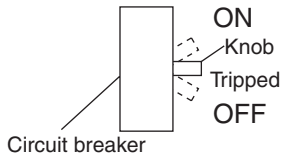
Part 6
Troubleshooting

1. Symptom-based Troubleshooting

	Symptom		Supposed Cause	Countermeasure
1	The system does not start operation at all.		Blowout of fuse(s)	Turn Off the power supply and then replace the fuse(s).
			Cutout of breaker(s)	• If the knob of any breaker is in its OFF position, turn ON the power supply. • If the knob of any circuit breaker is in its tripped position, do not turn ON the power supply. 
			Power failure	After the power failure is reset, restart the system.
2	The system starts operation but makes an immediate stop.		Blocked air inlet or outlet of indoor or outdoor unit	Remove obstacle(s).
			Clogged air filter(s)	Clean the air filter(s).
3	The system does not cool or heat air well.		Blocked air inlet or outlet of indoor or outdoor unit	Remove obstacle(s).
			Clogged air filter(s)	Clean the air filter(s).
			Enclosed outdoor unit(s)	Remove the enclosure.
			Improper set temperature	Set the temperature to a proper degree.
			Airflow rate set to "LOW"	Set it to a proper airflow rate.
			Improper direction of air diffusion	Set it to a proper direction.
			Open window(s) or door(s)	Shut it tightly.
		[In cooling]	Direct sunlight received	Hang curtains or shades on windows.
		[In cooling]	Too many persons staying in a room	
		[In cooling]	Too many heat sources (e.g. OA equipment) located in a room	
4	The system does not operate.	The system stops and immediately restarts operation.	If the OPERATION lamp on the remote control turns ON, the system will be normal. These symptoms indicate that the system is controlled so as not to put unreasonable loads on the system.	Normal operation. The system will automatically start operation after a lapse of five minutes.
		Pressing the TEMP ADJUST button immediately resets the system.		
		The remote control displays "UNDER CENTRALIZED CONTROL", which blinks for a period of several seconds when the OPERATION button is depressed.	The system is controlled with centralized controller. Blinking display indicates that the system cannot be operated using the remote control.	Operate the system using the COOL/HEAT centralized remote control.
		The system stops immediately after turning ON the power supply.	The system is in preparation mode of micro computer operation.	Wait for a period of approximately one minute.
5	The system makes intermittent stops.	The remote control displays malfunction codes "U4" and "U5", and the system stops but restarts after a lapse of several minutes.	The system stops due to an interruption in communication between units caused by electrical noises coming from equipment other than air conditioners.	Remove causes of electrical noises. If these causes are removed, the system will automatically restart operation.
6	COOL-HEAT selection is disabled.	The remote control displays "UNDER CENTRALIZED CONTROL".	This remote control has no option to select cooling operation.	Use a remote control with option to select cooling operation.
		The remote control displays "UNDER CENTRALIZED CONTROL", and the COOL-HEAT selection remote control is provided.	COOL-HEAT selection is made using the COOL-HEAT selection remote control.	Use the COOL-HEAT selection remote control to select cool or heat.

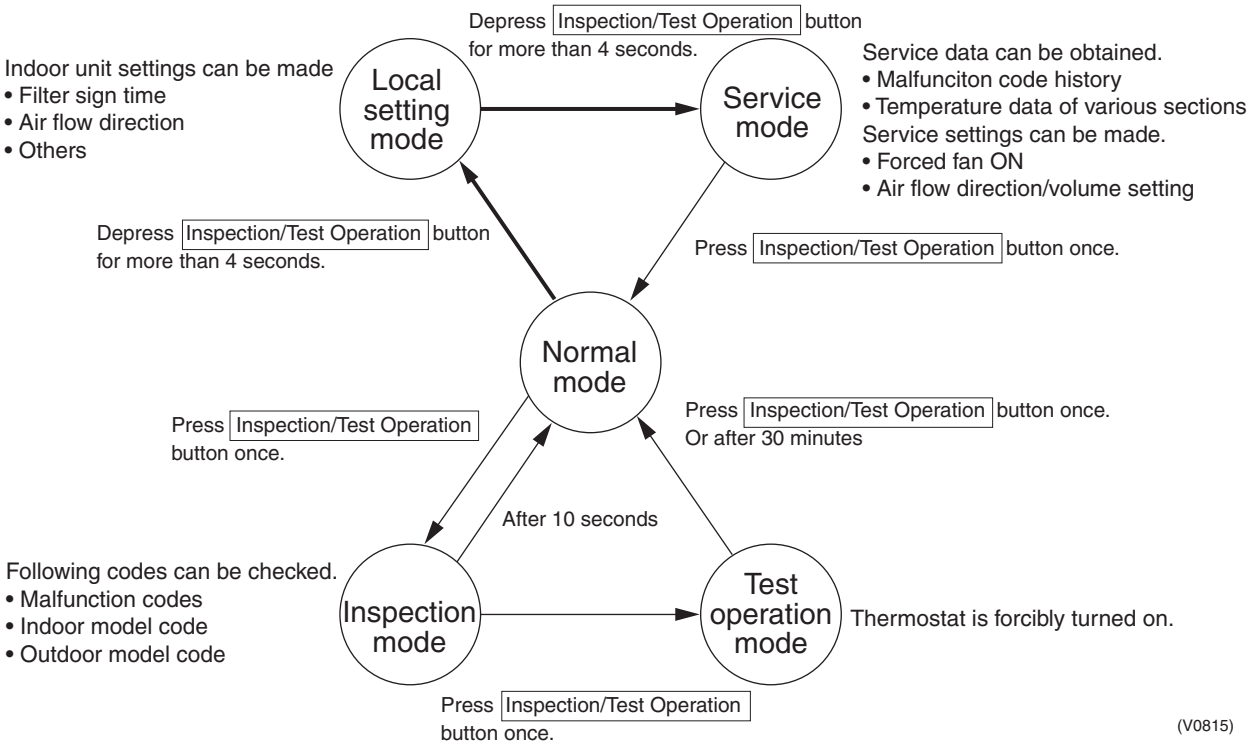
	Symptom		Supposed Cause	Countermeasure
7	The system conducts fan operation but not cooling or heating operation.	This symptom occurs immediately after turning ON the power supply.	The system is in preparation mode of operation.	Wait for a period of approximately 10 minutes.
8	The airflow rate is not reproduced according to the setting.	Even pressing the AIRFLOW RATE SET button makes no changes in the airflow rate.	In heating operation, when the room temperature reaches the set degree, the outdoor unit will stop while the indoor unit is brought to fan LL operation so that no one gets cold air. Furthermore, if fan operation mode is selected when other indoor unit is in heating operation, the system will be brought to fan LL operation. (The fan LL operation is also enabled while in oil return mode in cooling operation.)	Normal operation.
9	The airflow direction is not reproduced according to the setting.	The airflow direction is not corresponding to that displayed on the remote control. The flap does not swing.	Automatic control	Normal operation.
10	A white mist comes out from the system.	<Indoor unit> In cooling operation, the ambient humidity is high. (This indoor unit is installed in a place with much oil or dust.)	Uneven temperature distribution due to heavy stain of the inside of the indoor unit	Clean the inside of the indoor unit.
		<Indoor unit> Immediately after cooling operation stopping, the ambient temperature and humidity are low.	Hot gas (refrigerant) flown in the indoor unit results to be vapor from the unit.	Normal operation.
		<Indoor and outdoor units> After the completion of defrosting operation, the system is switched to heating operation.	Defrosted moisture turns to be vapor and comes out from the units.	Normal operation.
11	The system produces sounds.	<Indoor unit> Immediately after turning ON the power supply, indoor unit produces "ringing" sounds.	These are operating sounds of the electronic expansion valve of the indoor unit.	Normal operation. This sound becomes low after a lapse of approximately one minute.
		<Indoor and outdoor units> "Hissing" sounds are continuously produced while in cooling or defrosting operation.	These sounds are produced from gas (refrigerant) flowing respectively through the indoor and outdoor units.	Normal operation.
		<Indoor and outdoor units> "Hissing" sounds are produced immediately after the startup or stop of the system, or the startup or stop of defrosting operation.	These sounds are produced when the gas (refrigerant) stops or changes flowing.	Normal operation.
		<Indoor unit> Faint sounds are continuously produced while in cooling operation or after stopping the operation.	These sounds are produced from the drain discharge device in operation.	Normal operation.
		<Indoor unit> "Creaking" sounds are produced while in heating operation or after stopping the operation.	These sounds are produced from resin parts expanding and contracting with temperature changes.	Normal operation.
		<Indoor unit> Sounds like "trickling" or the like are produced from indoor units in the stopped state.	On VRV systems, these sounds are produced when other indoor units in operation. The reason is that the system runs in order to prevent oil or refrigerant from dwelling.	Normal operation.
		<Outdoor unit> Pitch of operating sounds changes.	The reason is that the compressor changes the operating frequency.	Normal operation.

	Symptom		Supposed Cause	Countermeasure
12	Dust comes out from the system.	Dust comes out from the system when it restarts after the stop for an extended period of time.	Dust, which has deposited on the inside of indoor unit, is blown out from the system.	Normal operation.
13	Odors come out from the system.	In operation	Odors of room, cigarettes or else adsorbed to the inside of indoor unit are blown out.	The inside of the indoor unit should be cleaned.
14	Outdoor unit fan does not rotate.	In operation	The reason is that fan revolutions are controlled to put the operation to the optimum state.	Normal operation.
15	LCD display "88" appears on the remote control.	Immediately after turning ON the power supply	The reason is that the system is checking to be sure the remote control is normal.	Normal operation. This code is displayed for a period of approximately one minute at maximum.
16	The outdoor unit compressor or the outdoor unit fan does not stop.	After stopping operation	It stops in order to prevent oil or refrigerant from dwelling.	Normal operation. It stops after a lapse of approximately 5 to 10 minutes.
17	The outdoor gets hot.	While stopping operation	The reason is that the compressor is warmed up to provide smooth startup of the system.	Normal operation.
18	Hot air comes out from the system even though it stops.	Hot air is felt while the system stops.	On VRV systems, small quantity of refrigerant is fed to indoor units in the stopped state when other indoor units are in operation.	Normal operation.
19	The system does not cool air well.	The system is in dry operation.	The reason is that the dry operation serves not to reduce the room temperature where possible.	Change the system to cooling operation.

2. Troubleshooting by Remote Control

2.1 The INSPECTION / TEST Button

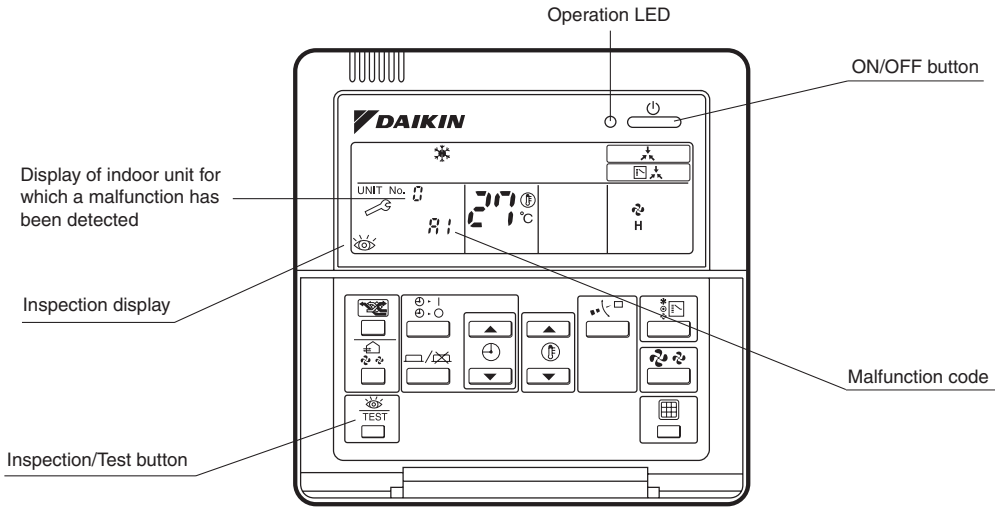
The following modes can be selected by using the [Inspection/Test Operation] button on the remote control.



2.2 Self-diagnosis by Wired Remote Control

Explanation

If operation stops due to malfunction, the remote control's operation LED blinks, and malfunction code is displayed. (Even if stop operation is carried out, malfunction contents are displayed when the inspection mode is entered.) The malfunction code enables you to tell what kind of malfunction caused operation to stop. See page 224 for malfunction code and malfunction contents.



Note:

1. Pressing the INSPECTION/TEST button will blink the check indication.
2. While in check mode, pressing and holding the ON/OFF button for a period of five seconds or more will clear the failure history indication shown above. In this case, on the codes display, the malfunction code will blink twice and then change to "00" (=Normal), the Unit No. will change to "0", and the operation mode will automatically switch from check mode to normal mode (displaying the set temperature).

2.3 Self-diagnosis by Infrared Remote Control

In the Case of BRC7C Type BRC7E Type BRC4C Type

If equipment stops due to a malfunction, the operation indicating LED on the light reception section flashes.
The malfunction code can be determined by following the procedure described below. (The malfunction code is displayed when an operation error has occurred. In normal condition, the malfunction code of the last problem is displayed.)

1. Press the INSPECTION/TEST button to select “Inspection.”
   The equipment enters the inspection mode. The “Unit” indication lights and the Unit No. display shows flashing “0” indication.
2. Set the Unit No.
   Press the UP or DOWN button and change the Unit No. display until the buzzer (*1) is generated from the indoor unit.
   *1 Number of beeps
   3 short beeps : Conduct all of the following operations.
   1 short beep : Conduct steps 3 and 4.
   Continue the operation in step 4 until a buzzer remains ON. The continuous buzzer indicates that the malfunction code is confirmed.
   Continuous beep : No abnormality.
3. Press the MODE selector button.
   The left “0” (upper digit) indication of the malfunction code flashes.
4. Malfunction code upper digit diagnosis
   Press the UP or DOWN button and change the malfunction code upper digit until the malfunction code matching buzzer (*2) is generated.

■ The upper digit of the code changes as shown below when the UP and DOWN buttons are pressed.

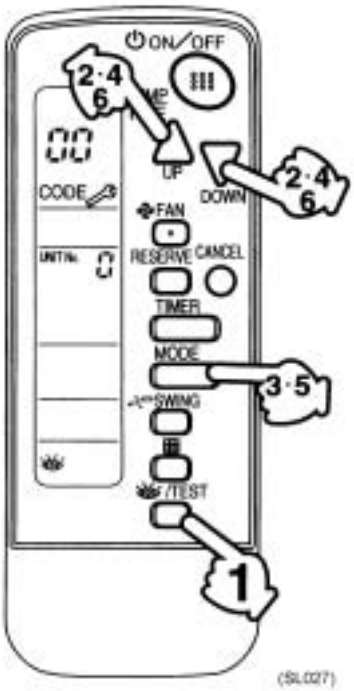
(SE006)

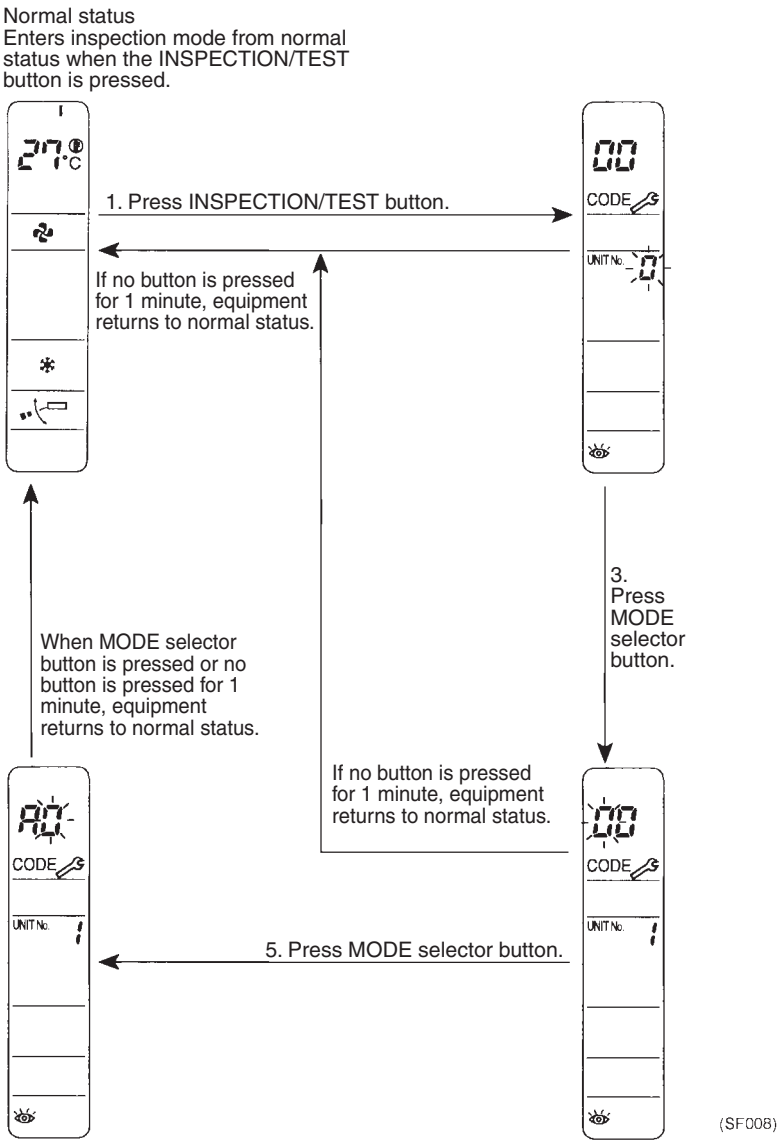
*2 Number of beeps
Continuous beep : Both upper and lower digits matched. (Malfunction code confirmed)
2 short beeps : Upper digit matched.
1 short beep : Lower digit matched.

5. Press the MODE selector button.
   The right “0” (lower digit) indication of the malfunction code flashes.
6. Malfunction code lower digit diagnosis
   Press the UP or DOWN button and change the malfunction code lower digit until the continuous malfunction code matching buzzer (*2) is generated.

- The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.

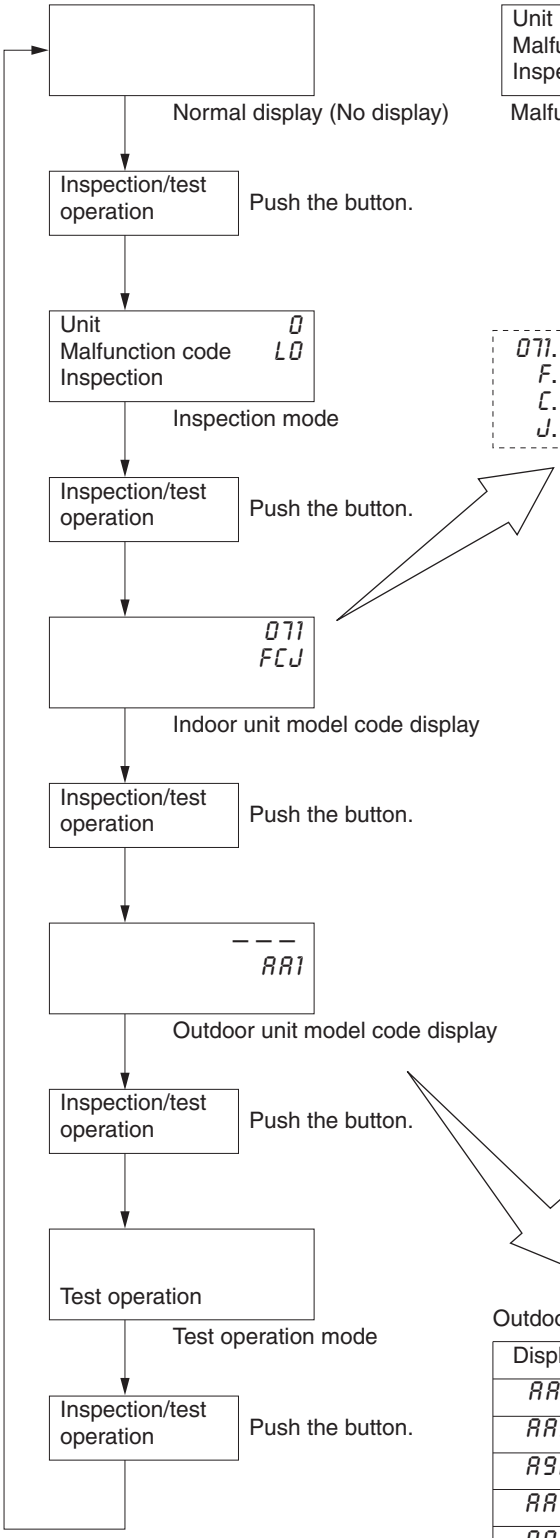
⇨ "Advance" button ⬅ "Backward" button (SE007)




Normal status
Enters inspection mode from normal status when the INSPECTION/TEST button is pressed.
27
°C
00
CODE
UNIT No.
0
1. Press INSPECTION/TEST button.
If no button is pressed for 1 minute, equipment returns to normal status.
3. Press MODE selector button.
When MODE selector button is pressed or no button is pressed for 1 minute, equipment returns to normal status.
If no button is pressed for 1 minute, equipment returns to normal status.
A0
CODE
UNIT No.
1
00
CODE
UNIT No.
1
5. Press MODE selector button.
(SF008)

2.4 Inspection Mode

Operating the INSPECTION/TEST button on the remote control will make it possible to check the malfunction codes, indoor unit model codes, and outdoor unit model codes while in inspection mode.



Unit 0
Malfunction code L0
Inspection

Malfunction code blinks when a malfunction occurs.

071... Capacity code
F... Indoor unit system code
C... Indoor unit type code
J... Progression code

Example of capacity code display

Example model	Display
FXCQ25	028
FXFQ63	071

Indoor unit system code

Display	Product classification	System classification
1	VRV system	(VAV indoor unit)
2	VRV system	Outdoor air processing unit
F	VRV system	Standard indoor unit
H	VRV system	New ceilling suspended cassette

Indoor unit type code

Display	Type	Model
A	Wall mounted	FXAQ
C	Double flow	FXCQ
E	Corner	FXKQ
F	Multi flow	FXFQ
H	Ceiling suspended	FXHQ
J	Built-in	FXSQ
L	Floor standing	FXLQ
P	Concealed ceiling duct	FXMQ
L	Concealed floor standing type	FXNQ
6	Multi flow 600×600	FXZQ
3	Slim Ceilling mounted duc	FXDQ

Outdoor model code

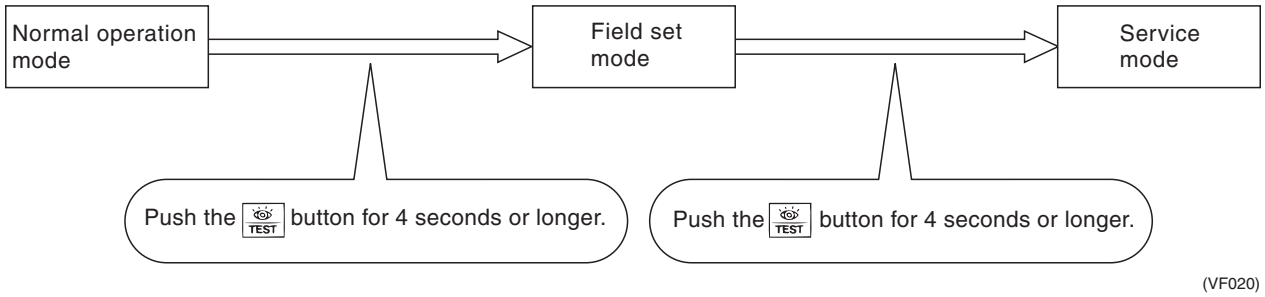
Display	Type	Model
AA1	VRV System Inverter K Series	RSXYP
AA3	R-407C VRV PLUS Series	RXYP
A92	VRV Heat Recovery Series	RSEYP
AA5	High COP type R-407C L Series	RSXYP-L
AAA	VRV II	RXYQ-M
AAC	VRV II M/C	RXYQ-MA
AAE	VRV III Heat Pump Series	RXYQ-P
	VRV III Cooling Only Series	RXQ-P
A9E	VRV III Heat Recovery Series	REYQ-P

(V2775)

2.5 Remote Control Service Mode

Operating the CHECK/TEST button on the remote control will make it possible to obtain "service data" and change "service setting" while in service mode.

