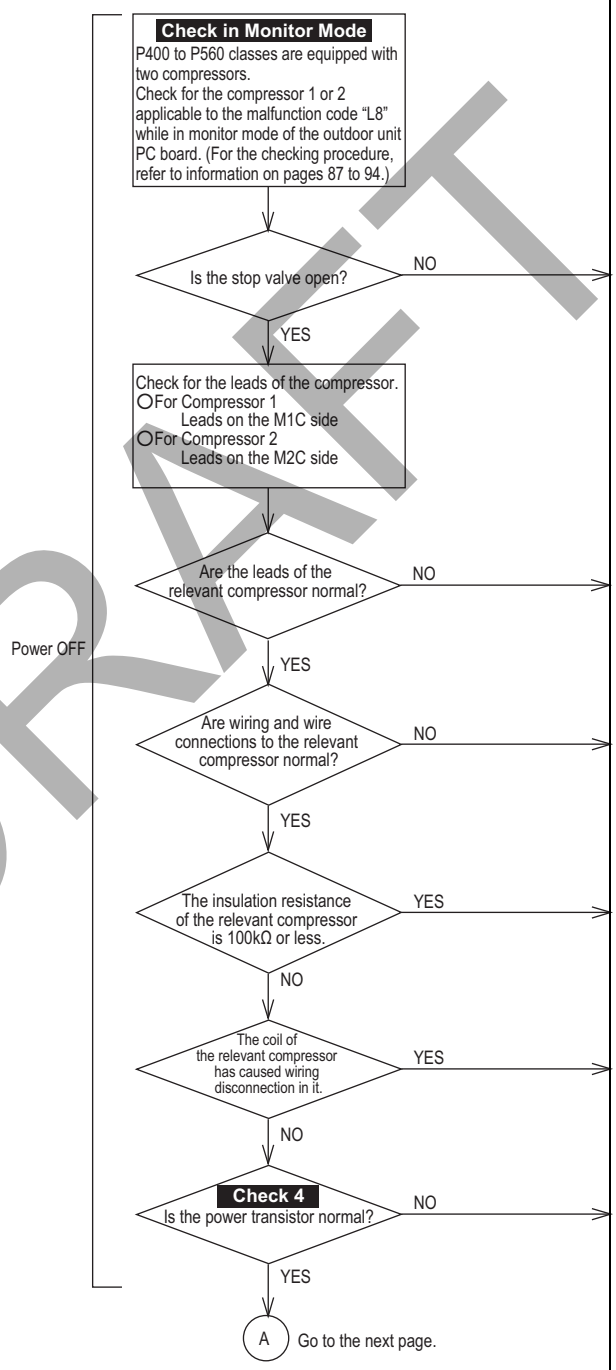
3 Conditions for Determining Malfunction

When the secondary-side inverter current exceeds
(1) 33.5A for a period of consecutive 5 seconds; or
(2) 27.6A for a period of consecutive 260 seconds.

4 Supposed Causes

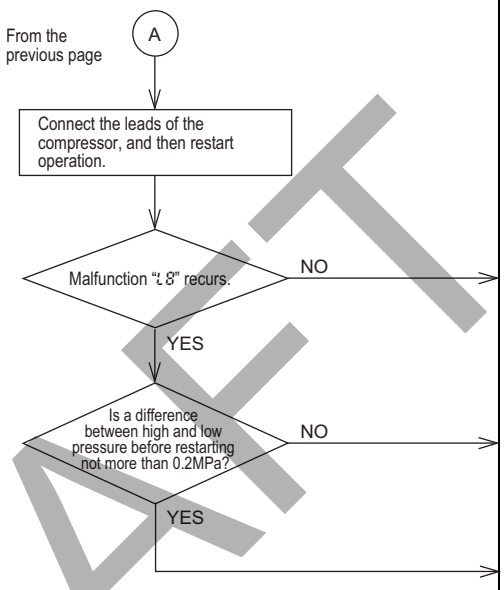
- Compressor overloaded
- Wiring disconnection in compressor coil
- Disconnection of compressor wiring
- Faulty inverter PC board

5 Troubleshooting



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures
	

DRAFT

Remote Controller Display

L9

Inverter Compressor Startup Failure

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect malfunction according to the signal waveform of compressor.

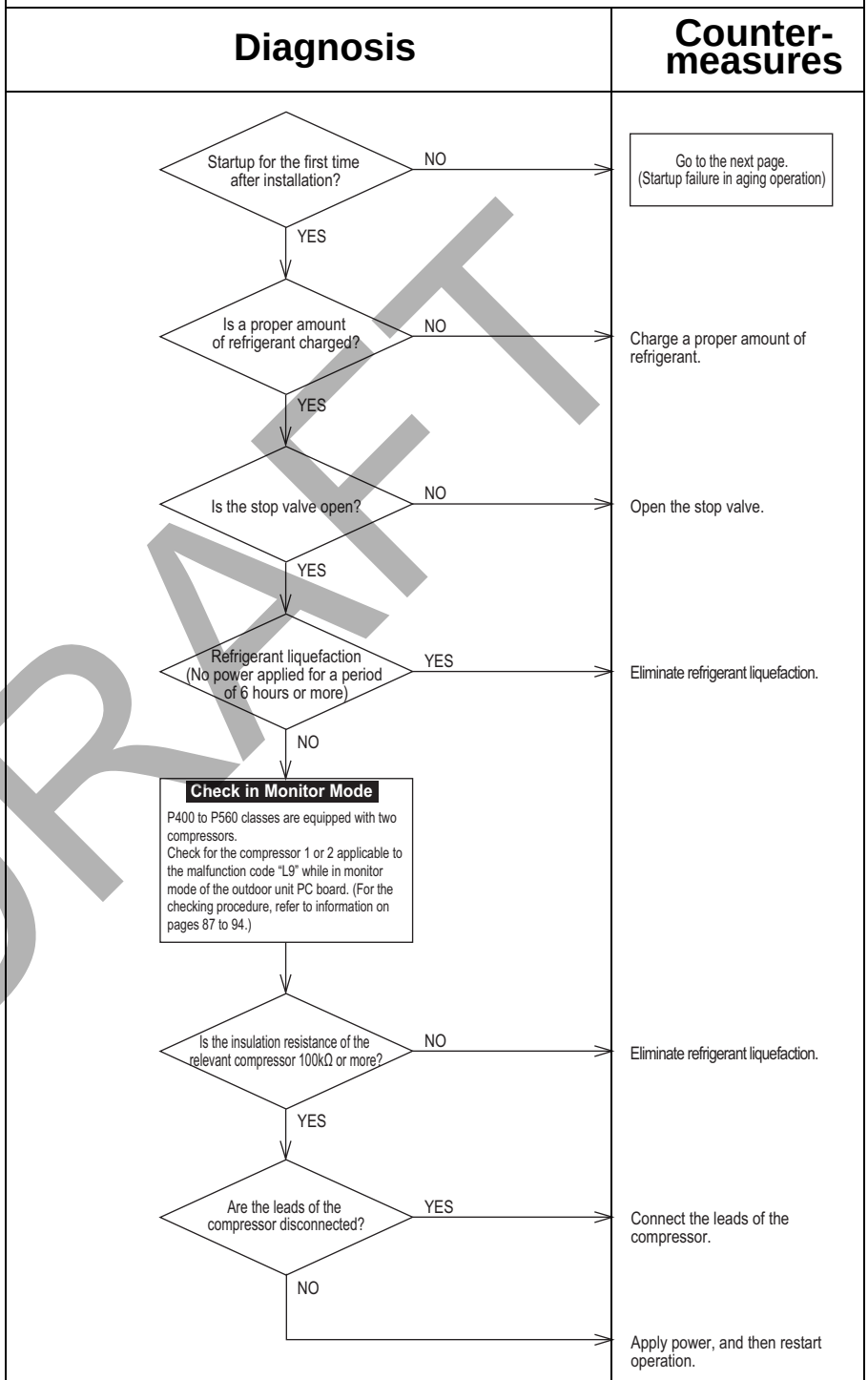
3 Conditions for Determining Malfunction

When compressor startup operation has not been completed

4 Supposed Causes

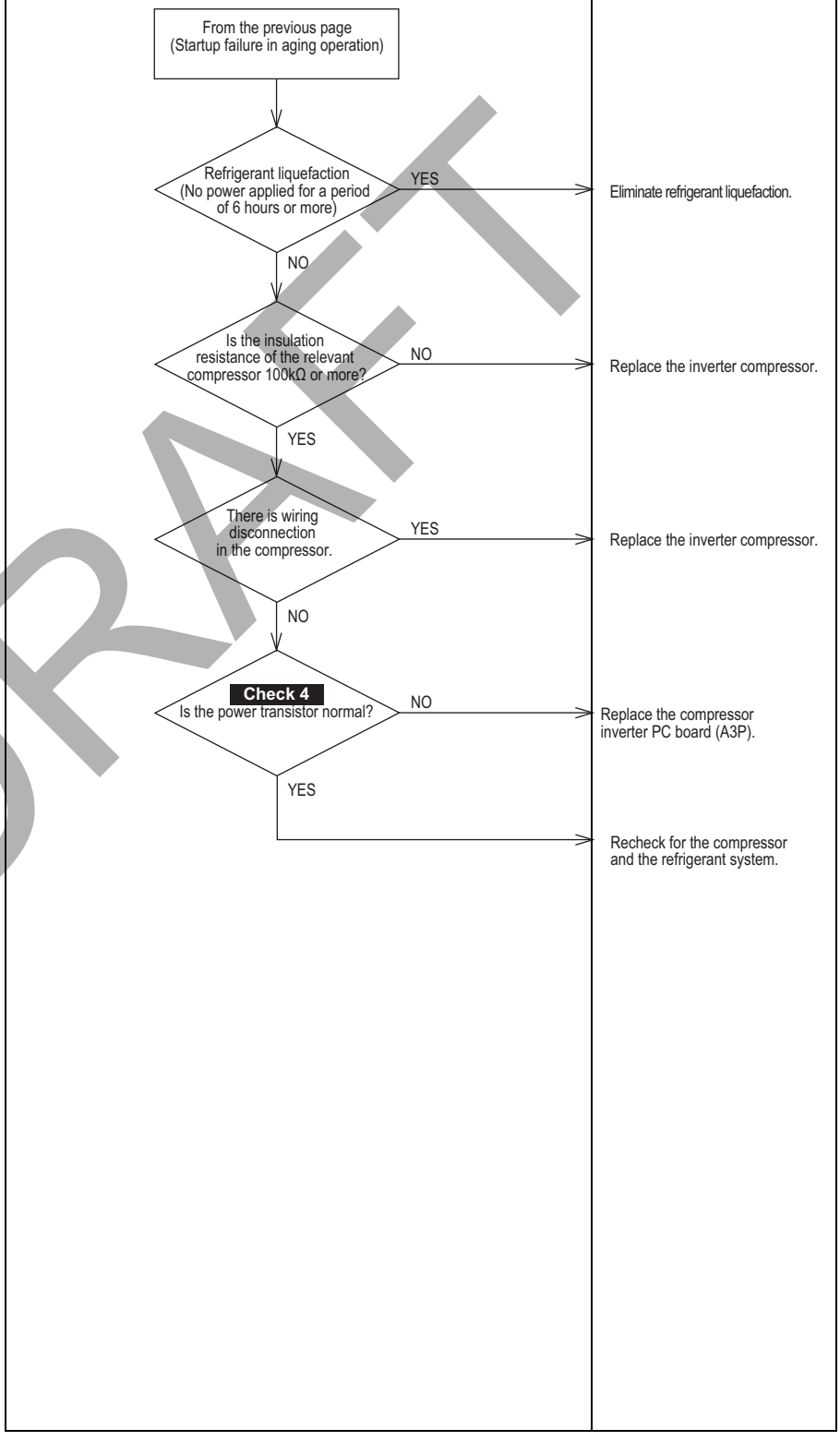
- Neglect to open the stop valve
- Faulty compressor
- Error in wire connections to compressor
- Large differential pressure before compressor startup
- Faulty inverter PC board

5 Troubleshooting



DRAFT

5 Troubleshooting



DRAFT

Remote Controller Display

LC

Transmission Error (Between Inverter PC Board and Control PC Board)

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Check for the transmission conditions between the inverter PC board and the control PC board using a microcontroller.

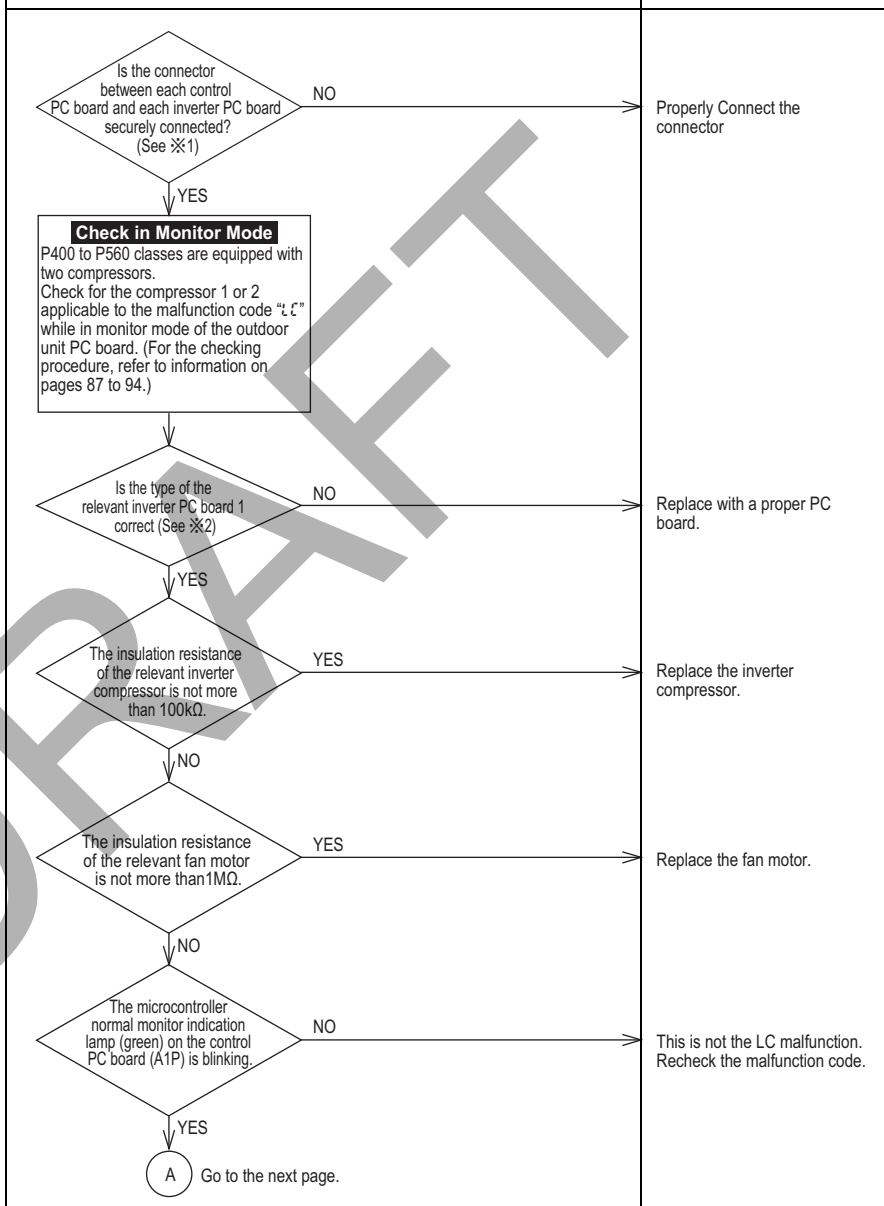
3 Conditions for Determining Malfunction

When normal transmission is disabled for a given period of time or more

4 Supposed Causes

- Faulty connection between the inverter PC board and the control PC board
- Faulty control PC board (Transmission block)
- Faulty noise filter
- External factors (e.g. noise)
- Faulty inverter compressor
- Faulty fan motor

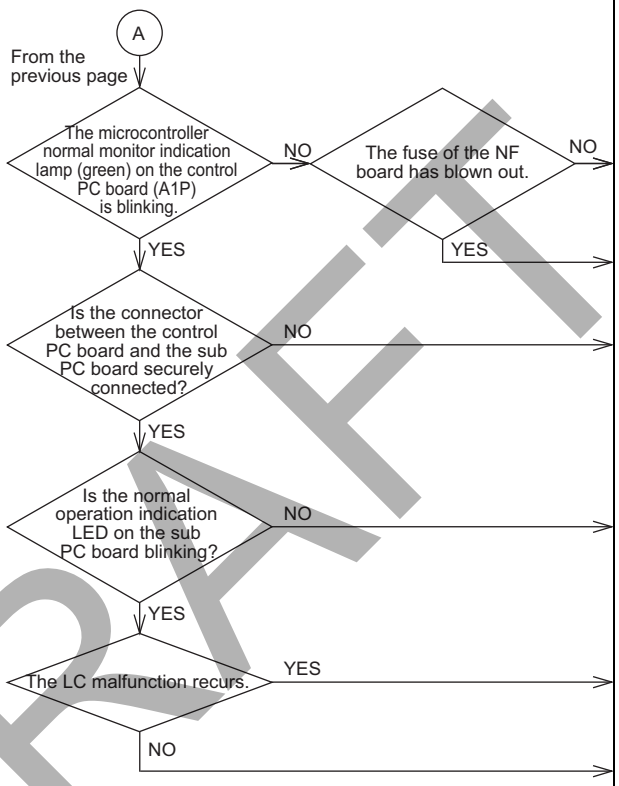
5 Troubleshooting



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures



∗1. Connect and disconnect the connector once to ensure that it is securely connected.

∗2. List of types of inverter PC board 1

Type	Applicable Model
PC0901-1	RXYP140・160・224C, RXMP224C
PC1120-1	RXYP280・335C, RXMP280・335C
PC0901-1	RXYP400・450C, RXMP400・450C
PC0901-5	RXYP500・560C, RXMP500・560C
	RXUP224・280・335・400C

DRAFT

Remote Controller Display

P1

Power Supply Voltage Imbalance

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect voltage imbalance through PC board.

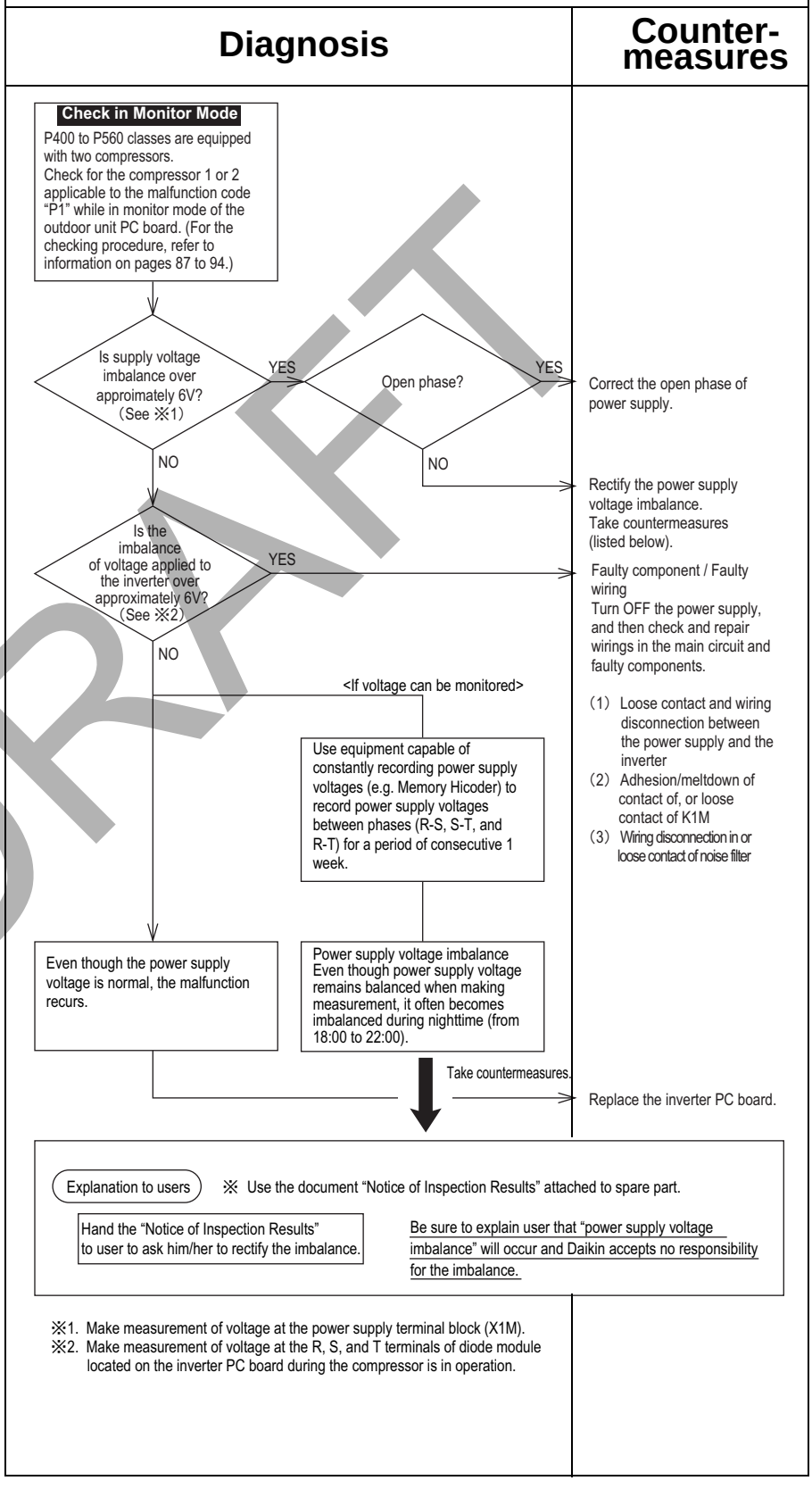
3 Conditions for Determining Malfunction

When power supply voltage imbalance exceeds approximately 6V

4 Supposed Causes

- Open phase
- Interphase voltage imbalance
- Faulty capacitor in the main circuit
- Faulty inverter PC board
- Faulty K1M
- Faulty wiring in the main circuit

5 Troubleshooting



DRAFT

Remote Controller Display
P3

Faulty Reactor Thermistor

1 Applicable Models

Outdoor unit
RXYP280C, 335C, 500C, 560C
RXMP280C, 335C, 500C, 560C
RXUP224C, 280C, 335C

2 Method for Detecting Malfunction

Detect according to temperature detected with the reactor surface temperature thermistor.

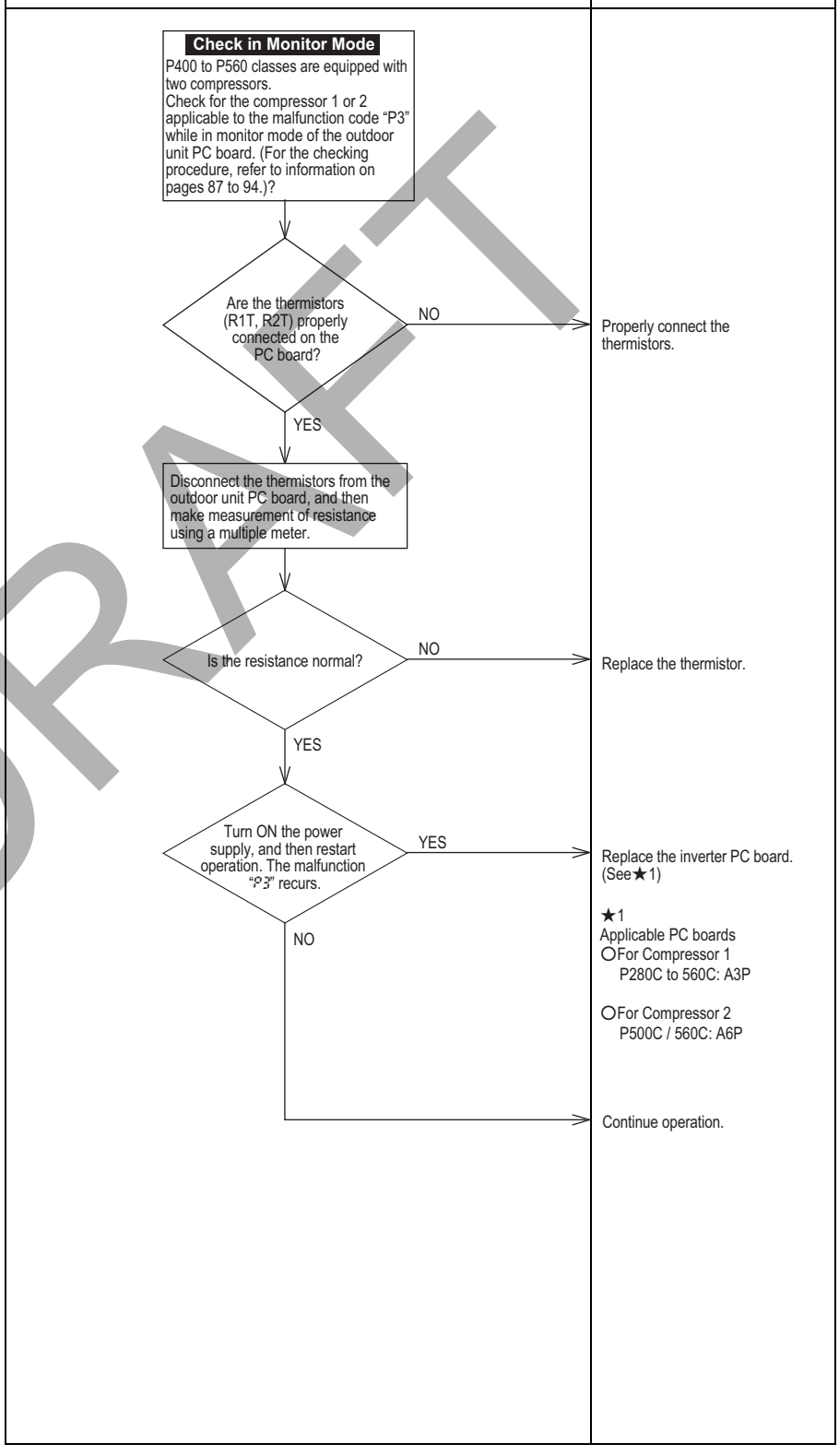
3 Conditions for Determining Malfunction

When the system is in operation and the thermistor causes wiring disconnection or short circuit in it

4 Supposed Causes

- Faulty connection of thermistor
- Faulty thermistor
- Faulty inverter PC board

5 Troubleshooting



DRAFT

Remote Controller Display
P4

Faulty Radiator Fin Thermistor

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect the resistance of the following thermistors during the compressor stops running.
① Radiator fin thermistor
② Thermistor located in PC board circuit
③ Heatsink thermistor

3 Conditions for Determining Malfunction

When the resistance of the thermistor comes to a value equivalent to open or short circuit
* The system continues operating without determining the imbalance to be malfunction. Pressing the TEST button on the remote controller will display, "P4" on the LCD.

4 Supposed Causes

- Faulty radiator fin thermistor
- Faulty inverter PC board
- Faulty heatsink thermistor
- Faulty inverter compressor
- Faulty fan motor

5 Troubleshooting

Diagnosis

Check in Monitor Mode
P400 to P560 classes are equipped with two compressors.
Check for the compressor 1 or 2 applicable to the malfunction code "P4" while in monitor mode of the outdoor unit PC board. (For the checking procedure, refer to information on pages 87 to 94.)

↓

Make measurement of resistance of the radiator fin thermistor.

↓

Is the resistance of the relevant thermistor normal? — NO → Replace the inverter PC board.

↓ YES

The insulation resistance of the relevant inverter compressor is not more than 100kΩ. — YES → Replace the inverter compressor.

↓ NO

The insulation resistance of the relevant fan motor is not more than 1MΩ — YES → Replace the fan motor.

↓ NO

Turn ON the power supply. Does the malfunction recur? — YES → Replace the inverter PC board.

↓ NO

Continue operation.

※1: List of applicable thermistors

	Thermistor 1	Thermistor 2
P140 to 224 Class	Radiator fin thermistor	—
P280 / 335 Class	(Thermistor located in the PC board circuit)	—
P400 / 450 Class	Heatsink thermistor 1	Heatsink thermistor 2
P500 / 560 Class	Heatsink thermistor	(Thermistor located in the PC board circuit)

Counter-measures

DRAFT

Remote Controller Display

PJ

Improper Combination of Inverter and Fan Driver

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to communication with the inverter.

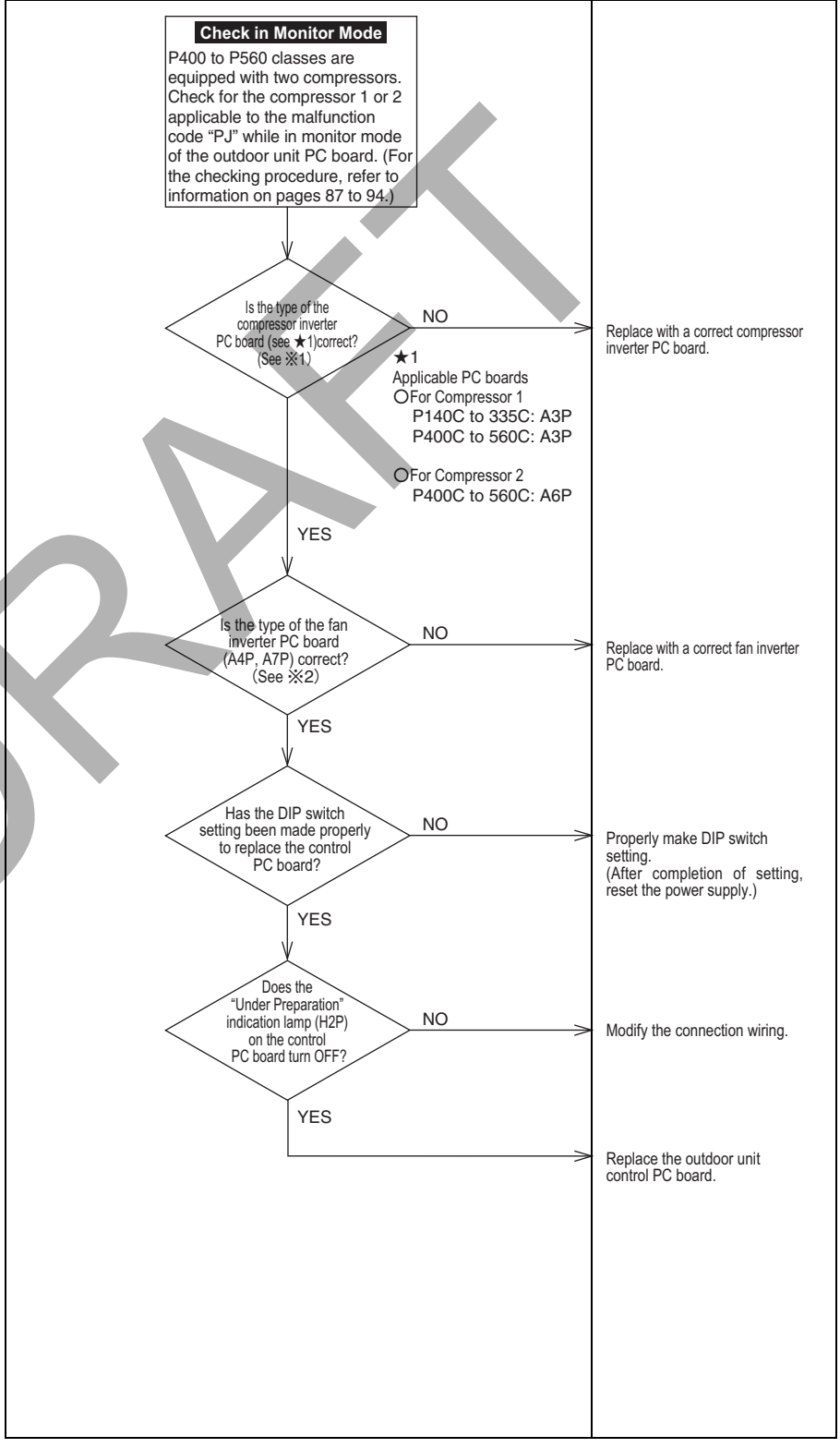
3 Conditions for Determining Malfunction

When the type of the inverter PC board is determined to be correct according to communication data

4 Supposed Causes

- Mismatch of the type of PC board
- Field setting error

5 Troubleshooting



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures

∗1: Types of compressor inverter PC boards
Compressor inverter PC board 1

Type	Applicable Model
PC0901-1	RXYP140 • 160 • 224C, RXMP224C
PC1120-1	RXYP280 • 335C, RXMP280 • 335C
PC0901-1	RXYP400 • 450C, RXMP400 • 450C
PC0901-5	RXYP500 • 560C, RXMP500 • 560C
	RXUP224 • 280 • 335 • 400C

Compressor inverter PC board 2

Type	Applicable Model
PC0901-5	RXYP400 • 450C, RXMP400 • 450C
PC1120-31	RXYP500 • 560C, RXMP500 • 560C
	RXUP224 • 280 • 335 • 400C

∗2: Types of fan inverter PC boards
Fan inverter PC board 1

Type	Applicable Model
PC0908-3	RXYP140
PC0908-1	RXYP160 • 224 • 280 • 335C, RXMP224 • 280 • 335C
PC0908-5	RXYP400 • 450C, RXMP400 • 450C
PC0908-5	RXYP500 • 560C, RXMP500 • 560C
	RXUP224 • 280 • 335 • 400C

Fan inverter PC board 2

Type	Applicable Model
PC0908-6	RXYP400 • 450C, RXMP400 • 450C
PC0908-6	RXYP500 • 560C, RXMP500 • 560C
	RXUP224 • 280 • 335 • 400C

DRAFT

Remote Controller Display

U7

Gas Shortage Alarm

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect gas shortage according to a low pressure level or a difference in heat exchanging temperature from the suction pipe.