How to Enter the Service Mode



(VF020)

Service Mode Operation Method

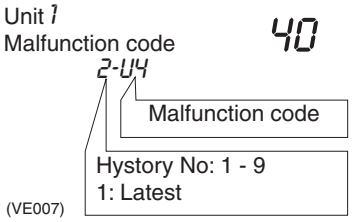
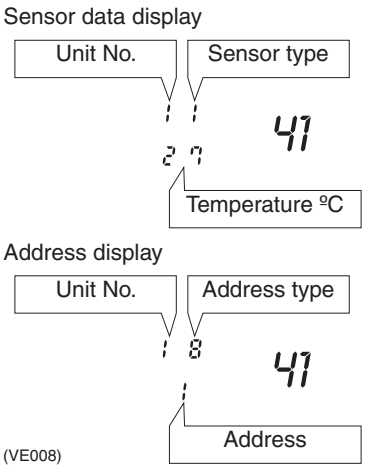
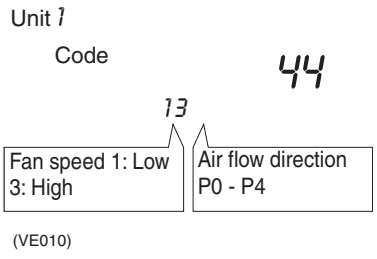
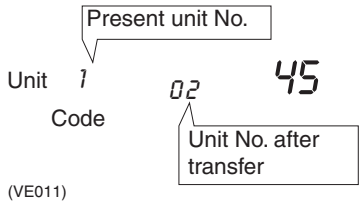
1. Select the mode No.
Set the desired mode No. with the button.
(For infrared remote control, Mode 43 only can be set.)

2. Select the unit No. (For group control only)
Select the indoor unit No. to be set with the time mode . (For infrared remote control, button.)

3. Make the settings required for each mode. (Modes 41, 44, 45)
In case of Mode 44, 45, push button to be able to change setting before setting work. (LCD “code” blinks.)
For details, refer to the table in next page.

4. Define the setting contents. (Modes 44, 45)
Define by pushing the timer button.
After defining, LCD “code” changes blinking to ON.

5. Return to the normal operation mode.
Push the button one time.

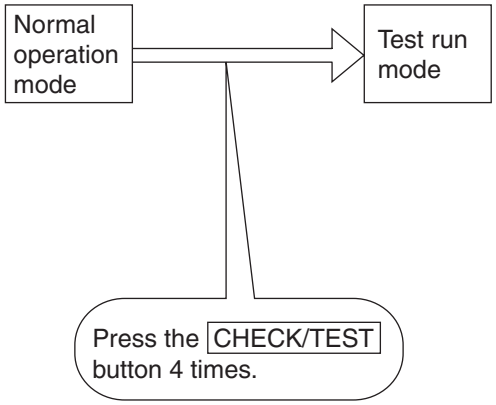
Mode No	Function	Contents and operation method	Remote control display example
40	Malfunction hysteresis display	Display malfunction hysteresis. The history No. can be changed with the button.	
41	Display of sensor and address data	Display various types of data. Select the data to be displayed with the button. Sensor data 0: Thermostat sensor in remote control. 1: Suction 2: Liquid pipe 3: Gas pipe Address data 4: Indoor unit address 5: Outdoor unit address 6: BS unit address 7: Zone control address 8: Cool/heat group address 9: Demand / low noise address	
43	Forced fan ON	Manually turn the fan ON by each unit. (When you want to search for the unit No.) By selecting the unit No. with the button, you can turn the fan of each indoor unit on (forced ON) individually.	
44	Individual setting	Set the fan speed and air flow direction by each unit Select the unit No. with the time mode button. Set the fan speed with the button. Set the air flow direction with the button.	
45	Unit No. transfer	Transfer unit No. Select the unit No. with the button. Set the unit No. after transfer with the button.	
46 47	This function is not used by VRV III R-410A Heat Recovery 50Hz.		

2.6 Test Run Mode

Operating the INSPECTION/TEST button on the remote control will make it possible to put the system into test run mode.

(1) Test run mode setting

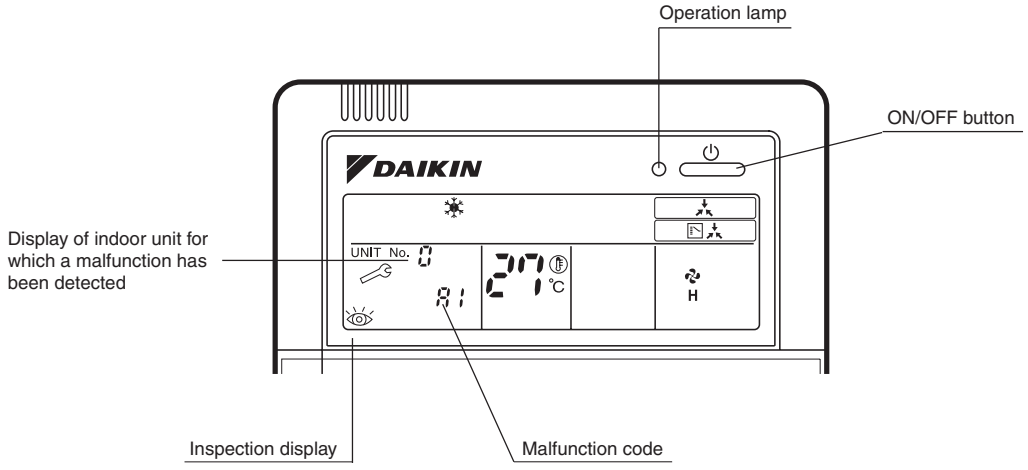
The test run mode setting can be made by conducting the following operation.



Press the RUN/STOP button after the completion of test run mode setting, and a test run starts.
(The remote control will display "TEST RUN" on it.)

2.7 Remote Control Self-Diagnosis Function

The remote control switches are equipped with a self diagnosis function so that more appropriate maintenance can be carried out. If a malfunction occurs during operation, the operation lamp, malfunction code and display of malfunctioning unit No. let you know the contents and location of the malfunction.
When there is a stop due to malfunction, the contents of the malfunction given below can be diagnosed by a combination of operation lamp, INSPECTION display of the liquid crystal display and display of malfunction code. It also lets you know the unit No. during group control.



(VL050)

○: ON ●: OFF ◑: Blink

	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referred
Indoor Unit	A0	◑	◑	◑	Error of external protection device	250
	A1	◑	◑	◑	PC board defect, *E2* PROM defect	251
	A3	◑	◑	◑	Malfunction of drain level control system (S1L)	252
	A6	◑	◑	◑	Fan motor (M1F) lock, overload	254 256 257
	A7	○	●	◑	Malfunction of swing flap motor (M1S)	258
	A9	◑	◑	◑	Malfunction of moving part of electronic expansion valve / Dust clogging	260 262
	AF	○	●	◑	Drain level about limit	264
	AH	○	●	◑	Malfunction of air filter maintenance	—
	AJ	◑	◑	◑	Malfunction of capacity setting	265
	C4	◑	◑	◑	Malfunction of thermistor (R2T) for heat exchange (loose connection, disconnection, short circuit, failure)	266
	C5	◑	◑	◑	Malfunction of thermistor (R3T) for gas pipes (loose connection, disconnection, short circuit, failure)	267
	C9	◑	◑	◑	Malfunction of thermistor (R1T) for air inlet (loose connection, disconnection, short circuit, failure)	268
	CJ	○	○	○	Malfunction of thermostat sensor in remote control	269
Outdoor Unit	E1	◑	◑	◑	PC board defect	270
	E3	◑	◑	◑	Actuation of high pressure switch	271
	E4	◑	◑	◑	Actuation of low pressure sensor	273
	E5	◑	◑	◑	Compressor motor lock	275
	E6	◑	◑	◑	Standard compressor lock or over current	277
	E7	◑	◑	◑	Malfunction of outdoor unit fan motor	278
	E9	◑	◑	◑	Malfunction of moving part of electronic expansion valve (Y1E, Y2E, Y3E)	281
	F3	◑	◑	◑	Abnormal discharge pipe temperature	283
	F6	◑	◑	◑	Refrigerant overcharged	285
	F9	◑	◑	◑	Malfunction of BS unit electronic expansion valve	286
	H7	◑	◑	◑	Abnormal outdoor fan motor signal	288
	H9	◑	◑	◑	Malfunction of thermistor (R1T) for outdoor air (loose connection, disconnection, short circuit, failure)	290
	J2	◑	◑	◑	Current sensor malfunction	291
	J3	◑	◑	◑	Malfunction of discharge pipe thermistor (R31, 32T, 33T) (loose connection, disconnection, short circuit, failure)	292
	J4	◑	◑	◑	Malfunction of temperature sensor for heat exchanger gas (R2T)	293
	J5	◑	◑	◑	Malfunction of thermistor (R8T) for suction pipe (loose connection, disconnection, short circuit, failure)	294
	J6	◑	◑	◑	Malfunction of thermistor (R4T) for heat exchanger (loose connection, disconnection, short circuit, failure)	295
	J7	◑	◑	◑	Malfunction of receiver outlet liquid pipe thermistor (R6T), (9T)	296
	J8	◑	◑	◑	Malfunction of liquid pipe thermistor 2 (R7T)	297
	J9	◑	◑	◑	Malfunction of subcooling heat exchanger gas pipe thermistor (R5T)	298
	JA	◑	◑	◑	Malfunction of high pressure sensor	299
	JC	◑	◑	◑	Malfunction of low pressure sensor	301
	L1	◑	◑	◑	Malfunction of inverter PC board	303
	L4	◑	◑	◑	Malfunction of inverter radiating fin temperature rise	305
	L5	◑	◑	◑	DC output overcurrent of inverter compressor	308
	L8	◑	◑	◑	Inverter current abnormal	310
	L9	◑	◑	◑	Inverter start up error	312

○: ON ●: OFF ◑: Blink

	Malfunction code	Operation lamp	Inspection display	Unit No.	Malfunction contents	Page Referred
Outdoor Unit	LA	◑	◑	◑	Malfunction of power unit	—
	LC	◑	◑	◑	Malfunction of transmission between inverter and control PC board	315
	P1	◑	◑	◑	Inverter over-ripple protection	318
	P4	◑	◑	◑	Malfunction of inverter radiating fin temperature rise sensor	320
	PJ	◑	◑	◑	Faulty field setting after replacing main PC board or faulty combination of PC board	322
System	U0	○	●	◑	Gas shortage alert	324
	U1	◑	◑	◑	Reverse phase / open phase	326
	U2	◑	◑	◑	Power supply insufficient or instantaneous failure	327
	U3	◑	◑	◑	Check operation is not completed.	330
	U4	◑	◑	◑	Malfunction of transmission between indoor and outdoor units	331
	U5	◑	◑	◑	Malfunction of transmission between remote control and indoor unit	334
	U5	●	○	●	Failure of remote control PC board or setting during control by remote control	334
	U7	◑	◑	◑	Malfunction of transmission between outdoor units	335
	U8	◑	◑	●	Malfunction of transmission between main and sub remote controls (malfunction of sub remote control)	341
	U9	◑	◑	◑	Malfunction of transmission between indoor unit and outdoor unit in the same system	342
	UA	◑	◑	◑	Improper combination of indoor and outdoor units, indoor units and remote control	343
	UC	○	○	○	Address duplication of central remote control	349
	UE	◑	◑	◑	Malfunction of transmission between central remote control and indoor unit	350
	UF	◑	◑	◑	Refrigerant system not set, incompatible wiring / piping	353
	UH	◑	◑	◑	Malfunction of system, refrigerant system address undefined	354
Central Remote Control and Schedule Timer	M1	○ or ●	◑	◑	Central remote control PC board defect Schedule timer PC board defect	356
	M8	○ or ●	◑	◑	Malfunction of transmission between optional controllers for centralized control	357
	MA	○ or ●	◑	◑	Improper combination of optional controllers for centralized control	358
	MC	○ or ●	◑	◑	Address duplication, improper setting	360
Heat Reclaim Ventilation	64	○	●	◑	Indoor unit's air thermistor error	—
	65	○	●	◑	Outside air thermistor error	—
	6A	○	●	◑	Damper system alarm	—
	6A	◑	◑	◑	Damper system + thermistor error	—
	6F	○	●	◑	Malfunction of simple remote control	—
	6H	○	●	◑	Malfunction of door switch or connector	—
	94	◑	◑	◑	Internal transmission error	—

The system operates for malfunction codes indicated in black squares, however, be sure to check and repair.

Malfunction code indication by outdoor unit PC board

<Monitor mode>

To enter the monitor mode, push the MODE (BS1) button when in "Setting mode 1".

* Refer to Page 195 for Monitor mode.

<Selection of setting item>

Push the SET (BS2) button and set the LED display to a setting item.

* Refer to Page 195 for Monitor mode.

<Confirmation of malfunction 1>

Push the RETURN (BS3) button once to display "First digit" of malfunction code.

<Confirmation of malfunction 2>

Push the SET (BS2) button once to display "Second digit" of malfunction code.

Detail description on next page.

<Confirmation of malfunction 3>

Push the SET (BS2) button once to display "malfunction location".

<Confirmation of malfunction 4>

Push the SET (BS2) button once to display "master or slave 1 or slave 2" and "malfunction location".

Push the RETURN (BS3) button and switches to the initial status of "Monitor mode".

* Push the MODE (BS1) button and returns to "Setting mode 1".

Malfunctions		Malfunction code
Description of malfunction	Description of malfunction (PGF)	Remote control
PC board malfunction	PC board malfunction	E1
	Faulty PC board	
Abnormal discharge pressure	HPS activated	E3
Abnormal suction pressure	Pe malfunction	E4
Compressor lock	INV compressor lock detected	E5
OC activation	STD1 compressor lock detected	E6
	STD2 compressor lock detected	
Overload, overcurrent and abnormal lock of outdoor unit fan motor	Instantaneous overcurrent of 1DC fan motor	E7
	1DC fan motor lock detected	
	Fan 1 IPM faulty protection detected	
	Instantaneous overcurrent of 2DC fan motor	
	2DC fan motor lock detected	
	Fan 2 IPM faulty protection detected	
Electronic expansion valve malfunction	EVM (main)	E9
	EVJ (refrigerant charging)	
	EVT (subcool heat exchanger)	
Positioning signal malfunction of outdoor unit fan motor	1DC fan motor positioning signal malfunction	H7
	2DC fan motor positioning signal malfunction	
Abnormal outdoor temperature	Ta sensor malfunction (short-circuited or open)	H9
Abnormal discharge pipe temperature	Td malfunction	F3
Abnormal heat exchanger temperature	Refrigerant overcharged	F6
BS unit electronic expansion valve malfunction	BS EVH disconnected (Y4E)	F9
	BS EVL disconnected (Y5E)	
	BS EVHS disconnected (Y2E)	
	BS EVLS disconnected (Y3E)	
	BS EVSC disconnected (Y1E)	
Current sensor malfunction	CT1 sensor malfunction (STD compressor 1)	J2
	CT2 sensor malfunction (STD compressor 2)	
	CT sensor malfunction (system)	
Discharge pipe temperature sensor malfunction	Tdi sensor malfunction (R31T)	J3
	Tds1 sensor malfunction (short-circuited) (R32T)	
	Tds2 sensor malfunction (short-circuited) (R33T)	
Heat exchanger gas temperature sensor malfunction	Tg sensor malfunction (R2T, R11T)	J4
Suction pipe temperature sensor malfunction	TsA sensor malfunction (short-circuited) (R8T, R10T)	J5
Heat exchanger temperature sensor malfunction	Tb sensor malfunction (R4T, R12T)	J6
Liquid pipe temperature sensor malfunction	Tsc sensor malfunction (R6T, R14T)	J7
	TL sensor malfunction (R9T)	
Heat exchanger liquid pipe temperature sensor malfunction	Tf sensor malfunction (R7T, R15T)	J8
Subcool heat exchanger temperature sensor malfunction	Tsh sensor malfunction (R5T, R13T)	J9
Discharge pressure sensor malfunction	Pc sensor malfunction (S1NPH)	JA
Suction pressure sensor malfunction	Pe sensor malfunction (S1NPL)	JC
INV PC board malfunction	Faulty IPM Current sensor failure confirmation 1 Current sensor failure confirmation 2 IGBT malfunction	L1
Rise in INV radiation fin temperature	Overheat of INV radiation fin temperature	L4
DC output overcurrent	Instantaneous overcurrent of INV	L5
	IGBT malfunction	
Electronic thermal	Electronic thermal 1	L8
	Electronic thermal 2	
	Loss of synchronization	
	Speed degradation after startup	
	Thunder detected	
Stall prevention (time limit)	Stall prevention (increased current)	L9
	Stall prevention (startup failure)	
	Abnormal starting waveform	
	Loss of synchronization	
INV transmission malfunction	INV transmission data malfunction	LC
	INV transmission malfunction	

○ : ON
◑ : Blink
● : OFF

○: ON ●: OFF ◑:Blink

Malfunction code	Confirmation of malfunction 1 (Check 1)							Confirmation of malfunction 2 (Check 2)							Confirmation of malfunction 3 (Check 3)								Confirmation of malfunction 4 (Check 4)					
	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P
E1	◑			●	●	◑	◑	◑			●	●	●	◑	◑			●	●	●	●	◑			●	●	◑	◑
								◑			●	●	●	◑	◑			●	●	●	●	◑			●	◑	◑	◑
E3								◑			●	●	◑	◑	◑			●	●	●	●	◑			●	●		
E4								◑			●	◑	●	●	◑			●	●	●	●	◑			●	●		
E5								◑			●	◑	●	◑	◑			●	●	●	●	◑			●	●		
E6								◑			●	◑	◑	●	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
E7								◑			●	◑	◑	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
															◑			●	●	●	●	◑			◑	●	∗1	
															◑			●	●	●	◑	◑			●	●		
															◑			●	●	●	◑	◑			●	◑		
															◑			●	●	●	◑	◑			◑	●		
E9								◑			◑	●	●	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
															◑			●	●	●	●	◑			◑	●		
H7	◑			●	◑	●	●	◑			●	◑	◑	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	◑	◑			●	●	∗1	
H9								◑			◑	●	●	◑	◑			●	●	●	●	◑			●	●		
F3	◑			●	◑	●	◑	◑			●	●	◑	◑	◑			●	●	●	●	◑			●	●	∗1	
F6								◑			●	◑	◑	●	◑			●	●	●	●	◑			●	●	◑	◑
F9								◑			◑	●	●	◑	◑			●	●	●	◑	◑			●	●	◑	◑
															◑			●	●	◑	●	◑			●	●	◑	◑
															◑			●	●	◑	◑	◑			●	●	◑	◑
															◑			●	◑	●	●	◑			●	●	◑	◑
															◑			●	◑	●	◑	◑			●	●	◑	◑
J2	◑			●	◑	◑	●	◑			●	●	◑	●	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
															◑			●	●	●	●	◑			●	◑		
J3								◑			●	●	◑	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
															◑			●	●	●	●	◑			◑	●		
J4								◑			●	◑	●	●	◑			●	●	●	●	◑			●	●		
J5								◑			●	◑	●	◑	◑			●	●	●	●	◑			●	●	∗1	
J6								◑			●	◑	◑	●	◑			●	●	●	●	◑			●	●		
J7								◑			●	◑	◑	◑	◑			●	●	●	●	◑			●	◑		
															◑			●	●	●	●	◑			●	●		
J8								◑			◑	●	●	●	◑			●	●	●	●	◑			●	●		
J9								◑			◑	●	●	◑	◑			●	●	●	●	◑			●	●		
JA								◑			◑	●	◑	●	◑			●	●	●	●	◑			●	●		
JC								◑			◑	◑	●	●	◑			●	●	●	●	◑			●	●		
L1	◑			●	◑	◑	◑	◑			●	●	●	◑	◑			●	●	●	●	◑			●	●		
																						◑			●	◑		
																						◑			◑	●		
																						◑			◑	◑		
L4								◑			●	◑	●	●	◑			●	●	●	●	◑			●	●		
L5								◑			●	◑	●	◑	◑			●	●	●	●	◑			●	●	∗1	
															◑			●	●	●	●	◑			●	◑		
L8								◑			◑	●	●	●	◑			●	●	●	●	◑			●	●		
L9								◑			◑	●	●	◑	◑			●	●	●	●	◑			●	●		
LC								◑			◑	◑	●	●	◑			●	●	●	●	◑			●	●		

Display of contents of malfunction (first digit)

Display of contents of malfunction (second digit)

Display 1 of malfunction in detail

Display 2 of malfunction in detail

*1: Faulty system

			Individual system	Multi system
●	●	→	Right-hand system	Master
●	◑	→	Left-hand system	Slave 1
◑	●	→	—	Slave 2
◑	◑	→	All systems	System

<Monitor mode>

To enter the monitor mode, push the MODE (BS1) button when in "Setting mode 1".

* Refer to Page 195 for Monitor mode.

<Selection of setting item>

Push the SET (BS2) button and set the LED display to a setting item.

* Refer to Page 195 for Monitor mode.

<Confirmation of malfunction 1>

Push the RETURN (BS3) button once to display "First digit" of malfunction code.

<Confirmation of malfunction 2>

Push the SET (BS2) button once to display "Second digit" of malfunction code.

Detail description on next page.

<Confirmation of malfunction 3>

Push the SET (BS2) button once to display "malfunction location".

<Confirmation of malfunction 4>

Push the SET (BS2) button once to display "master or slave 1 or slave 2" and "malfunction location".

Push the RETURN (BS3) button and switches to the initial status of "Monitor mode".

* Push the MODE (BS1) button and returns to "Setting mode 1".