3 Conditions for Determining Malfunction

[In cooling operation]

- When low pressure falls below 0.1MPa

[In hearting operation]

- When the degree of superheat of suction gas exceeds 20¬×C
  SH = Ts1 - Te
  where Ts1=Temperature detected by the suction pipe thermistor
  Te=Saturation temperature equivalent to low pressure

* The system continues operation without determining the symptom to be malfunction.

4 Supposed Causes

- Gas shortage or clogging of refrigerant (Piping error)
- Faulty thermistor (R4T, R7T)
- Faulty low pressure sensor
- Faulty outdoor unit PC board (A1P)

5 Troubleshooting

Diagnosis

In cooling operation

① Mount a pressure gauge on the low pressure service port.
② Reset the operation using the remote controller, and then restart the operation.

Low pressure is not more than 0.1MPa. (See ∗1)
NO → Are the low pressure characteristics normal? (See ∗2)
NO → Replace the low pressure sensor.
YES → Replace the control PC board (A1P).
YES → Referring to **Check 2**, eliminate the causes of a drop in low pressure.

∗1 Check for low pressure with the pressure gauge while operating.
∗2 Make a comparison between the measurement of the pressure sensor and the reading of the pressure gauge.
(To make measurement with the pressure sensor, make voltage measurement at the connector [between (2) and (3)], and then convert it to pressure referring to information on page 318.)

In heating operation

Reset the operation using the remote controller, and then restart the operation.

Is a difference between suction pipe temperature and heat exchanging temperature over 20°C?
NO → Are the characteristics of the suction pipe thermistor (R7T) and the heat exchanger thermistor (R4T) normal? (See ∗3)
NO → Replace the thermistor.
YES → Replace the control PC board (A1P).
YES → Referring to **Check 3**, eliminate the causes of superheat operation.

∗3 Make a comparison between the resistance of thermistor and value detected by the surface pyrometer.

Counter-measures

DRAFT

Remote Controller Display

U1

Negative Phase / Open Phase

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect the state of each phase in the negative phase detection circuit to determine whether or not it is open or negative.

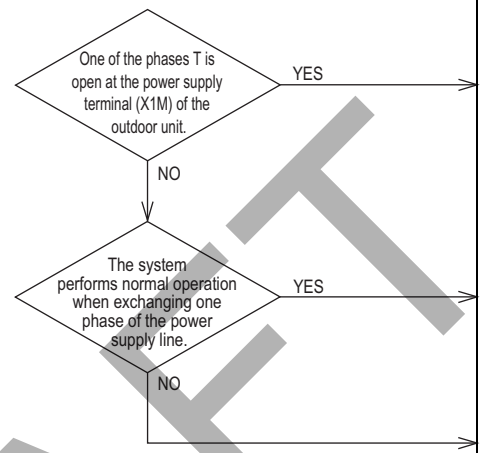
3 Conditions for Determining Malfunction

When power supply voltage is a negative-phase-sequence voltage or the phase T is open

4 Supposed Causes

- Negative-phase-sequence power supply
- Open phase-T
- Faulty outdoor unit PC board

5 Troubleshooting

Diagnosis	Counter-measures
	

DRAFT

Remote Controller Display
U2

Abnormal Power Supply Voltage

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect the voltage of capacitor of the main circuit in the inverter.

3 Conditions for Determining Malfunction

When the voltage aforementioned falls below 190V

4 Supposed Causes

- Abnormal power supply voltage
- Instantaneous power failure
- Open phase
- Faulty inverter PC board
- Faulty control PC board
- Faulty compressor
- Faulty main circuit wiring
- Faulty fan motor
- Faulty connection of signal cable

5 Troubleshooting

Diagnosis	Counter-measures
Check in Monitor Mode P400 to P560 classes are equipped with two compressors. Check for the compressor 1 or 2 applicable to the malfunction code "U2" while in monitor mode of the outdoor unit PC board. (For the checking procedure, refer to information on pages 87 to 94.)	
Check for power supply conditions. ① Power supply voltage falls within the range of200V±10%? ② Any open phase in the power supply wiring or any wrong wiring? ③ Imbalance in the power supply voltage is maintained within 6V?	
There are some defects in the power supply conditions aforementioned. — YES	Remedy the defects.
NO	
The insulation resistance of the compressor is not more than100kΩ. — YES	Replace the compressor.
NO	
The insulation resistance of the fan motor is not more than 1MΩ — YES	Replace the fan motor. If the motor gets severely damaged, the inverter PC board (A3P) should also be replaced.
NO	
Check 4 Is the power transistor normal? — NO	Replace the inverter PC board. (See ★1) ★1 Applicable PC boards ○For Compressor 1 P140C to 335C: A3P P400C to 560C: A3P ○For Compressor 2 P400C to 560C: A6P
YES	
Connect and disconnect the following connectors: ①X4A (A3P)↔X20A (A1P) ②X6A (A3P)↔X28A (A1P)	
A Go to the next page.	

DRAFT

5 Troubleshooting

Diagnosis	Counter-measures
From the previous page (A)	
The inverter PC board (A3P) has damage. — YES	Replace the inverter PC board (A3P). [If he inverter PC board gets severely damaged, the compressor and the fan motor may have been damaged.]
NO	
Turn ON the power supply, and then press the ON button.	
The system enters standby mode before the outdoor unit fan starts rotating. — YES	Replace the inverter PC board (A3P). (Faulty noise filter)
NO	
The system enters standby mode before completing the startup operation of the compressor. — YES	Replace the inverter PC board (A3P). [If he inverter PC board gets severely damaged, check for the compressor.]
NO	
The malfunction "U2" recurs. — YES	Check for wirings.
NO	
	Continue operation. [The malfunction could have resulted from causes such as instantaneous power failure.]

DRAFT

Remote Controller Display

U3

Check Operation Not Conducted

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect according to whether or not the test operation has been conducted.

3 Conditions for Determining Malfunction

When the system operates before the test operation is conducted

4 Supposed Causes

- Check operation not conducted

5 Troubleshooting

Diagnosis	Counter-measures
The contents of individual failures vary with detailed malfunction code. Ensure the detailed malfunction code, and then go to the following:	
U3-03	Conduct the test operation. (The test operation has not been conducted.)
U3-04	Check for the refrigerant piping, and then conduct the test operation.
U3-05	Conduct the test operation (due to the premature end of the test operation).
U3-06	Conduct the test operation (due to the premature end of the test operation).
U3-07	Check for transmission between indoor and outdoor units, and then conduct the test operation.
U3-08	Check for transmission between indoor and outdoor units, and then conduct the test operation.

DRAFT

Remote Controller Display

U4

Transmission Error (Between Indoor Unit and Outdoor Unit)

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP
Indoor unit
All models

2 Method for Detecting Malfunction

Check whether or not transmission n between indoor and outdoor units is normal, by the use of a microcontroller.

3 Conditions for Determining Malfunction

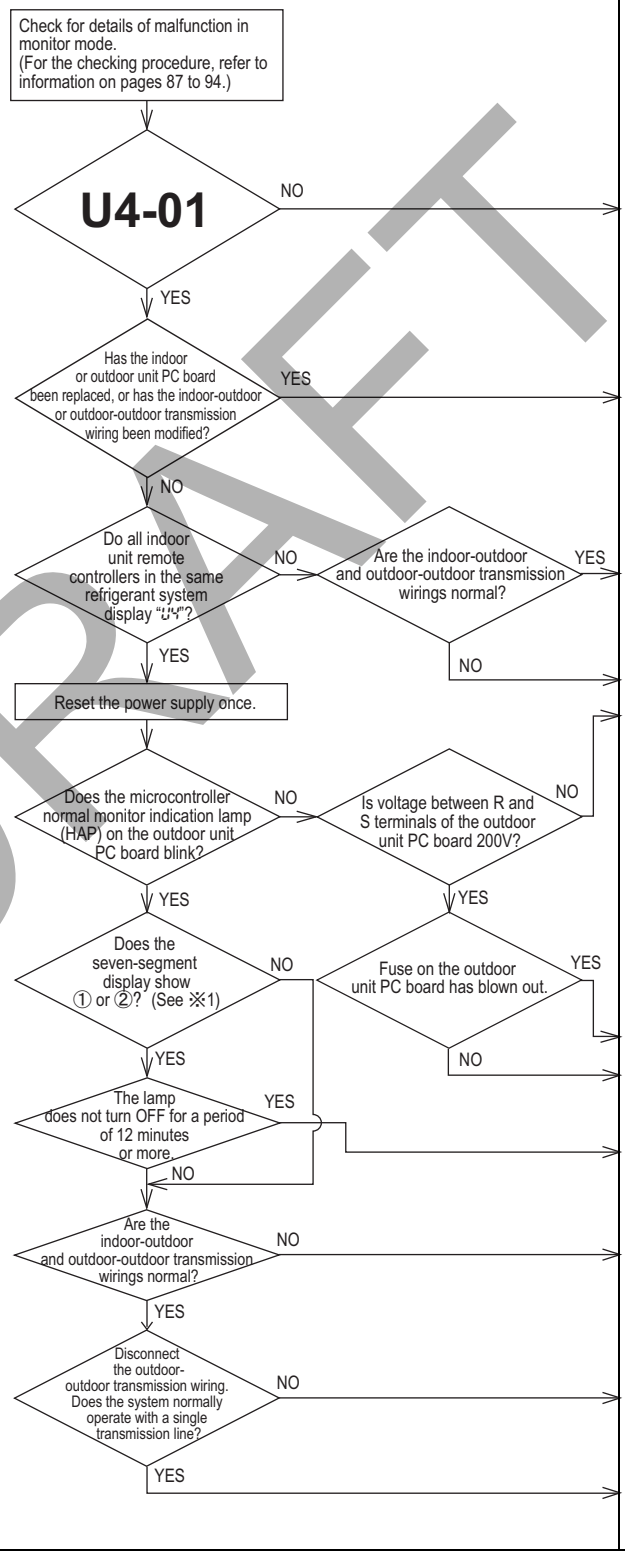
When normal transmission is disabled for a given period of time or more

4 Supposed Causes

- Short circuit in indoor-outdoor or outdoor-outdoor transmission wiring (F1 / F2), or wrong wiring
- Outdoor unit power OFF
- Mismatch of system address
- Faulty outdoor unit PC board (A1P)
- Faulty indoor unit PC board

5 Troubleshooting

Diagnosis



Counter-measures

Go to the next page.
U4-03
(Indoor unit system transmission error)

Press and hold BS3 on the master outdoor unit control PC board for a period of 5 seconds or more. (The system will not operate for a period of 12 minutes at maximum.)

Replace the indoor unit PC board.

Modify the transmission wirings.

Correct the voltage (200V).

※1 :OFF :ON :BLINK

①



②



Replace the fuse.

Replace the outdoor unit PC board.

Press and hold BS3 on the outdoor unit control PC board for a period of 5 seconds or more.

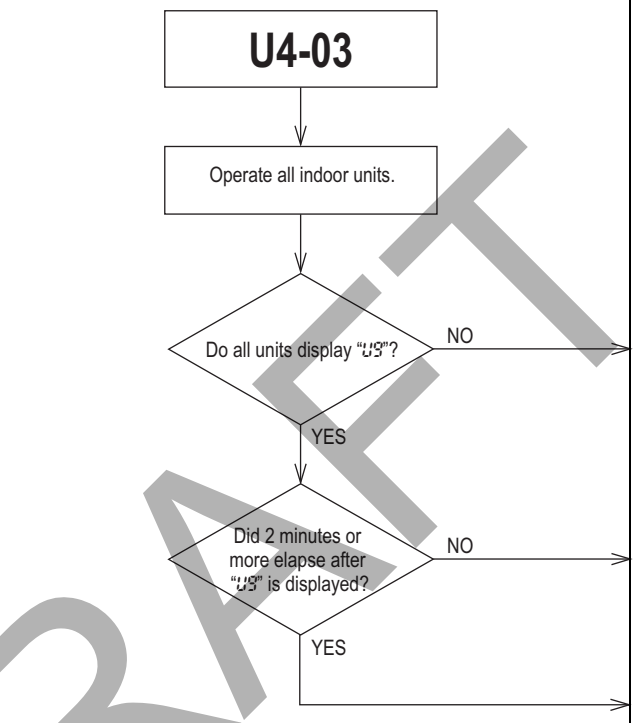
Modify the transmission wirings.

Replace the outdoor unit control PC board.

Mount the DIII-NET extension adapter.

DRAFT

5 Troubleshooting

Diagnosis	Counter-measures
	Continue operation. Carry out the diagnosis again after a lapse of 2 minutes or more. The PC boards of indoor units displaying "U3" are normal. Check for indoor units of other systems to troubleshoot them according to relevant malfunction codes.

DRAFT

Remote Controller Display

U5

Transmission Error (Between Remote Controller and Indoor Unit)

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Check whether or not transmission between indoor unit and remote controller is normal, by the use of a microcontroller.

3 Conditions for Determining Malfunction

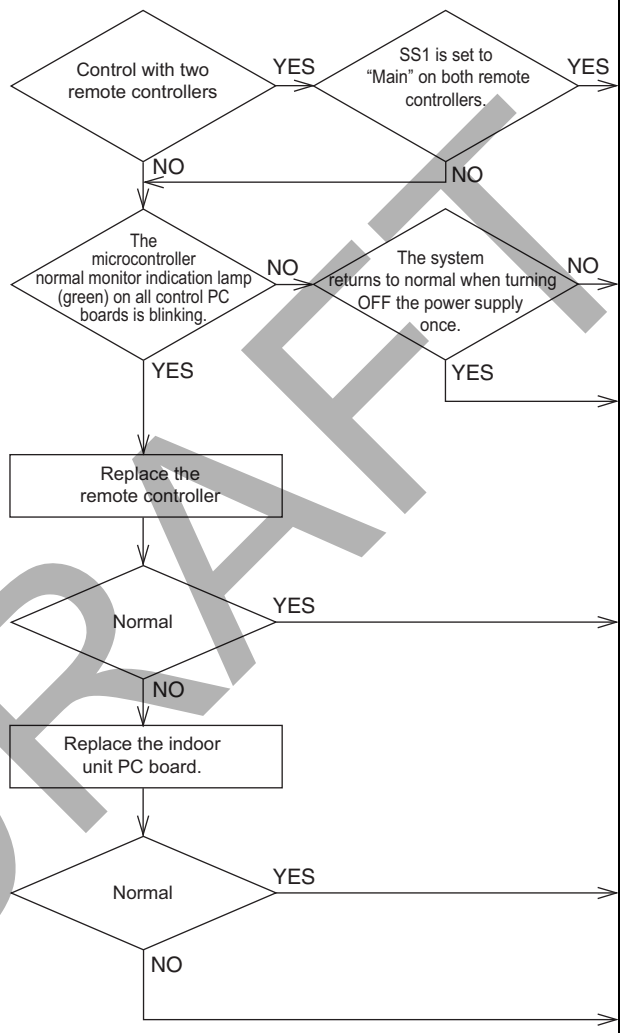
When normal transmission is disabled for a given period of time or more

4 Supposed Causes

- Transmission error between indoor unit and remote controller
- Connection of main remote controllers (for control with two remote controllers)
- Faulty outdoor unit PC board
- Faulty remote controller PC board
- Transmission error due to noise

5 Troubleshooting

Diagnosis



Counter-measures

DRAFT

Remote Controller Display

U7

Transmission Error (Between Remote Controller and Indoor Unit)

1 Applicable Models

Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Check whether or not transmission between outdoor units is normal, by the use of a microcontroller.

3 Conditions for Determining Malfunction

When normal transmission is disabled for a given period of time or more

4 Supposed Causes

- Connection error of transmission wirings between outdoor unit and external control adapter for outdoor unit
- Connection error of transmission wirings between outdoor units
- Cool/Heat selection setting error
- Cool/Heat unified address setting error
  (Functional unit, external control adapter for outdoor unit)
- Faulty outdoor unit PC board
- Faulty external control adapter for outdoor unit

5 Troubleshooting

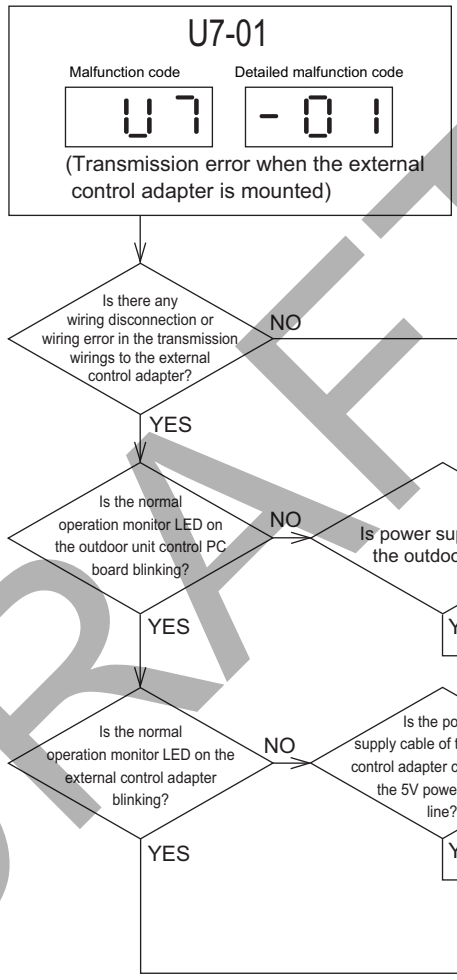
Diagnosis	Countermeasures
Ensure the detailed malfunction code or the lamp display of monitor mode, and then go to the following:	
U7-01 (Malfunction code: U7, Detailed malfunction code: -01)	Go to Diagnosis Flowchart-1. (Transmission error when the external control adapter is mounted)
U7-02 (Malfunction code: U7, Detailed malfunction code: -02)	Go to Diagnosis Flowchart-2. (Transmission error when the external control adapter is mounted)
U7-03 (Malfunction code: U7, Detailed malfunction code: -03)	Go to Diagnosis Flowchart-3. (Transmission error between master and slave 1)
U7-04 (Malfunction code: U7, Detailed malfunction code: -04)	Go to Diagnosis Flowchart-4. (Transmission error between master and slave 2)
U7-05 (Malfunction code: U7, Detailed malfunction code: -05)	Go to Diagnosis Flowchart-5. (Multi system error)
U7-06 (Malfunction code: U7, Detailed malfunction code: -06)	Go to Diagnosis Flowchart-6. (Manual address setting error for slave 1, 2)
U7-07 (Malfunction code: U7, Detailed malfunction code: -07)	Go to Diagnosis Flowchart-7. (Connection 4 or more outdoor units to the same system)
U7-11 (Malfunction code: U7, Detailed malfunction code: -11)	Go to Diagnosis Flowchart-8. (Connection of excess indoor units for test operation)

DRAFT

5 Troubleshooting

Diagnosis	Counter-measures

Diagnosis Flowchart-1



Modify the transmission wirings to the external control adapter.

Supply power to the outdoor unit.

Replace the outdoor unit control PC board.

Connect the power supply cable of the external control adapter to the 5V power supply line.

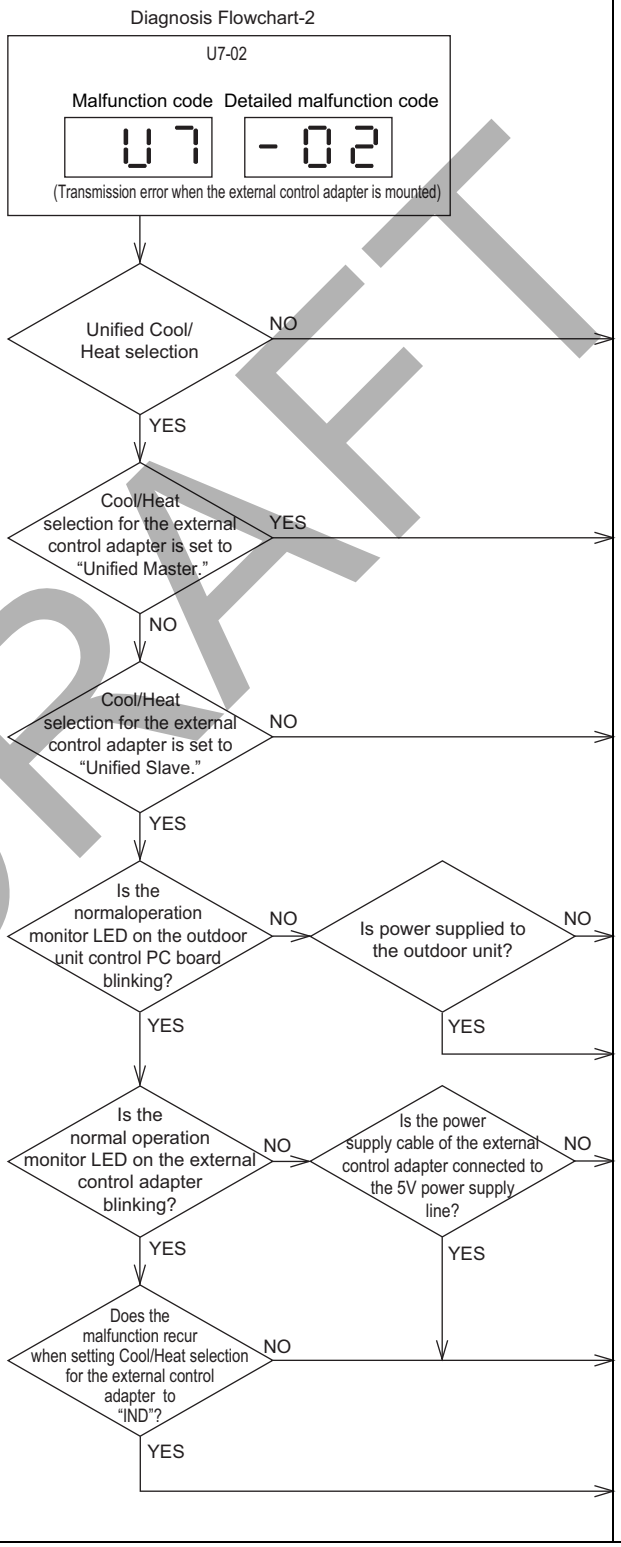
Replace the external control adapter PC board.

Replace the outdoor unit control PC board.

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5 Troubleshooting

Diagnosis	Counter-measures



DRAFT

5 Troubleshooting

Diagnosis	Counter-measures
Diagnosis Flowchart-3 U7-03 Malfunction code: U7 Detailed malfunction code: -03 (Transmission error between master and slave 1) The multi transmission wirings to multi slave 1 have caused wiring disconnection in them or are being disconnected. NO	Replace the outdoor unit control PC board for multi slave 1.
YES	Modify the outdoor unit multi transmission wirings, and then reset the power supply.
Diagnosis Flowchart-4 U7-04 Malfunction code: U7 Detailed malfunction code: -04 (Transmission error between master and slave 2) The multi transmission wirings to multi slave 2 have caused wiring disconnection in them or are being disconnected. NO	Replace the outdoor unit control PC board for multi slave 2.
YES	Modify the outdoor unit multi transmission wirings, and then reset the power supply.
Diagnosis Flowchart-5 U7-05 Malfunction code: U7 Detailed malfunction code: -05 (Multi system error) Is the model of outdoor unit RXYP140C or RXYP160C? NO	Replace the outdoor unit control PC board.
YES	Disconnect the outdoor unit multi transmission wirings, and then reset the power supply.

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5 Troubleshooting

Diagnosis	Counter-measures
Diagnosis Flowchart-6 U7-06 Malfunction code: U7 / Detailed malfunction code: -06 (Manual address setting error for slave 1, 2) One of outdoor unit multi transmission wirings has caused wiring disconnection in it or been disconnected. NO	Replace the outdoor unit control PC board.
YES	Modify the outdoor unit multi transmission wirings, and then reset the power supply.
Diagnosis Flowchart-7 U7-07 Malfunction code: U7 / Detailed malfunction code: -07 (Connection 4 or more outdoor units to the same system) 4 or more outdoor units are connected using the outdoor unit multi transmission wirings. NO	Replace the outdoor unit control PC board.
YES	Modify the outdoor unit multi transmission wirings, and then reset the power supply.
Diagnosis Flowchart-8 U7-11 Malfunction code: U7 / Detailed malfunction code: -11 (Connection of excess indoor units for test operation) There is an error in the connection of indoor-outdoor, indoor-indoor, and outdoor multi transmission wirings. YES	Rectify the error in the connection of transmission wirings, and then reset the power supply.
NO The capacity to connect indoor units falls within the specified range. NO	Review the capacity to connect indoor units.
YES	Replace the outdoor unit PC board (A1P).

DRAFT

Remote Controller Display

U8

Transmission Error (Between Main and Sub Remote Controllers)

1 Applicable Models

Indoor unit
All models

2 Method for Detecting Malfunction

Check whether or not transmission between indoor unit and remote controller (main and sub remote controller) under control with two remote controllers is normal, by the use of a microcontroller.

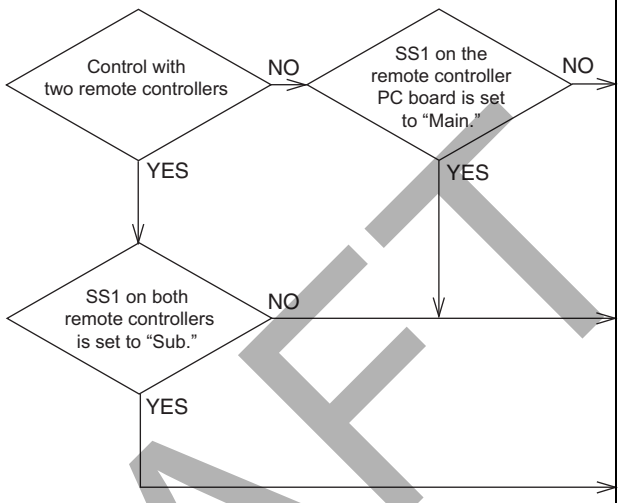
3 Conditions for Determining Malfunction

When normal transmission is disabled for a given period of time or more

4 Supposed Causes

- Transmission error between main and sub remote controllers
- Connection of sub remote controllers
- Faulty remote controller PC board

5 Troubleshooting

Diagnosis	Counter-measures
	

Set SS1 to "Main," and then turn OFF the power supply once. Subsequently, restart operation.

Turn OFF the power supply once, and then restart operation. If the system malfunctions, replace the remote controller PC board.

Set SS1 on one remote controller to "Main", and then turn OFF the power supply once. Subsequently, restart operation.

DRAFT

Remote Controller Display
U9

Transmission Error (Between Other Indoor and Outdoor Units)

1 Applicable Models

Indoor unit
All models
Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

Detect a malfunction signal from other indoor unit in the same system with the outdoor unit PC board.

3 Conditions for Determining Malfunction

When malfunction is determined on other indoor unit in the same system

4 Supposed Causes

- Transmission error between other indoor and outdoor units
- Malfunction of electronic expansion valve of other indoor unit
- Faulty indoor unit PC board for other indoor unit
- Faulty connection of indoor-outdoor transmission wirings

5 Troubleshooting

Diagnosis	Counter-measures
Operate all indoor units.	
All units display "U9". NO	Continue operation.
YES	
2 minutes or more elapsed after "U9" is displayed? NO	Carry out the diagnosis again after a lapse of 2 minutes or more.
YES	The PC boards of indoor units displaying "U9" are normal. Check for indoor units of other systems to troubleshoot them according to relevant malfunction codes.

DRAFT

Remote Controller Display

UA

Improper Combination of Indoor Unit and Remote Controller

1 Applicable Models

Indoor unit
All models
Outdoor unit
RXYP
RXMP
RXUP

2 Method for Detecting Malfunction

- Detect malfunction when data by refrigerant type differ between indoor and outdoor units.
- Detect malfunction when the number of indoor units falls outside of the allowable range.

3 Conditions for Determining Malfunction

The events listed above are determined to be malfunction as soon as they are detected.

4 Supposed Causes

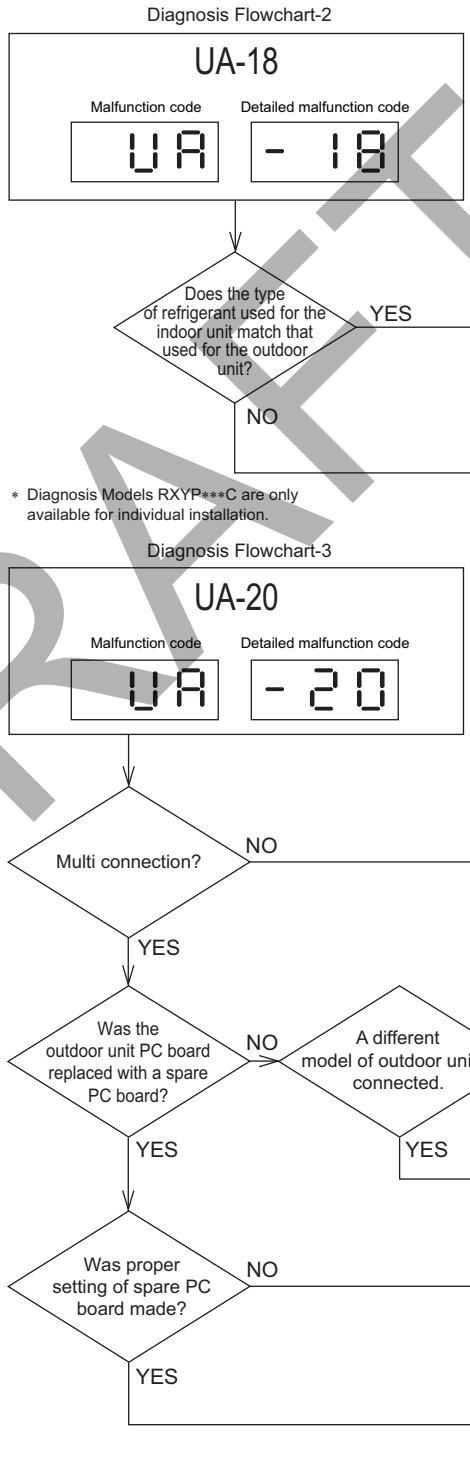
- Connection of excess indoor units
- Faulty outdoor unit PC board
- Mismatch of refrigerant between indoor and outdoor units
- No setting made when the outdoor unit control PC board (A1P) was replaced with a spare PC board

5 Troubleshooting

Diagnosis	Counter-measures
Ensure the detailed malfunction code or the lamp display of monitor mode, and then go to the following:	
UA-17 (Malfunction code: UA, Detailed malfunction code: -17)	Go to Diagnosis Flowchart-1. (Connection of excess indoor units)
UA-18 (Malfunction code: UA, Detailed malfunction code: -18)	Go to Diagnosis Flowchart-2. (Connection of incorrect models of indoor units)
UA-20 (Malfunction code: UA, Detailed malfunction code: -20)	Go to Diagnosis Flowchart-3. (Improper combination of outdoor units)
UA-21 (Malfunction code: UA, Detailed malfunction code: -21)	Go to Diagnosis Flowchart-4. (Wrong connection)
UA-31 (Malfunction code: UA, Detailed malfunction code: -31)	Go to Diagnosis Flowchart-5. (Multi system combination error)
Diagnosis Flowchart-1	
UA-17 (Malfunction code: UA, Detailed malfunction code: -17)	
The number of indoor units connected to the same system is not more than 64. YES	Replace the outdoor unit control PC board.
NO	Excess indoor units are connected. Check for the connection to connect the proper number of indoor units.

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5 Troubleshooting

Diagnosis	Counter-measures
	Replace the outdoor unit control PC board. Match the type of refrigerant used for the outdoor unit and that used for the indoor unit. Replace the outdoor unit control PC board. Replace the outdoor unit control PC board. Check for the model of outdoor unit. Make setting again, and then reset the power supply. Replace the spare PC board.

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5 Troubleshooting

Diagnosis	Counter-measures

Diagnosis Flowchart-4

UA-21

Malfunction code: UA

Detailed malfunction code: -21

→ Replace the outdoor unit control PC board.

Diagnosis Flowchart-5

UA-31

Malfunction code: UA

Detailed malfunction code: -31

Is the multi combination of outdoor units proper?

NO → Correct the multi combination of outdoor units.

YES

Was the outdoor unit PC board replaced with a spare PC board?

NO → Replace the outdoor unit PC board (A1P).

YES

Is the procurement of the spare PC board proper?

NO → Procure a proper spare PC board.

YES

Is the setting of the spare PC board proper?

NO → Make setting again, and then reset the power supply.

YES → Replace the outdoor unit PC board (A1P).

DRAFT

Remote Controller Display

UA

Lack of Support for Auto Clean Panel

1 Applicable Models

Indoor unit
All models
FXYFP28B to 160B
[with Eco auto clean panel (BYCP160BGF) installed]
FXYFP28MC to 160MC
[with Auto clean panel (BYCP160KGF/KAGF)]

2 Method for Detecting Malfunction

- Check whether or not the outdoor unit supports the use of auto clean panel, by the use of a microcontroller.

3 Conditions for Determining Malfunction

- The lack of support is determined to be malfunction as soon as it is detected.

4 Supposed Causes

- Lack of support of outdoor unit for the use of auto clean panel

5 Troubleshooting

Diagnosis	Counter-measures
Lack of Support for Auto Clean Panel (Detailed malfunction code "UA-15")	
The outdoor unit lacks support for the use of auto clean panel. — YES	Replace the outdoor unit with that providing support for the use of auto clean panel.
NO	
Are there any external factors other than failures (e.g. noise)? — YES	Eliminate the external factors.
NO	Check for the panel, indoor unit, and outdoor unit PC boards.

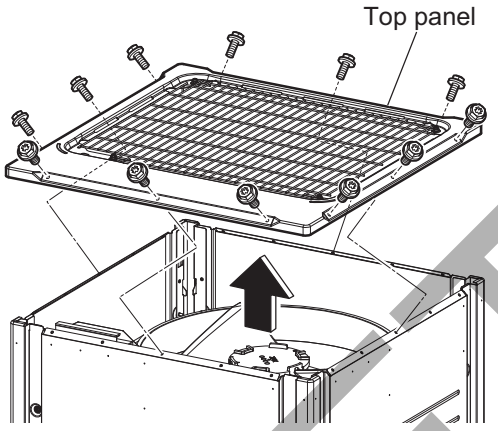
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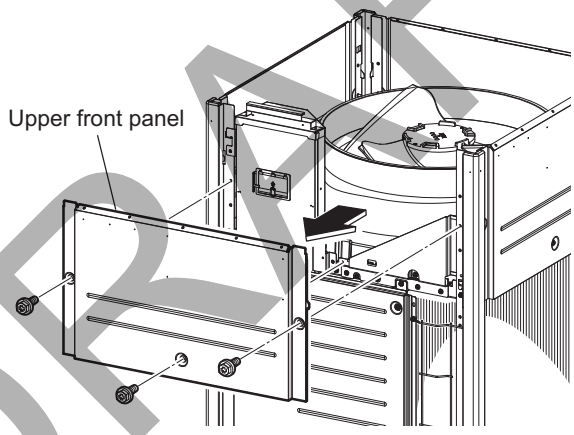
5 RXY140 • 160C

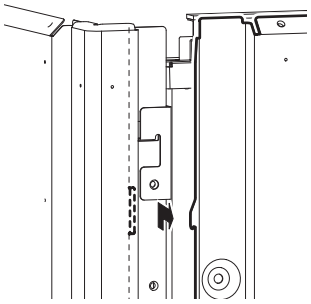
Removal Instructions for Outside Panels (1/2)

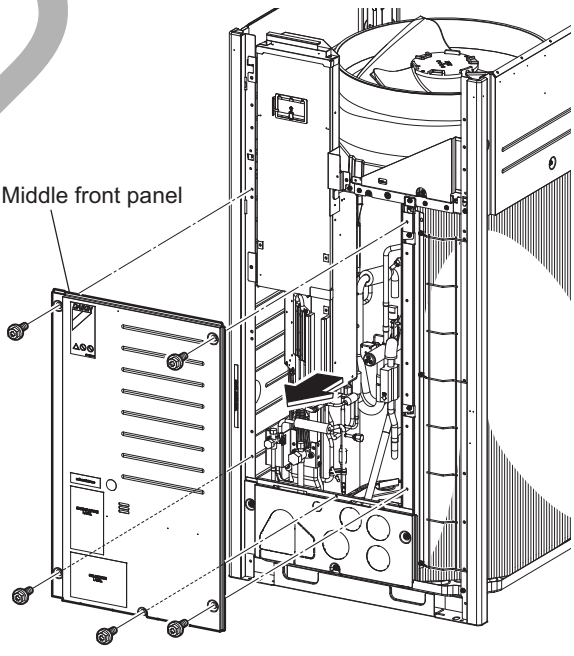
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

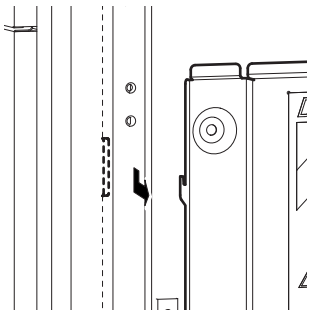
Work procedure	Remarks
1. Remove the top panel ① Remove the 12 screws, and pull out the top panel upward.	★ In the case of working on a stepladder, secure the stepladder to ensure work safety.
2. Remove the upper front panel ① Remove the three screws, unclamp the two claws, and take out the upper front panel.	★ There is a claw on each side of the upper front panel.
3. Remove the middle front panel ① Remove the five screws, unclamp the single claw, and take out the middle front panel.	







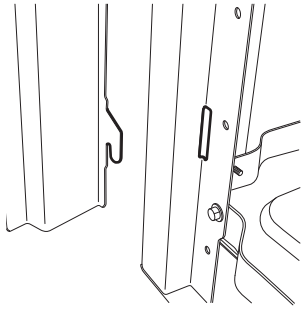


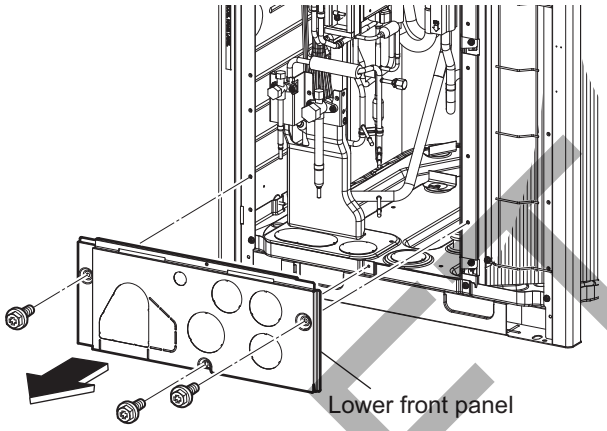


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Removal Instructions for Outside Panels (2/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

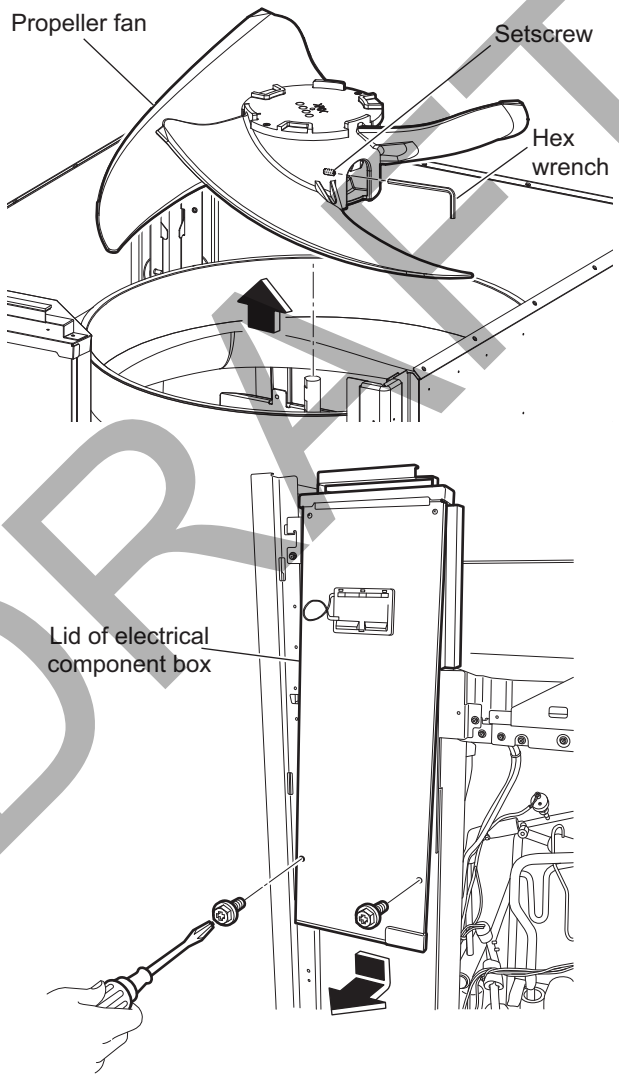
Work procedure	Remarks
4. Remove the lower front panel ① Remove the three screws, unclamp the single claw, and take out the lower front panel.	



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Removal Instructions for Fan Motor (1/3)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

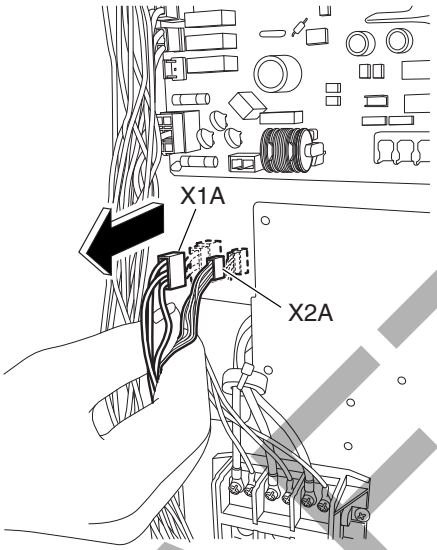
Work procedure		Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. **1. Remove the propeller fan** ① Loosen the setscrew (M10) with a hex wrench. ② Pull out the propeller fan upward. **2. Remove the fan motor** ① Remove the two screws from the lid of the electrical component box. ② Slide down the lid of the electrical component box until the top edge of the lid becomes visible, and remove the lid of the electrical component box.		

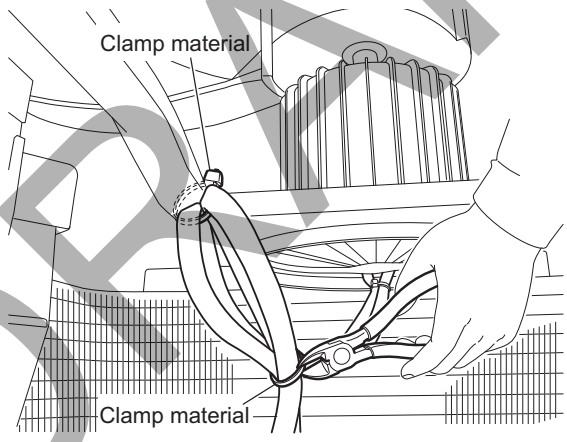
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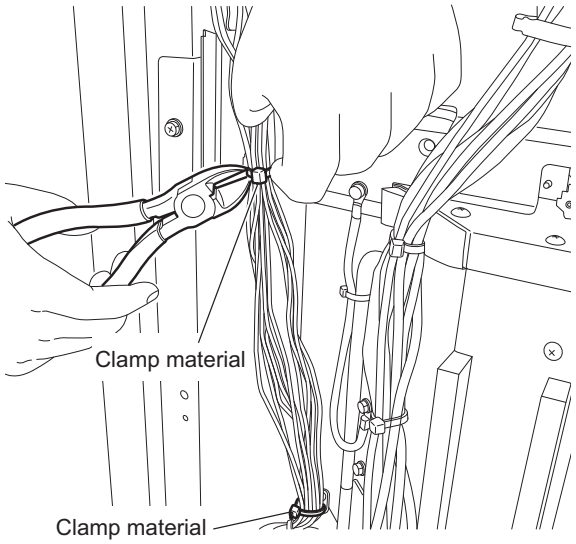
Removal Instructions for Fan Motor (2/3)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
③ Remove the relay connectors (X1A and X2A) for the fan motor.	
④ Remove the four clamp materials that secure the leads.	





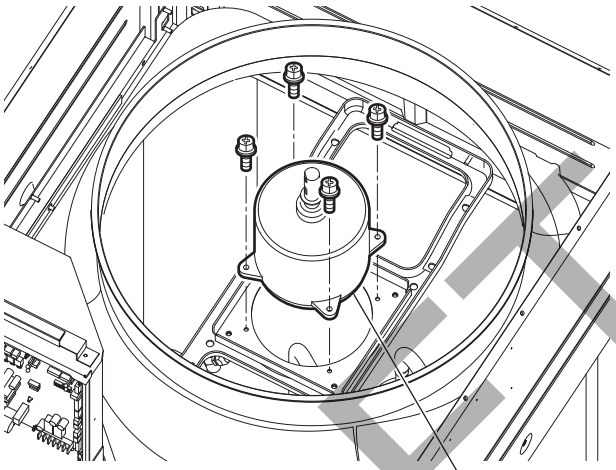


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Removal Instructions for Fan Motor (2/3)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑤ Remove the four fixing bolts, and take out the fan motor.	

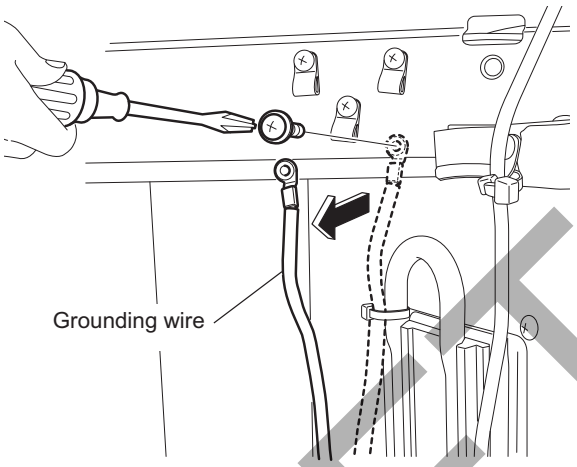


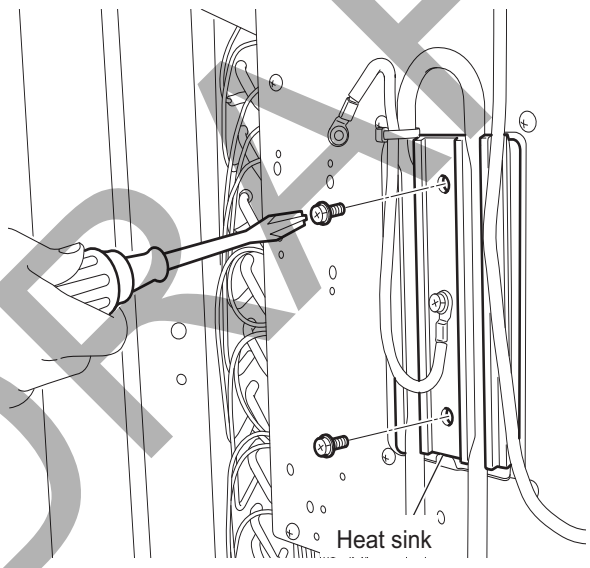
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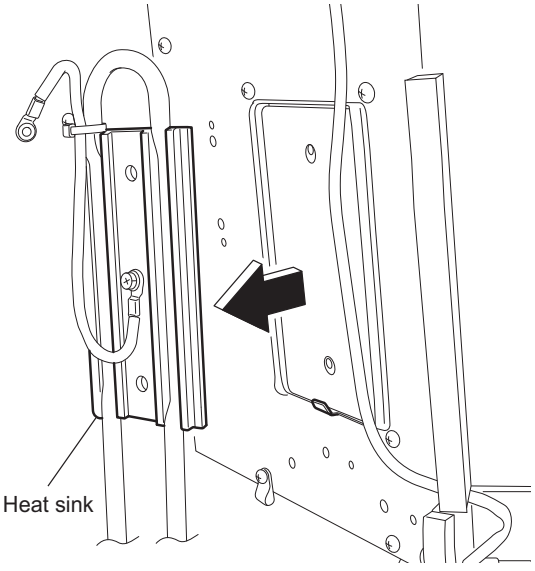
Removal Instructions for Electrical Component Assembly (1/4)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper and middle front panels. ● Remove the two screws, and take out the lid of the electrical component box. **1. Remove the heat sink** ① Remove the ground wire from the heat sink. ② Remove the two screws from the heat sink. ③ Unclamp the hook on the mounting part and pull out the heat sink forward.	★ Precautions for the installation of the heat sink Tighten the screws twice in the order of ① to ④ as shown in the illustration below. Screw tightening procedure Heat sink Hexagon head bolt Tightening torque 1.8±0.2N•m





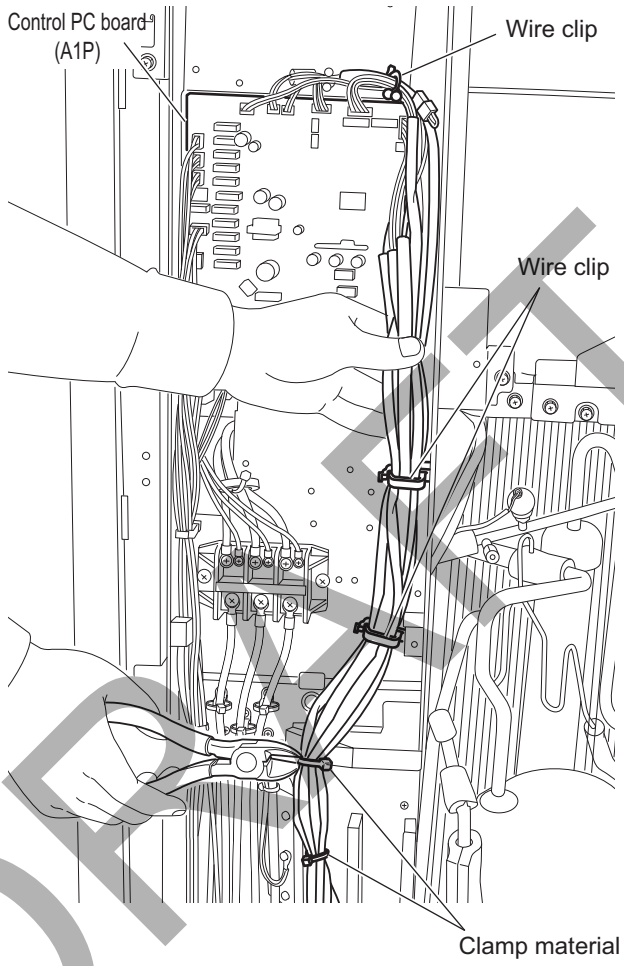


DRAFT

Removal Instructions for Electrical Component Assembly(2/4)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

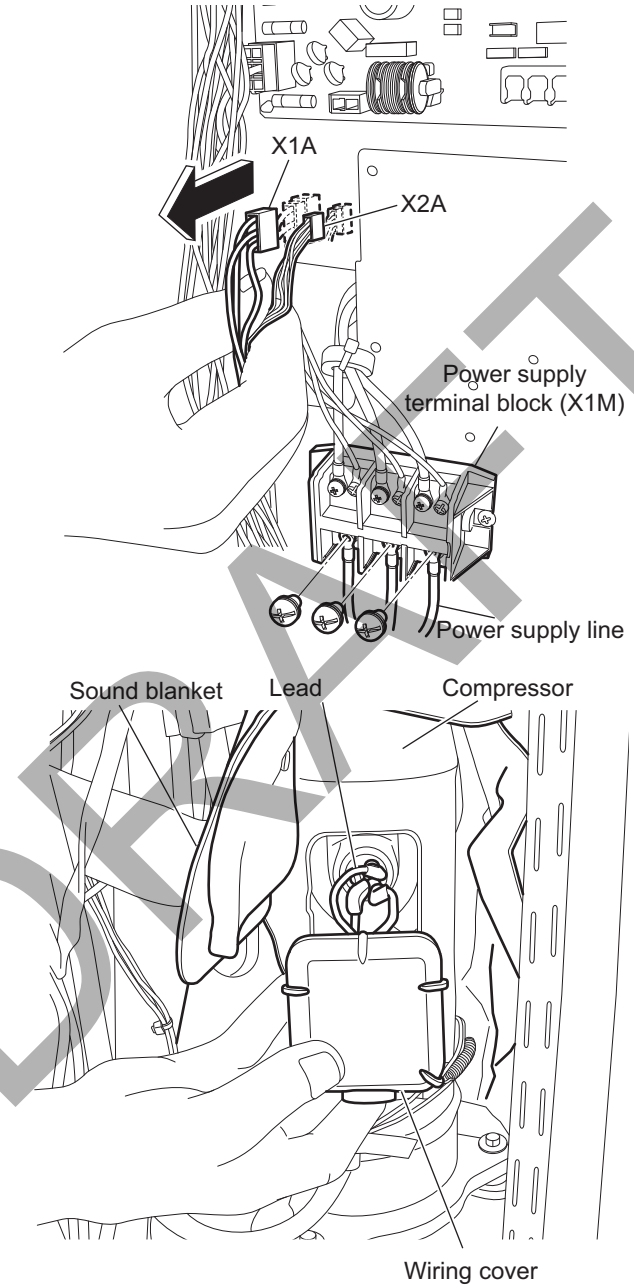
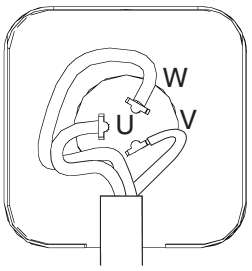
Work procedure	Remarks
2. Remove the electrical component assembly. ① Remove the connectors on the control PC board (A1P). ② Cut two points of the clamp material. ③ Remove the harness from the wire clip.	



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Removal Instructions for Electrical Component Assembly (3/4)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

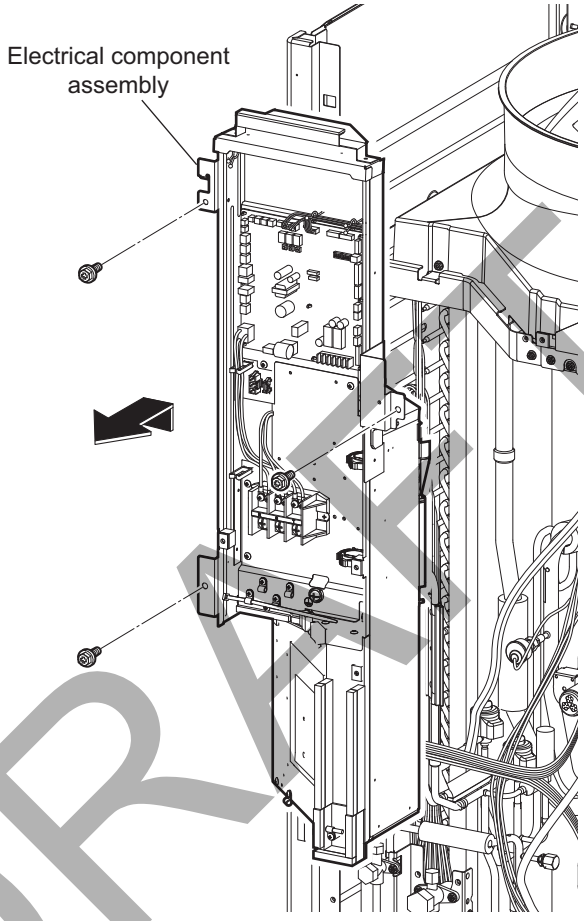
Work procedure	Remarks
④ Remove the relay connectors (X1A and X2A) for the fan motor. ⑤ Remove the three screws from the power supply terminal block (X1M), and disconnect the power supply line. ⑥ Open the sound blanket of the inverter compressor (M1C), and remove the wiring cover. ⑦ Remove the three leads from the terminals of the compressor (M1C).	 ★ Compressor terminal symbol 

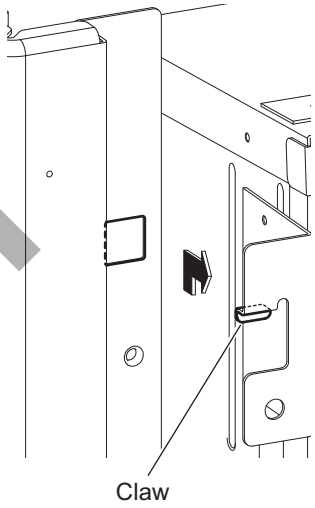
DRAFT

Removal Instructions for Electrical Component Assembly (4/4)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑧ Remove the three screws, lift up the upper part of the electrical component assembly, and take out the electrical component assembly.	★ Unclamp the claw on the back of the electrical component assembly.





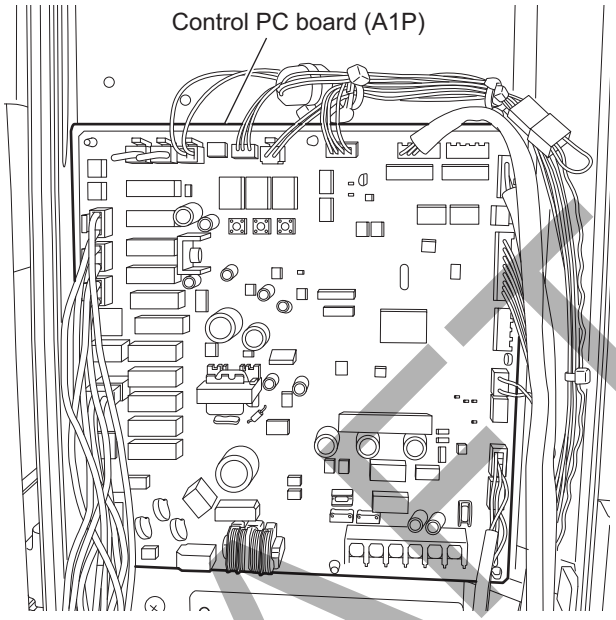
★ Take out the electrical component assembly with careful attention paid to the heat sink.

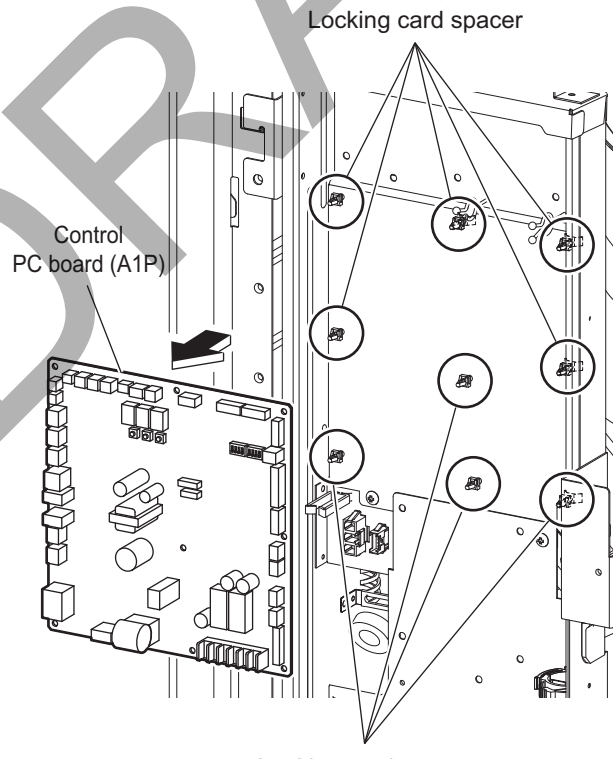
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Removal Instructions for Control PC Board

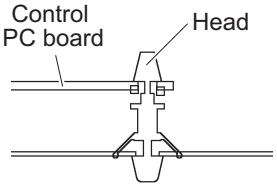
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper and middle front panels. ● Remove the two screws, and take out the lid of the electrical component box. **1. Remove the control PC board (A1P)** ① Remove all the connectors on the control PC board. ② Remove the locking card spacer and take out the control PC board (A1P).	★ Removal from the locking card spacer ★ Cross-sectional view of locking card spacer









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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (1/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

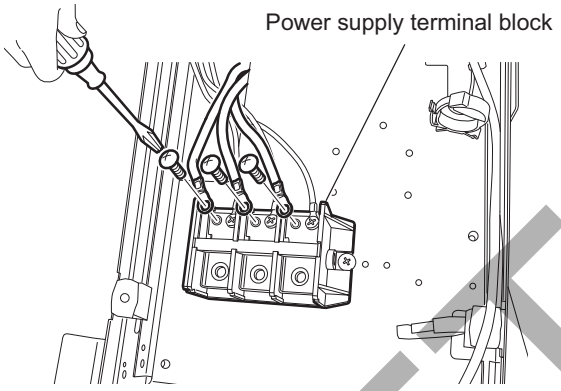
Work procedure	Remarks

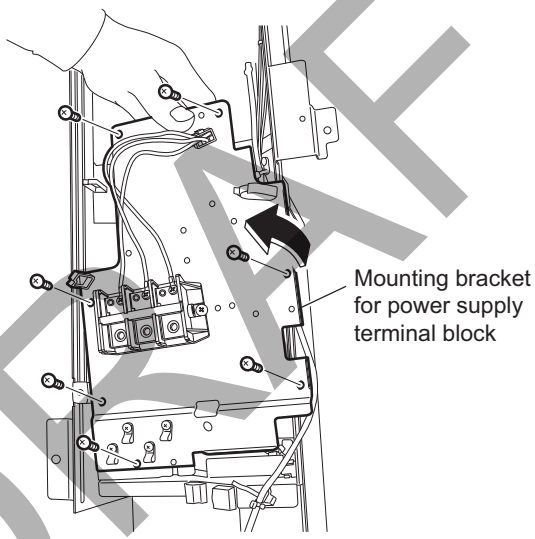
- Follow the removal instructions for the outside panels to remove the top panel and upper and middle front panels.
- Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.