Malfunctions		Malfunction code
Description of malfunction	Description of malfunction (PGF)	Remote control
Open phase and unbalanced power supply	Unbalanced INV power supply voltage	P1
INV radiation fin temperature sensor malfunction	INV fin thermistor malfunction	P4
Faulty combination of INV and fan driver	Faulty combination of INV	PJ
Out of gas	Out-of-gas alarm	U0
Reversed phase	Reversed phase malfunction	U1
	Reversed phase malfunction (ON)	
Abnormal power supply voltage	Insufficient INV voltage	U2
	INV open phase (single phase)	
	Abnormal charge of capacitor of INV main circuit	
Test run not carried out yet	Test run not carried out yet	U3
Faulty transmission between indoor and outdoor units	IN-OUT transmission malfunction	U4
	System malfunction	
Faulty transmission between outdoor units	Malfunction caused when mounting the external control adapter	U7
	Alarm given when mounting the external control adapter	
	Malfunction caused between the master and the slave 1	
	Malfunction caused between the master and the slave 2	
	Multi REYQ models connected	
	Faulty address setting of slaves 1 and 2	
	4 or more outdoor units connected in the same system	
	Erroneous address of slaves 1 and 2	
Faulty transmission with other systems	Other system or other unit in the same system	U9
Faulty field setting	Excess indoor units connected	UA
	Erroneous refrigerant used for indoor unit	
	Faulty combination of outdoor units	
	Faulty independent installation	
	Faulty connection of former BS unit	
	Faulty connection between outdoor and BS unit	
	Faulty connection between BS units	
	Wrong number of indoor units connected to BS unit	
Faulty system line	Wrong wiring (auto address error)	UH
Faulty transmission with accessory equipment	Multi level converter malfunction	UJ
	Multi level converter alarm	
	Multi level converter data malfunction	
	Multi level converter transmission malfunction	
Unmatched wiring/piping, no system settings	Unmatched wiring/piping	UF

○ : ON
◑ : Blink
● : OFF

○ : ON ● : OFF ◑ :Blink

Malfunction code	Confirmation of malfunction 1 (Check 1)							Confirmation of malfunction 2 (Check 2)							Confirmation of malfunction 3 (Check 3)							Confirmation of malfunction 4 (Check 4)						
	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P	H1P	H2P	H3P	H4P	H5P	H6P	H7P
P1	◑	◑	●	◑	●	●	●	◑			●	●	●	◑	◑			●	●	●	●	◑			●	●		
P4								◑			●	◑	●	●	◑			●	●	●	●	◑			●	●	＊1	
PJ								◑			◑	◑	●	◑	◑			●	●	●	●	◑			●	●		
U0	◑	◑	●	◑	●	●	◑	◑			●	●	●	●	◑			●	●	●	●	◑			●	●	◑	◑
U1								◑			●	●	●	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑	＊1	
U2								◑			●	●	◑	●	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑		
U3								◑			●	●	◑	◑	◑			●	●	●	●	◑			●	●	◑	◑
U4								◑			●	◑	●	●	◑			●	●	●	●	◑			●	●	◑	◑
															◑			●	●	●	●	◑			●	◑	◑	◑
U7								◑			●	◑	◑	◑	◑			●	●	●	●	◑			●	●	◑	◑
															◑			●	●	●	●	◑			●	◑	◑	◑
															◑			●	●	●	●	◑			◑	●	◑	◑
															◑			●	●	●	●	◑			◑	◑	◑	◑
															◑			●	●	●	◑	◑			●	●	◑	◑
															◑			●	●	●	◑	◑			●	◑	◑	◑
															◑			●	●	●	◑	◑			◑	●	◑	◑
															◑			●	●	●	◑	◑			◑	◑	◑	◑
U9								◑			◑	●	●	◑	◑			●	●	●	●	◑			●	●	◑	◑
UA								◑			◑	●	◑	●	◑			●	●	●	●	◑			◑	●	◑	◑
															◑			●	●	●	◑	◑			●	●	◑	◑
															◑			●	●	●	◑	◑			●	◑	◑	◑
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															◑			●	●	◑	◑	◑			◑	●	◑	◑
															◑			●	●	◑	◑	◑			◑	◑	◑	◑
UH								◑			◑	●	◑	◑	◑			●	●	●	●	◑			●	●	◑	◑
UJ								◑			◑	◑	●	◑	◑			●	●	●	●	◑			●	●		
															◑			●	●	●	●	◑			●	◑	＊1	
															◑			●	●	●	●	◑			◑	●		
															◑			●	●	●	◑	◑			●	●		
UF		◑	●					◑			◑	◑	◑	◑	◑			●	●	●	●	◑			●	●	◑	◑

Display of contents of malfunction (first digit)

Display of contents of malfunction (second digit)

Display 1 of malfunction in detail

Display 2 of malfunction in detail

*1: Faulty system

			Individual system	Multi system
●	●	→	Right-hand system	Master
●	◑	→	Left-hand system	Slave 1
◑	●	→	—	Slave 2
◑	◑	→	All systems	System

3. Troubleshooting by Indication on the Remote Control

3.1 "A0" Indoor Unit: Error of External Protection Device

Remote Control Display

A0

Applicable Models

All indoor unit models

Method of Malfunction Detection

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

Malfunction Decision Conditions

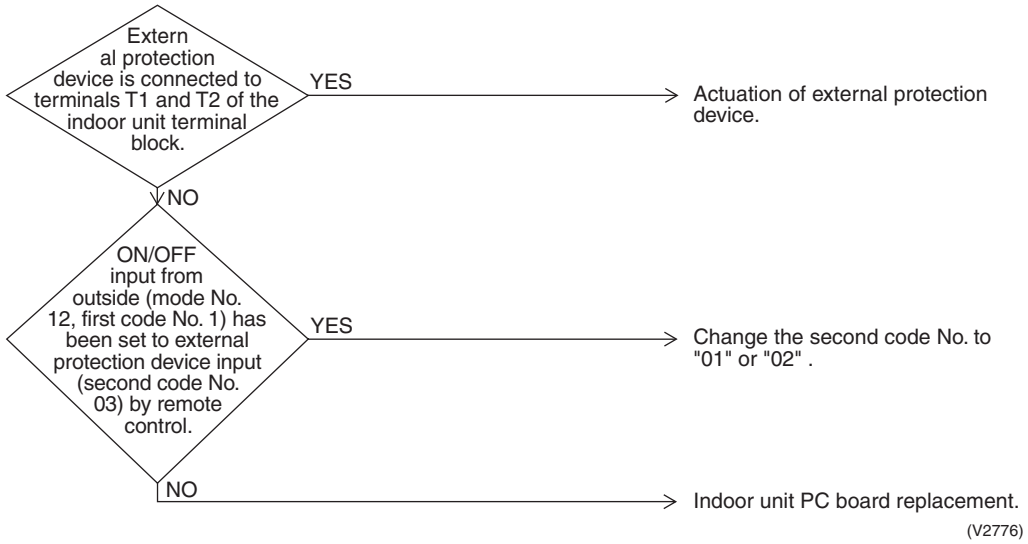
When an open circuit occurs between external input terminals with the remote control set to "external ON/OFF terminal".

Supposed Causes

- Actuation of external protection device
- Improper field set
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.2 "A1" Indoor Unit: PC Board Defect

Remote Control Display

A1

Applicable Models

All indoor unit models

Method of Malfunction Detection

Check data from E²PROM.

Malfunction Decision Conditions

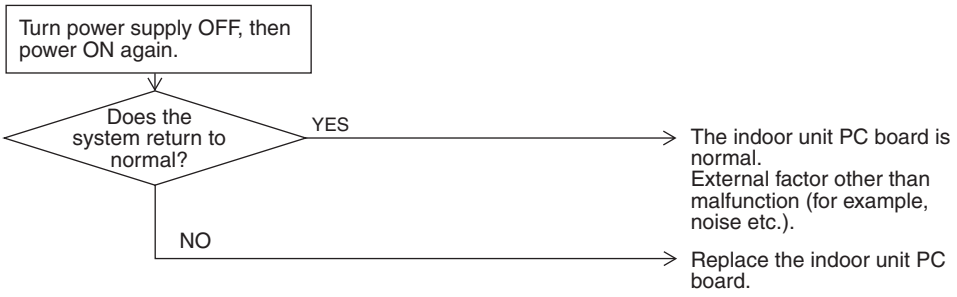
When data could not be correctly received from the E²PROM
E²PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

Supposed Causes

- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



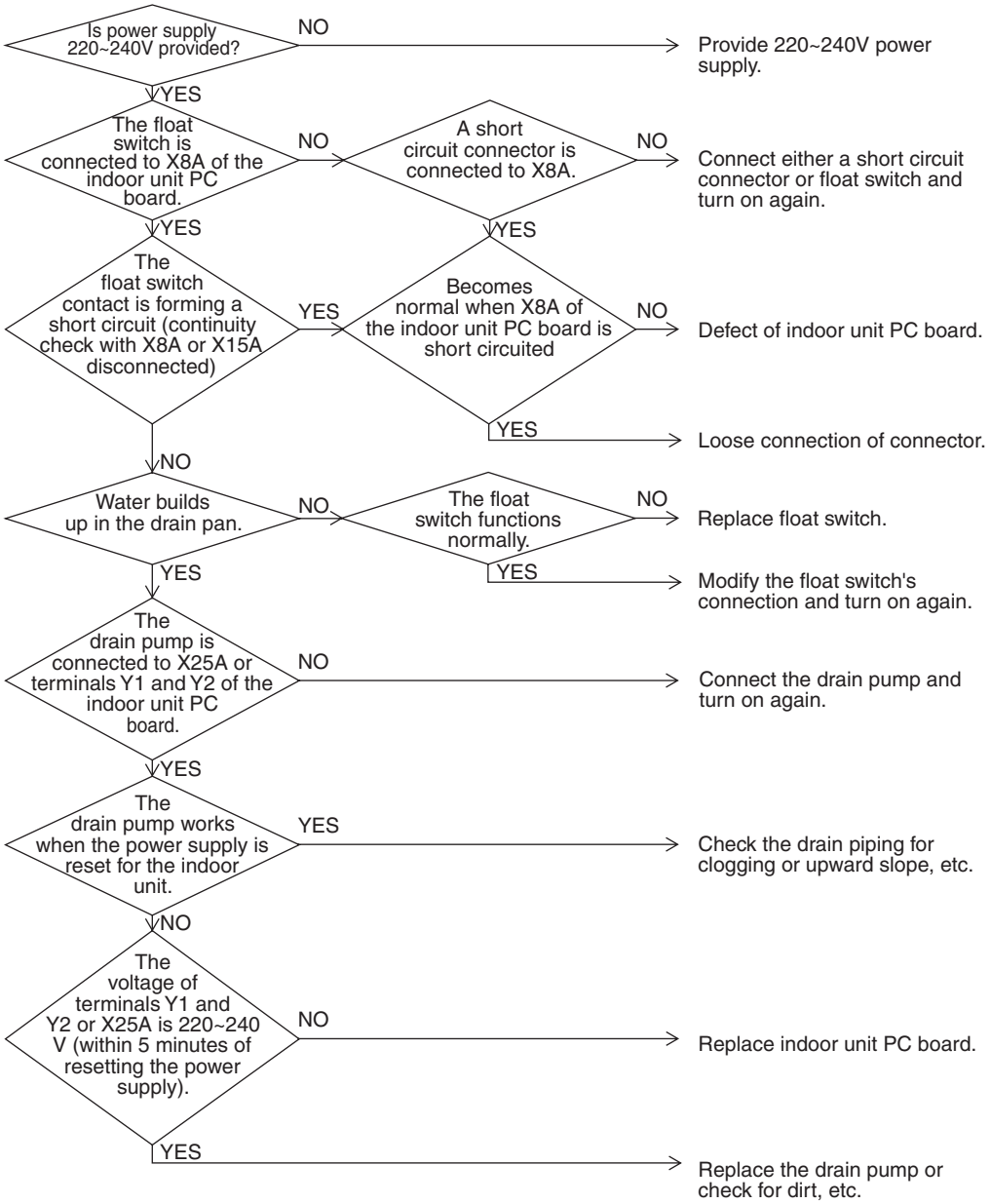
(V2777)

3.3 "A3" Indoor Unit: Malfunction of Drain Level Control System (S1L)

Remote Control Display	A3
Applicable Models	FXCQ, FXFQ, FXSQ, FXKQ, FXDQ, FXMQ, FXHQ (Option), FXMQ200,250M (Option), FXAQ (Option), FXMQ-MF (Option)
Method of Malfunction Detection	By float switch OFF detection
Malfunction Decision Conditions	When rise of water level is not a condition and the float switch goes OFF.
Supposed Causes	■ 220~240V power supply is not provided ■ Defect of float switch or short circuit connector ■ Defect of drain pump ■ Drain clogging, upward slope, etc. ■ Defect of indoor unit PC board ■ Loose connection of connector

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



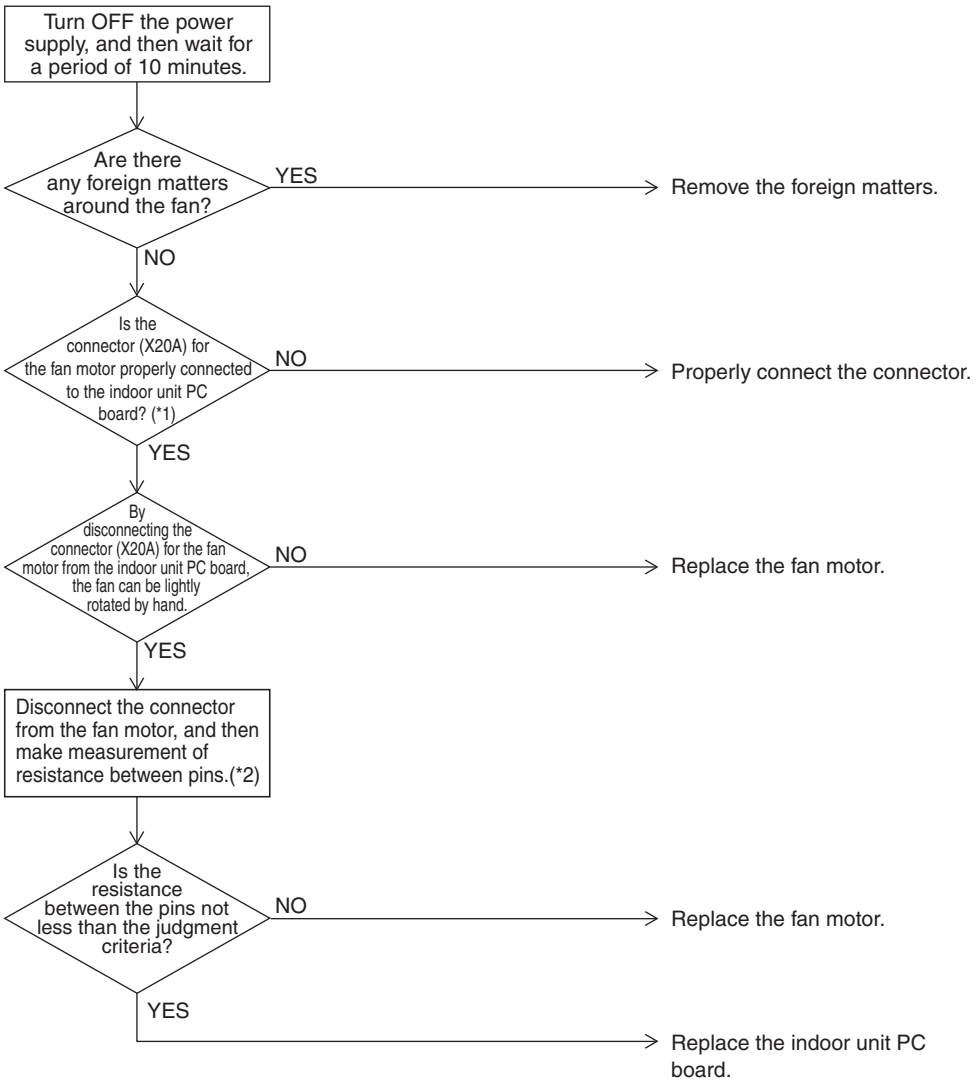
(V2778)

3.4 "A6" Indoor Unit: Fan Motor (M1F) Lock, Overload

Remote Control Display	A6
Applicable Models	FXAQ20~63MAVE, FXFQ25~125MVE
Method of Malfunction Detection	Abnormal fan revolutions are detected by a signal output from the fan motor.
Malfunction Decision Conditions	When the fan revolutions do not increase
Supposed Causes	■ Broken wires in, short circuit of, or disconnection of connectors from the fan motor harness ■ Faulty fan motor (Broken wires or faulty insulation) ■ Abnormal signal output from the fan motor (Faulty circuit) ■ Faulty PC board ■ Instantaneous disturbance in the power supply voltage ■ Fan motor lock (Due to motor or external causes) ■ The fan does not rotate due to foreign matters blocking the fan. ■ Disconnection of the connector between the high-power PC board (A1P) and the low-power PC board (A2P).

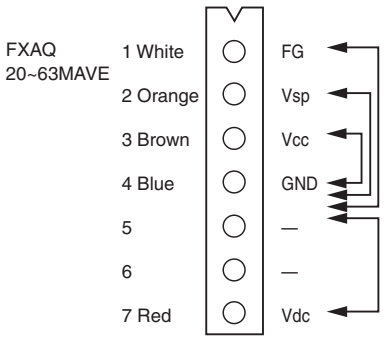
Troubleshooting

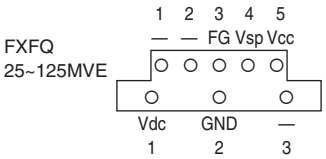
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1. If any junction connector is provided between the connector (X20A) on the indoor unit PC board and the fan motor, also check whether or not the junction connector is properly connected.

*2. All resistance measuring points and judgment criteria





Judgment Criteria

Measuring 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

"A6" Indoor Unit: Malfunction of Indoor Unit Fan Motor

Remote Control Display

A6

Applicable Models

FXHQ32~100MAVE, FXDQ20~63NVET, FXDQ20~63NAVE

Method of Malfunction Detection

This malfunction is detected if there is no revolutions detection signal output from the fan motor.

Malfunction Decision Conditions

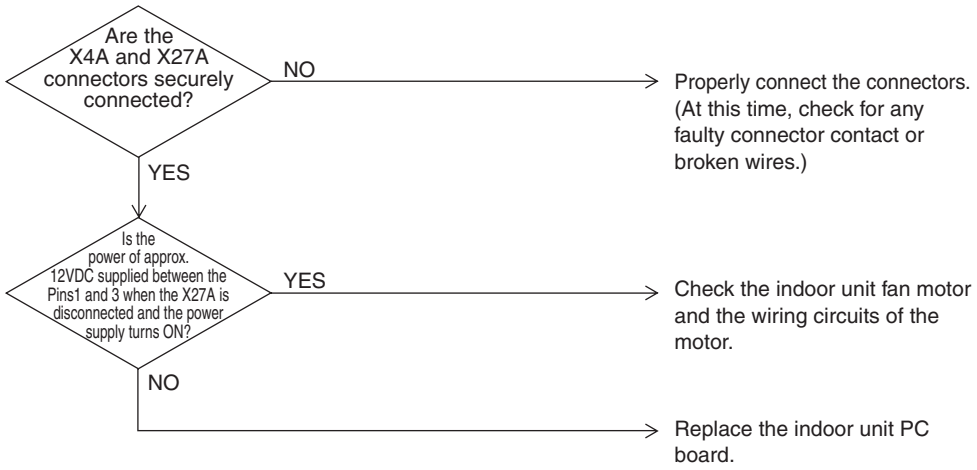
When no revolutions can be detected even at the maximum output voltage to the fan

Supposed Causes

- Faulty indoor fan motor
- Broken wires
- Faulty contact

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



"A6" Indoor Unit: Overload / Overcurrent / Lock of Indoor Unit Fan Motor

Remote Control Display

A6

Applicable Models

FXMQ40~125MAVE

Method of Malfunction Detection

This malfunction is detected by detecting that the individual power supply for the fan turns OFF.

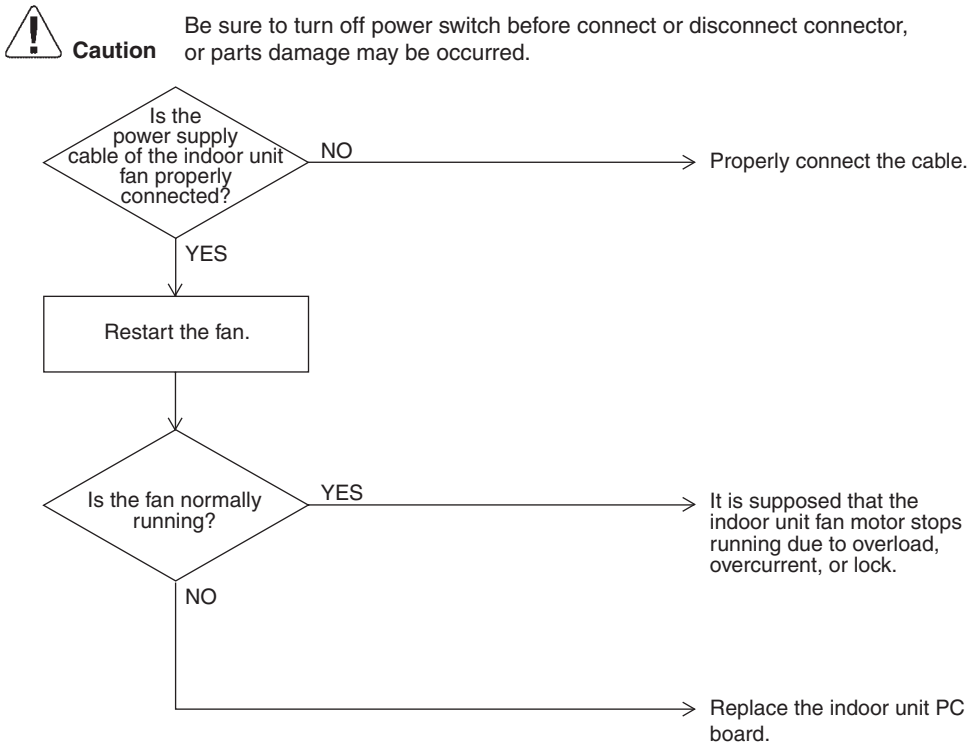
Malfunction Decision Conditions

When it is not detected that the individual power supply for the indoor unit fan turns ON while in operation.

Supposed Causes

- Faulty power supply for the indoor unit fan motor
- Clogged drain piping
- Actuation of the indoor unit safety device
- Faulty contact in the fan wiring circuit

Troubleshooting

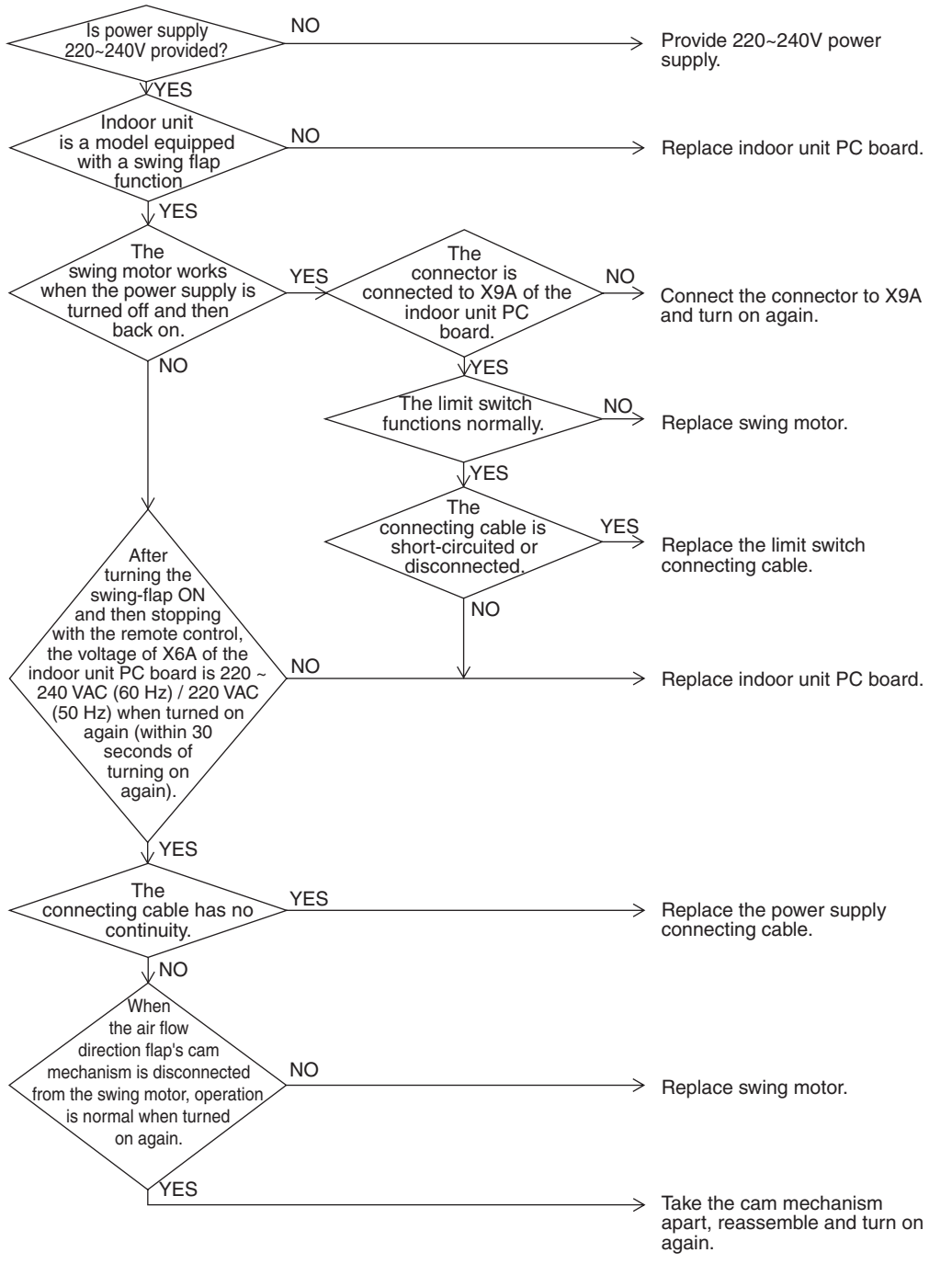


3.5 "A7" Indoor Unit: Malfunction of Swing Flap Motor (M1S)

Remote Control Display	A7
Applicable Models	FXCQ, FXHQ, FXKQ
Method of Malfunction Detection	Utilizes ON/OFF of the limit switch when the motor turns.
Malfunction Decision Conditions	When ON/OFF of the microswitch for positioning cannot be reversed even though the swing flap motor is energized for a specified amount of time (about 30 seconds). ★ Error code is displayed but the system operates continuously.
Supposed Causes	■ Defect of swing motor ■ Defect of connection cable (power supply and limit switch) ■ Defect of air flow direction adjusting flap-cam ■ Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



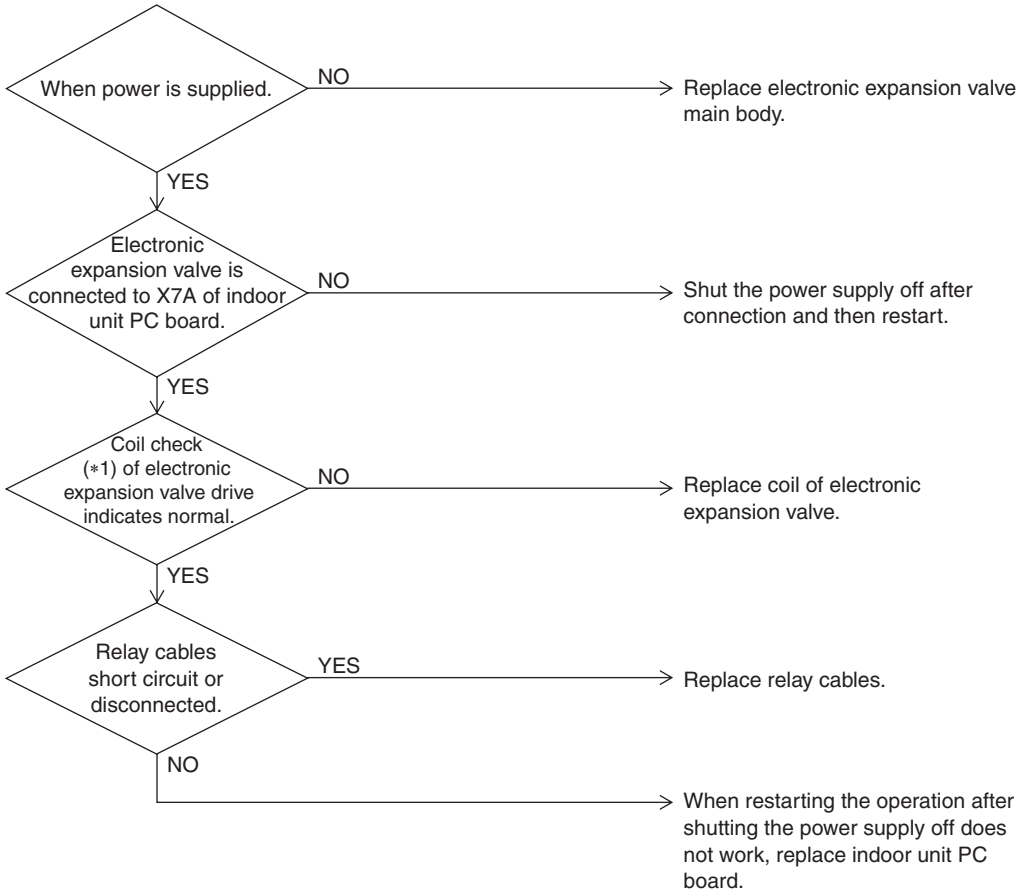
(V2780)

3.6 "A9" Indoor Unit: Electronic Expansion Valve Malfunction / Dust Clogging

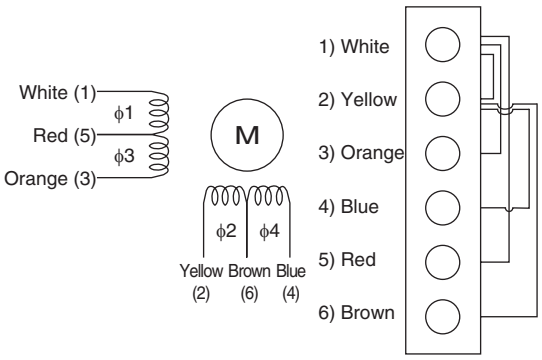
Remote Control Display	A9
Applicable Models	FXFQ25~125M
Method of Malfunction Detection	Check coil condition of electronic expansion valve by using microcomputer. Check dust clogging condition of electronic expansion valve main body by using microcomputer.
Malfunction Decision Conditions	Pin input for electronic expansion valve coil is abnormal when initializing microcomputer. Either of the following conditions is seen/caused/ occurs while the unit stops operation. ● Temperature of suction air (R1T) – temperature of liquid pipe of heat exchanger (R2T)>8°C. ● Temperature of liquid pipe of heat exchanger (R2T) shows fixed degrees or below.
Supposed Causes	■ Defective drive of electronic expansion valve ■ Defective PC board of indoor unit ■ Defective relay cables

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗1: How to check the coil of electronic expansion valve drive
Remove the connector for electronic expansion valve (X7A) from PC board. Measure the resistance value between pins and check the continuity to judge the condition.



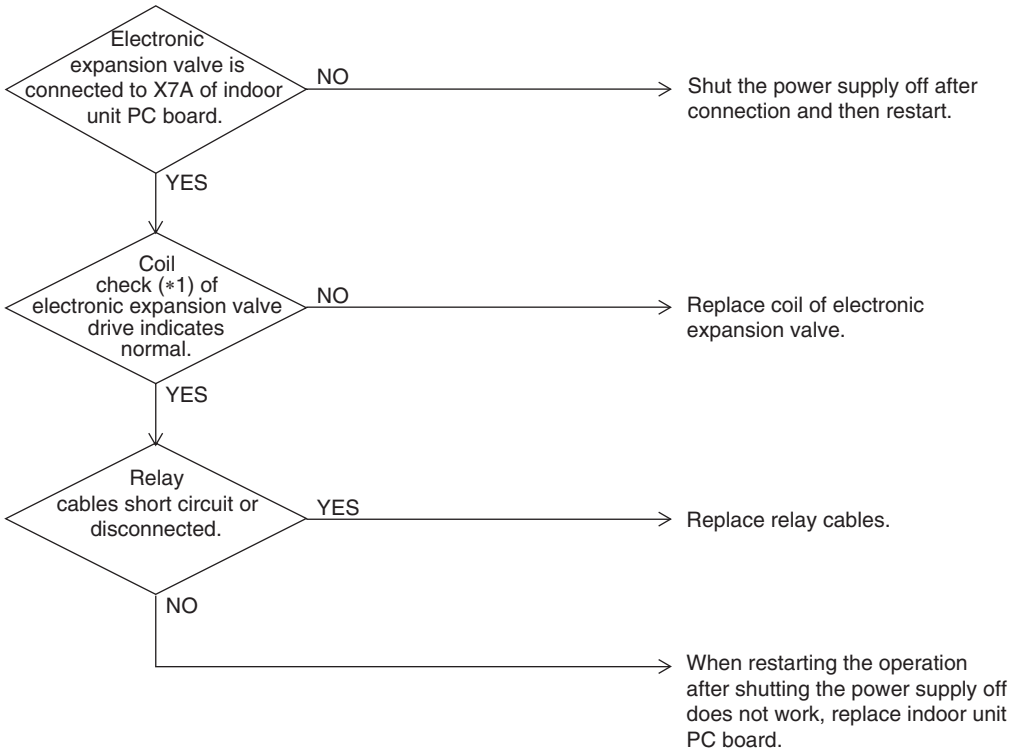
The normal products will show the following conditions:
① No continuity between (1) and (2)
② Resistance value between (1) and (3) is approx. 300 Ω
③ Resistance value between (1) and (5) is approx. 150 Ω
④ Resistance value between (2) and (4) is approx. 300 Ω
⑤ Resistance value between (2) and (6) is approx. 150 Ω

"A9" Indoor Unit: Malfunction of Electronic Expansion Valve Coil

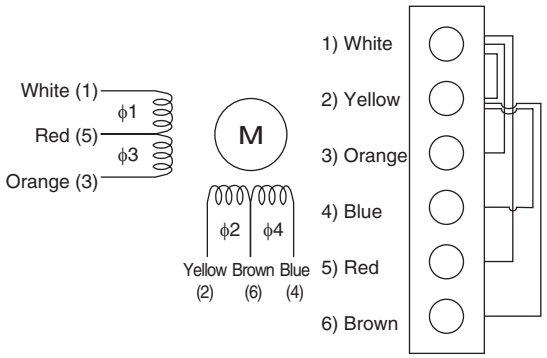
Remote Control Display	A9
Applicable Models	Indoor units except FXFQ models
Method of Malfunction Detection	Check coil condition of electronic expansion valve by using microcomputer.
Malfunction Decision Conditions	Pin input for electronic expansion valve coil is abnormal when initializing microcomputer.
Supposed Causes	■ Defective drive of electronic expansion valve ■ Defective PC board of indoor unit ■ Defective relay cables

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗1: How to check the coil of electronic expansion valve drive
Remove the connector for electronic expansion valve (X7A) from PC board. Measure the resistance value between pins and check the continuity to judge the condition.



The normal products will show the following conditions:
① No continuity between (1) and (2)
② Resistance value between (1) and (3) is approx. 300 Ω
③ Resistance value between (1) and (5) is approx. 150 Ω
④ Resistance value between (2) and (4) is approx. 300 Ω
⑤ Resistance value between (2) and (6) is approx. 150 Ω

3.7 "AF" Indoor Unit: Drain Level above Limit

Remote Control Display

AF

Applicable Models

FXCQ, FXFQ, FXSQ, FXKQ, FXMQ, FXDQ, FXMQ-MF

Method of Malfunction Detection

Water leakage is detected based on float switch ON/OFF operation while the compressor is in non-operation.

Malfunction Decision Conditions

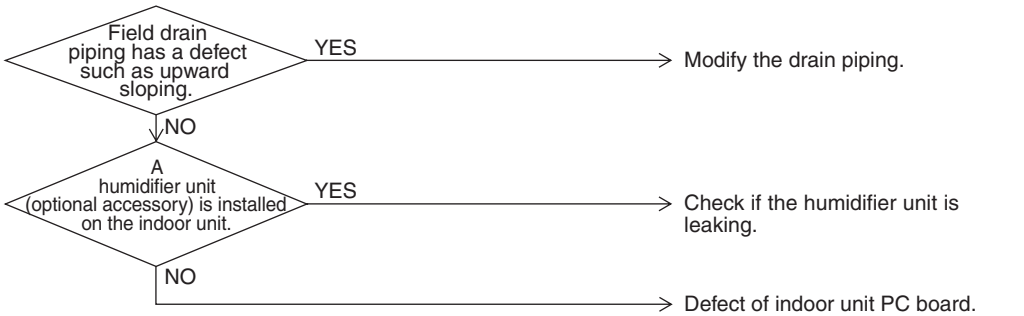
When the float switch changes from ON to OFF while the compressor is in non-operation.
★ Error code is displayed but the system operates continuously.

Supposed Causes

- Humidifier unit (optional accessory) leaking
- Defect of drain pipe (upward slope, etc.)
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2782)

3.8 "AJ" Indoor Unit: Malfunction of Capacity Determination Device

Remote Control display

AJ

Applicable Models

All indoor unit models

Method of Malfunction Detection

Capacity is determined according to resistance of the capacity setting adapter and the memory inside the IC memory on the indoor unit PC board, and whether the value is normal or abnormal is determined.

Malfunction Decision Conditions

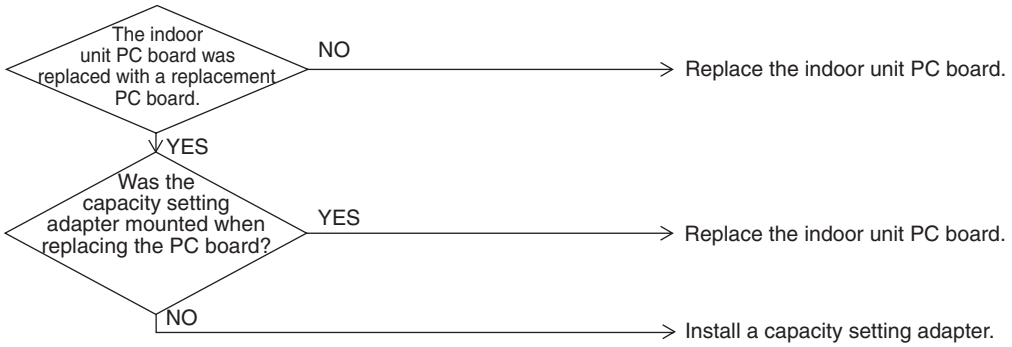
When the capacity code is not contained in the PC board's memory, and the capacity setting adapter is not connected.

Supposed Causes

- The capacity setting adapter was not installed.
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2783)

3.9 "C4" Indoor Unit: Malfunction of Thermistor (R2T) for Heat Exchanger

Remote Control Display

C4

Applicable Models

All indoor unit models

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by heat exchanger thermistor.

Malfunction Decision Conditions

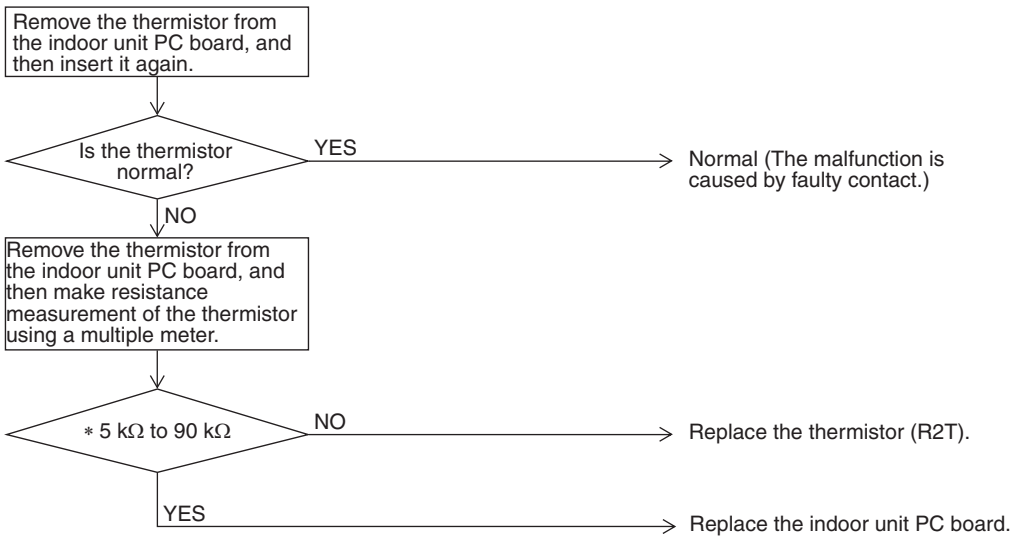
When the heat exchanger thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of thermistor (R2T) for liquid pipe
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.10 "C5" Indoor Unit: Malfunction of Thermistor (R3T) for Gas Pipes

Remote Control Display

C5

Applicable Models

All indoor unit models

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by gas pipe thermistor.

Malfunction Decision Conditions

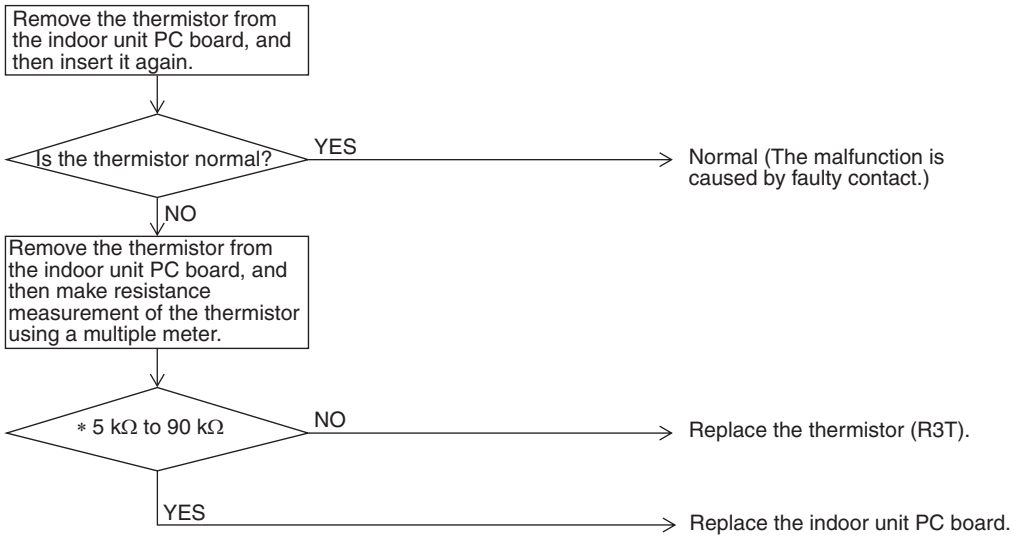
When the gas pipe thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of indoor unit thermistor (R3T) for gas pipe
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.11 "C9" Indoor Unit: Malfunction of Thermistor (R1T) for Suction Air

Remote Control Display

C9

Applicable Models

All indoor unit models

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by suction air temperature thermistor.

Malfunction Decision Conditions

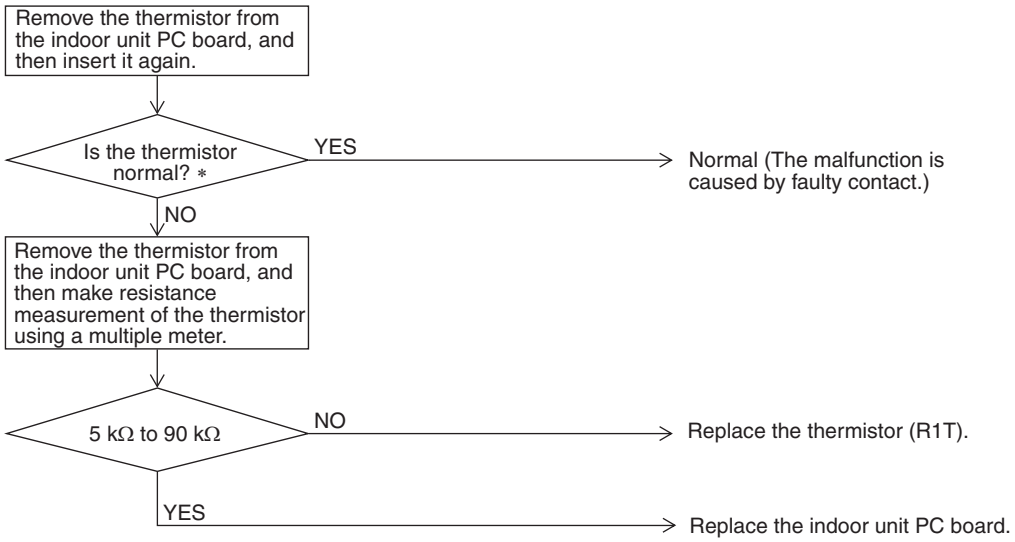
When the suction air temperature thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of indoor unit thermistor (R1T) for air inlet
- Defect of indoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



* Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.12 "CJ" Indoor Unit: Malfunction of Thermostat Sensor in Remote Control

Remote Control Display

CJ

Applicable Models

All indoor unit models

Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by remote control air temperature thermistor. (Note:)

Malfunction Decision Conditions

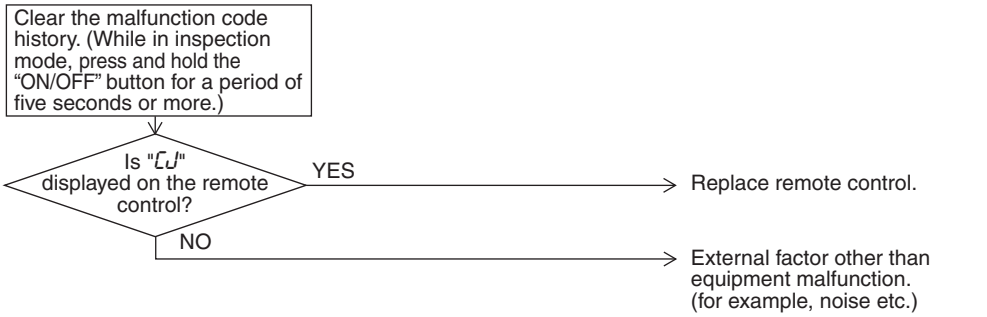
When the remote control air temperature thermistor becomes disconnected or shorted while the unit is running.

Supposed Causes

- Defect of remote control thermistor
- Defect of remote control PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2787)

Note: ∗1: How to delete "the record of malfunction codes".
Press the "Operate/ Stop" button for 4 seconds and more while the malfunction code is displayed in the inspection mode.

∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.13 "E1" Outdoor Unit: PC Board Defect

Remote Control Display

E1

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Abnormality is detected under the communication conditions in the hardware section between the indoor unit and outdoor unit.

Malfunction Decision Conditions

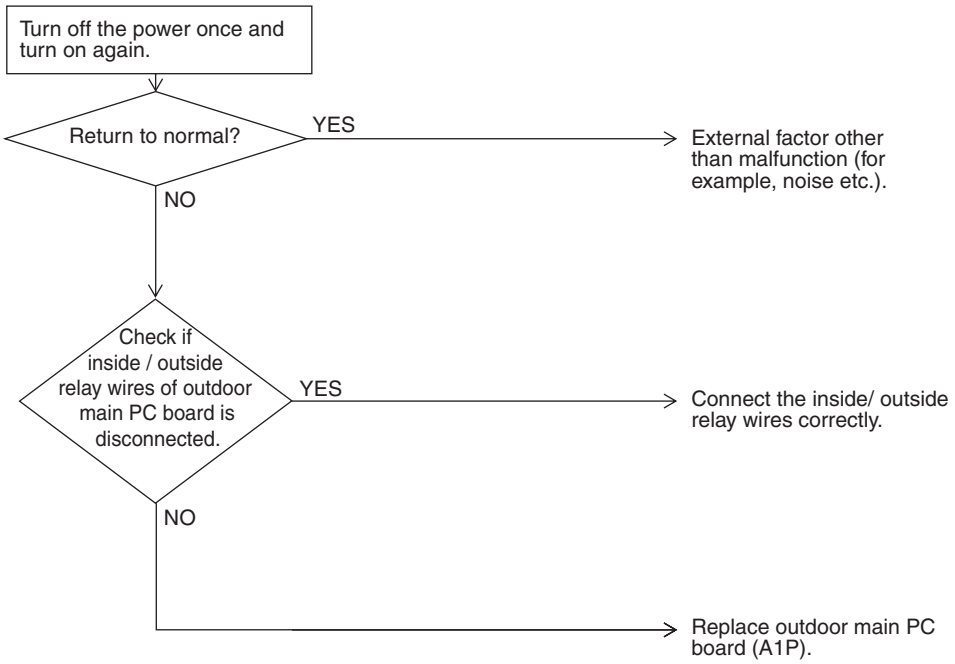
When the communication conditions in the hardware section between the indoor unit and the outdoor unit are not normal.