1. Remove the noise filter PC board (A2P)

① Remove the three wires from the power supply terminal block.

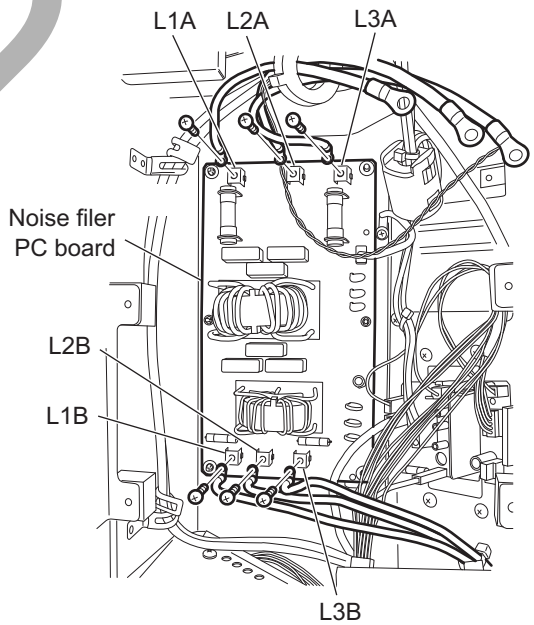
② Remove the seven screws from the power supply terminal block.





③ Remove the connector on the noise filter PC board.

④ Remove the screws from the L1A, L2A, L3A, L1B, L2B, and L3B terminals.



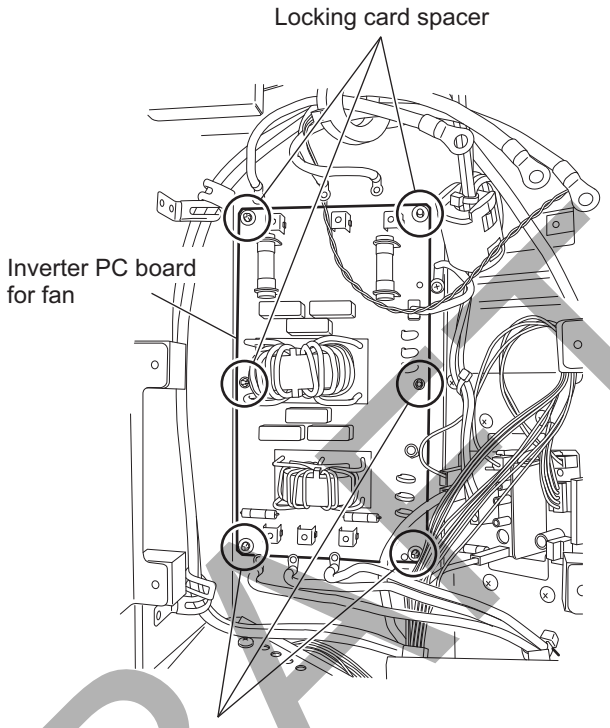
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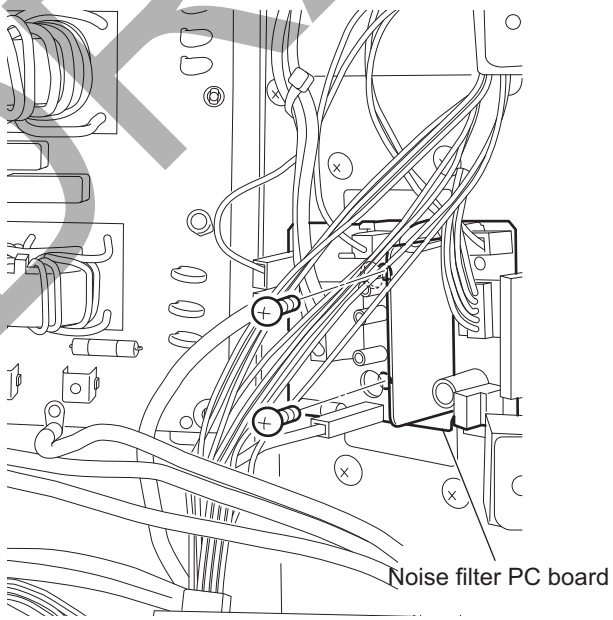
Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (2/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

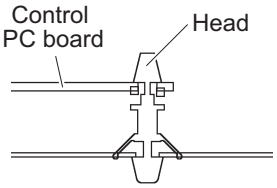
Work procedure	Remarks
⑤ Remove the locking card spacer, and take out the noise filter PC board.	★ Removal from the locking card spacer
2. Remove the inverter PC board for the fan	
① Remove the connector on the inverter PC board for the fan.	
② Remove the two screws, and take out the inverter PC board for the fan.	







★ Cross-sectional view of locking card spacer

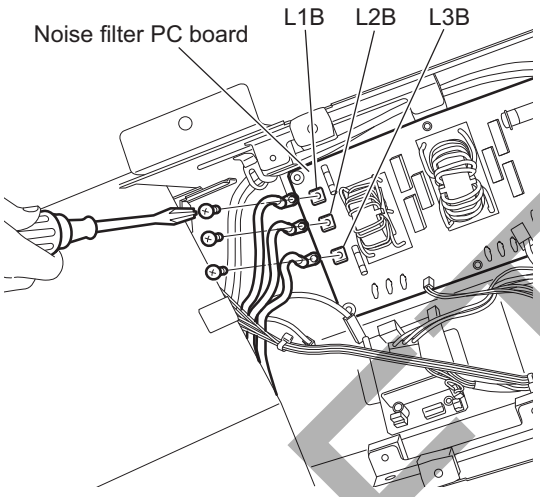
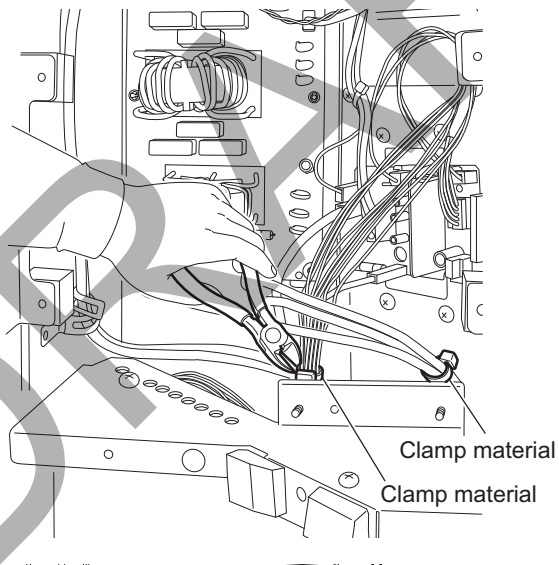
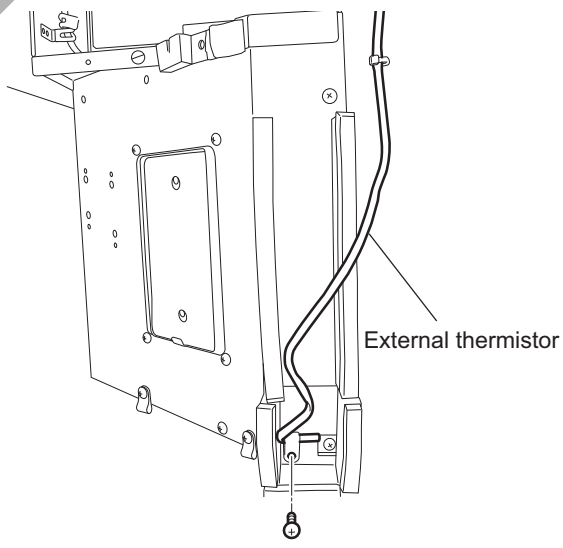


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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (3/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
3. Remove the inverter PC board (A3P) for the	
① Remove the three screws from the L1B, L2B, and L3B terminals on the noise filter PC board.	
② Cut two points of the clamp material for the inverter protection plate.	
③ Remove the single screw from the outdoor air thermistor.	

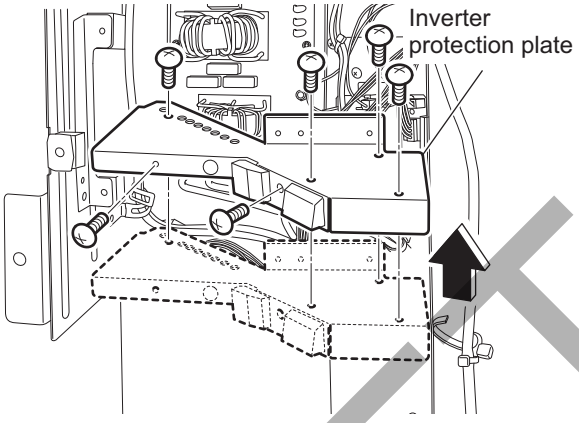
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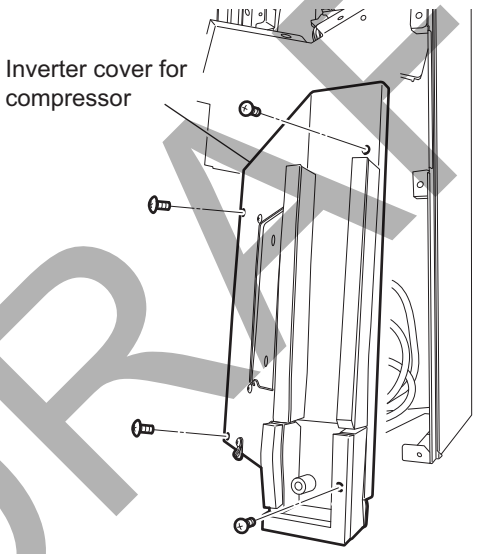
Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

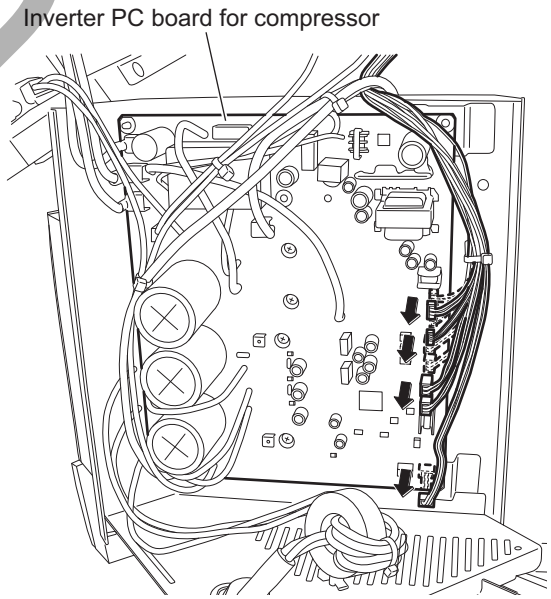
Removal Instructions (4/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
④ Remove the six screws, and take out the inverter protection plate.	
⑤ Remove the four screws, and take out the inverter cover for the compressor.	
⑥ Remove all the connectors on the inverter PC board for the compressor.	





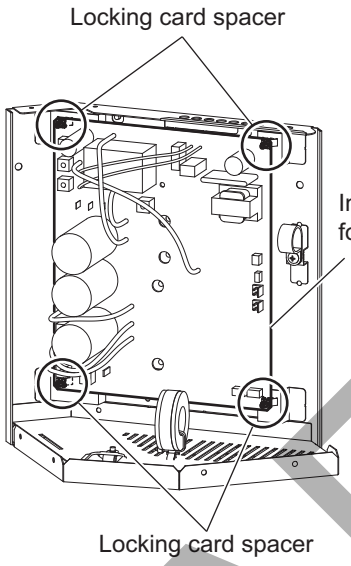
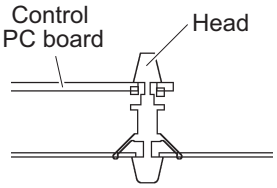


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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (5/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

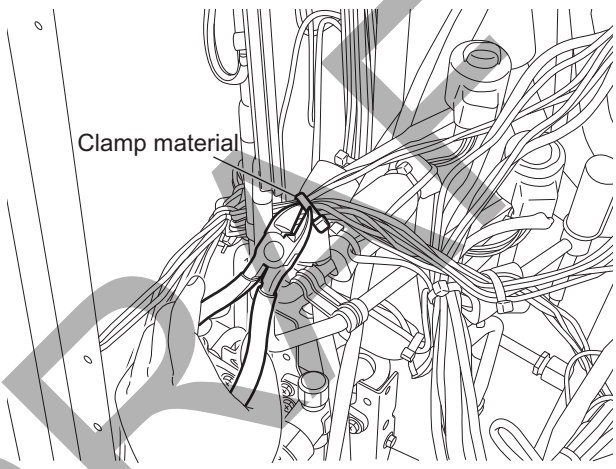
Work procedure		Remarks
⑦ Remove the locking card spacer, and take out the inverter PC board for the compressor.		★ Removal from the locking card spacer  ★ Cross-sectional view of locking card spacer 

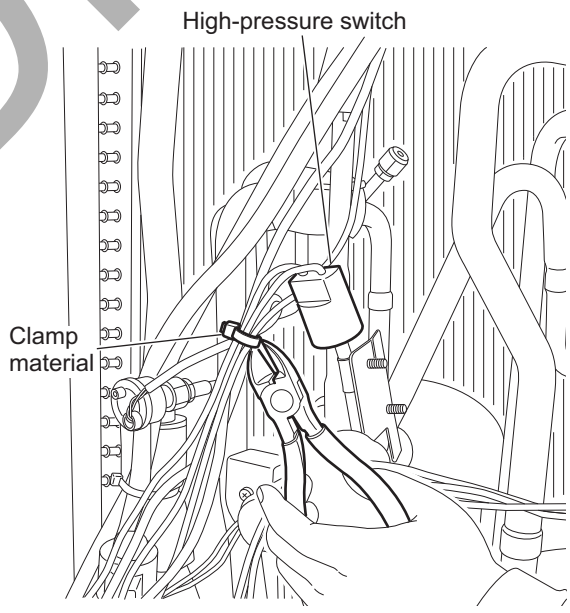
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Removal Instructions for Pressure Switches and Pressure Sensors (1/4)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the upper and lower front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly. **1. Remove the pressure switches** ① Remove the connector (X4A) on the high-pressure switch. ② Cut four points of the clamp material.	

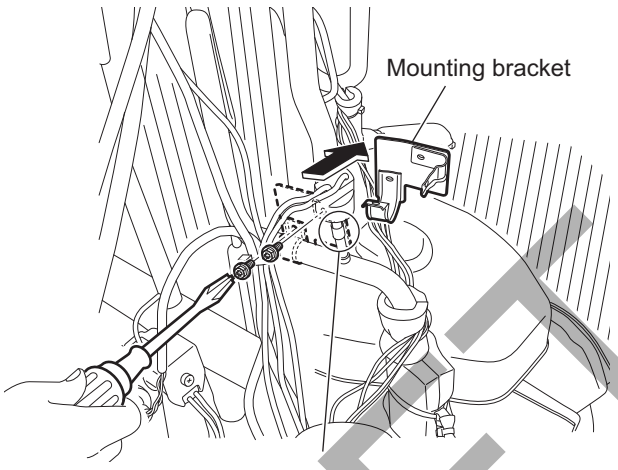
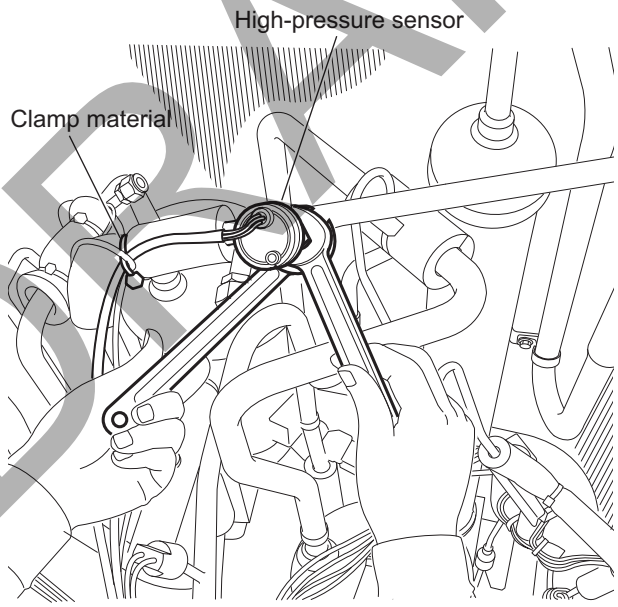




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Removal Instructions for Pressure Switches and Pressure Sensors (2/4)

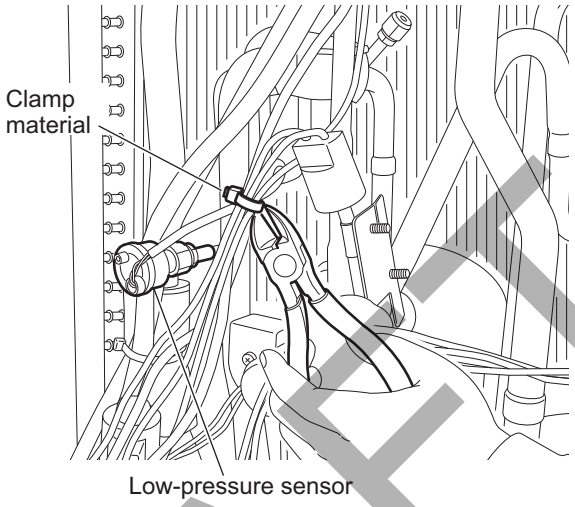
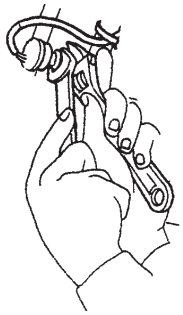
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure		Remarks
③ Remove the two screws, and take out the mounting bracket. ④ Remove the one-point brazing, and take out the high-pressure switch.		★ Perform brazing after checking that the refrigerant has been completely purged. ★ Use an appropriate protector, such as a steel plate, so that the flame of the gas-welding machine will not have an adverse effect on other piping.
2. Remove the pressure sensors ① Remove the connector (X32A) for the high-pressure sensor. ② Remove the leads from the two wire clips, and cut three points of the clamp material. ③ Use two wrenches to remove the high-pressure sensor.		★ You can remove the high-pressure sensor without purging the refrigerant. (A check valve is provided.)

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Removal Instructions for Pressure Switches and Pressure Sensors (3/4)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

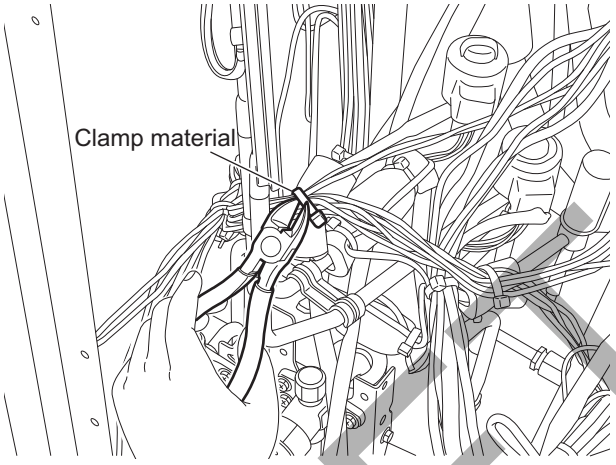
Work procedure		Remarks
④ Remove the connector (X31A) for the low-pressure sensor. ⑤ Remove the leads from the two wire clips, and cut two points of the clamp material. ⑥ Use two wrenches to remove the low-pressure sensor.		★ Use two wrenches to remove the low-pressure sensor. 

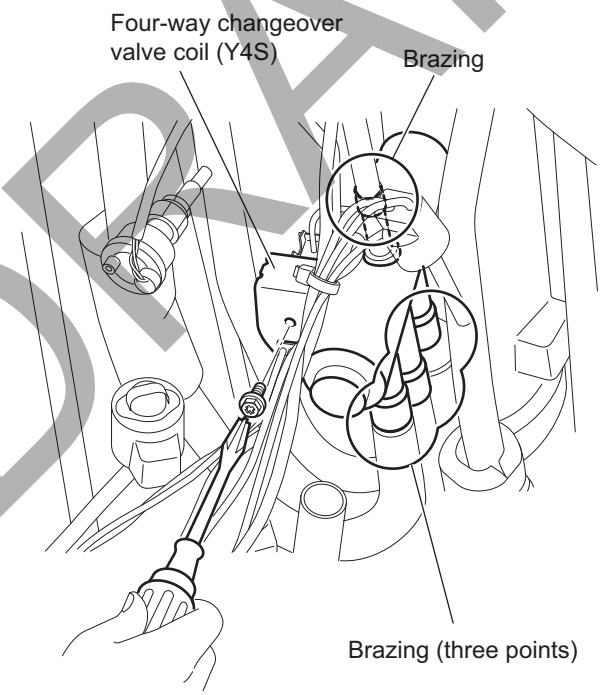
DRAFT

Removal Instructions for Pressure Switches and Pressure Sensors (4/4)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
3. Remove the four-way changeover valve	
① Remove the connector (X15A) for the four-way changeover valve coil (Y4S). ② Remove the leads from the two wire clips, and cut two points of the clamp material.	★ Blaze the four-way changeover valve while cooling the valve so that the temperature of the valve does not exceed 120°C.
③ Remove the single screw, and take out the four-way changeover valve. ④ Remove the four-point brazing, and take out the four-way changeover valve.	★ Perform brazing after checking that the refrigerant has been completely purged. ★ Use an appropriate protector, such as a steel plate, so that the flame of the gas-welding machine does not have an adverse effect on other piping.

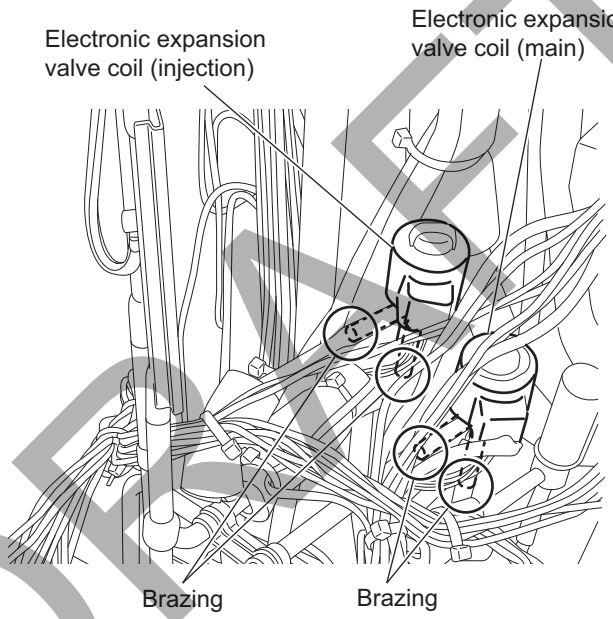
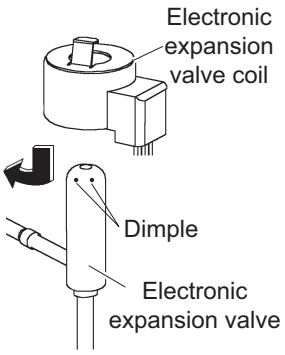
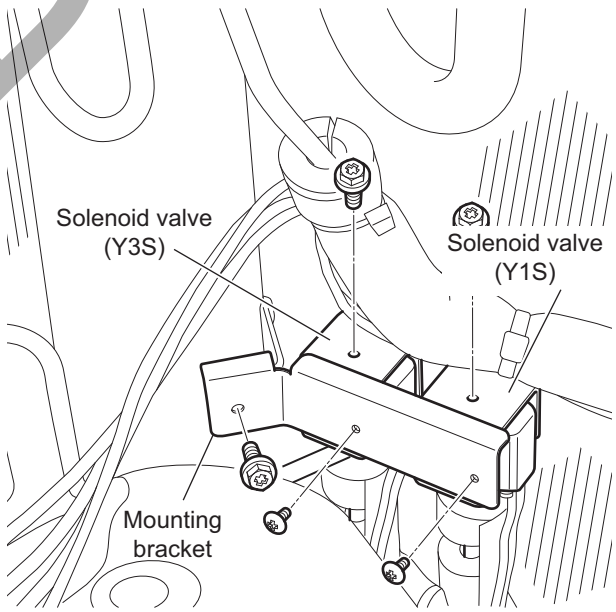
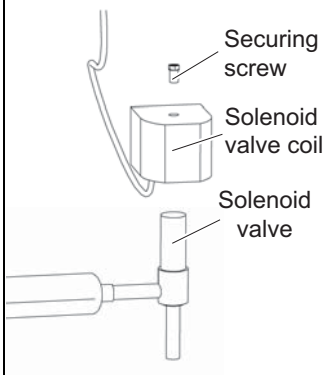




DRAFT

Removal Instructions for Electronic Expansion Valves and Solenoid Valves (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

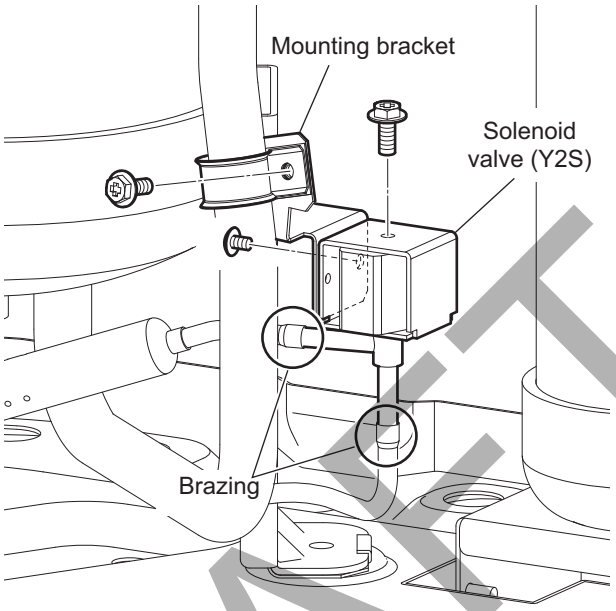
Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.	
1. Remove the electronic expansion valves ① Rotate the main and injection electronic expansion valves by 20°„ to 30°„, and pull out the valves upward. ② Remove the two-point brazing, and take out the electronic expansion valve.	
	★ Mounting method of electronic expansion valve ★ Mount the electronic expansion valve in a dimple engagement position. 
2. Remove the solenoid valves ① Remove the single screw, and take out the mounting bracket. ② Remove each screw each from the mounting bracket, and take out the solenoid valves Y1S and Y3S). ③ Remove each screw each, and take out the solenoid valve coils.	
	★ Removal of solenoid valves 
	★ Perform brazing after checking that the refrigerant has been completely purged.

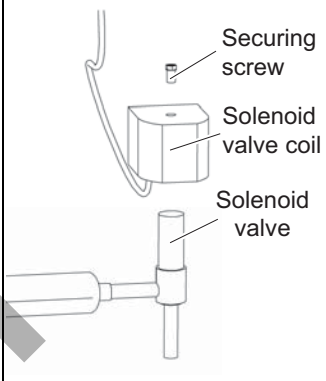
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Removal Instructions for Electronic Expansion Valves and Solenoid Valves (2/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
④ Remove the single screw, and take out the mounting bracket for the solenoid valve (Y2S). ⑤ Remove the single screw from the mounting bracket, and take out the solenoid valve (Y2S). ⑥ Remove the two-point brazing, and take out the solenoid valves.	★ Removal of solenoid valves ★ Perform brazing after checking that the refrigerant has been completely purged.





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Removal Instructions for Outdoor Air Thermistor (1/2)

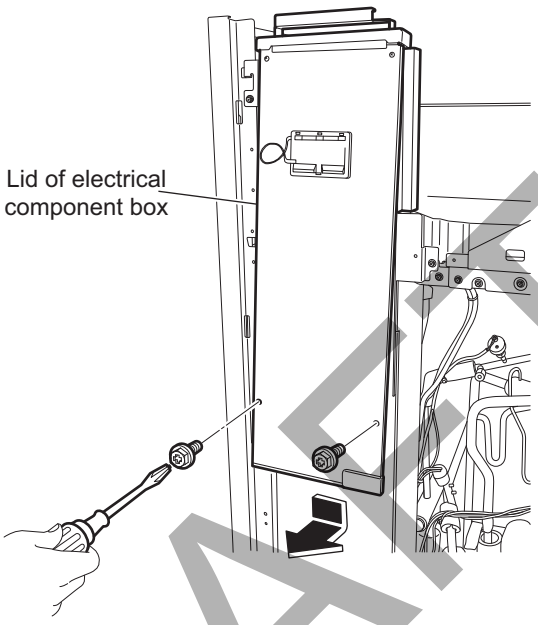
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks

- Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels.

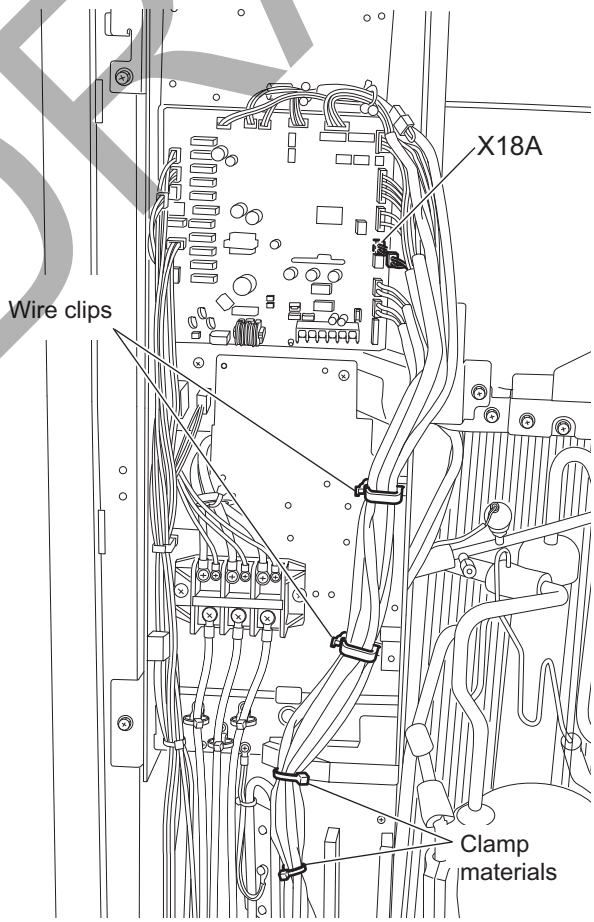
1. Remove the outdoor air thermistor (R1T)

① Remove the two screws, and take out the lid of the electrical component box.



② Remove the connector (X18A) for the outdoor air thermistor, and disconnect the leads from the two wire clips.

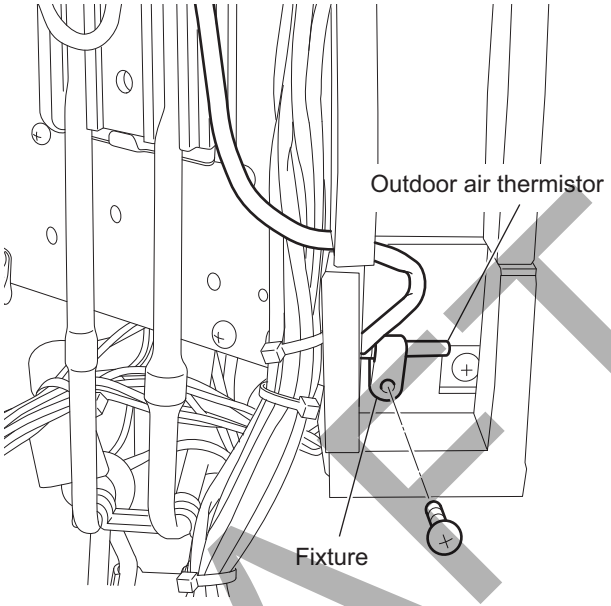
③ Cut two points of the clamp material.