Supposed Causes

- Defect of outdoor unit PC board (A1P)
- Defective connection of inside/ outside relay wires

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.14 "E3" Outdoor Unit: Actuation of High Pressure Switch

Remote Control Display	E3
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Abnormality is detected when the contact of the high pressure protection switch opens.
Malfunction Decision Conditions	Error is generated when the HPS activation count reaches the number specific to the operation mode. (Reference) Operating pressure of high pressure switch Operating pressure: 4.0MPa Reset pressure: 2.85MPa
Supposed Causes	■ Actuation of outdoor unit high pressure switch ■ Defect of High pressure switch ■ Defect of outdoor unit main PC board (A1P) ■ Instantaneous power failure ■ Faulty high pressure sensor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check for the points shown below.
① Is the stop valve open?
② Is the HPS connector properly connected to the main PC board?
③ Does the high pressure switch have continuity?

Are the three points above OK?
- NO → Rectify defective points, if any.
- 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 stop due to malfunction (E3) recur?
- YES → Is the HPS operating value normal (i.e., 4.0MPa)?
  - NO → Replace the HPS.
  - YES
- NO

Are the characteristics of the high pressure sensor normal? (See ∗1.)
- NO → Replace the high pressure sensor.
- YES

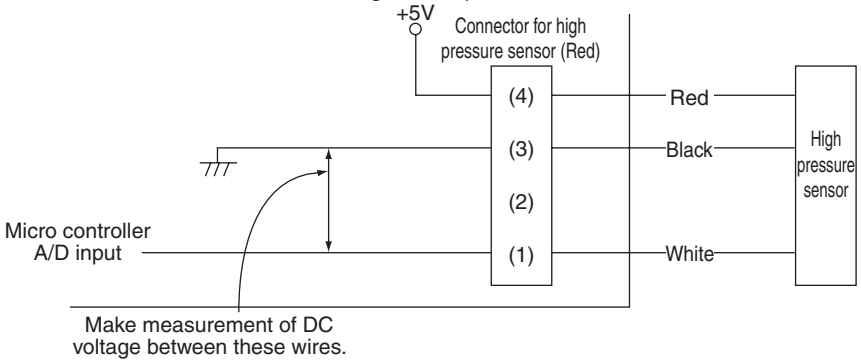
Service Checker
Connect the service checker to compare the “high pressure” value and the actual measurement value by pressure sensor (Refer to ∗1) by using the service checker.

Check if the “high pressure” value and the actual measurement value by pressure sensor are the same.
- NO → Replace main PC board (A1P).
- YES

· The high pressure sensor is normal, and the pressure detected with the PC board is also normal.
· The high pressure has really become high.

CHECK 5 Referring to information on P350, remove the causes by which the high pressure has become high.

∗1: Make a comparison between the voltage of the pressure sensor and that read by the pressure gauge.
(As to the voltage of the pressure sensor, make measurement of voltage at the connector, and then convert it to pressure according to information on P419.)
∗2: Make measurement of voltage of the pressure sensor.

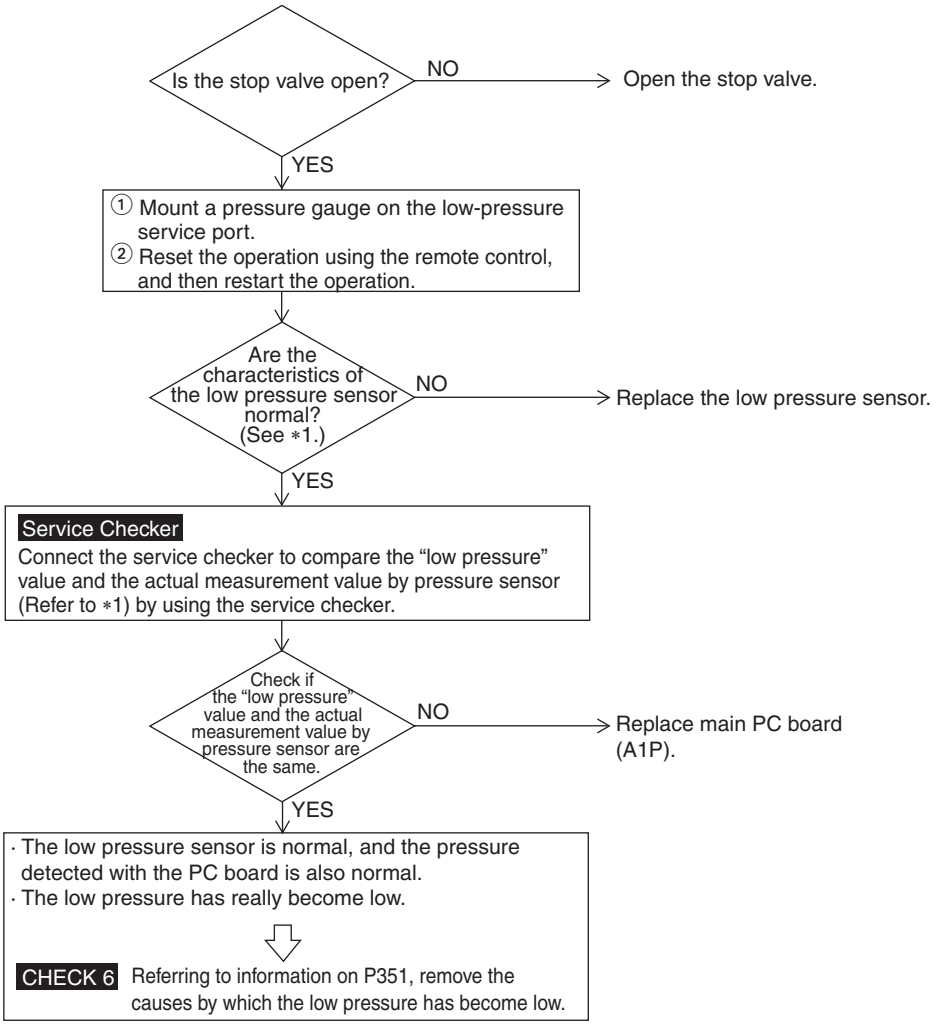


3.15 "E4" Outdoor Unit: Actuation of Low Pressure Sensor

Remote Control Display	E4
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Abnormality is detected by the pressure value with the low pressure sensor.
Malfunction Decision Conditions	Error is generated when the low pressure is dropped under compressor operation. Operating pressure:0.07MPa
Supposed Causes	■ Abnormal drop of low pressure (Lower than 0.07MPa) ■ Defect of low pressure sensor ■ Defect of outdoor unit PC board ■ Stop valve is not opened.

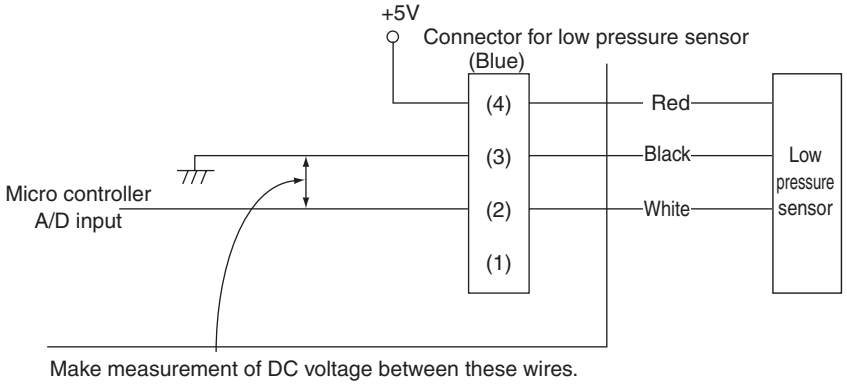
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗1: Make a comparison between the voltage of the pressure sensor and that read by the pressure gauge.
(As to the voltage of the pressure sensor, make measurement of voltage at the connector, and then convert it to pressure according to information on P419.)

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

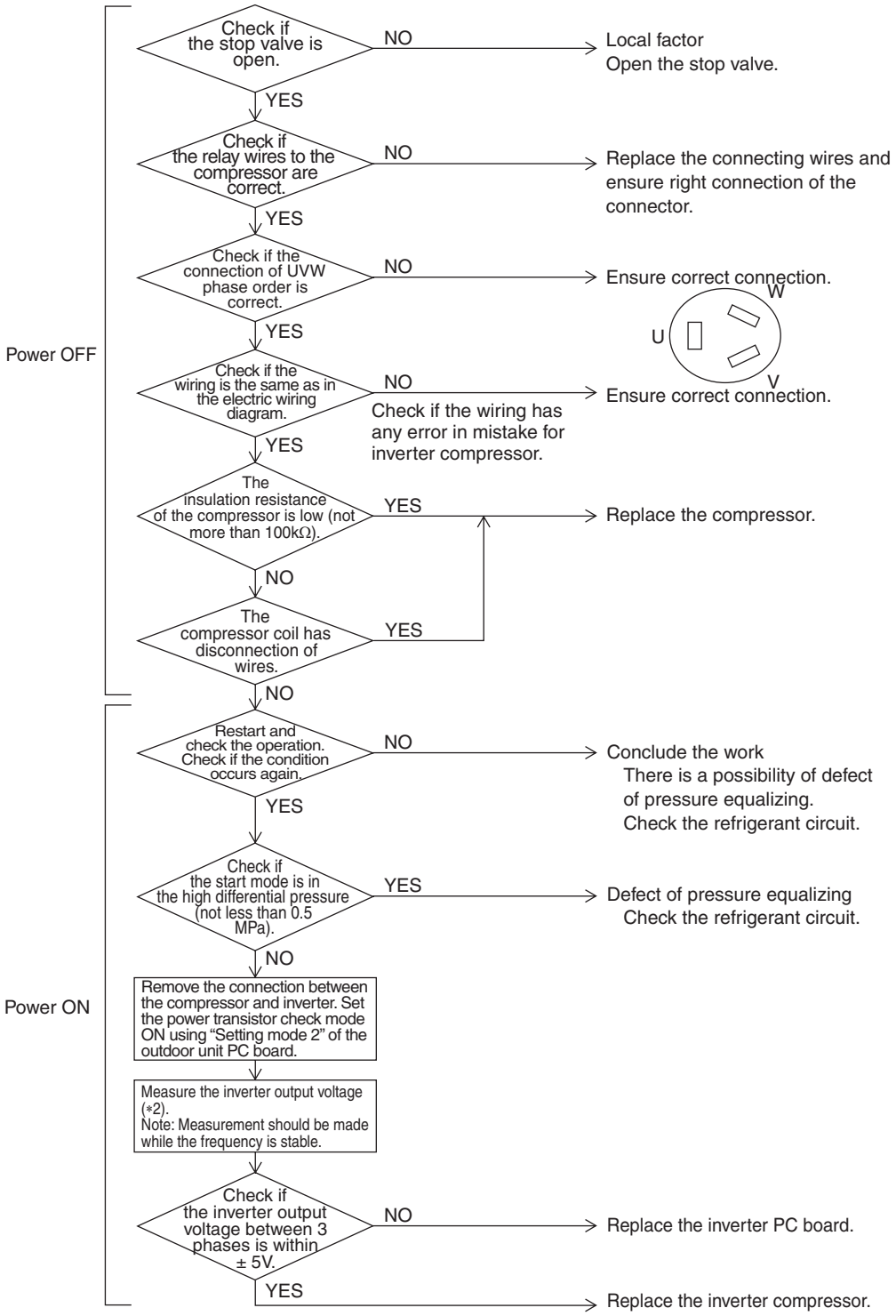


3.16 "E5" Outdoor Unit: Inverter Compressor Motor Lock

Remote Control Display	E5
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Inverter PC board takes the position signal from UVW line connected between the inverter and compressor, and the malfunction is detected when any abnormality is observed in the phase-current waveform.
Malfunction Decision Conditions	This malfunction will be output when the inverter compressor motor does not start up even in forced startup mode.
Supposed Causes	■ Inverter compressor lock ■ High differential pressure (0.5MPa or more) ■ Incorrect UVW wiring ■ Faulty inverter PC board ■ Stop valve is left in closed.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1: Pressure difference between high pressure and low pressure before starting.
*2: The quality of power transistors/ diode modules can be judged by executing Check 4 (P349).

3.17 "E6" Outdoor Unit: STD Compressor Motor Overcurrent/ Lock

Remote Control Display

E6

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Detects the overcurrent with current sensor (CT).

Malfunction Decision Conditions

Malfunction is decided when the detected current value exceeds the below mentioned value for 2 seconds.

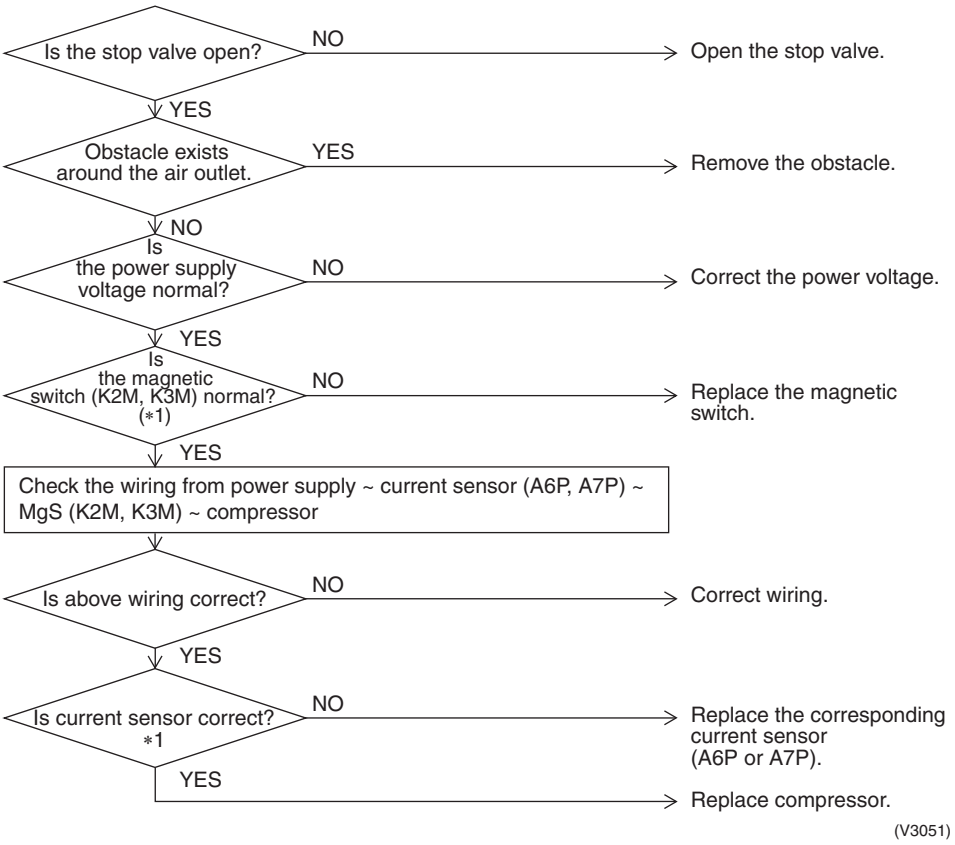
- 400 V unit : 15.0 A

Supposed Causes

- Closed stop value
- Obstacles at the air outlet
- Improper power voltage
- Faulty magnetic switch
- Faulty compressor
- Faulty current sensor (A6P, A7P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Note: ∗1 One of the possible factors may be chattering due to rough MgS contact.
∗2 Abnormal case

- The current sensor value is 0 during STD compressor operation.
- The current sensor value is more than 15.0A during STD compressor stop.

3.18 "E7" Outdoor Unit: Malfunction of Outdoor Unit Fan Motor

Remote Control Display	E7
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Detect a malfunction based on the current value in the INVERTER PC board (as for motor 2, current value in the fan PC board). Detect a malfunction for the fan motor circuit based on the number of rotation detected by hole IC during the fan motor operation.
Malfunction Decision Conditions	■ Overcurrent is detected for INVERTER PC board (A2P) or fan INVERTER PC board (A5P) (System down is caused by 4 times of detection.) ■ In the condition of fan motor rotation, the number of rotation is below the fixed number for more than 6 seconds. (System down is caused by 4 times of detection.)
Supposed Causes	■ Failure of fan motor ■ Defect or connect ion error of the connectors/ harness between the fan motor and PC board ■ The fan can not rotate due to any foreign substances entangled. ■ Clear condition: Continue normal operation for 5 minutes

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check in the monitor mode
12HP ~18HP class models have 2 fans.
Check electric motor (electric motor 1 or 2) corresponding to malfunction code "E7" in the monitor mode of outdoor unit PC board. (Refer to P226 - P227 for how to check)

↓

Cut the power supply OFF and wait for 10 minutes.

↓

Check if any foreign substances around the fan. — YES → Remove the foreign substances.

↓ NO

Check the connection status of the connectors
- Fan motor 1: relay connector or X1A, X2A of compressor inverter PC board.
- Fan motor 2: relay connector or X1A, X2A of fan inverter PC board.

↓

Check if any connector is disconnected. — YES → Insert the connector.

↓ NO

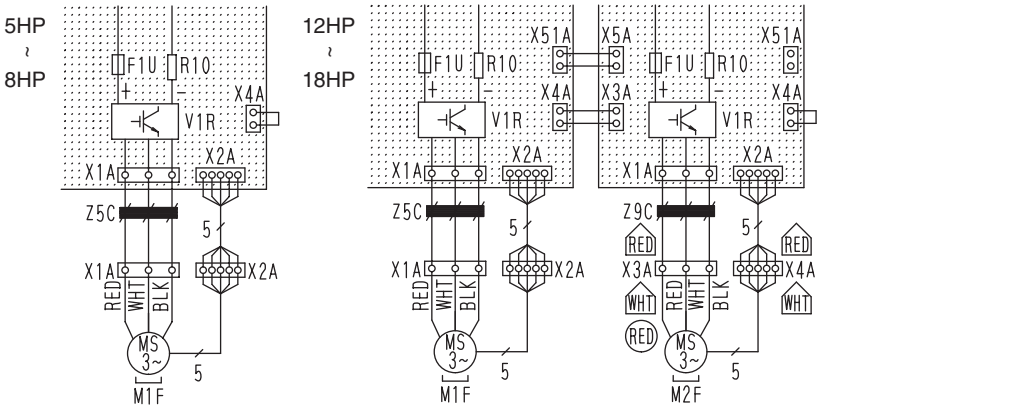
Check the color of relay connectors
- Fan motor 1: Both power supply wire and signal wire are all white.
- Fan motor 2: Both power supply wire and signal wire are red in the PC board side and white in the motor side.

↓

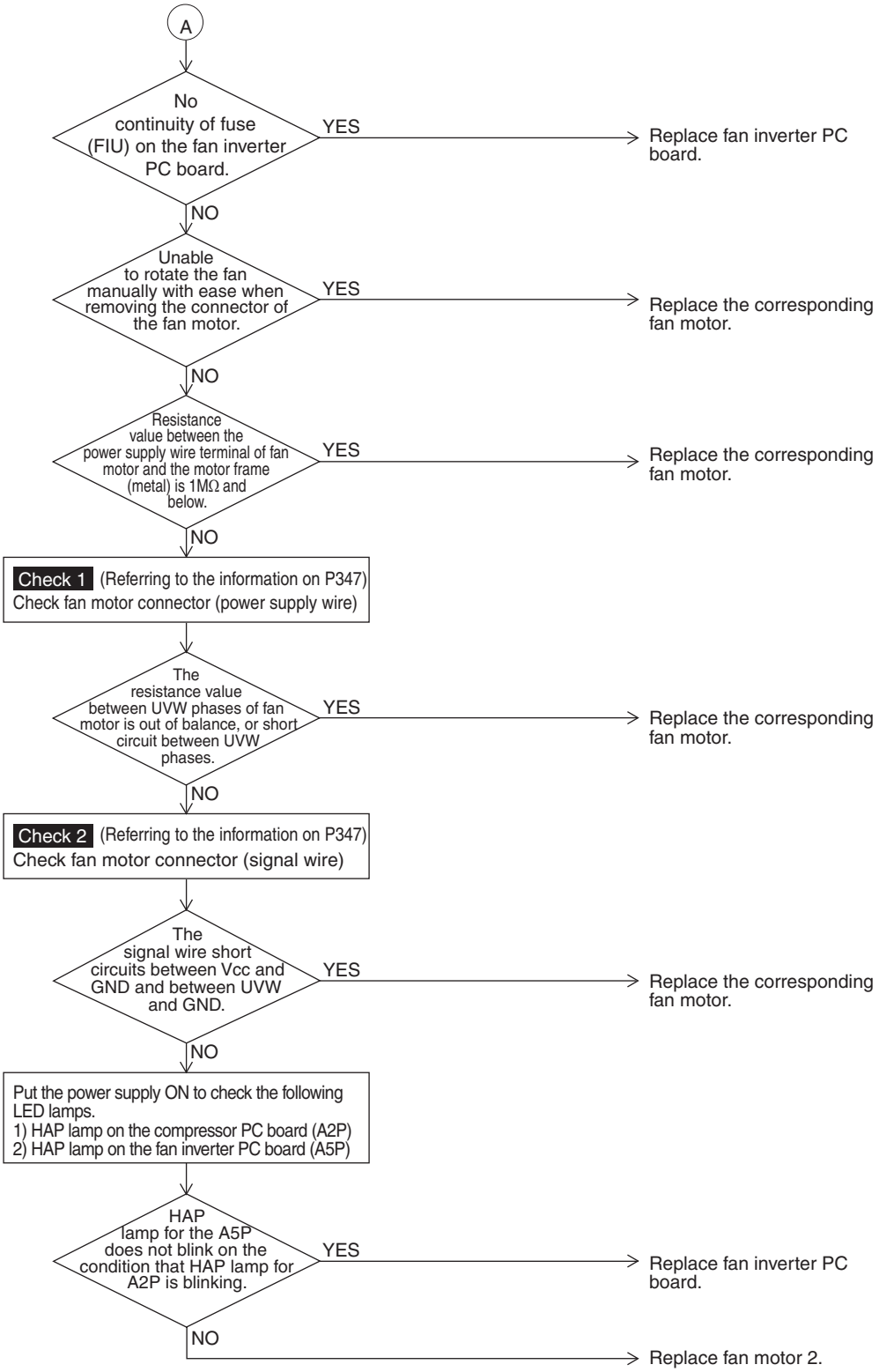
Relay connectors have any connection error. — YES → Correct the connection of the relay connectors.

↓ NO

A



Troubleshooting



3.19 "E9" Outdoor Unit: Malfunction of Moving Part of Electronic Expansion Valve (Y1E~Y5E)

Remote Control Display	E9
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Check disconnection of connector To be detected based on continuity existence of coil of electronic expansion valve
Malfunction Decision Conditions	No current is detected in the common (COM [+]) when power supply is ON.
Supposed Causes	■ Disconnection of connectors for electronic expansion valve (Y1E) ■ Defect of moving part of electronic expansion valve ■ Defect of outdoor unit main PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Turn power supply off, and turn power supply on again.