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Removal Instructions for Outdoor Air Thermistor (2/2)

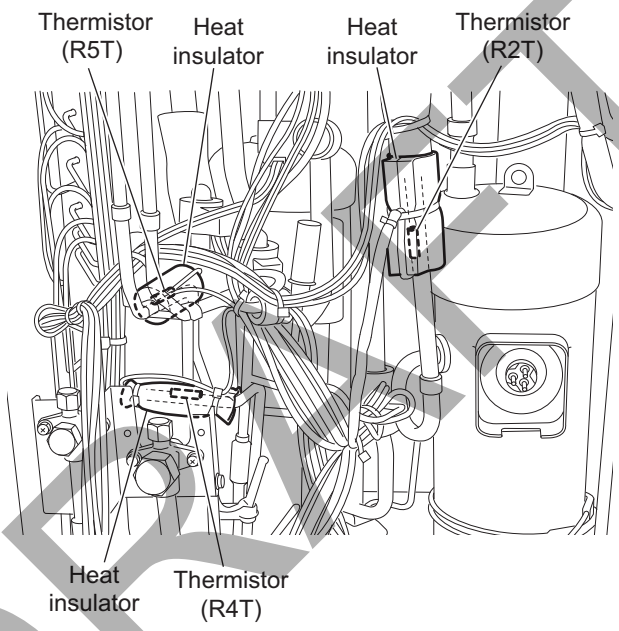
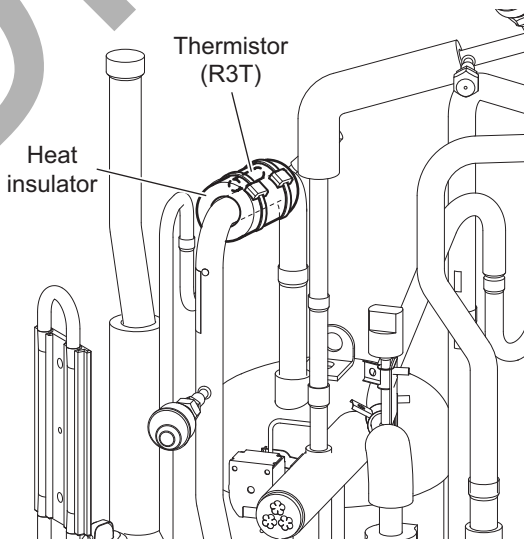
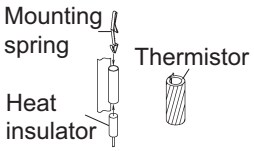
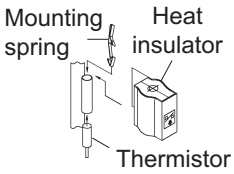
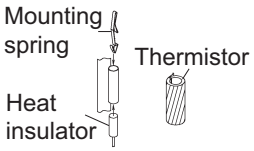
WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
④ Remove the single screw, dismount the fixture, and take out the outdoor air thermistor. 	

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Removal Instructions for Each Thermistor (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

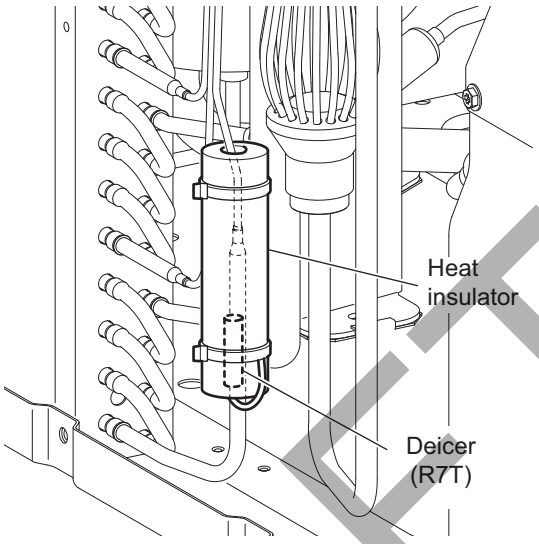
Work procedure		Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly. **1. Remove the thermistors (R2T, R3T, R4T, and R5T)** ① Remove the heat insulator. ② Press the lower part of each mounting screw for the thermistors, and take out the thermistors.	 	★ 1 Thermistor (R4T) for heat exchanger  ★ 2 Thermistor (R2T) for discharge pipe  ★ 3 Thermistor (R5T) for sub-cooling heat exchanger liquid pipe Thermistor (R3T) for accumulator inlet 

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Removal Instructions for Each Thermistor (2/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

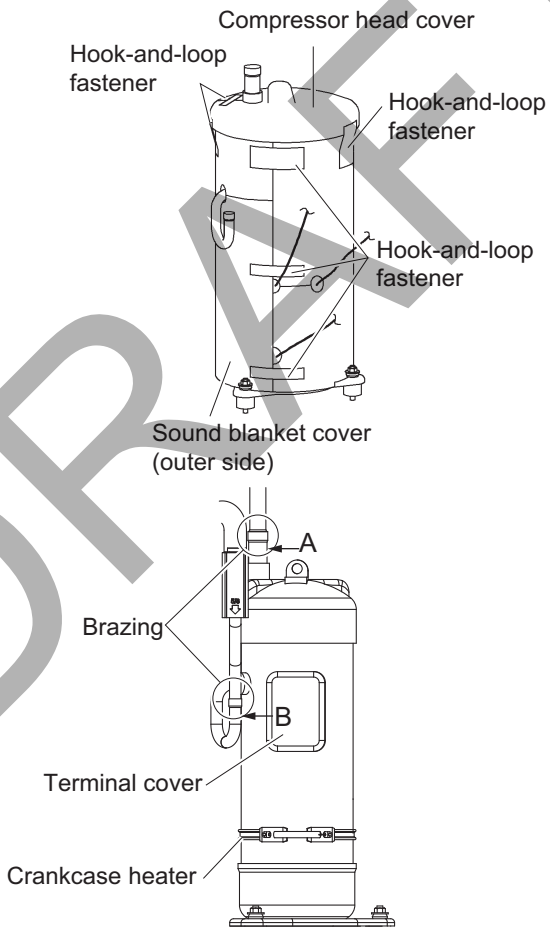
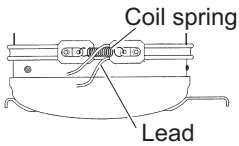
Work procedure	Remarks
2. Remove the deicer (R7T) ① Remove the heat insulator. ② Pull out the deicer together with the mounting bracket.	



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Removal Instructions for Compressor (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

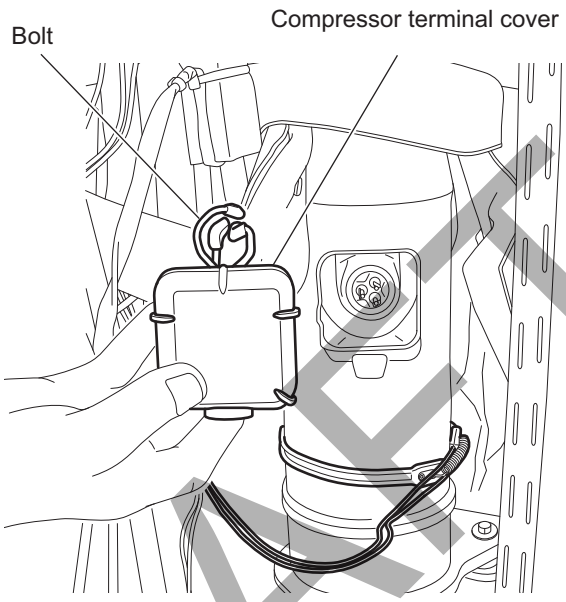
Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly. **1. Remove the sound blanket cover** ① Remove the three hook-and-loop fasteners, and take out the compressor head cover. ② Remove the three Hook-and-loop fasteners, and pull out the sound blanket cover for the compressor. **2. Remove the crankcase heater** ① Remove the coil spring, and pull out the crankcase heater.		★ Perform brazing after checking that the refrigerant has been completely purged. ★ Precautions for the mounting of the crankcase heater • Make sure that the crankcase heater does not overlap with the weld part of the compressor. • Insert the coil spring of the heater into the lead loop. 

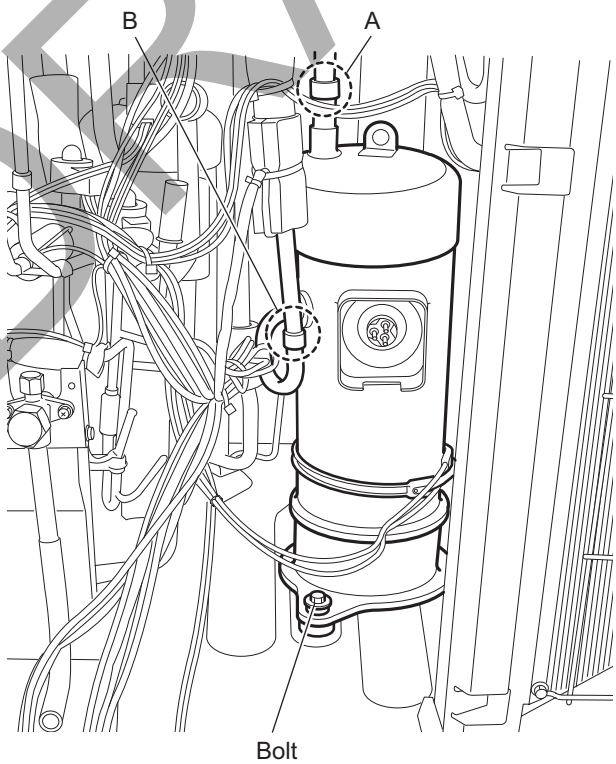
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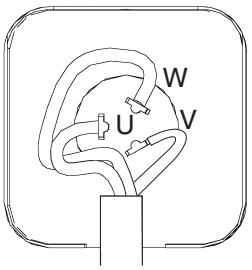
Removal Instructions for Compressor (2/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
3. Take out the compressor ① Remove the compressor terminal cover. ② Remove the leads from the compressor terminal block. ③ Remove the three mounting bolts from the compressor. ④ Cut the discharge pipe (at A and B) with a pipe cutter. ⑤ Lift up and pull the compressor forward. ⑥ Remove the residual brazing on the pipe.	★ Compressor terminal symbols ★ Oil will leak at the time of cutting the pipe. Cut the pipe with the lower part protected with a waste cloth.





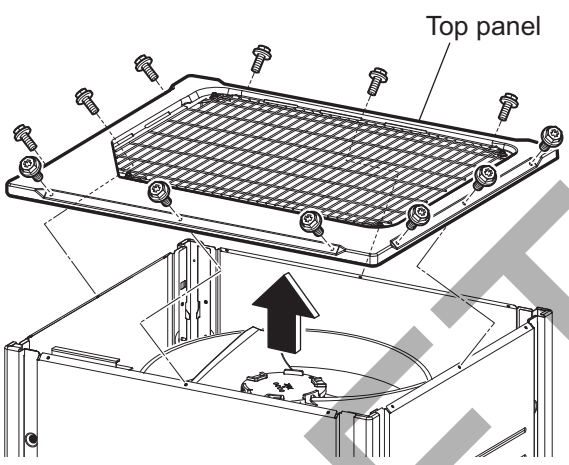
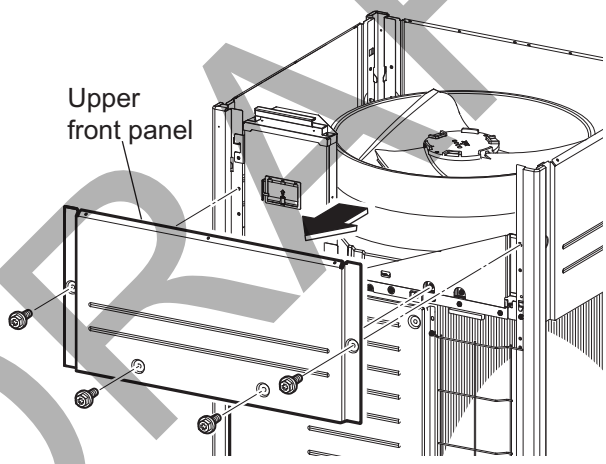
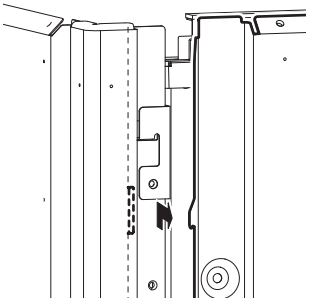
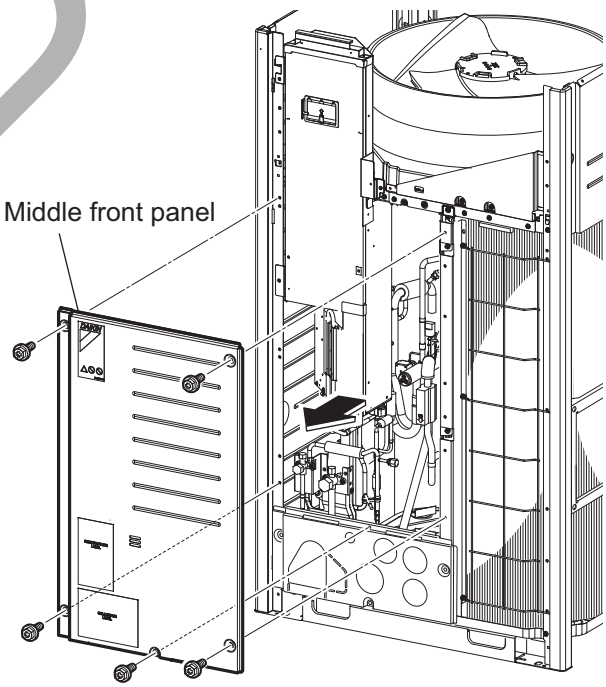
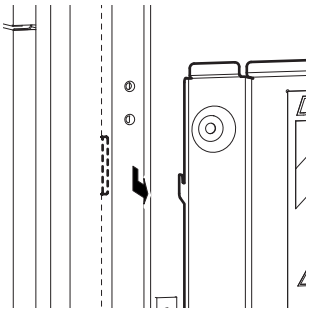


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6 RXYP224-280-335C

Removal Instructions for Outside Panels (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

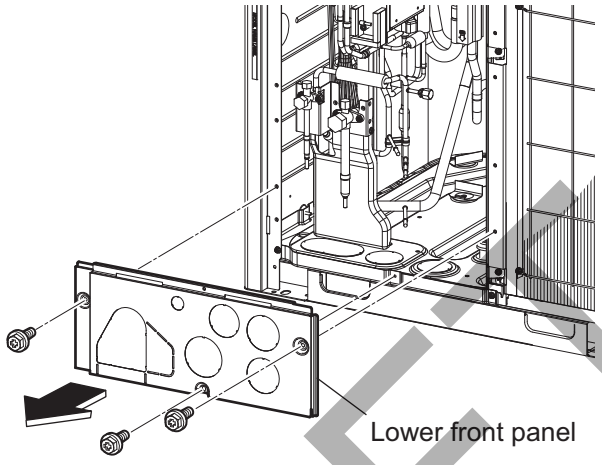
Work procedure		Remarks
1. Remove the top panels ① Remove the 12 screws, and pull out the top panel upward.		★ In case of working on a stepladder, secure the stepladder to ensure work safety.
2. Remove the upper front panel ① Remove the 4 screws, unclamp two claws and pull out the upper front panel upward.		★ There is a claw on each side of the upper front panel. 
3. Remove the middle front panel ① Remove the five screws, unclamp the single claw, and take out the middle front panel.		

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Removal Instructions for Outside Panels (2/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
4. Remove the lower front panel ① Remove the three screws, unclamp the single claw, and take out the lower front panel.	



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Removal Instructions for Fan Motor (1/3)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

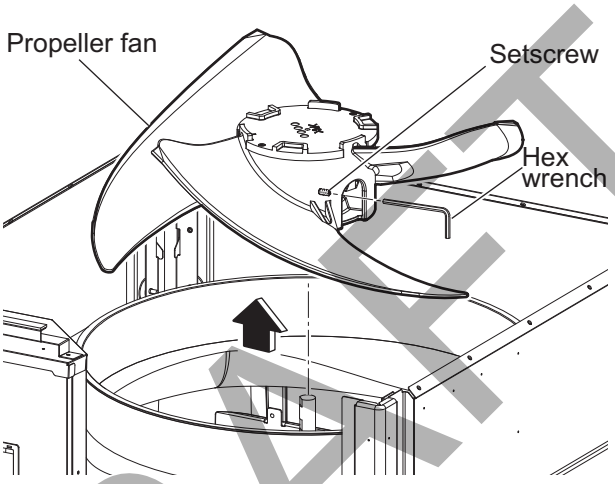
Work procedure	Remarks

● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels.

1. Remove the propeller fan

① Loosen the setscrew (M10) with a hex wrench.

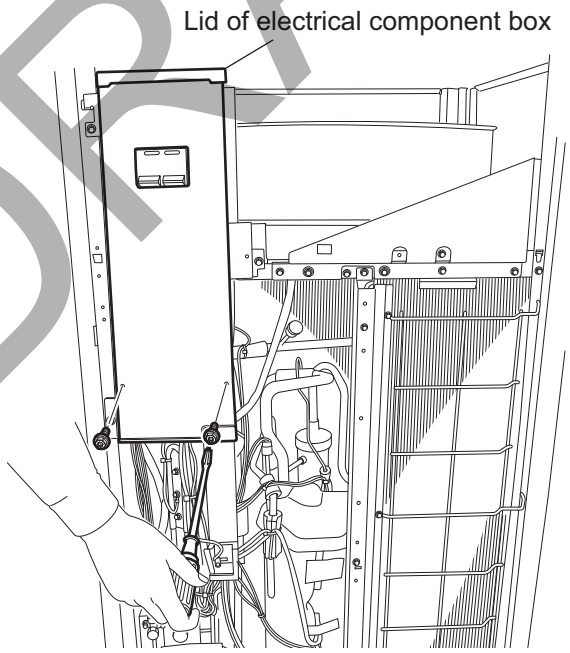
② Pull out the propeller fan upward.



2. Remove the fan motor

① Remove the two screws from the lid of the electrical component box.

② Slide down the lid of the electrical component box until the top edge of the lid becomes visible, and remove the lid of the electrical component box.

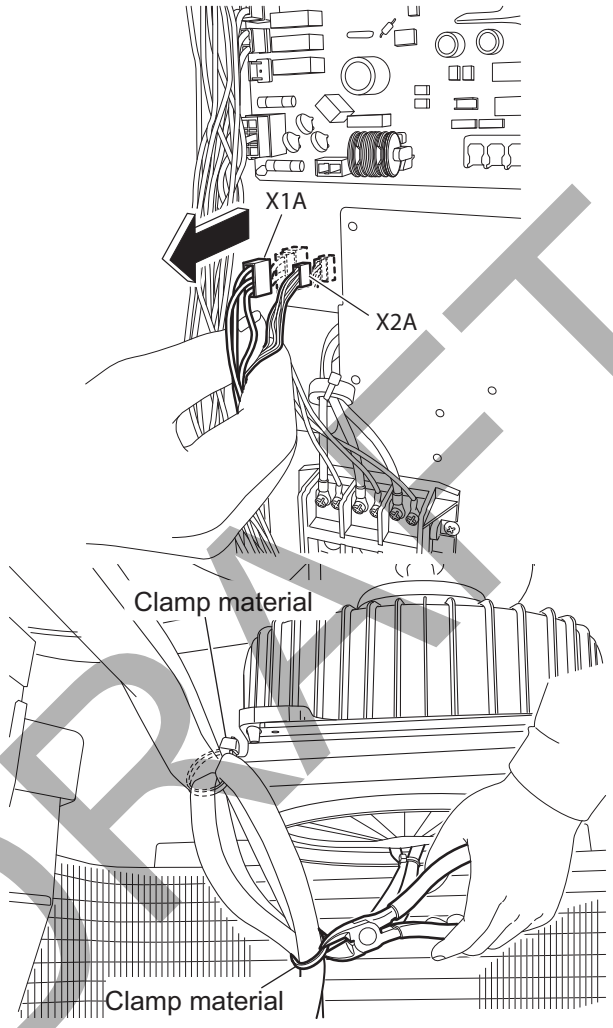


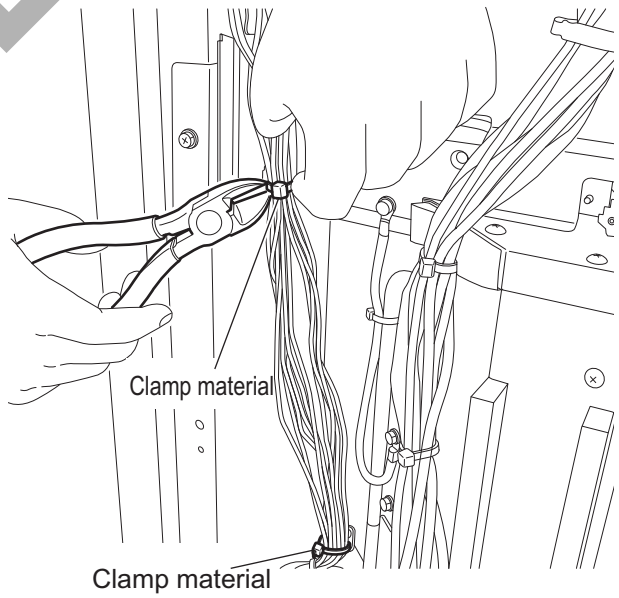
DRAFT

Removal Instructions for Fan Motor (2/3)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
③ Remove the relay connectors (X1A and X2A) for the fan motor. ④ Remove the four clamp materials that secure the leads.	

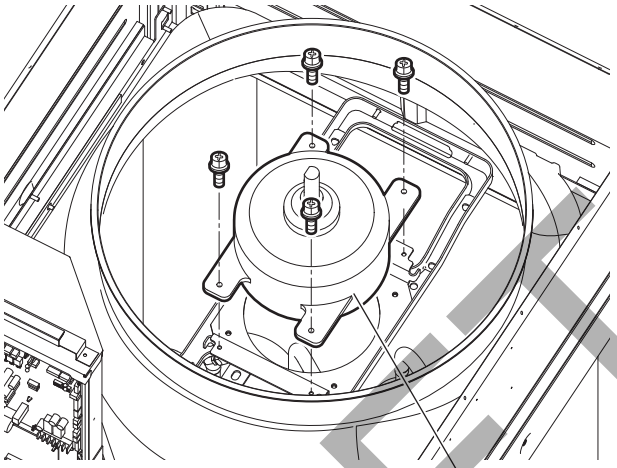




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Removal Instructions for Outside Panels (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

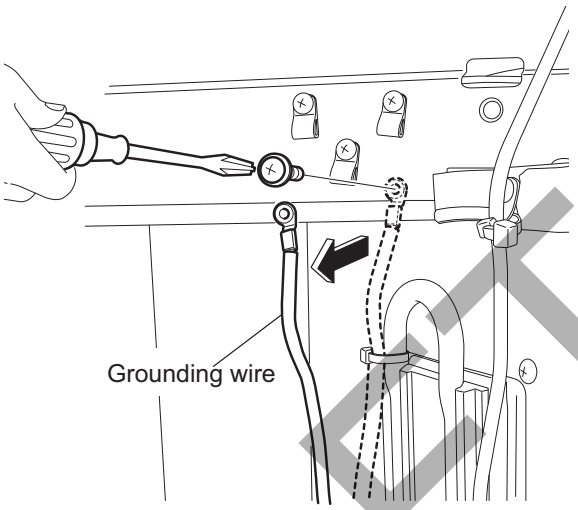
Work procedure		Remarks
⑤ Remove the four fixing bolts, and take out the fan motor.	 Fan motor	

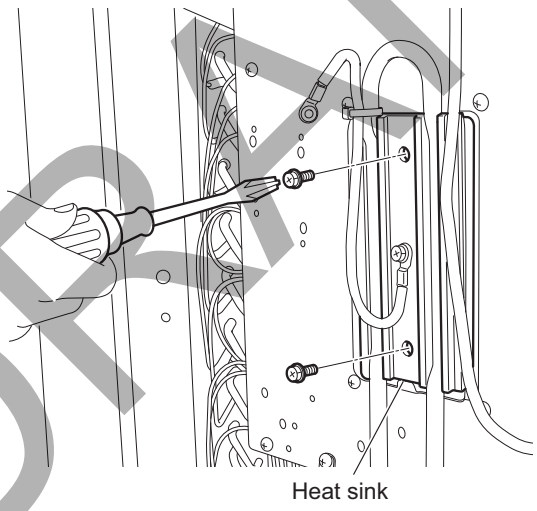
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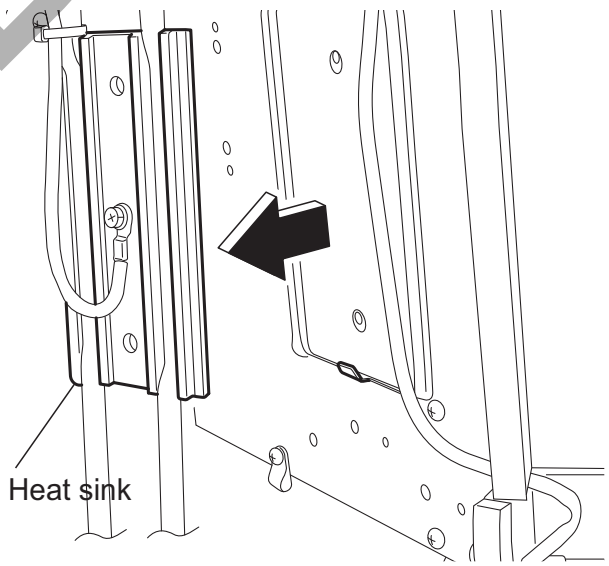
Removal Instructions for Electrical Component Assembly (1/4)

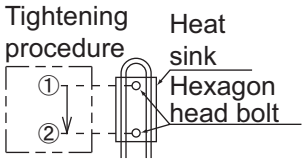
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper and middle front panels. ● Remove the two screws, and take out the lid of the electrical component box. **1. Remove the heat sink** ① Remove the ground wire from the heat sink. ② Remove the two screws from the heat sink. ③ Unclamp the hook on the mounting part and pull out the heat sink.	★ Precautions for the installation of the heat sink. Tighten the screws twice in the order of (1) to (4) as shown in the illustration below. Tightening torque 1.8±0.2N·m









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Removal Instructions for Electrical Component Assembly (2/4)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

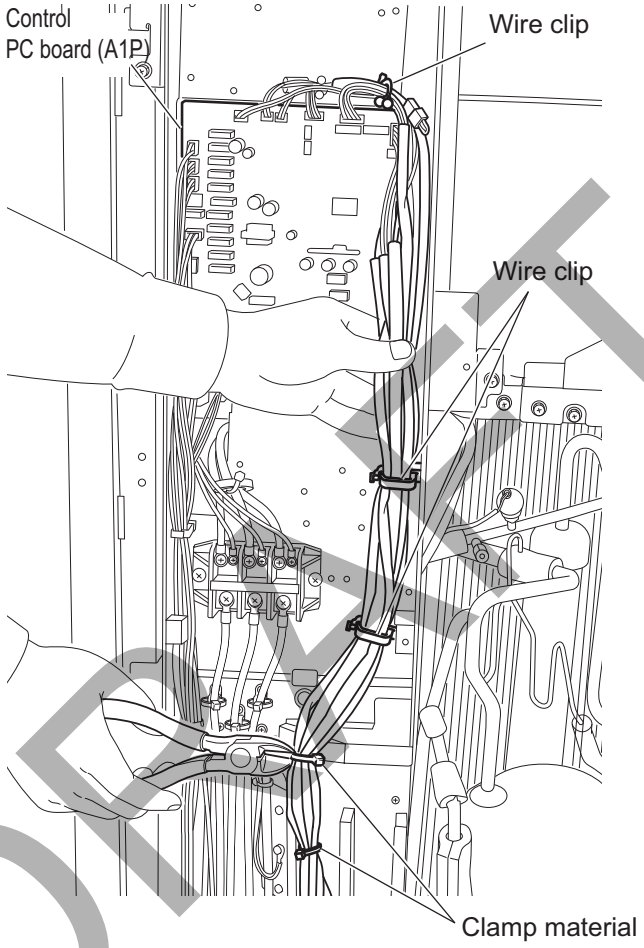
Work procedure	Remarks

2. Remove the electrical component assembly

① Remove the connectors on the control PC board (A1P).

② Cut two points of the clamp material.

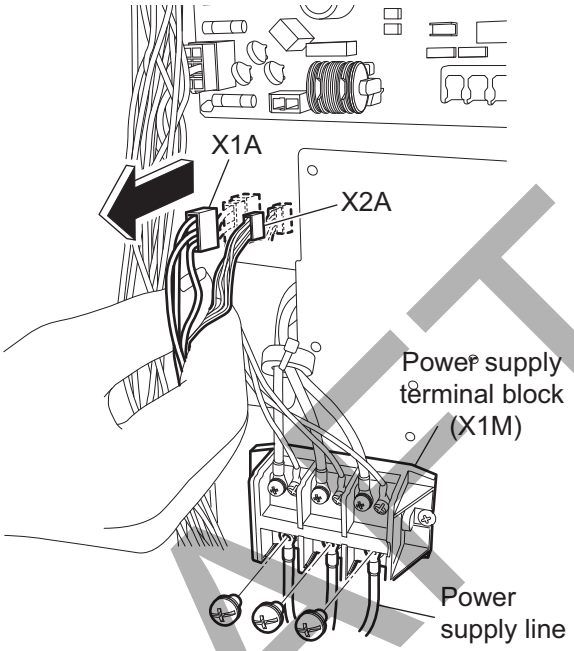
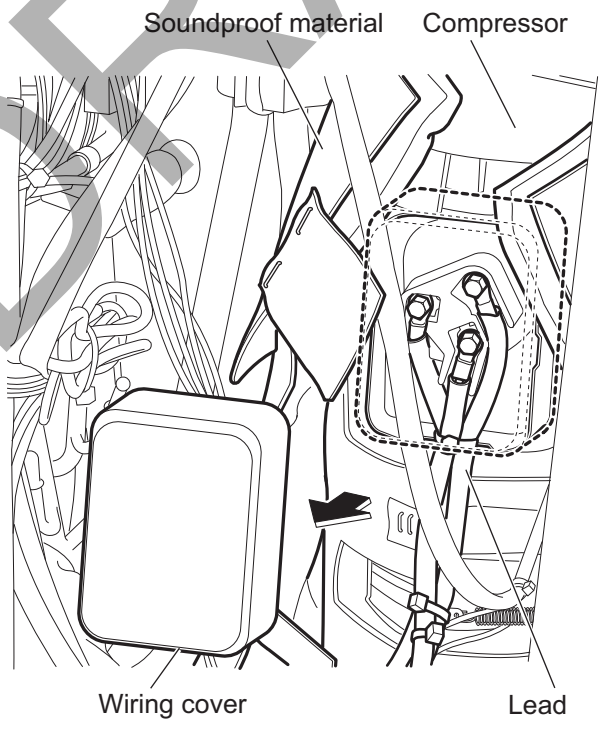
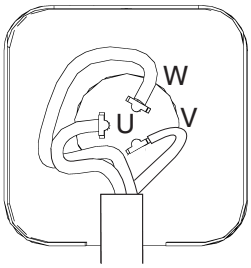
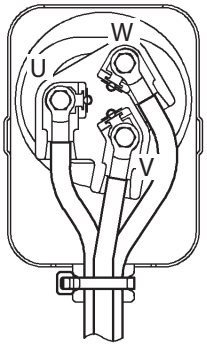
③ Remove the harness from the wire clip.



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Removal Instructions for Electrical Component Assembly (3/4)

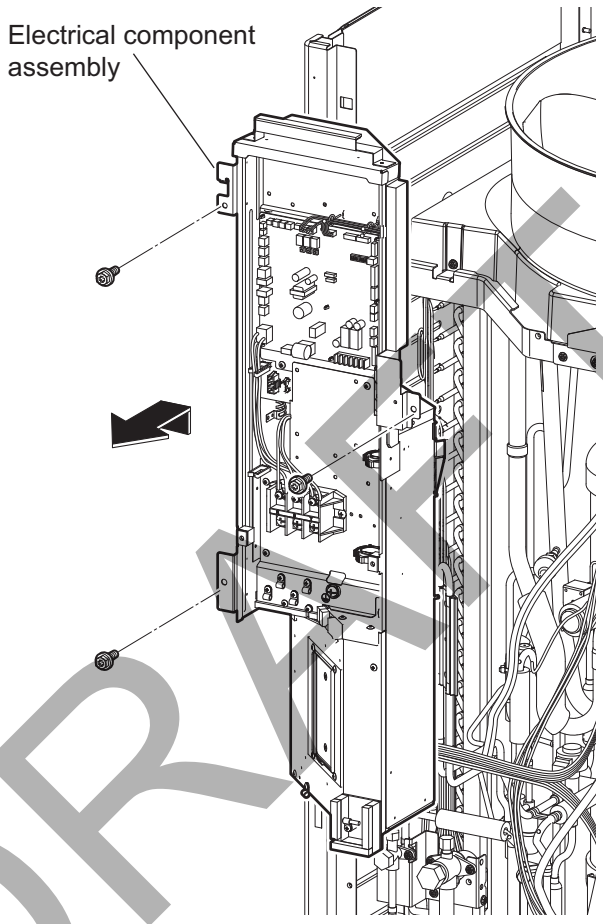
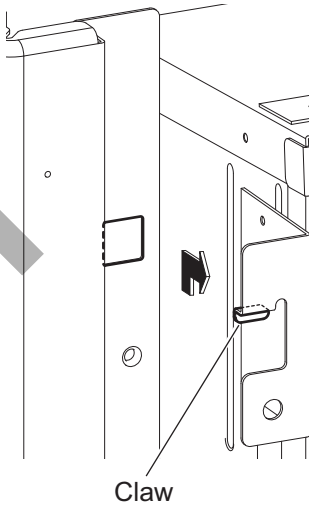
WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure		Remarks
④ Remove the relay connectors (X1A and X2A) for the fan motor. ⑤ Remove the three screws from the power supply terminal block (X1M), and disconnect the power supply line.		
⑥ Open the soundproof material of the inverter compressor (M1C), and remove the wiring cover. ⑦ Remove the three leads from the terminals of the compressor (M1C).		★ Compressor terminal symbol <Class 224>  <Class 280 or 335> 

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Removal Instructions for Electrical Component Assembly (4/4)

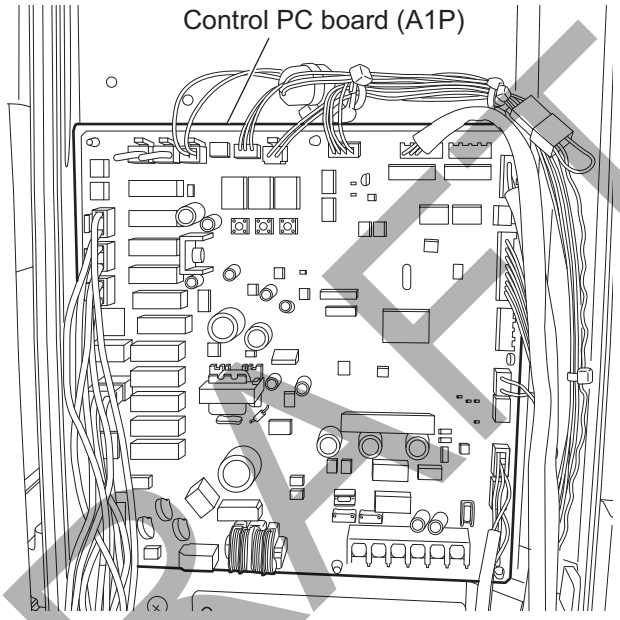
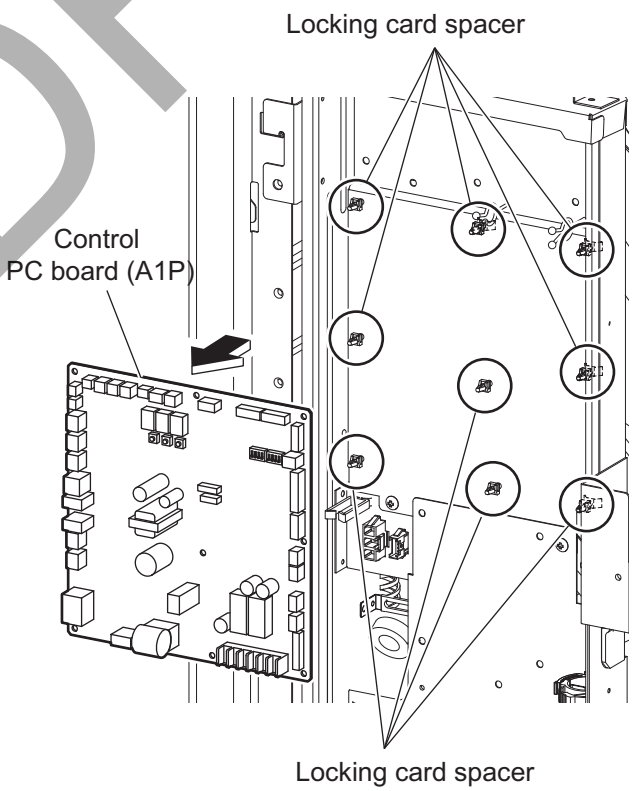
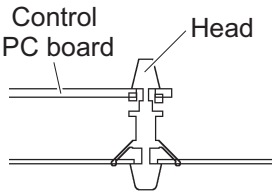
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure		Remarks
⑧ Remove the three screws, lift up the upper part of the electrical component assembly, and take out the electrical component assembly.		★ Unclamp the claw on the back of the electrical component assembly.  ★ Take out the electrical component assembly with careful attention paid to the heat sink.

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Removal Instructions for Control PC Board

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper and middle front panels. ● Remove the two screws, and take out the lid of the electrical component box.	
1. Remove the control PC board (A1P)	
① Remove all the connectors on the control PC board.	
② Remove the locking card spacer and take out the control PC board (A1P).	
	★ Removal from the locking card spacer  ★ Cross-sectional view of locking card spacer 

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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (1/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

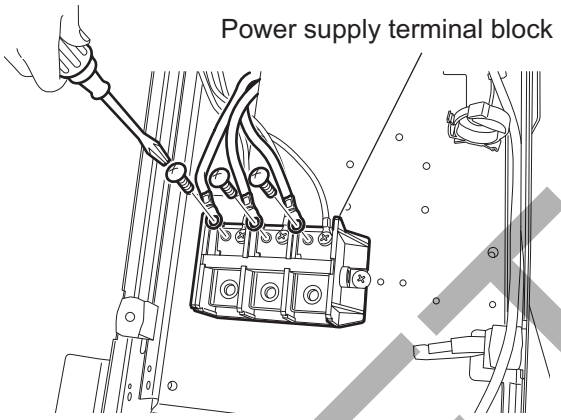
Work procedure	Remarks

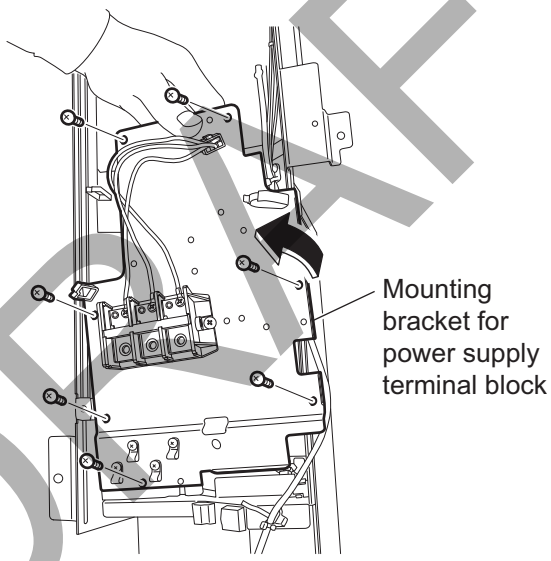
- Follow the removal instructions for the outside panels to remove the upper and middle front panels.
- Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.

1. Remove the noise filter PC board (A2P)

① Remove the three wires from the power supply terminal block.

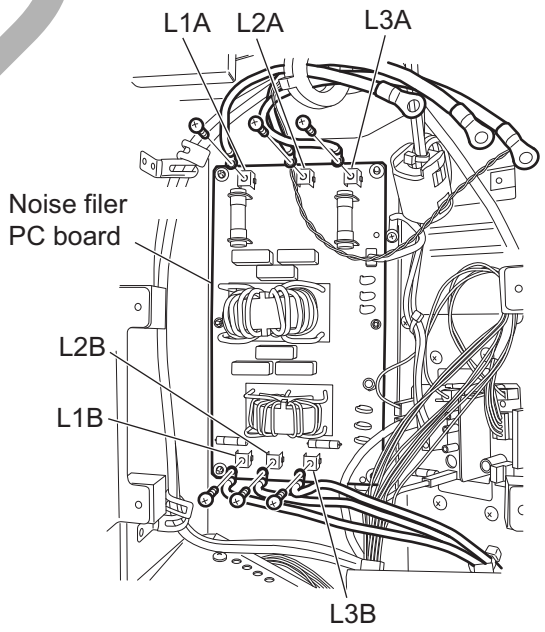
② Remove the seven screws from the power supply terminal block mounting bracket to take it out.





③ Remove the connector on the noise filter PC board.

④ Remove the screws from the L1A, L2A, L3A, L1B, L2B, and L3B terminals.



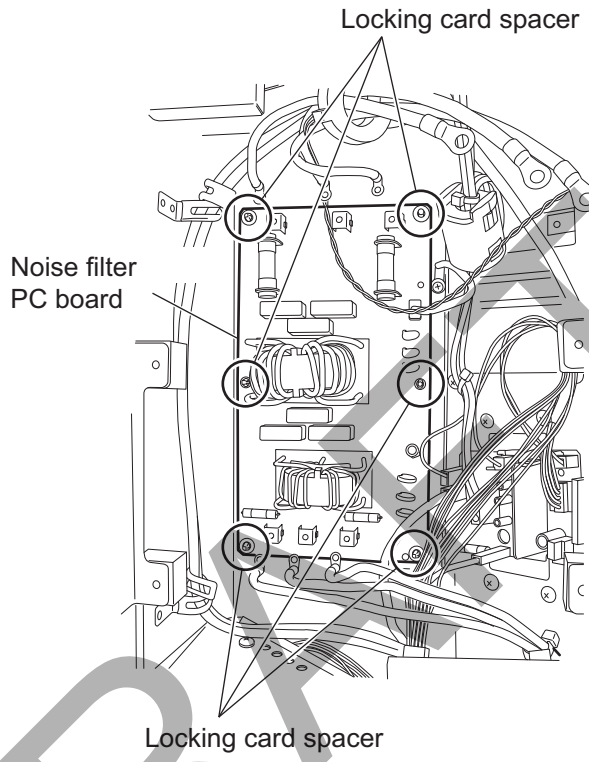
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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

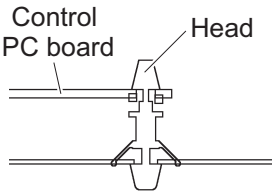
Removal Instructions (2/5)

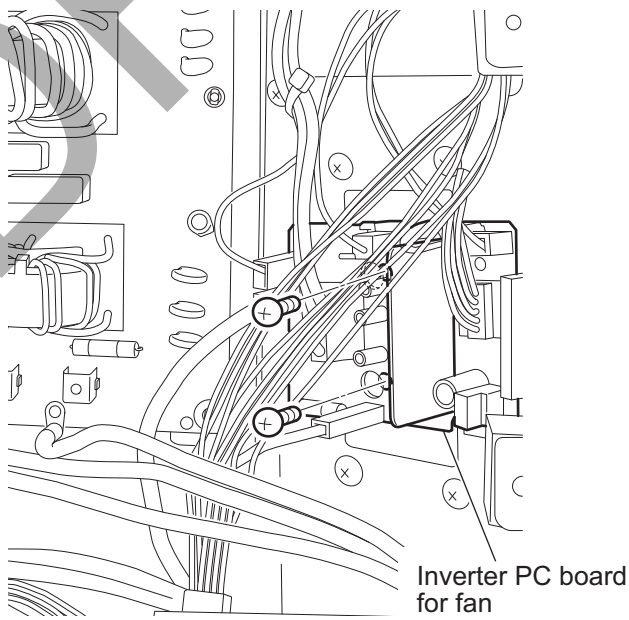
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑤ Remove the locking card spacer, and take out the noise filter PC board.	★ Removal from the locking card spacer
2. Remove the inverter PC board for the fan	★ Cross-sectional view of locking card spacer
① Remove the connector on the inverter PC board for the fan.	
② Remove the two screws, and take out the inverter PC board for the fan.	









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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

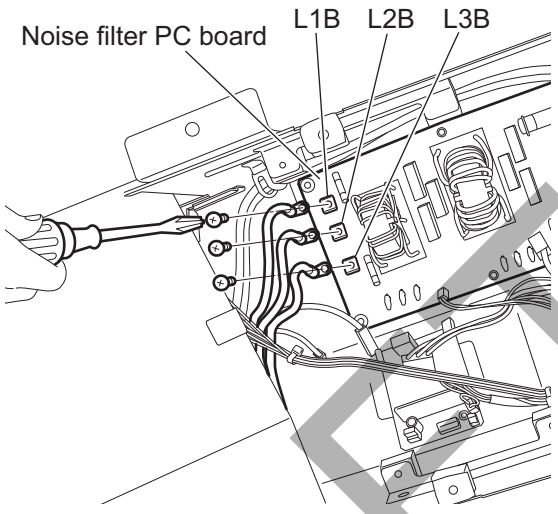
Removal Instructions (3/5)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

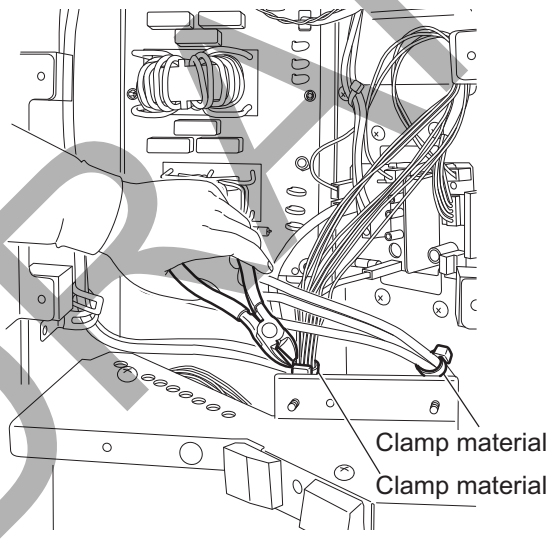
Work procedure	Remarks

3. Remove the inverter PC board (A3P) for the compressor

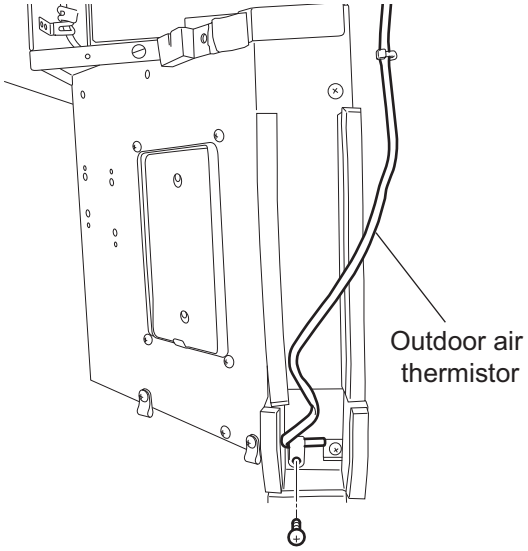
① Remove the three screws from the L1B, L2B, and L3B terminals on the noise filter PC board.



② Cut two points of the clamp material for the inverter protection plate.



③ Remove the single screw from the outdoor air thermistor.



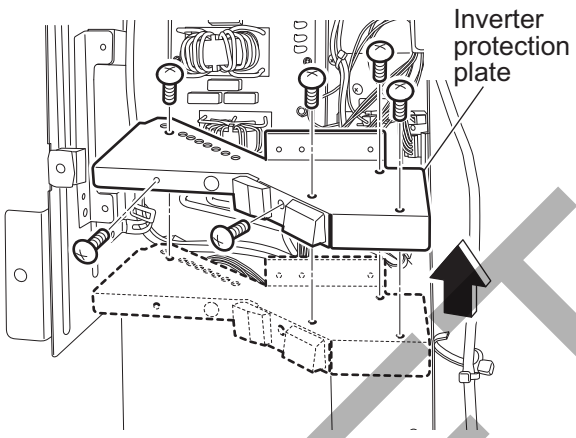
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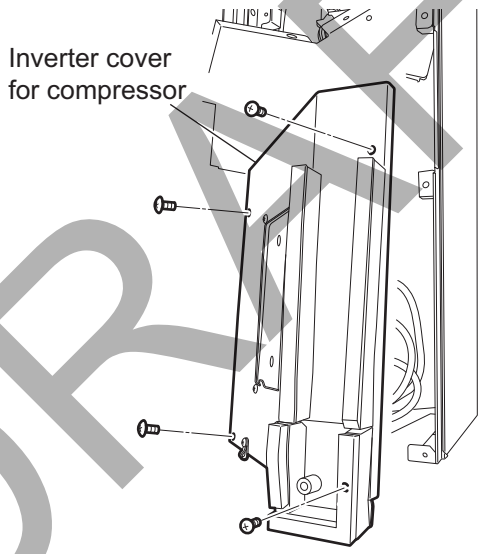
Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

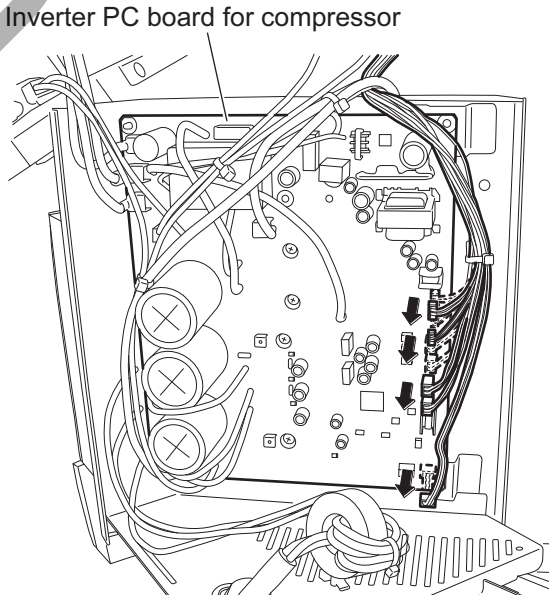
Removal Instructions (4/5)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
④ Remove the six screws, and take out the inverter protection plate.	
⑤ Remove the four screws, and take out the inverter cover for the compressor.	
⑥ Remove all the connectors on the inverter PC board for the compressor.	







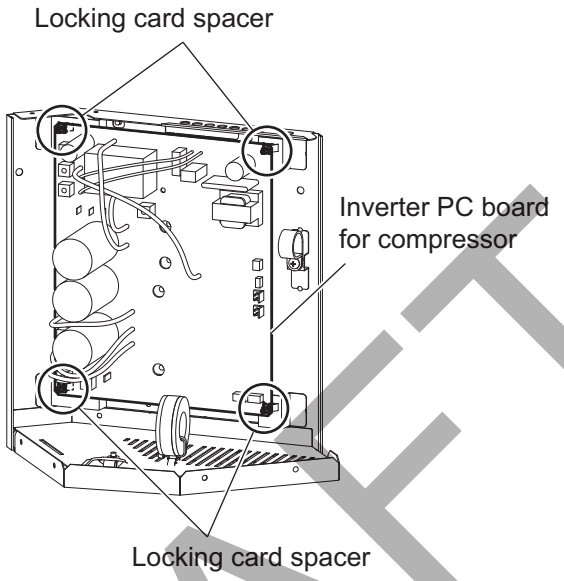
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Noise Filter PC Board
Inverter PC Board for Fan
Inverter PC Board for Compressor

Removal Instructions (5/5)

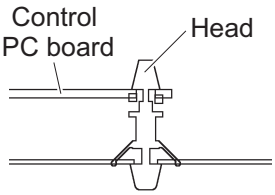
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑦ Remove the locking card spacer, and take out the inverter PC board for the compressor.	★ Removal from the locking card spacer





★ Cross-sectional view of locking card spacer

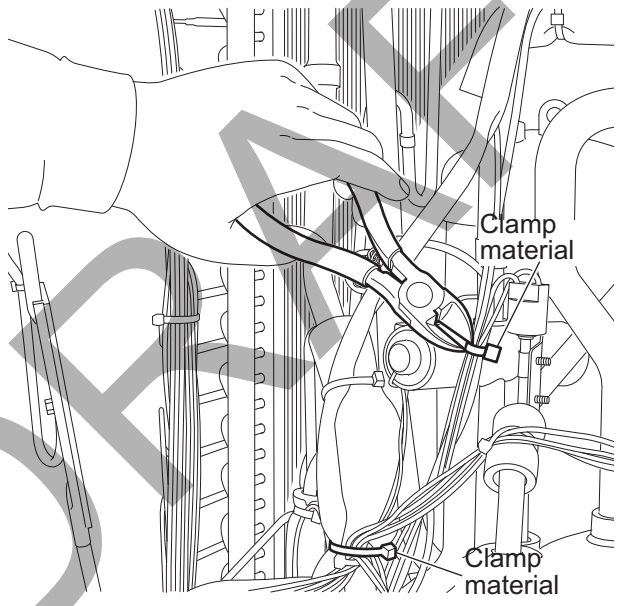


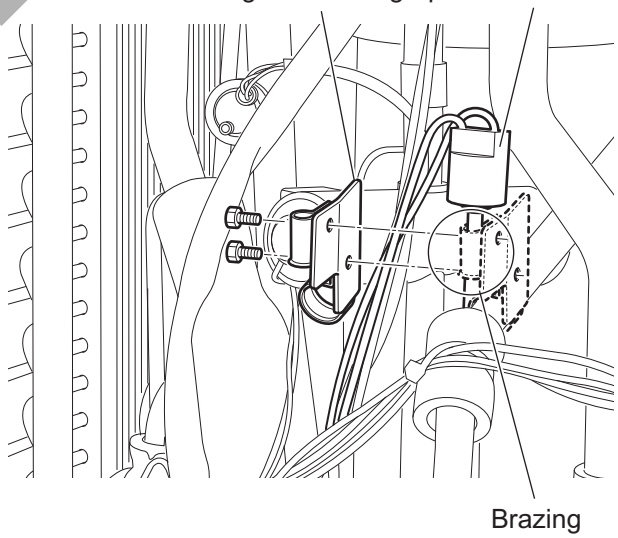
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Removal Instructions for Pressure Switches and Pressure Sensors (1/3)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the upper and middle front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly. **1. Remove the pressure switches** ① Remove the connector (X4A) on the high-pressure switch. ② Cut four points of the clamp material. ③ Remove the two screws, and take out the mounting bracket. ④ Remove the one-point brazing, and take out the high-pressure switch.	★ Perform brazing after checking that the refrigerant has been completely purged. ★ Use an appropriate protector, such as a steel plate, so that the flame of the gas-welding machine does not have an adverse effect on other piping.



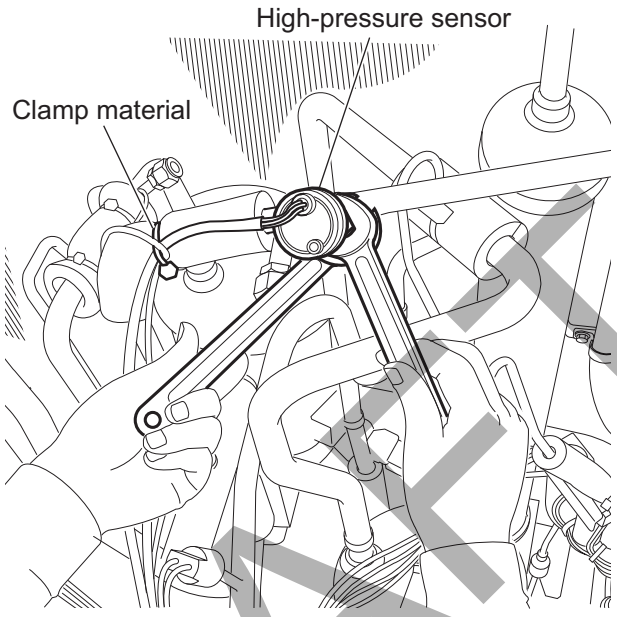


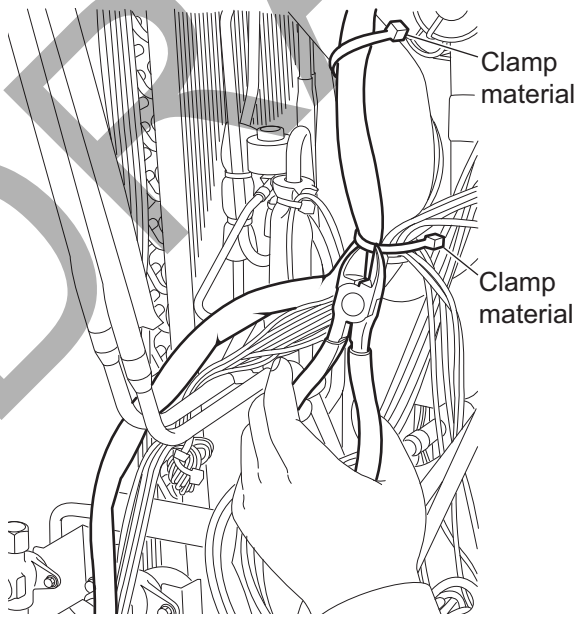
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Removal Instructions for Pressure Switches and Pressure Sensors (2/3)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
2. Remove the pressure sensors ① Remove the connector (X32A) for the high-pressure sensor. ② Remove the leads from the two wire clips, and cut three points of the clamp material. ③ Use two wrenches to remove the high-pressure sensor. ④ Remove the connector (X31A) for the low-pressure sensor. ⑤ Remove the leads from the two wire clips, and cut two points of the clamp material.	★ You can remove the high-pressure sensor without purging the refrigerant. (A check valve is provided.)

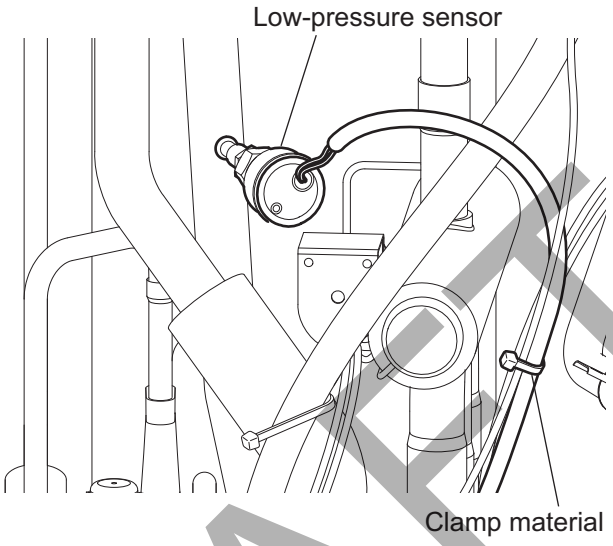
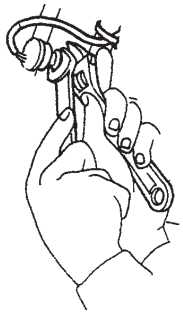
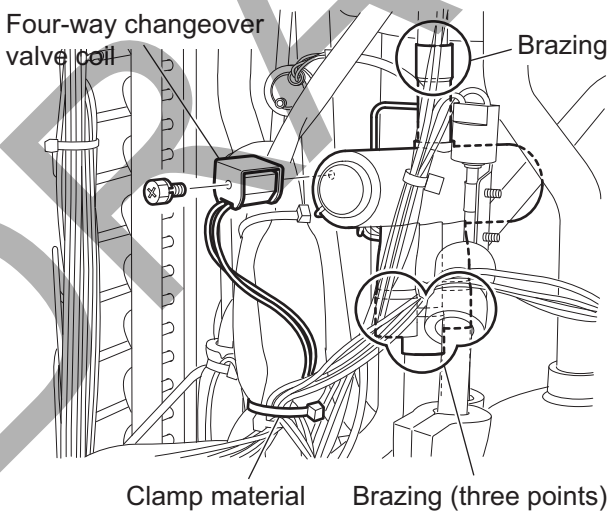




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Removal Instructions for Pressure Switches and Pressure Sensors (3/3)

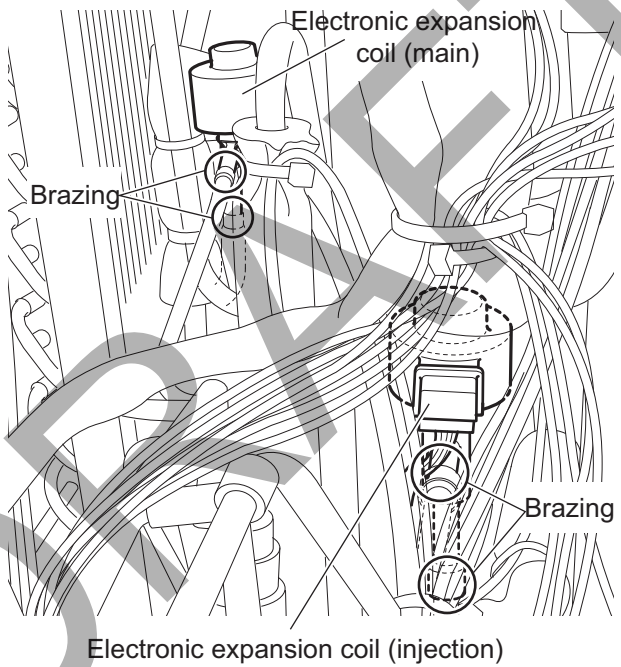
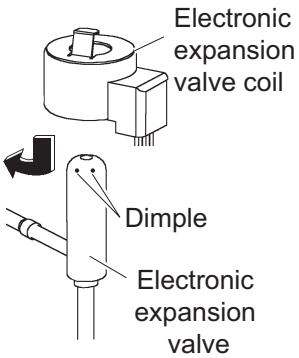
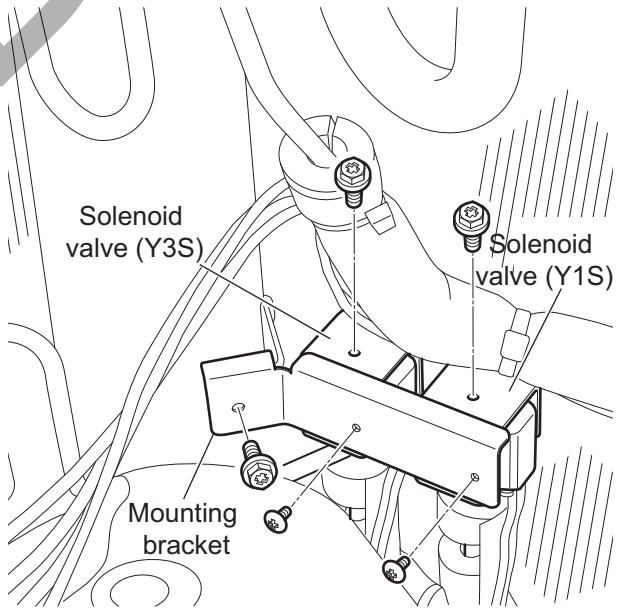
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure		Remarks
⑥ Use two wrenches to remove the low-pressure sensor.		★ Use two wrenches to remove the low-pressure sensor. 
3. Remove the four-way changeover valve ① Remove the connector (X15A) for the four-way changeover valve coil (Y4S). ② Remove the leads from the two wire clips, and cut two points of the clamp material. ③ Remove the single screw, and take out the four-way changeover valve. ④ Remove the four-point brazing, and take out the four-way changeover valve.		★ Blaze the four-way changeover valve while cooling the valve so that the temperature of the valve does not exceed 120°C. ★ Perform brazing after checking that the refrigerant has been completely purged. ★ Use an appropriate protector, such as a steel plate, so that the flame of the gas-welding machine does not have an adverse effect on other piping.