Return to normal?

YES → External factor other than malfunction (for example, noise etc.).

NO

Check the electronic expansion valve corresponding to the malfunction code "E9" in the monitor mode.
(Refer to P226~227 for how to check.)

○ When Check 4 shows as follows:
◑○○●●※※ → Electronic expansion valve for main use (Y1E, Y3E for Single, Y1E for Multi)

○ When Check 4 shows as follows:
◑○○●◑※※ → Electronic expansion valve for refrigerant charge (Y4E for Single, Y2E for Multi)

○ When Check 4 shows as follows:
◑○○◑●※※ → Electronic expansion valve for subcooling (Y2E, Y5E for Single, Y3E for Multi)

○ Explanation of "※※"

● ●	Master unit
● ◑	Slave unit 1
◑ ●	Slave unit 2
◑ ◑	System

The connector of outdoor unit PC board (A1P) for electronic expansion valve is connected.

NO → Ensure correct connection.

YES

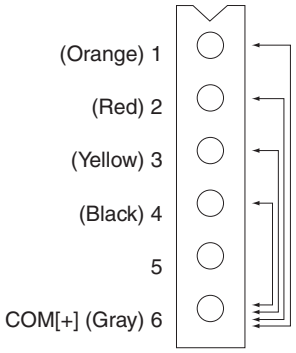
The coil resistance of electronic expansion valve isnormal. (Refer to ∗1)

NO → Replace the connecting cable.

YES → Replace outdoor unit PC board (A1P).

(V3067)

∗ Make measurement of resistance between the connector pins, and then make sure the resistance falls in the range of 40 to 50Ω.



Measuring points	Judgment criteria
1 - 6	40~50Ω
2 - 6	
3 - 6	
4 - 6	

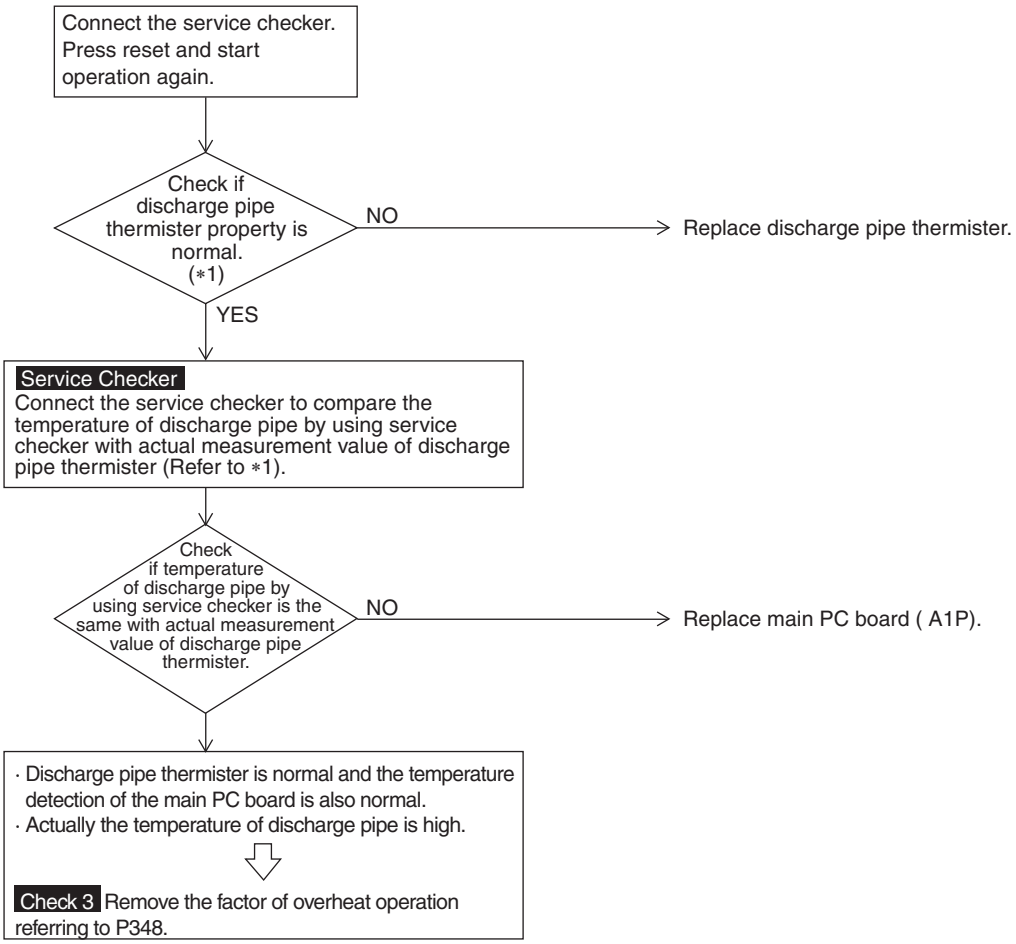
(V3067)

3.20 "F3" Outdoor Unit: Abnormal Discharge Pipe Temperature

Remote Control Display	F3
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.
Malfunction Decision Conditions	When the discharge pipe temperature rises to an abnormally high level (135 °C and above) When the discharge pipe temperature rises suddenly (120 °C and above for10 successive minutes)
Supposed Causes	■ Faulty discharge pipe temperature sensor ■ Faulty connection of discharge pipe temperature sensor ■ Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗1: Compare the resistance value of discharge pipe thermister and the value based on the surface thermometer.
(Refer to P417 for the temperature of thermister and the resistance property)

∗ Refer to “Thermistor Resistance / Temperature Characteristics” table on P417.

3.21 "F6" Outdoor Unit: Refrigerant Overcharged

Remote Control Display

F6

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Excessive charging of refrigerant is detected by using the outside air temperature, heat exchanging deicer temperature and liquid pipe temperature during a check run.

Malfunction Decision Conditions

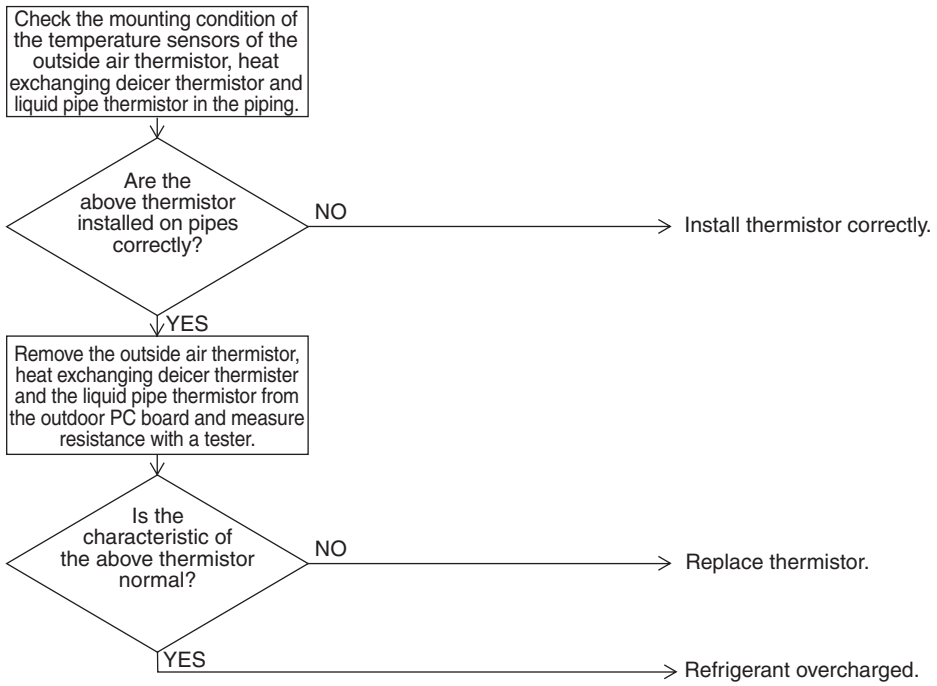
When the amount of refrigerant, which is calculated by using the outside air temperature, heat exchanging deicer temperature and liquid pipe temperature during a check run, exceeds the standard.

Supposed Causes

- Refrigerant overcharge
- Misalignment of the outside air thermistor
- Misalignment of the heat exchanging deicer thermistor
- Misalignment of the liquid pipe thermistor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2797)

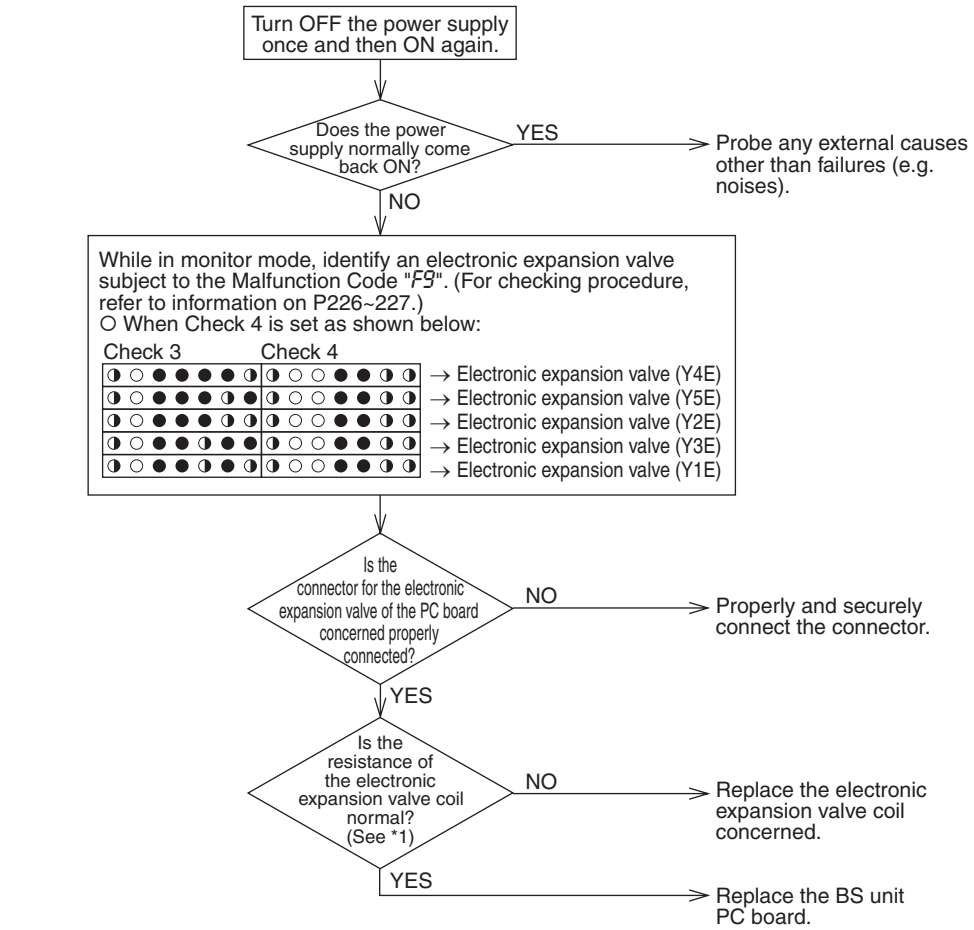
∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.22 "F9" Outdoor Unit: Malfunction of BS Unit Electronic Expansion Valve

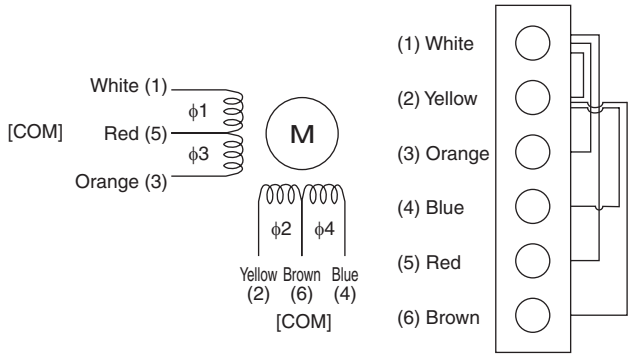
Remote Control Display	F9
Applicable Models	BS unit
Method of Malfunction Detection	This malfunction is detected by whether or not all coils of the electronic expansion valve have continuity.
Malfunction Decision Conditions	When the power supply turns ON, there is no currents pass through the common (COM[+]).
Supposed Causes	■ Connector disconnected from the electronic expansion valve ■ Faulty coil of the electronic expansion valve ■ Faulty PC board of the BS unit

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



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



The normal states are as follows:
① No continuity between Pins (1) and (2)
② Approx. 300Ω resistance between Pins (1) and (3)
③ Approx. 150Ω resistance between Pins (1) and (5)
④ Approx. 300Ω resistance between Pins (2) and (4)
⑤ Approx. 150Ω resistance between Pins (2) and (6)

3.23 "H7" Outdoor Unit: Abnormal Outdoor Fan Motor Signal

Remote Control Display	H7
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Detection of abnormal signal from fan motor.
Malfunction Decision Conditions	In case of detection of abnormal signal at starting fan motor.
Supposed Causes	■ Abnormal fan motor signal (circuit malfunction) ■ Broken, short or disconnection connector of fan motor connection cable ■ Fan Inverter PC board malfunction (A2P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check the fan motor corresponding to the malfunction code "H7" in the monitor mode.
(Refer to P226~227 for how to check)
When check 3 shows as follows:
◑○●●●●● → Fan motor 1 (M1F)
When check 3 shows as follows:
◑○●●●●◑ → Fan motor 2 (M2F)
Identify outdoor unit based on Check 4.
◑○○●●※※

Explanation for "※※"

● ●	Master unit
● ◑	Slave unit 1
◑ ●	Slave unit 2
◑ ◑	System

↓

Cut the power supply off.

↓

Check if signal wire connector for the corresponding fan motor is normal.

NO → Ensure correct connection.

YES ↓

Check the connector of the fan motor (∗1).

↓

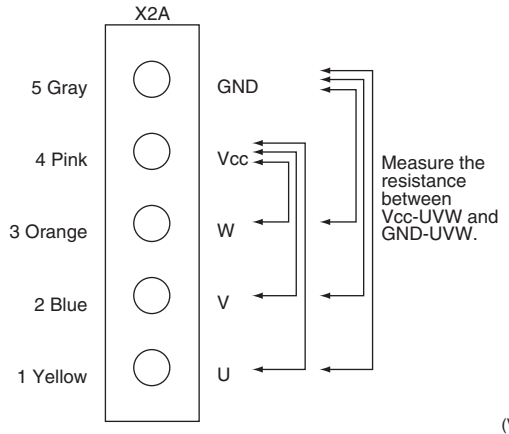
Check if the resistance of the fan motor lead wire between Vcc and UVW and between GND and UVW are balanced.

NO → Replace fan motor.

YES → Replace inverter PC board.
- For fan motor 1: replace inverter PC board (A2P)
- For fan motor 2: replace fan inverter PC board (A5P)

∗1. Check procedure for fan motor connector
(1) Power OFF the fan motor.
(2) Remove the connector (X2A or X4A) on the PC board to measure the following resistance value.
Judgment criteria: resistance value between each phase is within ±20%

Connector for signal wires (X2A or X4A)



3.24 "H9" Outdoor Unit: Malfunction of Thermistor (R1T) for Outdoor Air

Remote Control Display

H9

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the outdoor air thermistor.

Malfunction Decision Conditions

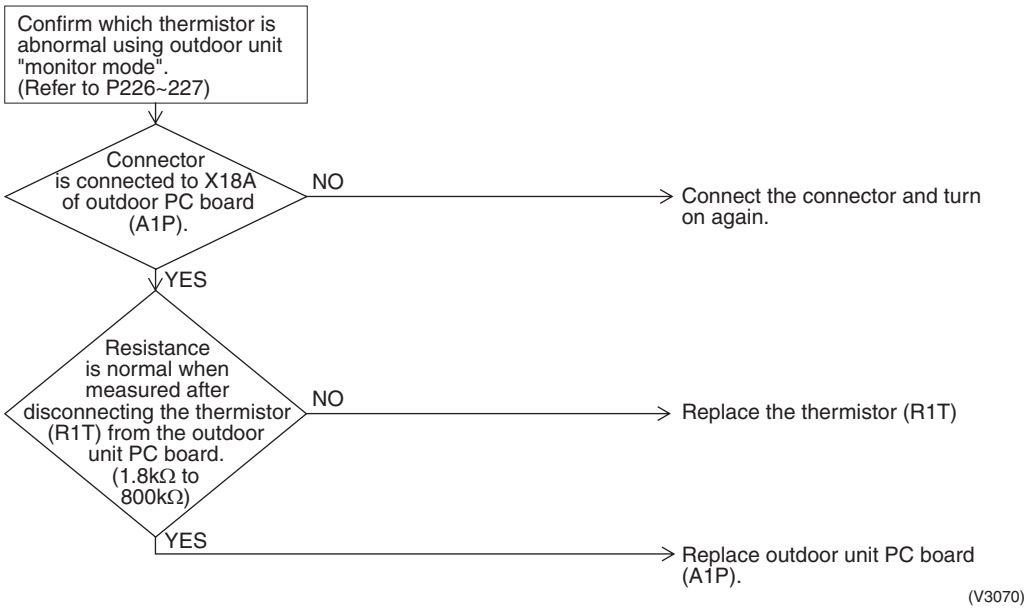
When the outside air temperature thermistor has short circuit or open circuit.

Supposed Causes

- Defective thermistor connection
- Defect of thermistor (R1T) for outdoor air
- Defect of outdoor unit PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.25 "J2" Outdoor Unit: Current Sensor Malfunction

Remote Control Display

J2

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected according to the current value detected by current sensor.

Malfunction Decision Conditions

When the current value detected by current sensor becomes 5A or lower, or 40A or more during standard compressor operation.

Supposed Causes

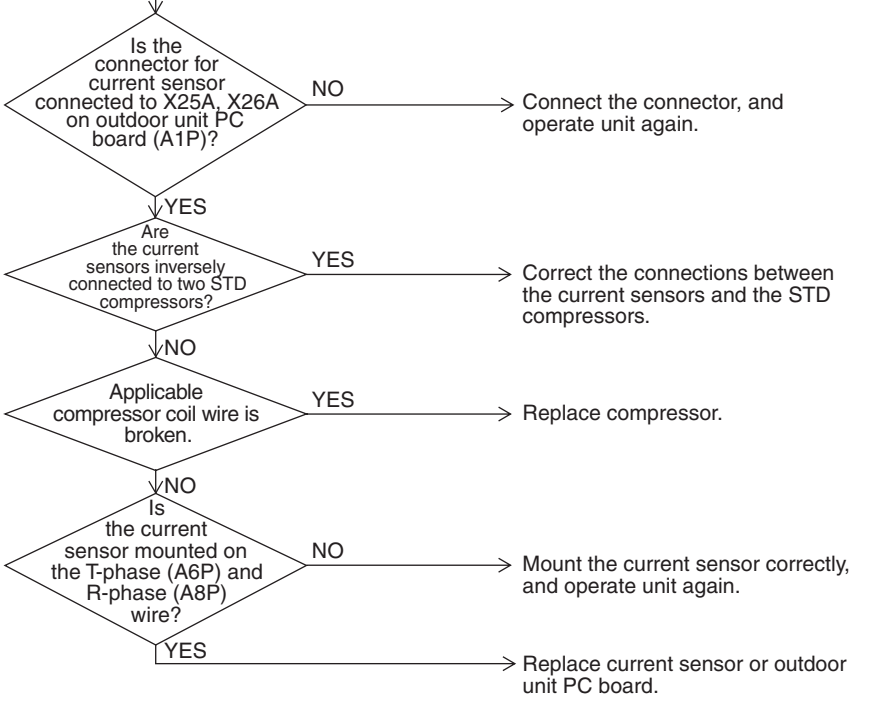
- Faulty current sensor (A6P, A8P)
- Faulty outdoor unit PC board
- Defective compressor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check the current sensor corresponding to the malfunction code "J2" in the monitor mode.
(Refer to P226~227 for how to check)
○ Check 4 shows as follows:
◑○○●●※※ → Current sensor for constant rate compressor 1
○ Check 4 shows as follows:
◑○○●◑※※ → Current sensor for constant rate compressor 2
○ Explanation for "※※"

● ●	Master unit
● ◑	Slave unit 1
◑ ●	Slave unit 2
◑ ◑	System



(V3071)

3.26 "J3" Outdoor Unit: Malfunction of Discharge Pipe Thermistor (R31, 32T, 33T)

Remote Control Display

J3

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected from the temperature detected by discharge pipe temperature thermistor.

Malfunction Decision Conditions

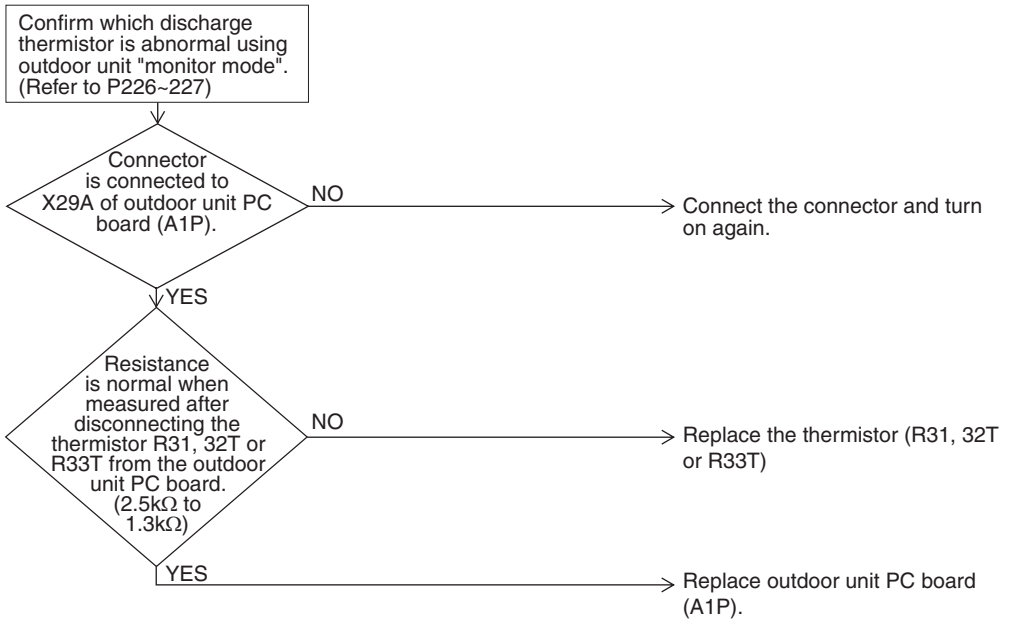
When a short circuit or an open circuit in the discharge pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R31T, R32T, R33T) for outdoor unit discharge pipe
- Defect of outdoor unit PC board (A1P)
- Defect of thermistor connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



The alarm indicator is displayed when the fan is being used also.

∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P418.

3.27 "J4" Outdoor Unit: Malfunction of Temperature Sensor for Heat Exchanger Gas (R2T or R11T)

Remote Control Display

J4

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Detect malfunction based on the temperature detected by each thermistor.