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Removal Instructions for Electronic Expansion Valves and Solenoid Valves (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

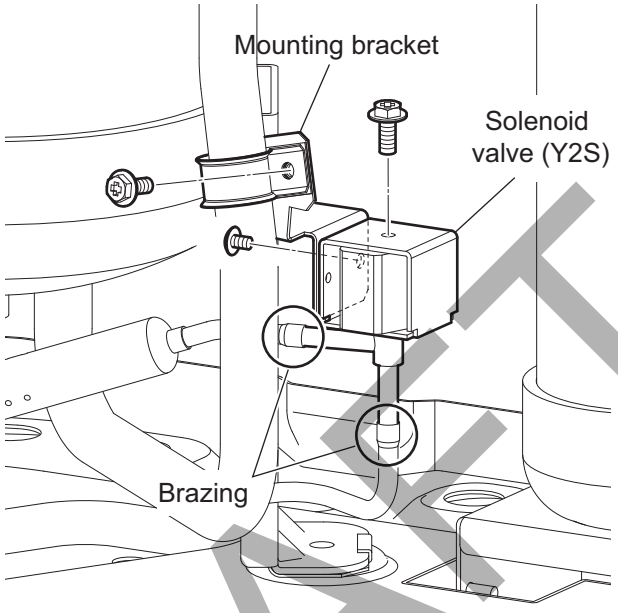
Work procedure		Remarks
● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. ● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.		
1. Remove the electronic expansion valves ① Rotate the main and injection electronic expansion valves by 20° to 30°, and pull out the valves upward. ② Remove the two-point brazing, and take out the electronic expansion valve.		★ Mounting method of electronic expansion valve 
2. Remove the solenoid valves ① Remove the single screw, and take out the mounting bracket. ② Remove each screw each from the mounting bracket, and take out the solenoid valves (Y1S and Y3S). ③ Remove each screw each, and take out the solenoid valve coils.		

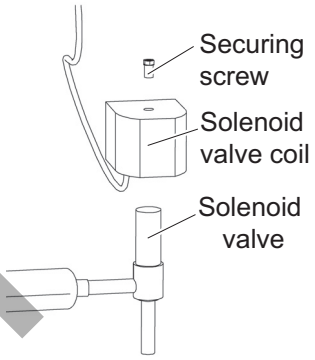
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Removal Instructions for Electronic Expansion Valves and Solenoid Valves (2/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
④ Remove the single screw, and take out the mounting bracket for the solenoid valve (Y2S). ⑤ Remove the single screw from the mounting bracket, and take out the solenoid valve (Y2S). ⑥ Remove the two-point brazing, and take out the solenoids.	★ Removal of solenoid valves





★ Perform brazing after checking that the refrigerant has been completely purged.

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Removal Instructions for Outdoor Air Thermistor

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

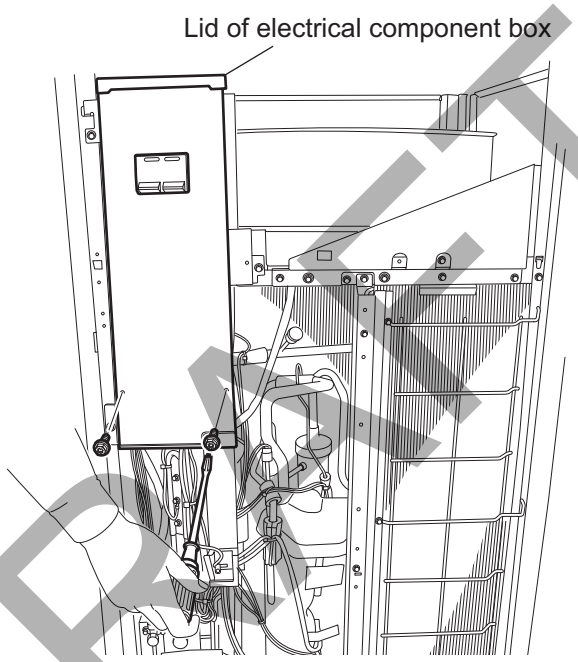
Work procedure	Remarks

● Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels.

1. Remove the outdoor air thermistor (R1T)

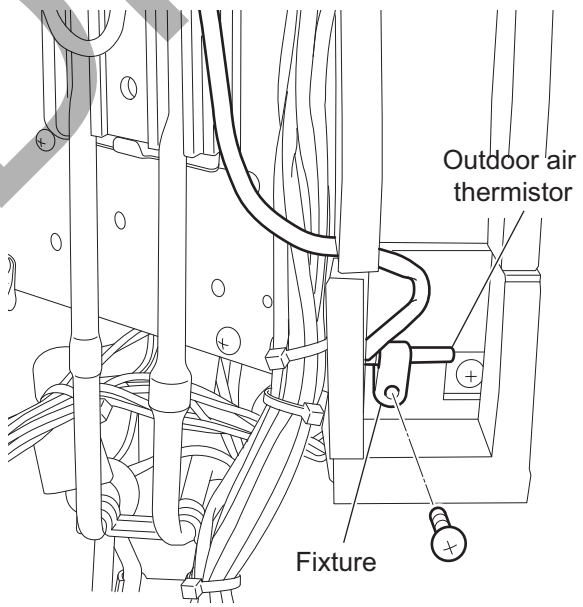
① Remove the two screws, and take out the lid of the electrical component box.

② Remove the connector (X18A) for the outdoor air thermistor, and disconnect the leads from the two wire clips.



③ Cut two points of the clamp material.

④ Remove the single screw, dismount the fixture, and take out the outdoor air thermistor.

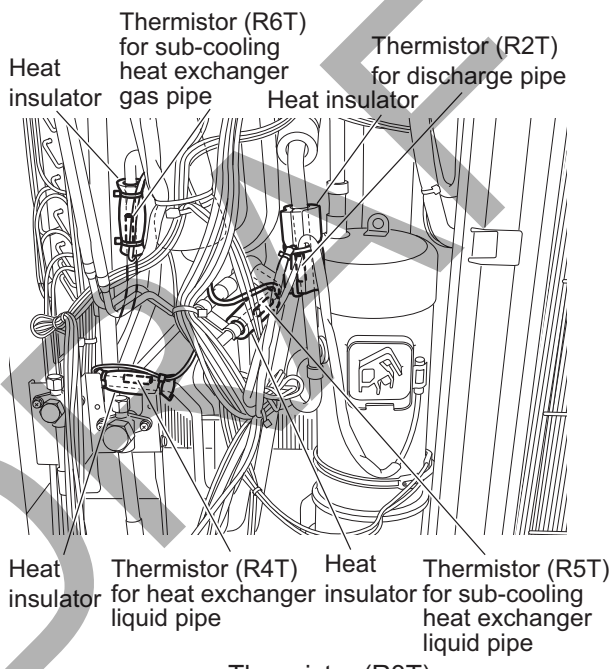


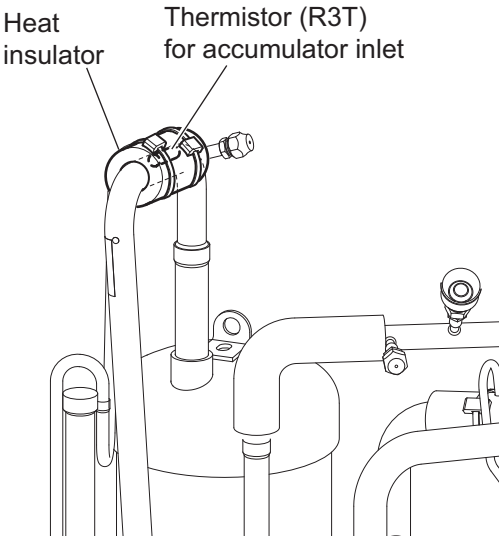
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Removal Instructions for Each Thermistor (1/2)

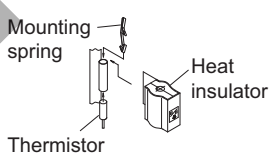
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal Instructions for the outside panels to remove the top panel and upper, middle, and lower front panels. ● Follow the removal Instructions for the electrical component assembly to remove the electrical component assembly.	
1. Remove the thermistors (R2T, R3T, R4T, R5T and R6T)	
① Remove the heat insulator.	
② Press the lower part of each mounting screw for the thermistors, and take out the thermistors.	

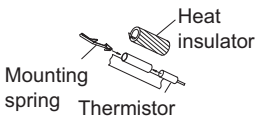




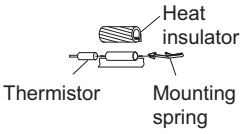
★ 1
Perform brazing after checking that the refrigerant has been completely purged.



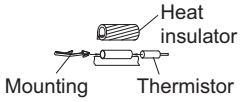
★ 2
Thermistor (R3T) for accumulator inlet



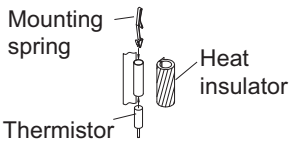
★ 3
Thermistor (R4T) for heat exchanger liquid pipe



★ 4
Thermistor (R5T) for sub-cooling heat exchanger liquid pipe



★ 5
Thermistor (R6T) for sub-cooling heat exchanger gas pipe

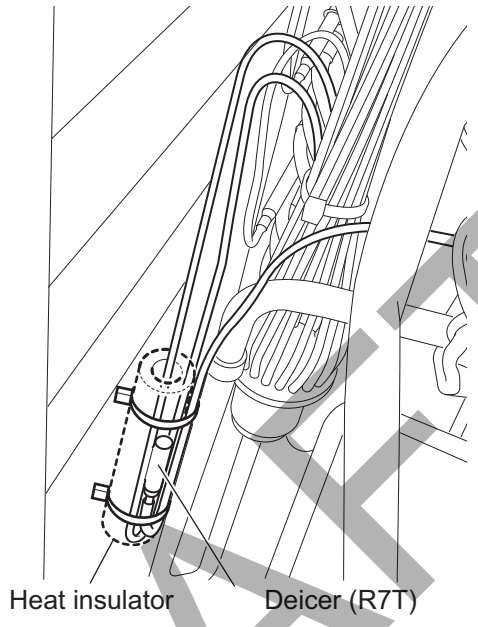


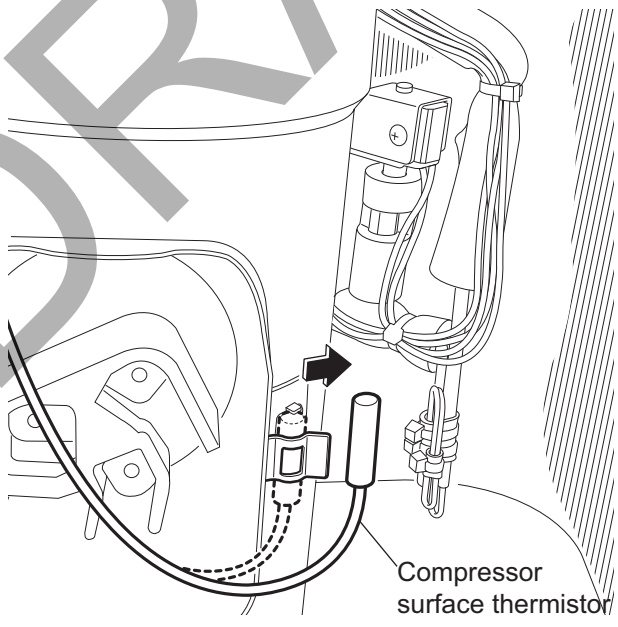
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Removal Instructions for Each Thermistor (2/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
2. Remove the deicer (R7T) ① Remove the heat insulator. ② Pull out the deicer together with the mounting bracket.	
3. Remove the compressor surface thermistor (R8T) ① Pull out the compressor surface thermistor from the mounting bracket.	





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Removal Instructions for Compressor (1/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

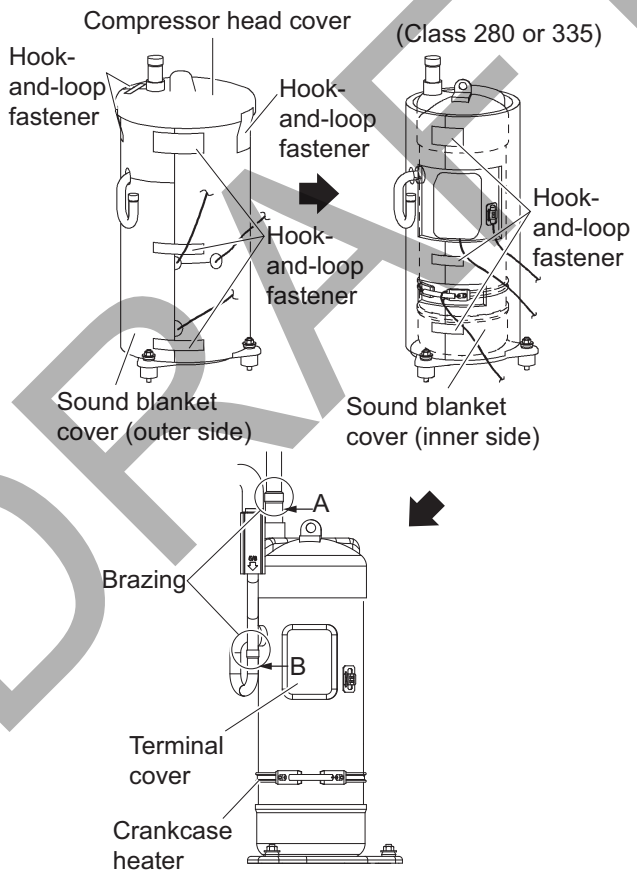
Work procedure	Remarks

- Follow the removal instructions for the outside panels to remove the top panel and upper, middle, and lower front panels.
- Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.

1. Remove the sound blanket cover

① Remove the three hook-and-loop fasteners, and take out the compressor head cover.

② Remove the three Hook-and-loop fasteners, and pull out the sound blanket cover for the compressor.

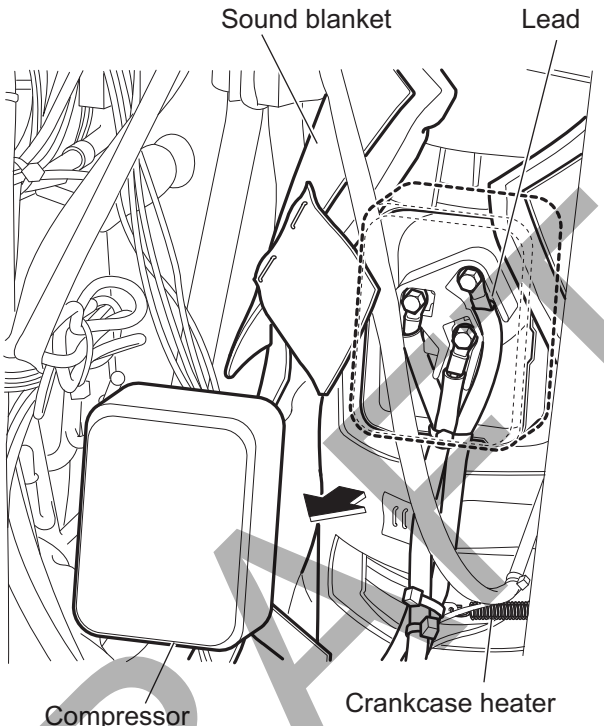


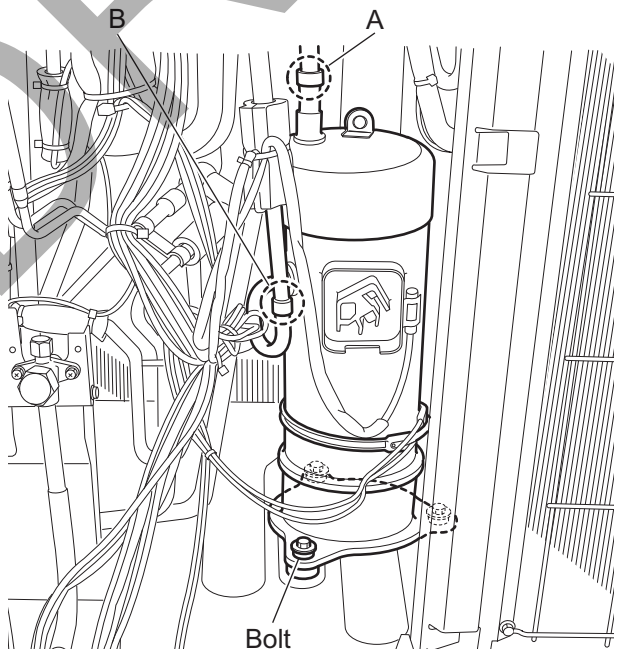
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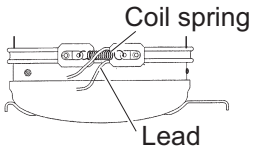
Removal Instructions for Compressor (2/2)

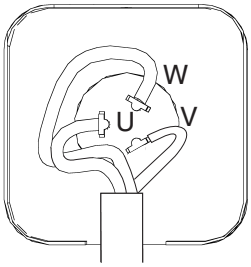
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

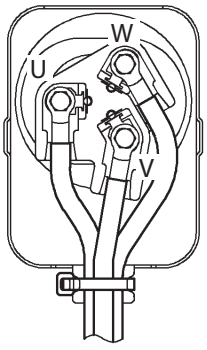
Work procedure	Remarks
1. Remove the crankcase heater ① Remove the coil spring, and pull out the crankcase heater.	★ Perform brazing after checking that the refrigerant has been completely purged. ★ Precautions for the mounting of the crankcase heater • Make sure that the crankcase heater does not overlap with the weld part of the compressor. • Insert the coil spring of the heater into the lead loop.
3. Take out the compressor ① Remove the compressor terminal cover. ② Remove the leads from the compressor terminal block. ③ Remove the three mounting bolts from the compressor. ④ Cut the discharge pipe (at A and B) with a pipe cutter. ⑤ Lift up and pull the compressor forward. ⑥ Remove the residual brazing on the pipe.	★ Compressor terminal symbols <Class P224> <Class P280 or 335> ★ Oil will leak at the time of cutting the pipe. Cut the pipe with the lower part protected with a waste cloth.









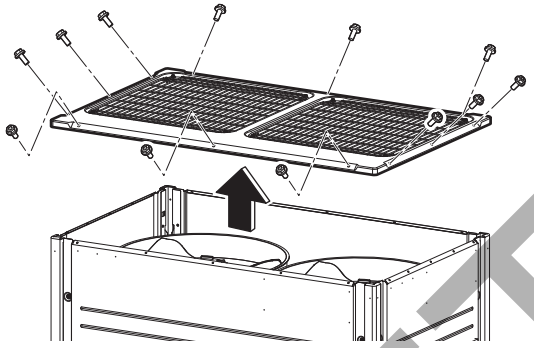
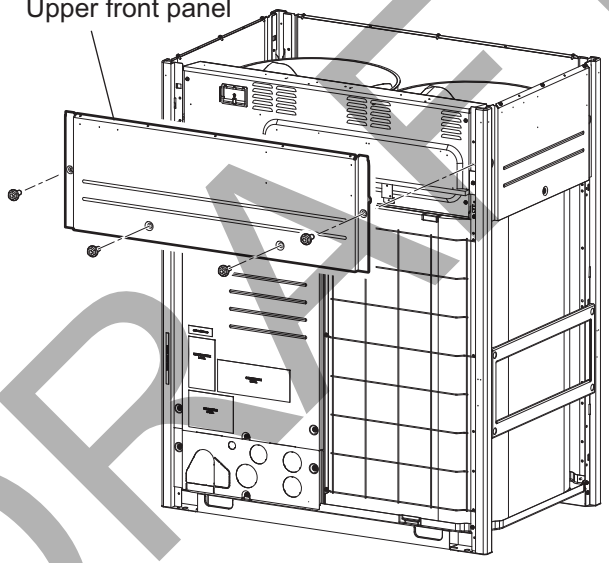
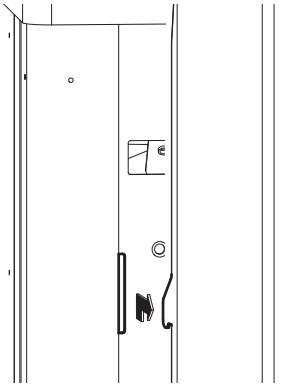
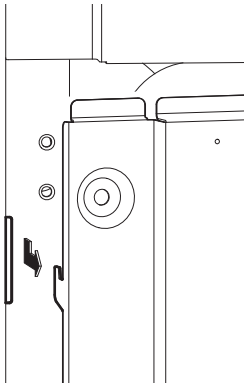
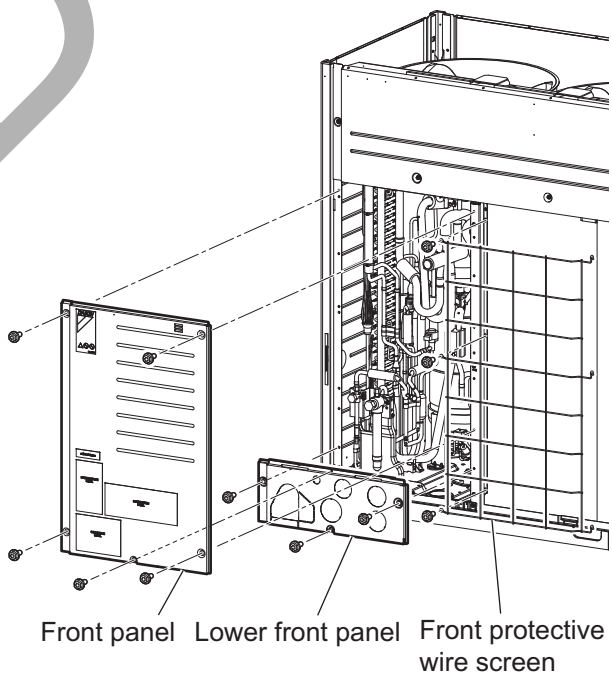


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7 RXYP400·450·500·560C

Removal Instructions for Outside Panels

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
1. Remove the top panel ① Remove the 12 screws, and pull out the top panel upward.	
2. Remove the upper front panel ① Remove the three screws, unclamp the two claws, and take out the upper front panel.		There is a claw on each side of the upper front panel. 
3. Remove the middle front panel ① Remove the five screws, unclamp the single claw, and take out the middle front panel.		There is a claw on left side of the upper front panel. 
4. Remove the protection wire mesh ① Remove the three screws, and take out the front protective wire screen. You can take out the protective wire screen without removing the front panel.		
5. Remove the lower front panel ① Remove the three screws, unclamp the single claw, and take out the lower front panel.		

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Removal Instructions for Fan Assembly (1/2)

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks

● Follow the removal instructions for the outside panels to remove the top panel, front panel, and upper front panel.

1. Remove the propeller fan

① Loosen the setscrew (M10) with a hex wrench.

② Pull out the propeller fan upward.

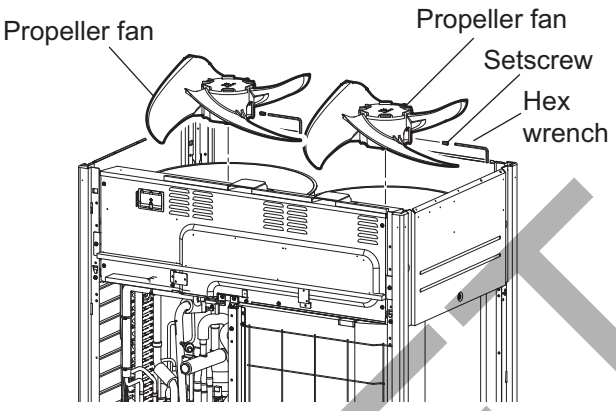
2. Remove the fan motor

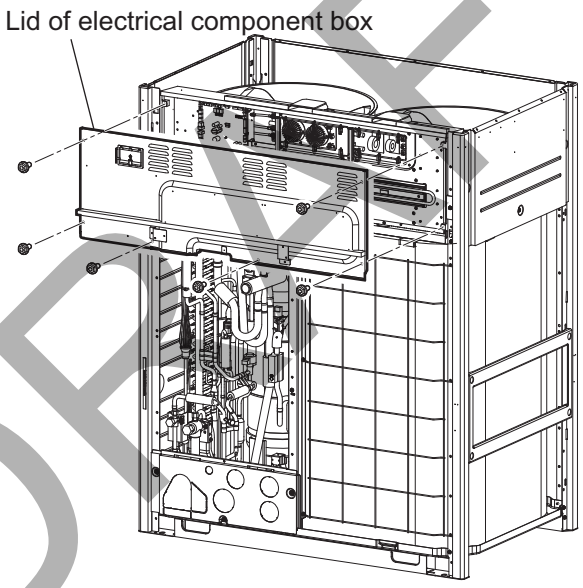
① Remove the six screws from the lid of the electrical component box.

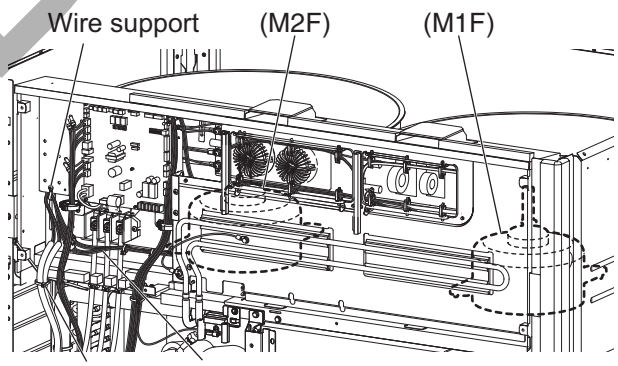
② Remove the fan leads from the wire support.

③ Cut the clamp material.

④ Remove the relay connectors for the fan motor.

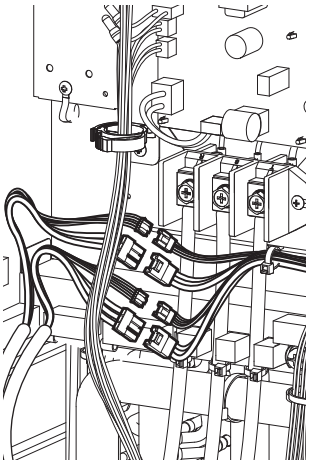






	Connector on the equipment side	Connector on the PC board side
M1F	White	White (X1A and X2A)
M2F	White with red marking	Red (X3A and X4A)

★ Relay connectors for fan motor

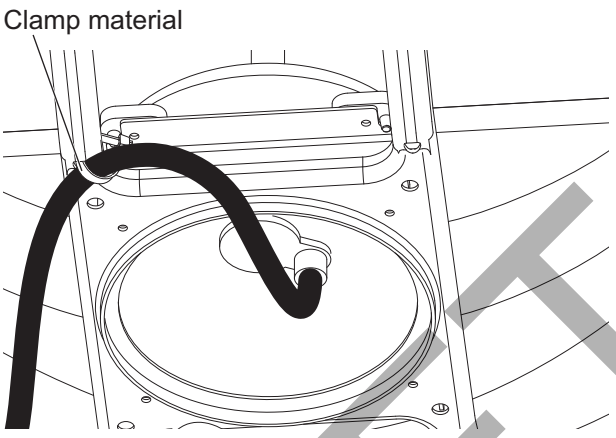


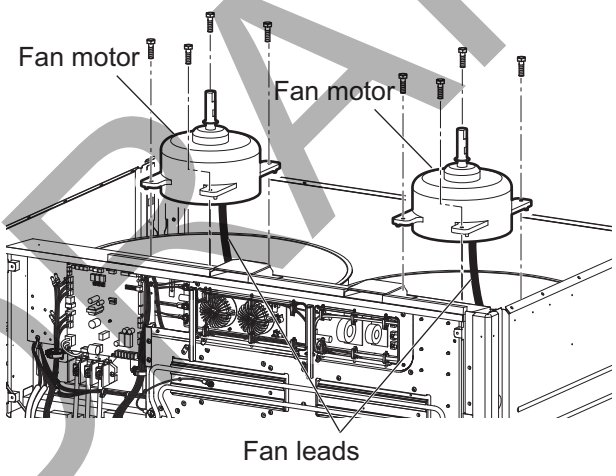
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Removal Instructions for Fan Assembly (2/2)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑤ Remove the clamp material that secures the leads.	
⑥ Remove the four fixing bolts, and take out the fan motor.	

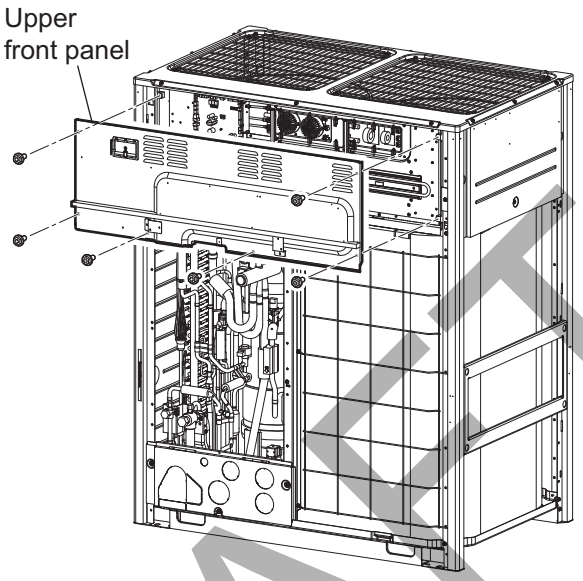
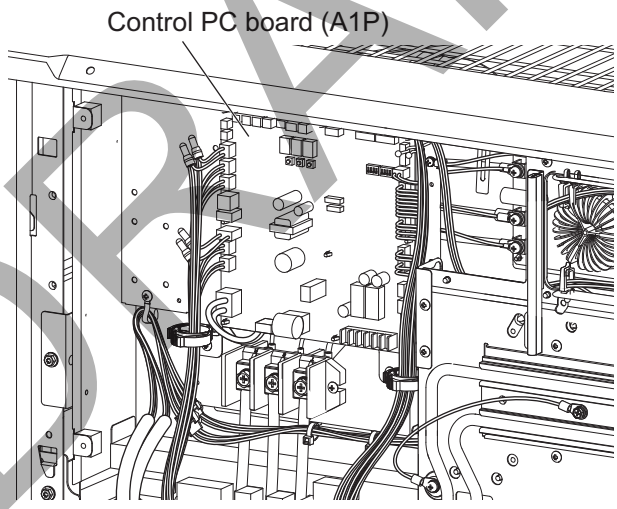
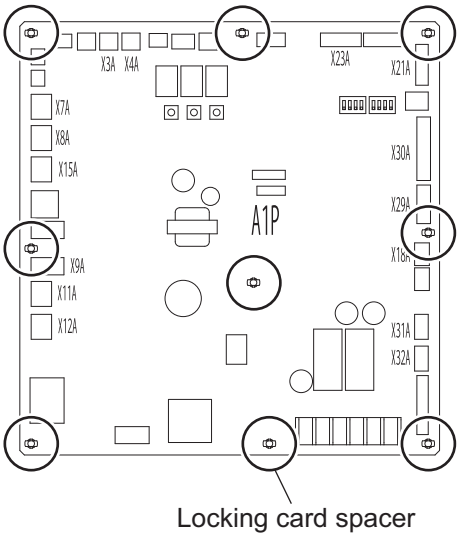
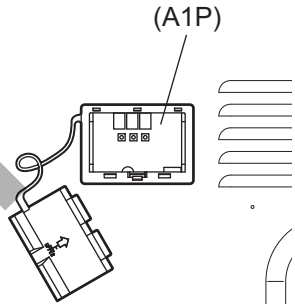
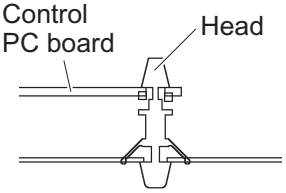




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Removal Instructions for Control PC Board

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the front panel and upper front panel. **1. Remove the control PC board (A1P)** ① Remove the six screws, and take out the lid of the electrical component box. ② Remove all the connectors on the control PC board. ③ Remove the locking card spacer, and take out the control PC board (A1P).	  	★ Open the access hole at the time of commissioning. Press the button on the PC board with an insulated rod.  ★ You can check the commissioning button with the access hole opened. Refer to the precautions for servicing on the lid of the electrical component box. ★ Removal from locking card spacer  ★ Cross-sectional view of locking card spacer 

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Removal Instructions for Electrical Component Assembly (1/3)

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks

● Follow the removal instructions for the outside panels to remove the front panel and upper front panel.