Malfunction Decision Conditions

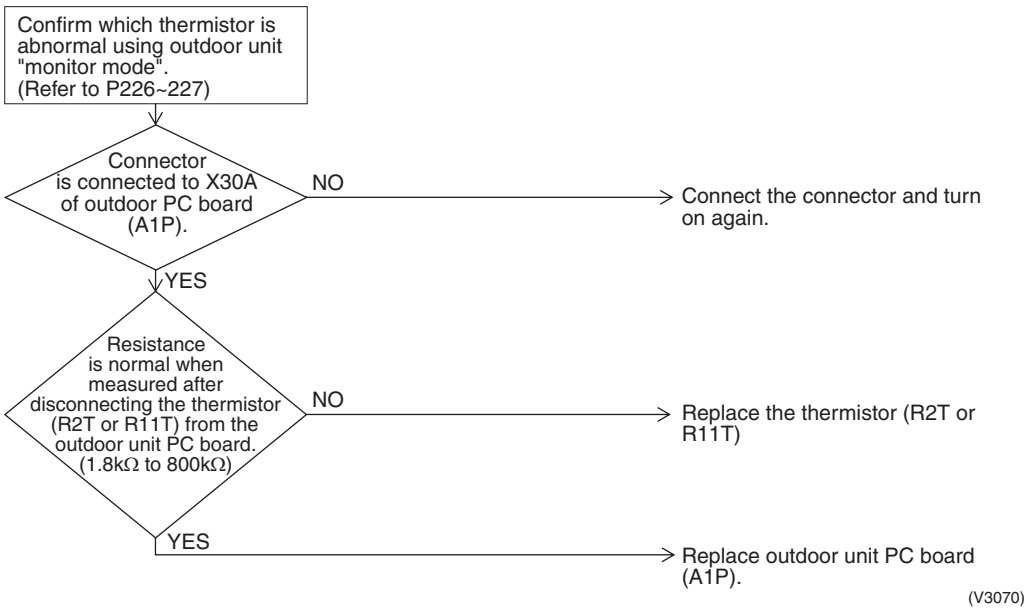
In operation, when a thermistor is disconnected or short circuits.

Supposed Causes

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

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.28 "J5" Outdoor Unit: Malfunction of Thermistor (R8T or R10T) for Suction Pipe

Remote Control Display

J5

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the suction pipe temperature thermistor.

Malfunction Decision Conditions

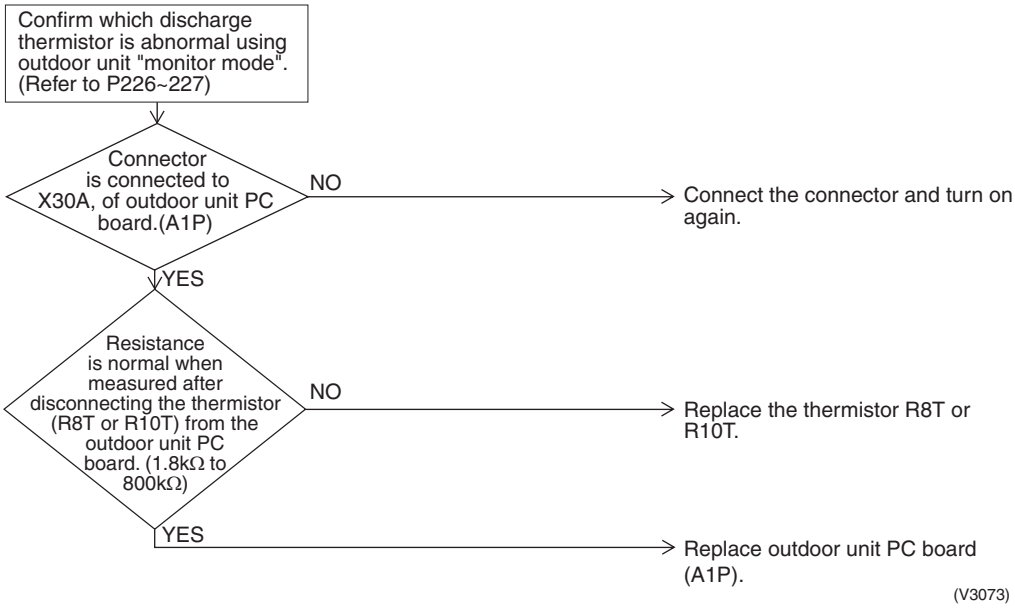
When a short circuit or an open circuit in the suction pipe temperature thermistor is detected.

Supposed Causes

- Defect of thermistor (R8T or R10T) for outdoor unit suction pipe
- Defect of outdoor unit PC board (A1P)
- Defect of thermistor connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.29 "J6" Outdoor Unit: Malfunction of Thermistor (R4T or R12T) for Outdoor Unit Heat Exchanger

Remote Control Display

J6

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected from the temperature detected by the heat exchanger thermistor.

Malfunction Decision Conditions

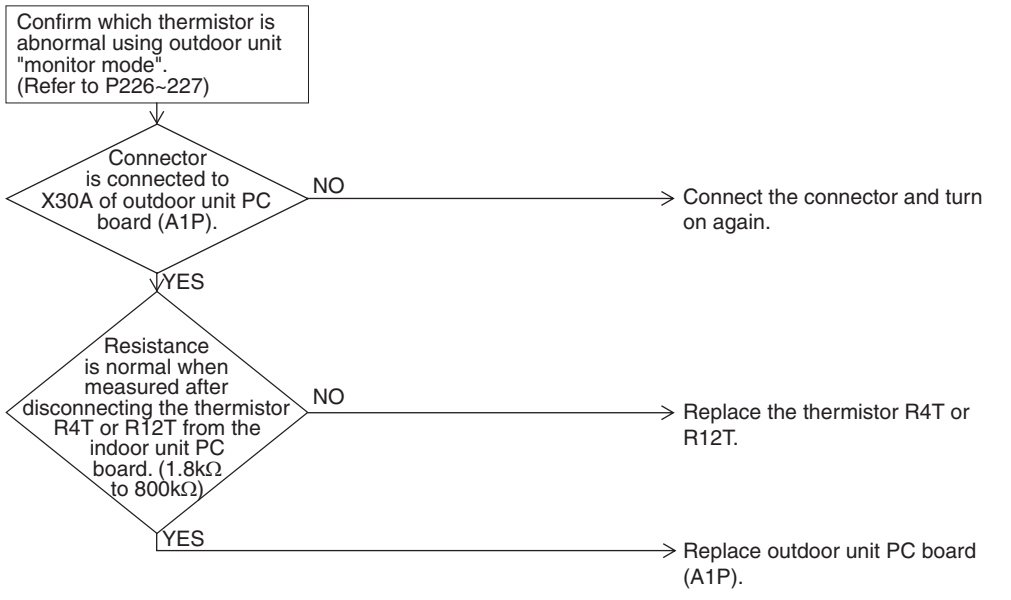
When a short circuit or an open circuit in the heat exchange thermistor is detected.

Supposed Causes

- Defect of thermistor (R4T or R12T) for outdoor unit coil
- Defect of outdoor unit PC board (A1P)
- Defect of thermistor connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3074)

∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.30 "J7" Outdoor Unit: Malfunction of Liquid Pipe Thermistor 1 (R6T), (R9T) or (R14T)

Remote Control Display

J7

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by liquid pipe thermistor.

Malfunction Decision Conditions

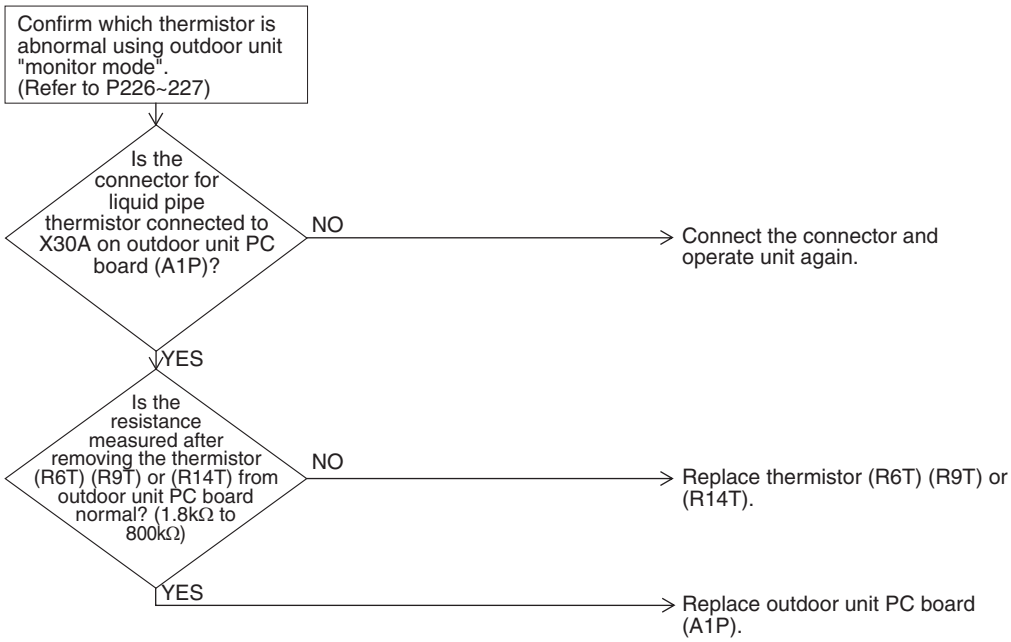
When the liquid pipe thermistor is short circuited or open.

Supposed Causes

- Faulty liquid pipe thermistor 1 (R6T), (R9T) or (R14T)
- Faulty outdoor unit PC board
- Defect of thermistor connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3075)

∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.31 "J8" Outdoor Unit: Malfunction of Liquid Pipe Thermistor 2 (R7T or R15T)

Remote Control Display

J8

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by liquid pipe thermistor.

Malfunction Decision Conditions

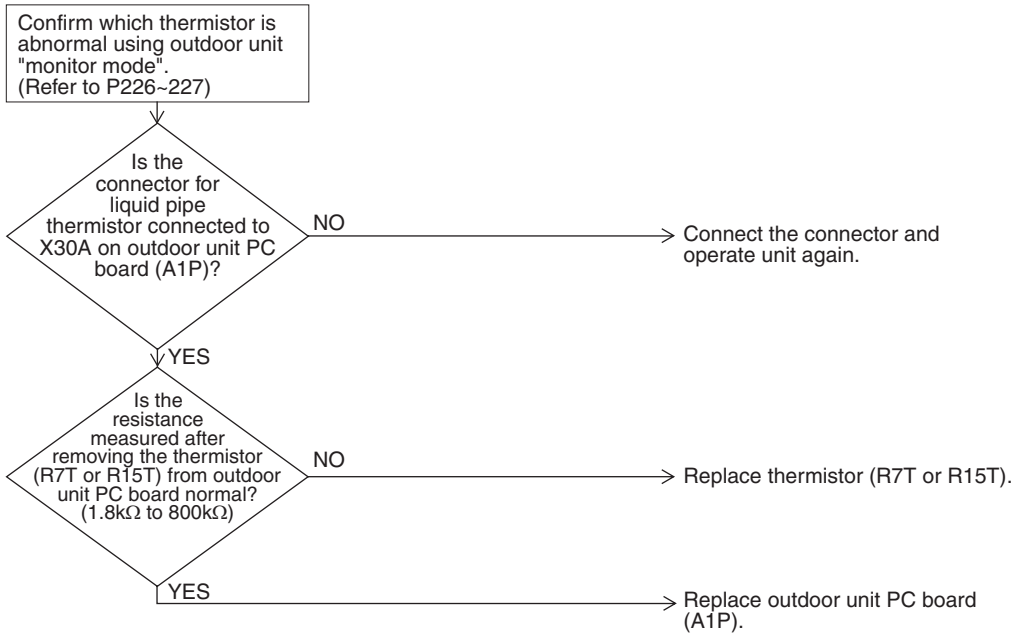
When the liquid pipe thermistor is short circuited or open.

Supposed Causes

- Faulty liquid pipe thermistor 2 (R7T or R15T)
- Faulty outdoor unit PC board
- Defect of thermistor connection

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.32 "J9" Outdoor Unit: Malfunction of Subcooling Heat Exchanger Gas Pipe Thermistor (R5T or R13T)

Remote Control Display

J9

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected according to the temperature detected by subcooling heat exchanger gas pipe thermistor.

Malfunction Decision Conditions

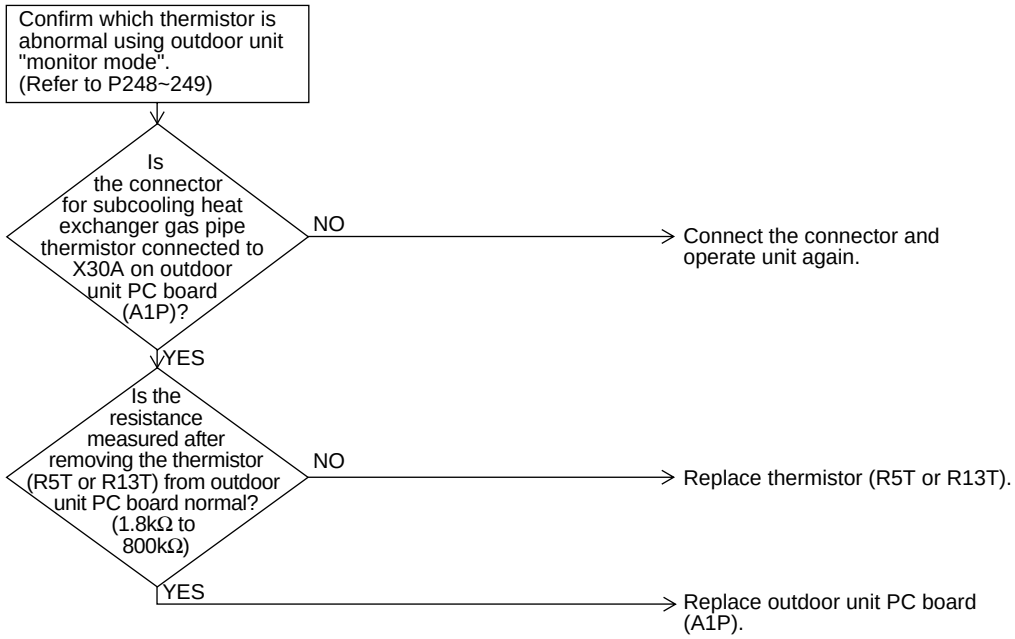
When the subcooling heat exchanger gas pipe thermistor is short circuited or open.

Supposed Causes

- Faulty subcooling heat exchanger gas pipe thermistor (R5T or R13T)
- Faulty outdoor unit PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V3075)

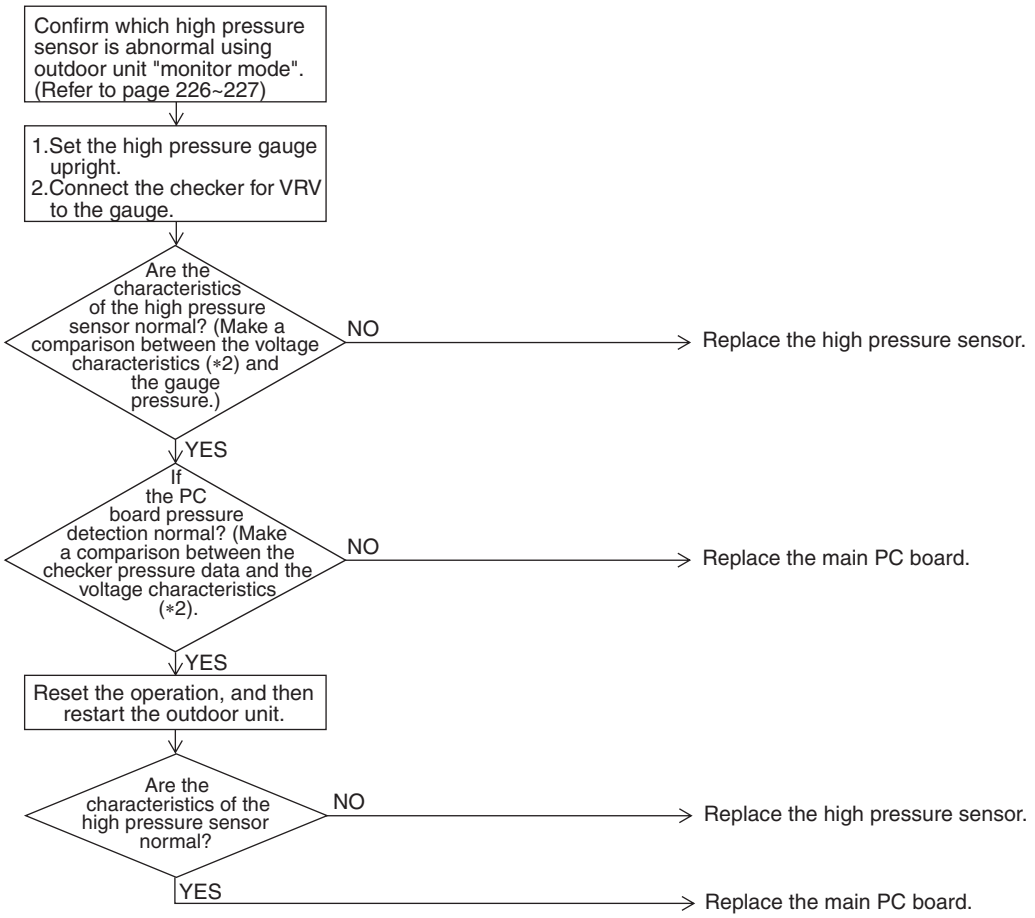
∗ Refer to "Thermistor Resistance / Temperature Characteristics" table on P417.

3.33 "JA" Outdoor Unit: Malfunction of High Pressure Sensor

Remote Control Display	JA
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Malfunction is detected from the pressure detected by the high pressure sensor.
Malfunction Decision Conditions	When the high pressure sensor is short circuit or open circuit. (Not less than 4.22MPa, or 0.01MPa and below)
Supposed Causes	■ Defect of high pressure sensor system ■ Connection of low pressure sensor with wrong connection. ■ Defect of outdoor unit PC board. ■ Defective connection of high pressure sensor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

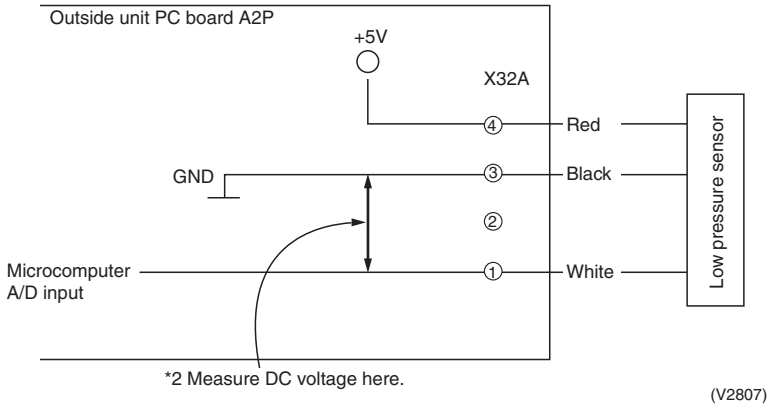


∗1: Pressure sensor subject to malfunction code

Malfunction code	Pressure sensor subject to malfunction code	Electric symbol
JA	High pressure sensor	S1NPH

(V2806)

∗2: Voltage measurement point



(V2807)

∗2: Refer to “Pressure Sensor, Pressure / Voltage Characteristics” table on P419.

3.34 "JC" Outdoor Unit: Malfunction of Low Pressure Sensor

Remote Control Display

JC

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Malfunction is detected from pressure detected by low pressure sensor.

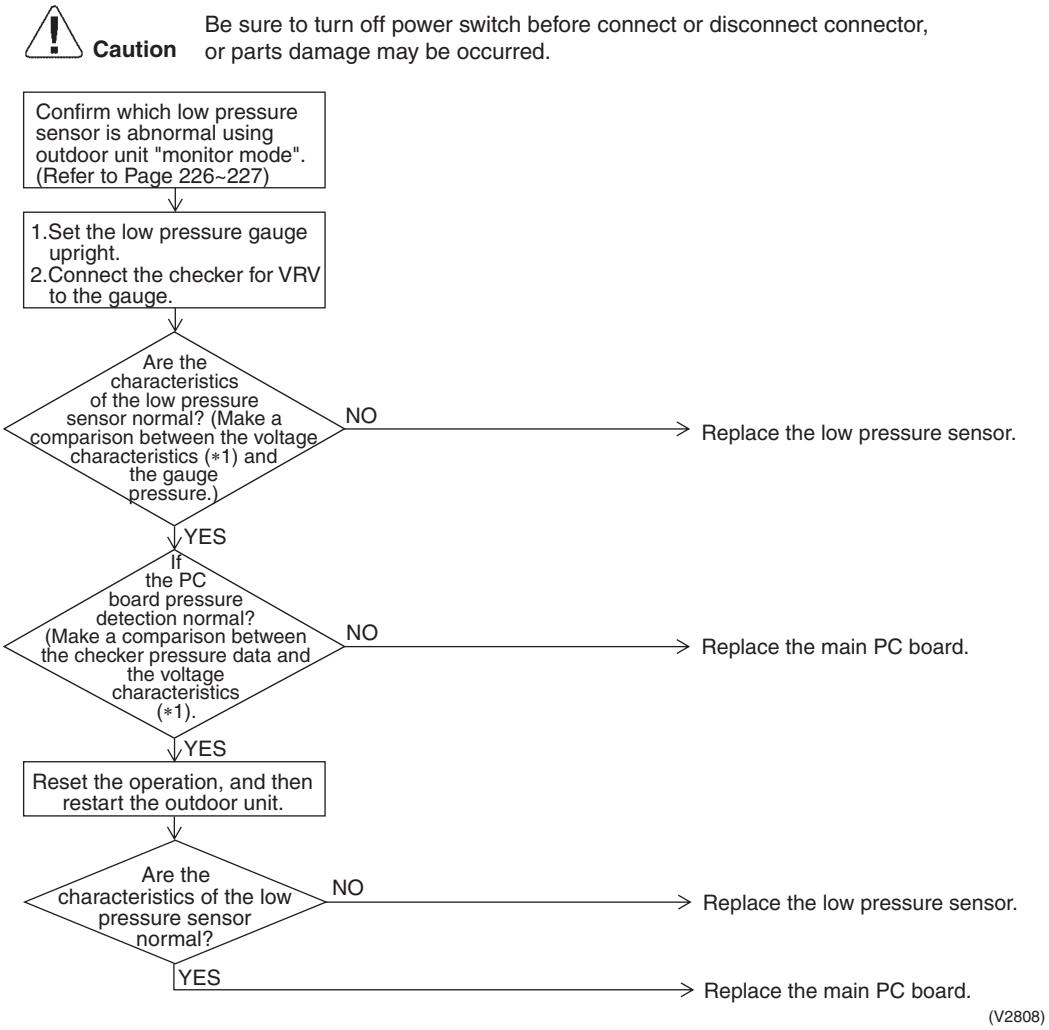
Malfunction Decision Conditions

When the low pressure sensor is short circuit or open circuit.
(Not less than 1.77MPa, or -0.01MPa and below)

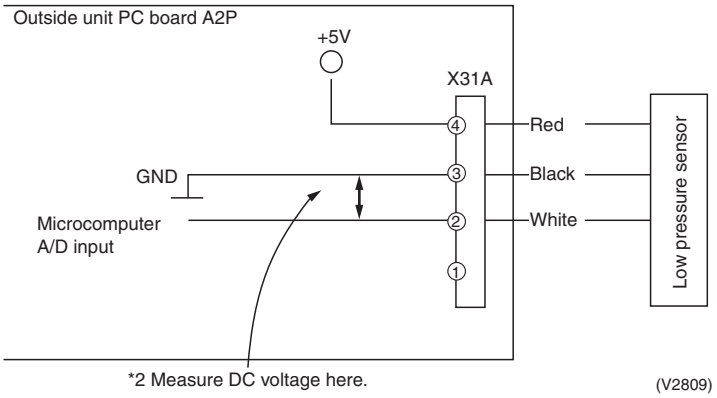
Supposed Causes

- Defect of low pressure sensor system
- Connection of high pressure sensor with wrong connection.
- Defect of outdoor unit PC board.
- Defective connection of low pressure sensor