1. Remove the electrical component assembly

① Remove the connectors (X28A and X20A) on the control PC board (A1P).

② Cut the clamp materials.

③ Remove the harness from the wire clip.

④ Cut the clamp material on the fan leads.

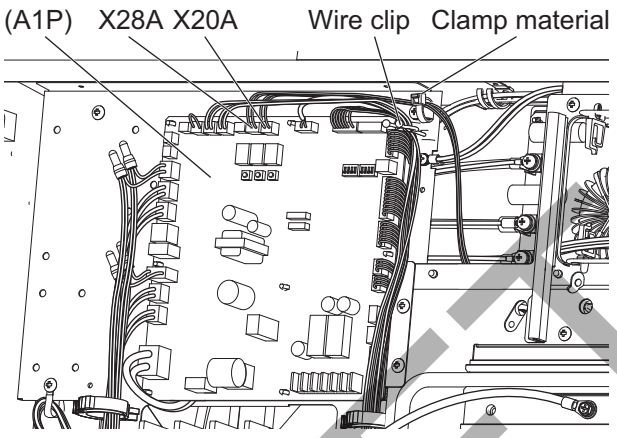
⑤ Remove the relay connector for the fan motor.

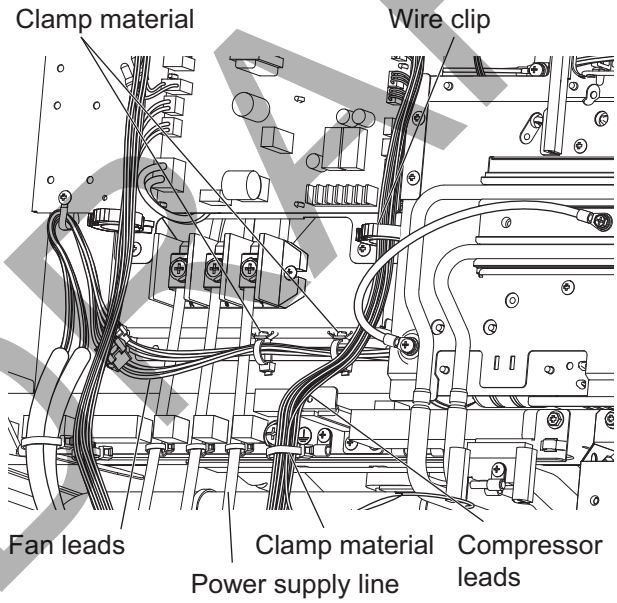
⑥ Remove the power supply line.

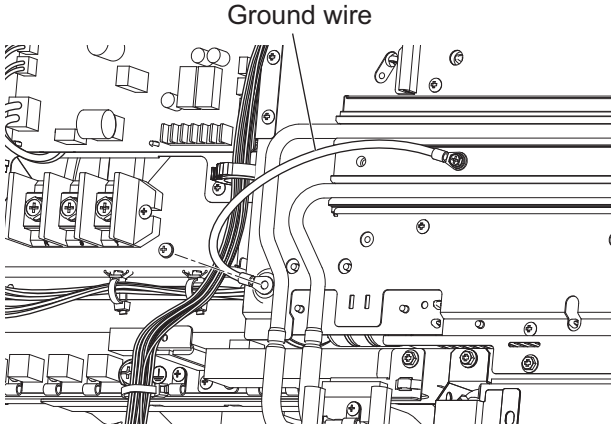
⑦ Remove the harness from the wire clip.

⑧ Cut the two clamp materials on the compressor leads.

⑨ Remove the screw on the left-hand side for the ground wire. Leave the screw on the heat sink side as it is.



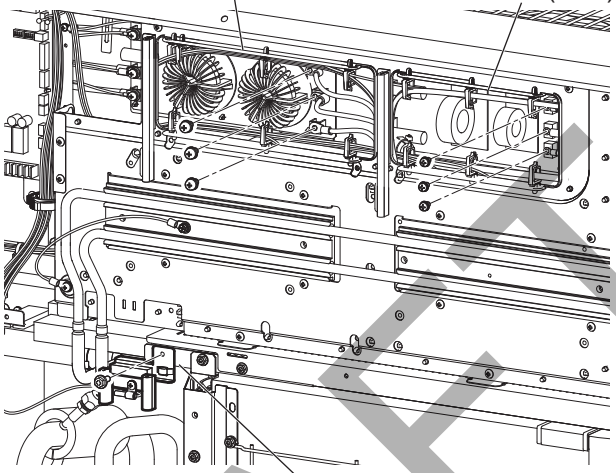
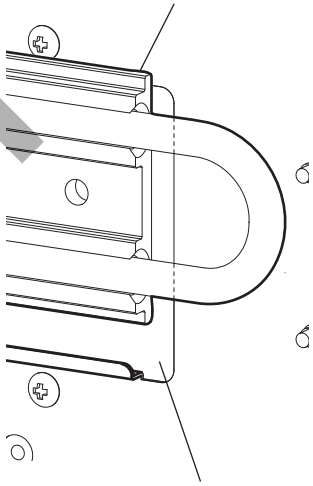
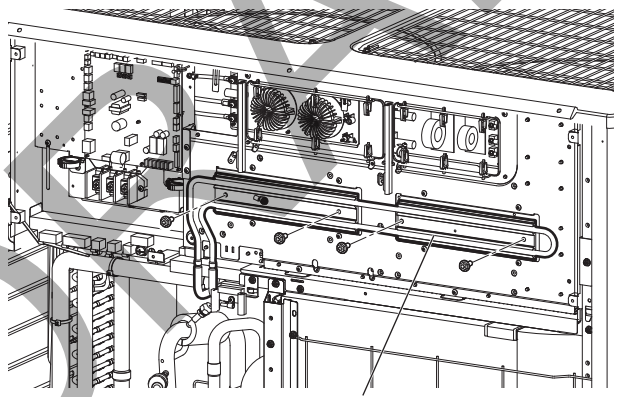




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Removal Instructions for Electrical Component Assembly (2/3)

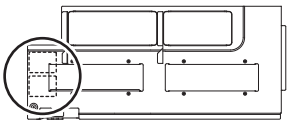
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

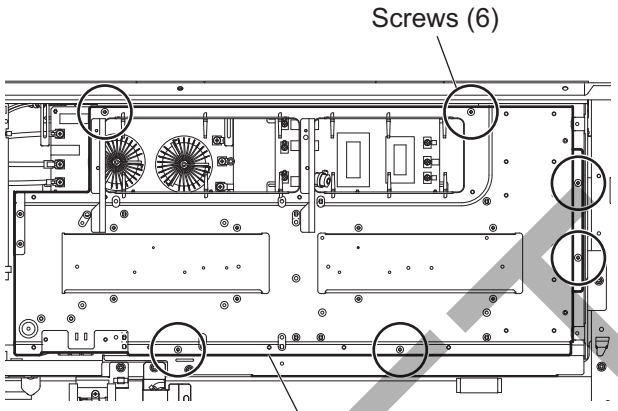
Work procedure		Remarks
⑧ Remove the six securing screws (blue, white, and red) on the leads of the noise filter PC board. ⑨ Remove the single screw from the mounting bracket of outdoor air thermistor.	Noise filter PC board (A5P) Noise filter PC board (A2P)  Mounting bracket of outdoor air thermistor	**Precaution:** Be careful not to drop the screws. ★ Hook on the electrical component assembly Heat sink  Electrical component assembly
⑩Remove the four securing screws from the heat sink. ⑪Unclamp the hook on the electrical component assembly, and slid the heat sink upward.	 Heat sink	

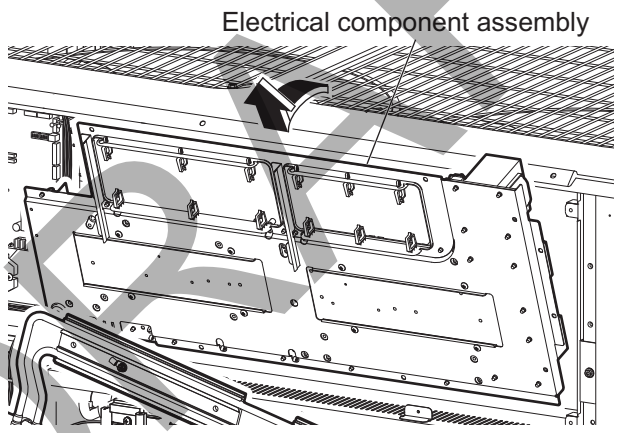
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Removal Instructions for Electrical Component Assembly (3/3)

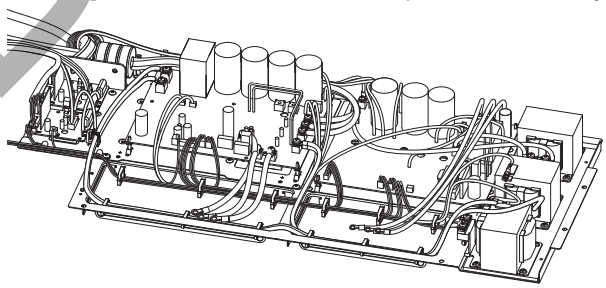
⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
⑫Remove the six screws, slide the electrical component assembly to the left, and pull and take out the electrical component assembly forward.	**Precaution**  Do not touch the PC board for the fan on the back.





[Backside of electrical component assembly]



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Removal Instructions for Inverter PC Board for Compressor

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks

● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.

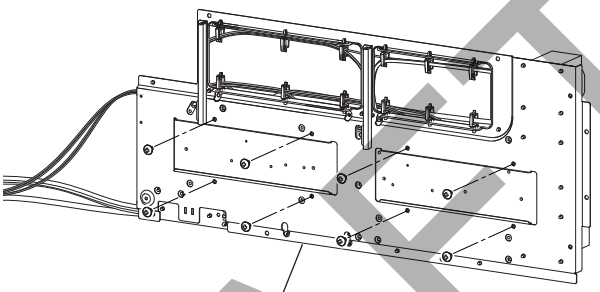
1. Remove the inverter PC boards (A3P and A6P) for the compressor

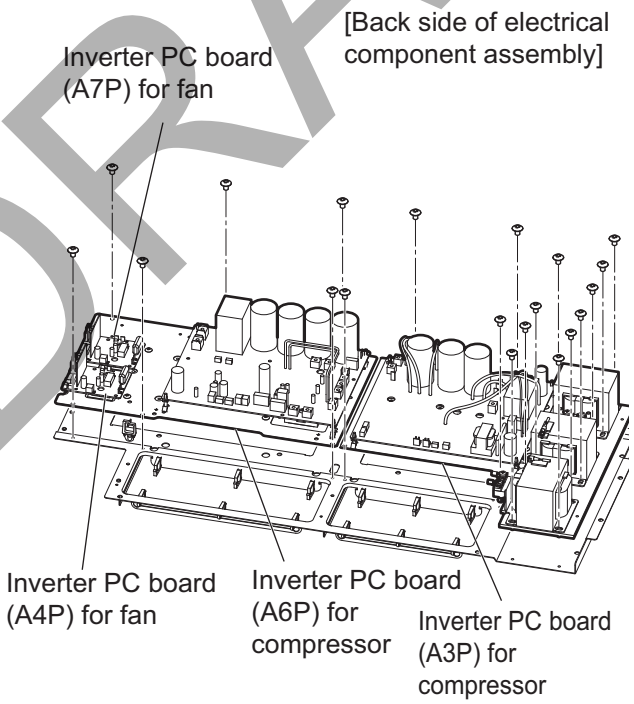
① Remove the eight screws (four each on both sides) of the heat sink.

② Remove all the connectors on the inverter PC board for the compressor.

③ Remove the following screws.
Reactors: 9 screws
Ferrite core: 4 screws
(A6P): 6 screws
(A3P): 4 screws

④ (4) Take out the inverter PC board for the compressor. (Replace the PC board connected to the plate.)

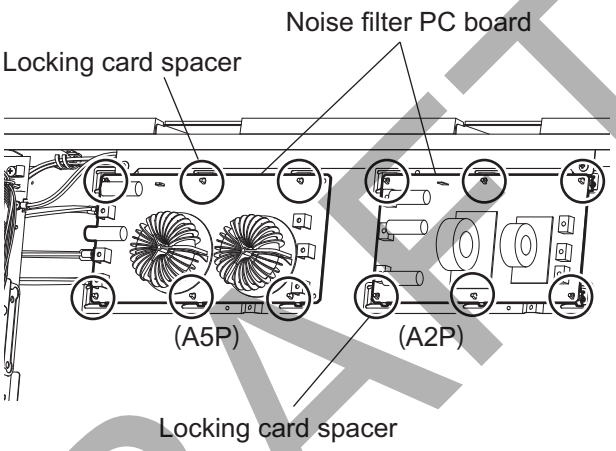
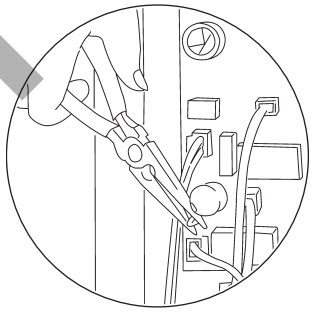
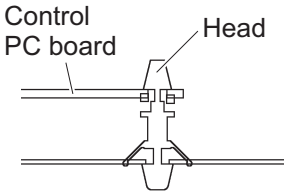




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Removal Instructions for Noise Filter PC Board

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

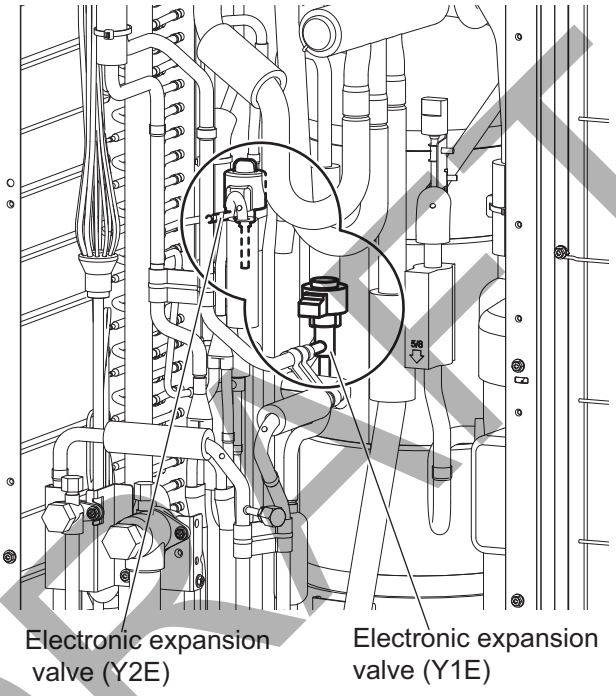
Work procedure		Remarks
● Follow the removal instructions for the electrical component assembly to remove the electrical component assembly.		
1. Remove the noise filter PC boards (A2P and A5P) ① Remove all the connectors on the filter PC board. ② Remove the locking card spacer, and take out the filter PC board.		★ Removal from locking card spacer  ★ Cross-sectional view of locking card spacer 

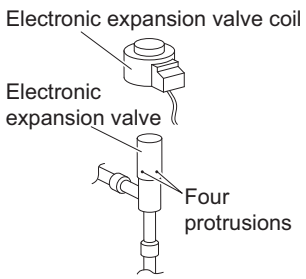
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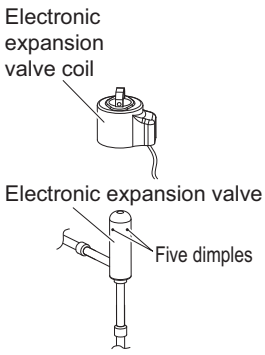
Removal Instructions for Electronic Expansion Valves

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the front panel. **1. Remove the electronic expansion valves** ① Rotate the electronic expansion valve (Y1E and Y2E) coils by 20° to 30°, and pull out the valves upward. ② Remove the two-point brazing, and take out the solenoid valves (Y1E and Y2E).	★ 1 Collect the refrigerant before removing each part, and perform brazing after checking that the refrigerant has been completely purged. ★ 2 Electronic expansion valve (Y1E) ★ 3 Electronic expansion valve (Y2E)



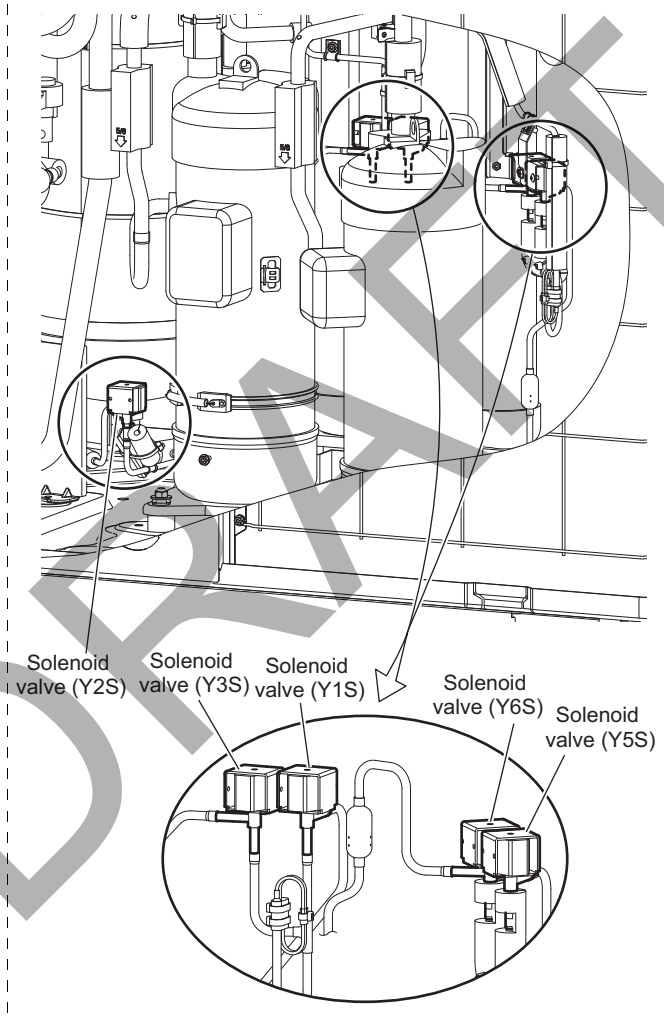
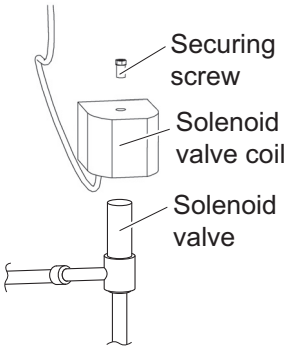




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Removal Instructions for Solenoid Valves

WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

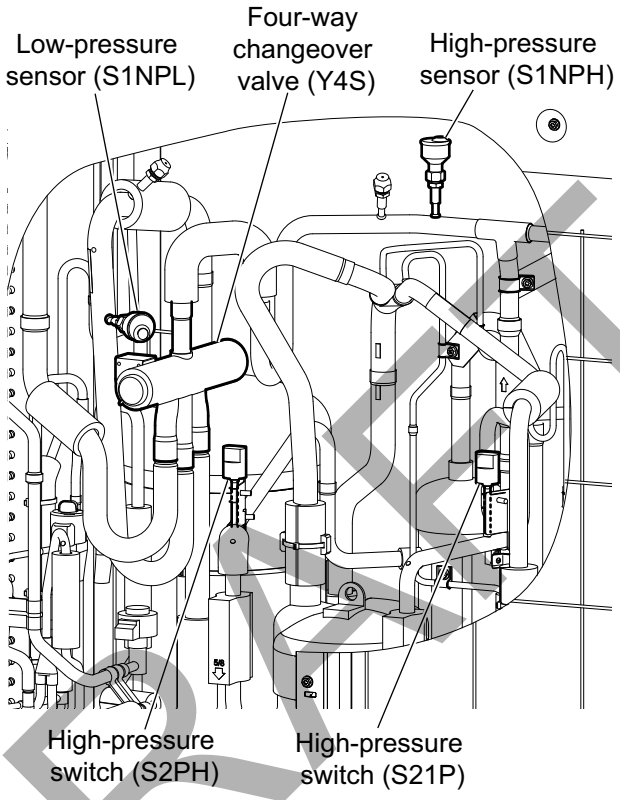
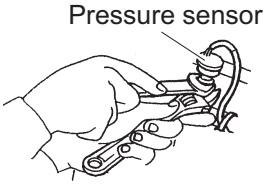
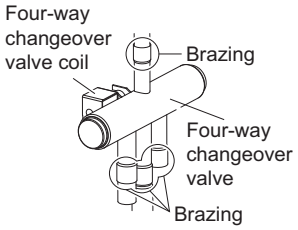
Work procedure	Remarks
● Follow the removal instructions for the outside panels to remove the front panel. **1. Remove the solenoid valves** ① Remove a single screw each, and take out the solenoid valve (Y1S to Y3S, Y5S, and Y6S) coils. ② Remove the two-point brazing, and take out the solenoid valve (Y1S to Y3S, Y5S, and Y6S).	 ★ 1 Collect the refrigerant before removing each part, and perform brazing after checking that the refrigerant has been completely purged. ★ 2 Solenoid valves (Y1S to Y3S, Y5S, and Y6S) 

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Pressure Sensor Four-way Changeover Valve High-pressure Switch

Removal Instructions

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure		Remarks
● Follow the removal instructions for the outside panels to remove the front panel. **1. Remove the pressure sensors** ① Remove the connector (X32A) for the high-pressure sensor. ② Use two wrenches to remove the high-pressure sensor. ③ Remove the connector (X31A) for the low-pressure sensor. ④ Use two wrenches to remove the low-pressure sensor. **2. Remove the four-way changeover valve** ① Remove the connector (X15A) for the four-way changeover valve coil. ② Remove the single screw, and take out the four-way changeover valve coil. ③ Remove the four-point brazing, and take out the four-way changeover valve. **3. Remove the pressure switches.** ① Remove the connectors (X3A and X4A) for the high-pressure switches. ② Remove a single-brazing point per high-pressure switch.		★ 1 Collect the refrigerant before removing the four-way changeover valve and high-pressure switch, and perform brazing after checking that the refrigerant has been completely purged. ★ 2 Pressure sensor (S1NPH/S1NPL)  (You can take out the pressure sensors without purging the refrigerant.) ★ 3 Four-way changeover valve (Y4S)  (Blaze the four-way changeover valve while cooling the valve with a wet cloth so that the temperature of the valve will not exceed 120°C.)

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Removal Instructions for Solenoid Valves

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure

● Follow the removal instructions for the outside panels to remove the front panel.

1. Remove the outdoor air thermistor (R1T)

① Remove the single screw, and take out the thermistor fixture.

② Pull out the outdoor air thermistor from the fixture.

2. Remove the thermistors (R3T, R5T, R6T, R4T, R21T, and R22T)

① Remove the heat insulator.

② Remove the thermistors while pushing the lower part of the mounting spring.

3. Remove the deicer (R7T)

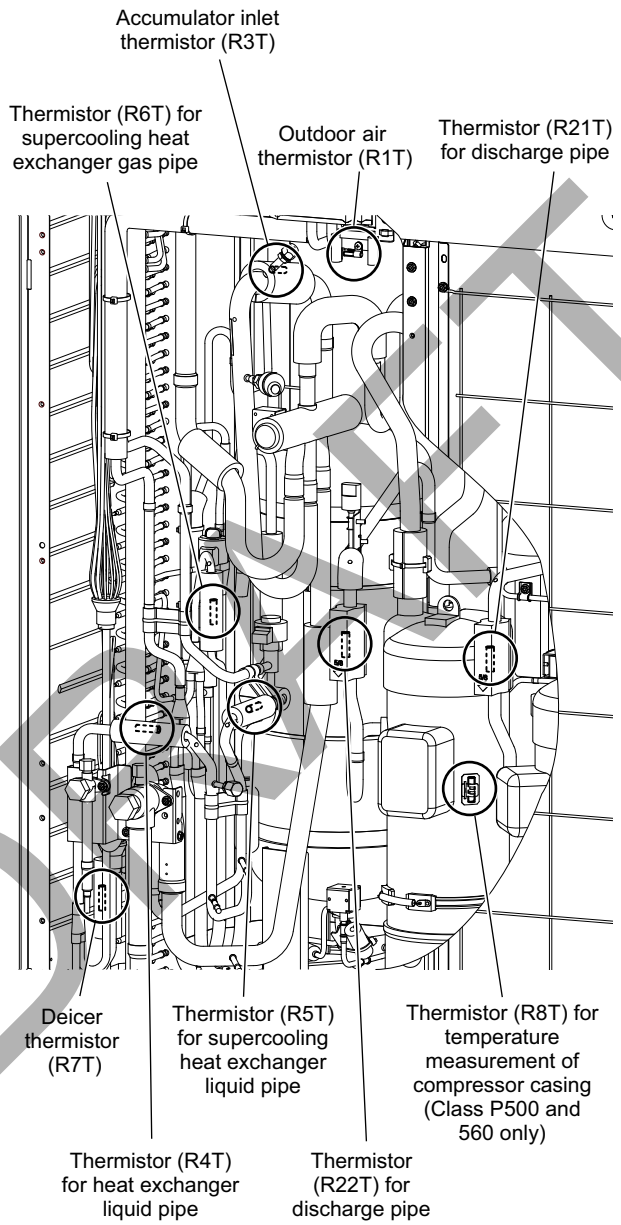
① Remove the heat insulator.

② Pull out the deicer together with the mounting bracket.

4. Remove the compressor surface thermistor (R8T)

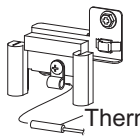
Class P500 or 560 only)

① Pull out the compressor surface thermistor from the mounting

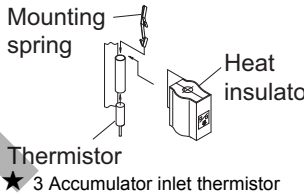


Remarks

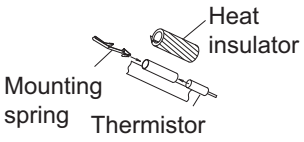
★ 1 outdoor air thermistor (R1T)



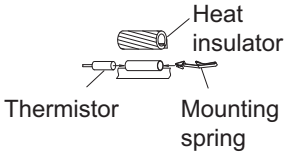
★ 2 Thermistors (R21T and R22T) for discharge pipe



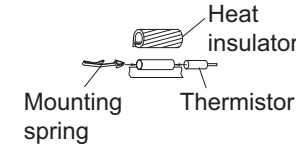
★ 3 Accumulator inlet thermistor (R3T)



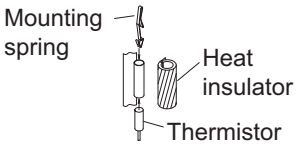
★ 4 Thermistor (R4T) for heat exchanger liquid pipe



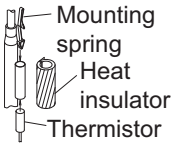
★ 5 Thermistor (R5T) for supercooling heat exchanger liquid pipe



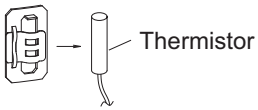
★ 6 Thermistor (R6T) for supercooling heat exchanger gas pipe



★ 7 Deicer thermistor (R7T)



★ 8 Thermistor (R8T) for temperature measurement of compressor casing surface



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Removal Instructions for Compressor

⚠ WARNING
Be sure to disassemble the unit 10 minutes after all the power supply is turned off.

Work procedure

● Follow the removal instructions for the outside panels to remove the front panel.

1. Remove the soundproof materials

① Remove the three hook-and-loop fasteners, and take out the compressor head cover.

② Remove the three hook-and-loop fasteners, and pull out the soundproof cover for the compressor.

2. Remove the compressor

① Remove the coil spring, and pull out the crankcase heater.

② Remove the compressor terminal cover.

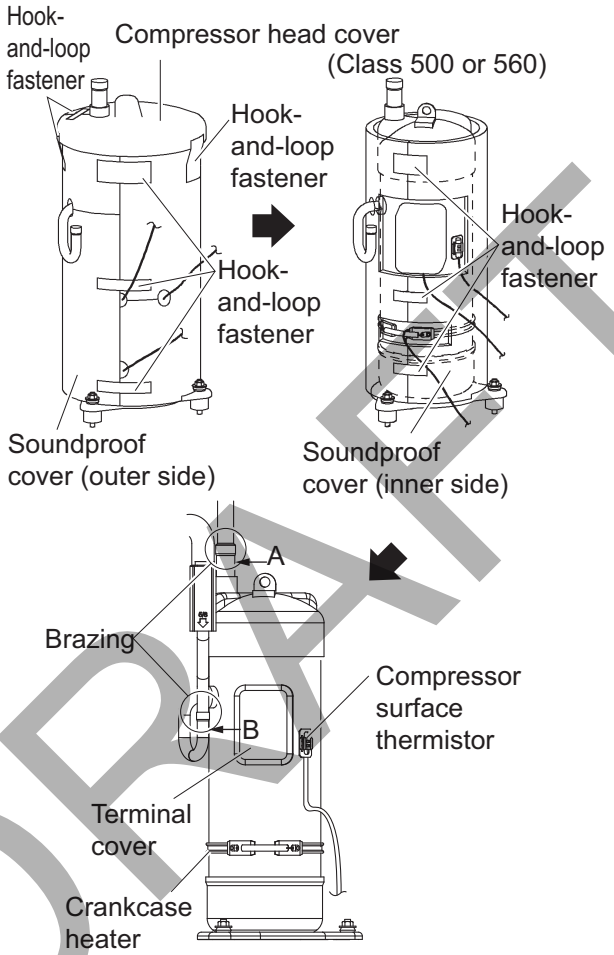
③ Remove the leads from the compressor terminal block.

④ Remove the three mounting bolts from the compressor.

⑤ Cut the discharge pipe (at B) and the suction pipe (at A) with a pipe cutter.

⑥ Lift up and pull out the compressor.

⑦ Remove the residual brazing on the pipe.



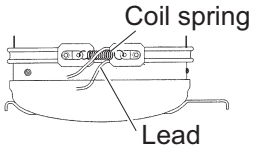
[Connection methods for compressor terminal block]
Use either one of the following methods according to the compressor model.

Applicable model	M1C	M2C
Class P400 or 450	Fast-on terminal	Fast-on terminal
Class P500 or P560	Fast-on terminal	Screw terminal

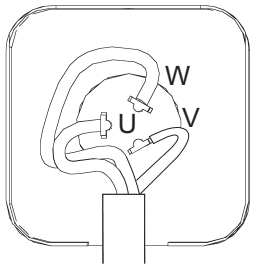
Remarks

★ 1
Collect the refrigerant, and start working after checking that the refrigerant has been completely purged.

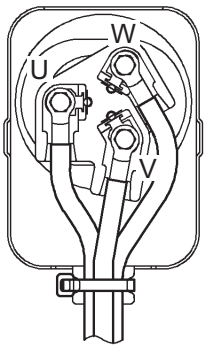
★ 2
Precautions for mounting crankcase heater
- Make sure that the crankcase heater does not overlap with the weld part of the compressor.
- Insert the coil spring of the heater into the lead loop.



★ 3
Terminal block of compressor
<Fast-on terminal>



<Screw terminal>



★ 4
Oil will leak at the time of cutting the pipe.
Cut the pipe with the lower part protected with a waste cloth.

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