Troubleshooting



∗1: Voltage measurement point



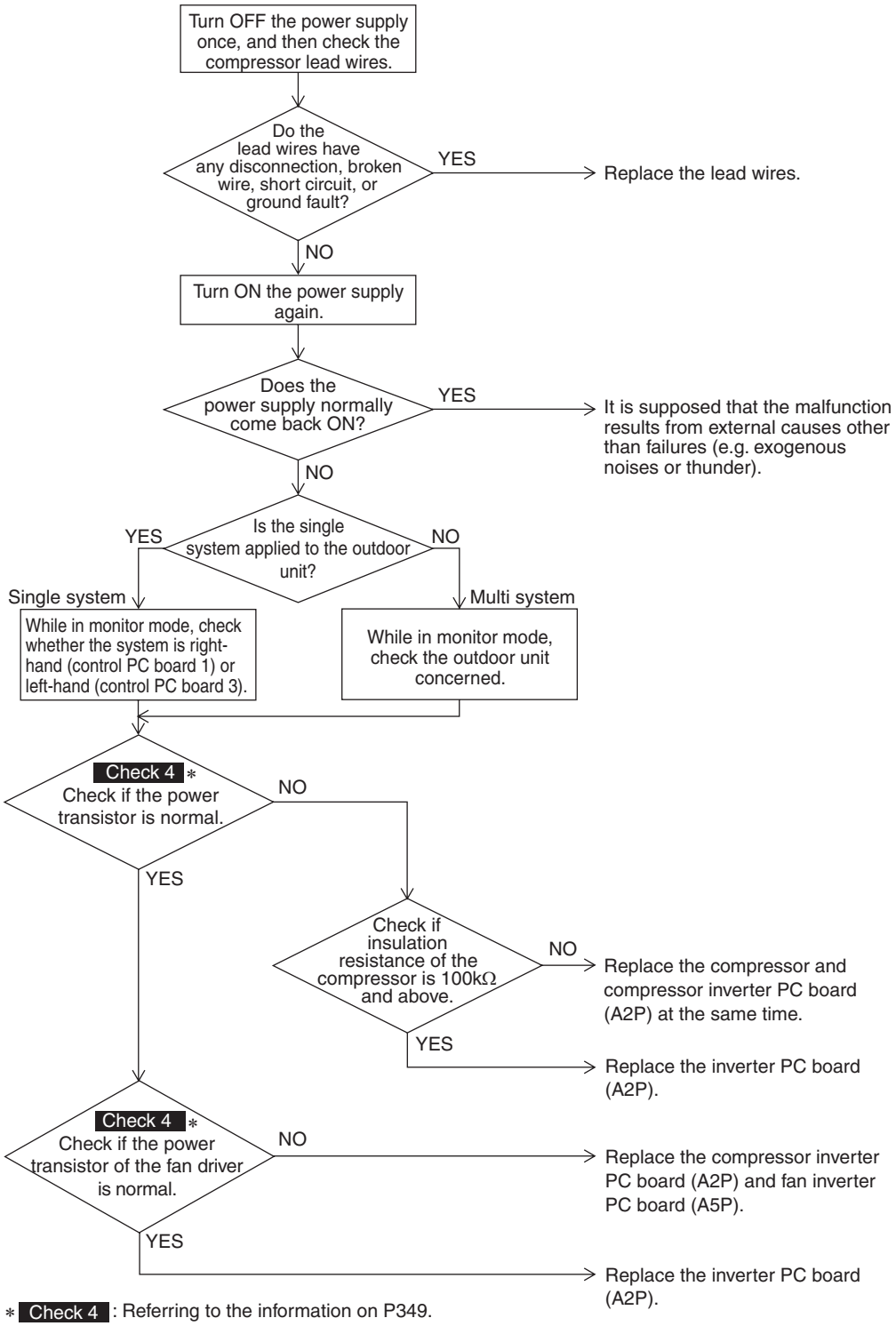
∗2: Refer to “Pressure Sensor, Pressure / Voltage Characteristics” table on P419.

3.35 "L1" Outdoor Unit: Defective Inverter PC Board

Remote Control Display	L1
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Malfunction is detected based on the current value during waveform output before starting compressor. Malfunction is detected based on the value from current sensor during synchronous operation when starting the unit.
Malfunction Decision Conditions	Overcurrent (OCP) flows during waveform output. Malfunction of current sensor during synchronous operation. IPM failure.
Supposed Causes	■ Inverter PC board (A2P) ● IPM failure ● Current sensor failure ● Drive circuit failure

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



* Check 4 : Referring to the information on P349.

*1. List of Inverter PC boards

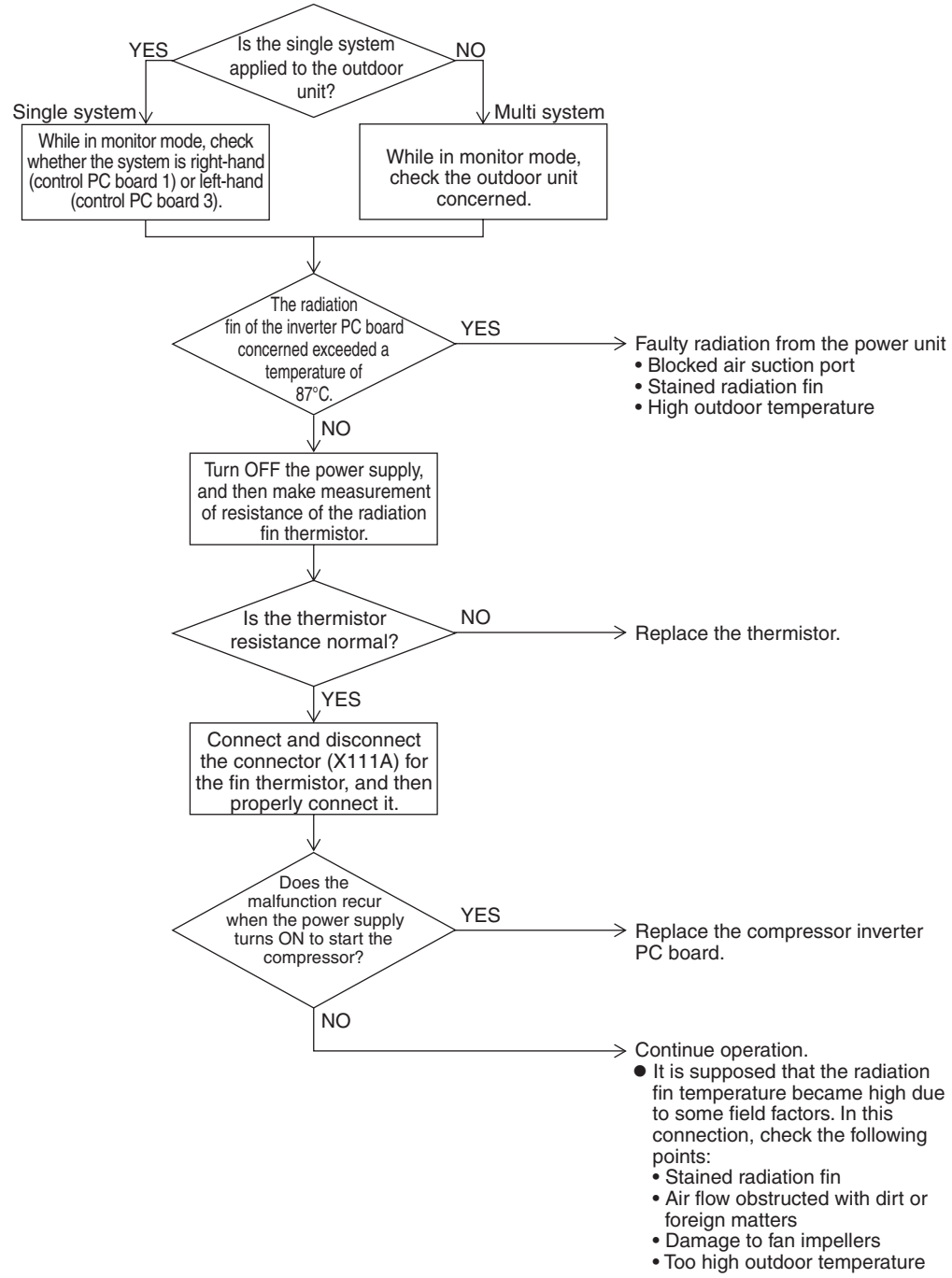
Model	Name	Electric symbol
REYQ 8, 10,12P	Compressor inverter PC board	A5P
	Fan inverter PC board	A6P, A7P
REYQ 14, 16P	Compressor inverter PC board	A4P, A7P
	Fan inverter PC board	A6P, A9P
REMQ 8, 10, 12P	Compressor inverter PC board	A4P
	Fan inverter PC board	A5P
REMQ 14, 16P	Compressor inverter PC board	A4P
	Fan inverter PC board	A5P, A7P

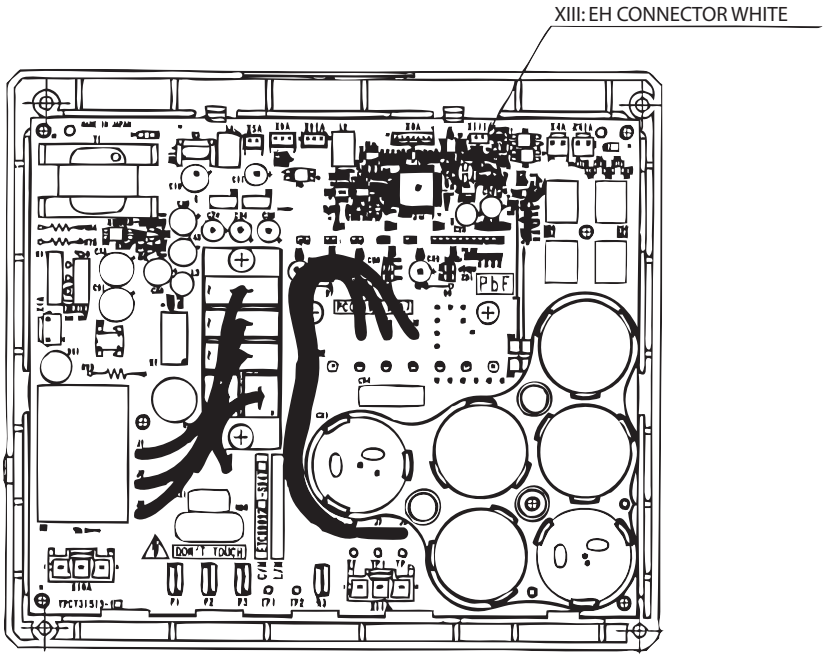
3.36 "L4" Outdoor Unit: Malfunction of Inverter Radiating Fin Temperature Rise

Remote Control Display	L4
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Fin temperature is detected by the thermistor of the radiation fin.
Malfunction Decision Conditions	When the temperature of the inverter radiation fin increases above 87°C.
Supposed Causes	■ Actuation of fin thermal (Actuates above 87°C) ■ Defect of inverter PC board ■ Defect of fin thermistor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





Inverter PC board for compressor

∗ Refer to “Thermistor Resistance / Temperature Characteristics” table on P417.

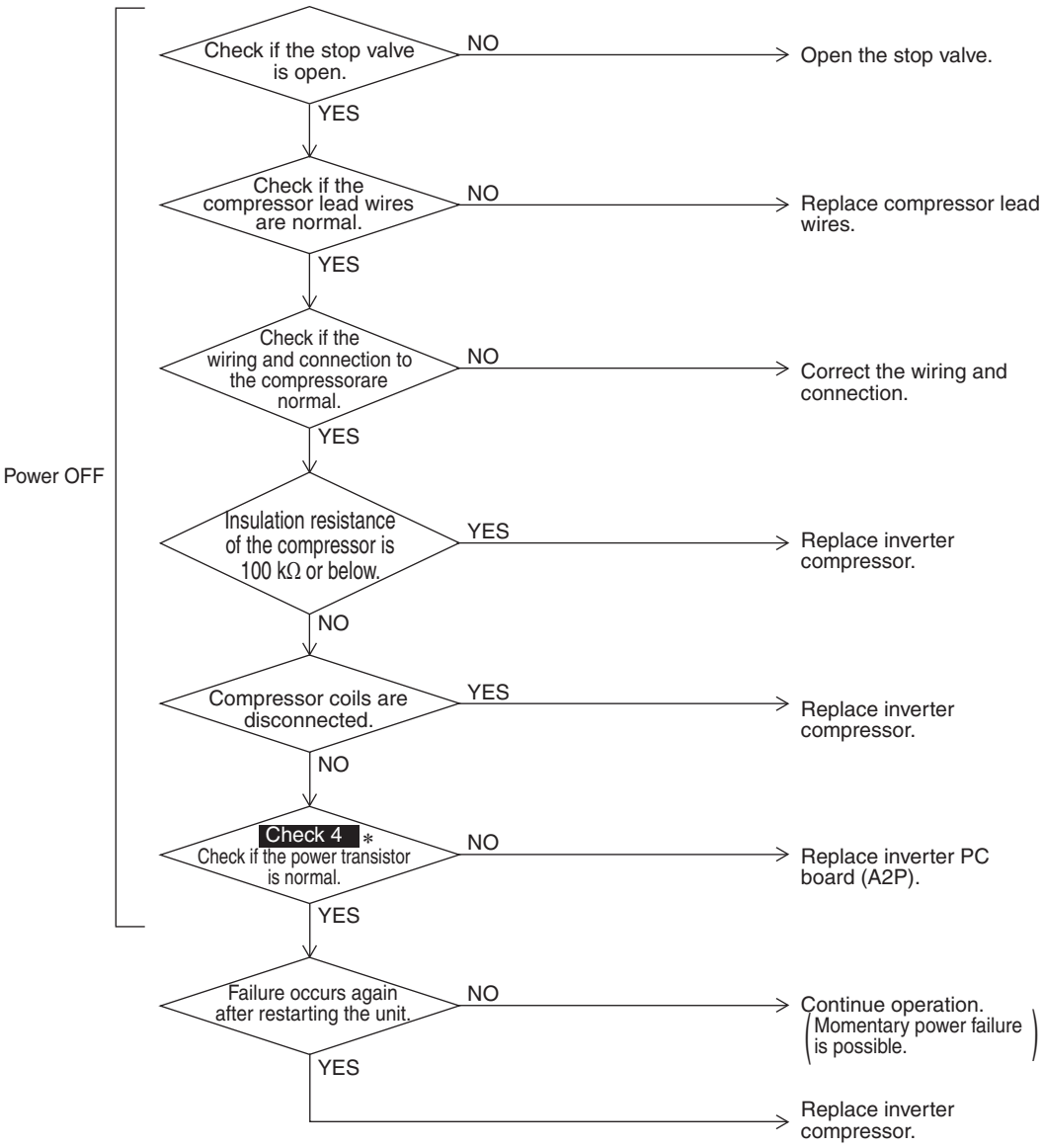
3.37 "L5" Outdoor Unit: Momentary Overcurrent of Inverter Compressor

Remote Control Display	L5
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Malfunction is detected from current flowing in the power transistor.
Malfunction Decision Conditions	When an excessive current flows in the power transistor. (Instantaneous overcurrent also causes activation.)
Supposed Causes	■ Defect of compressor coil (disconnected, defective insulation) ■ Compressor start-up malfunction (mechanical lock) ■ Defect of inverter PC board

Troubleshooting

Compressor inspection

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



* Check 4 : Referring to the information on P349.

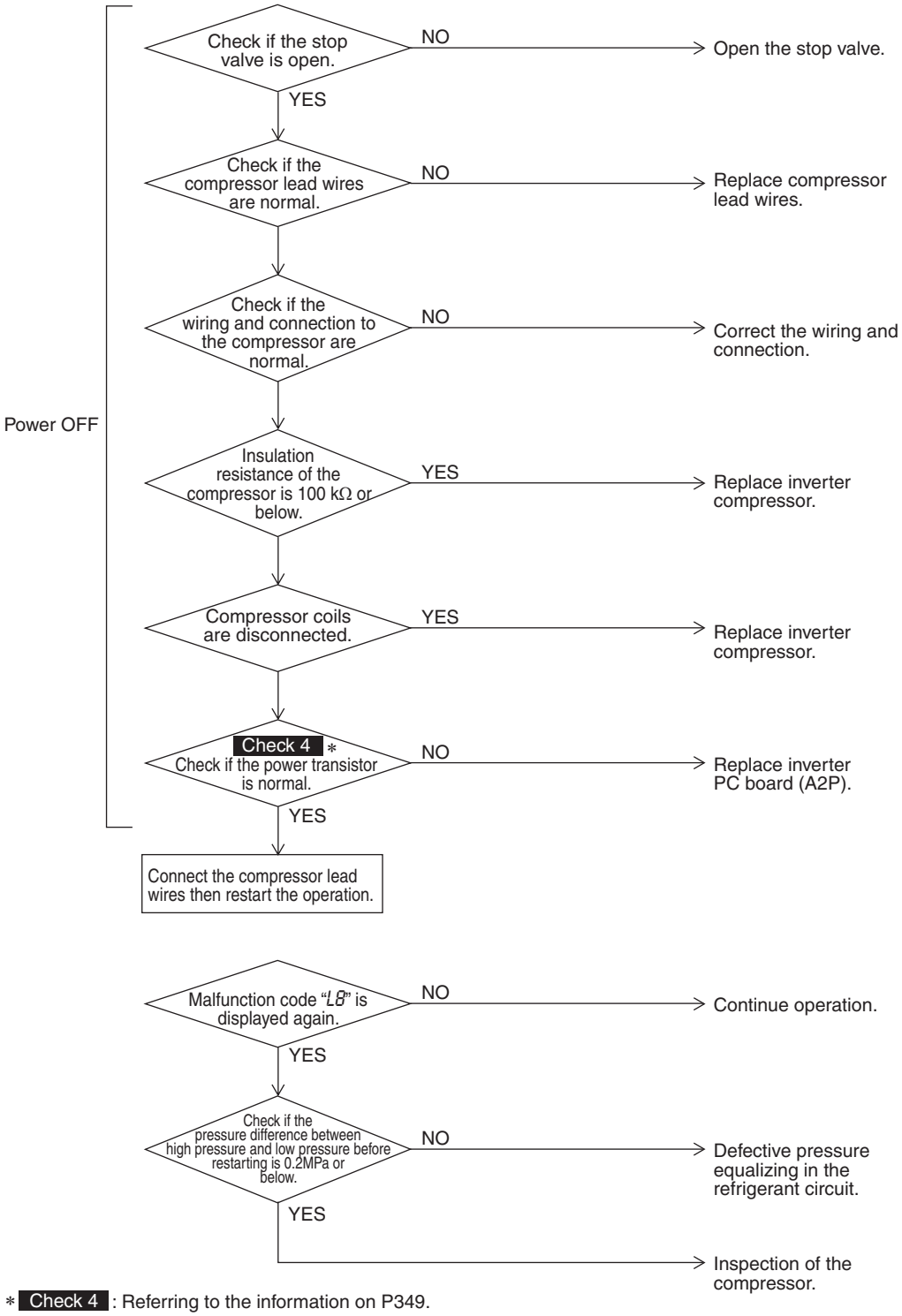
3.38 "L8" Outdoor Unit: Momentary Overcurrent of Inverter Compressor

Remote Control Display	L8
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Malfunction is detected by current flowing in the power transistor.
Malfunction Decision Conditions	When overload in the compressor is detected. (Inverter secondary current 16.1A) (1) 19.0A and over continues for 5 seconds. (2) 16.1A and over continues for 260 seconds.
Supposed Causes	■ Compressor overload ■ Compressor coil disconnected ■ Defect of inverter PC board ■ Faulty compressor

Troubleshooting

Output current check

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



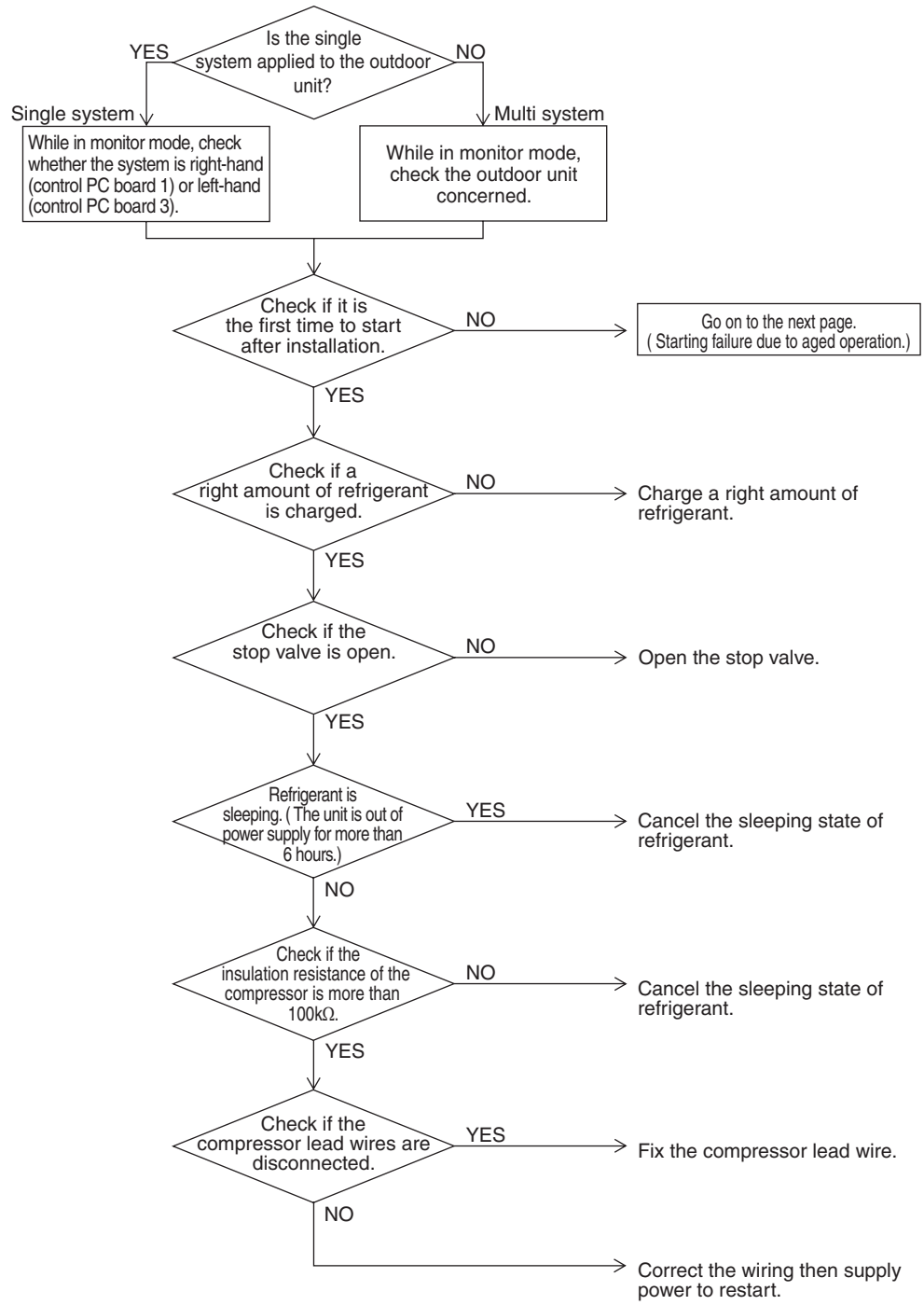
* Check 4 : Referring to the information on P349.

3.39 "L9" Outdoor Unit: Inverter Compressor Starting Failure

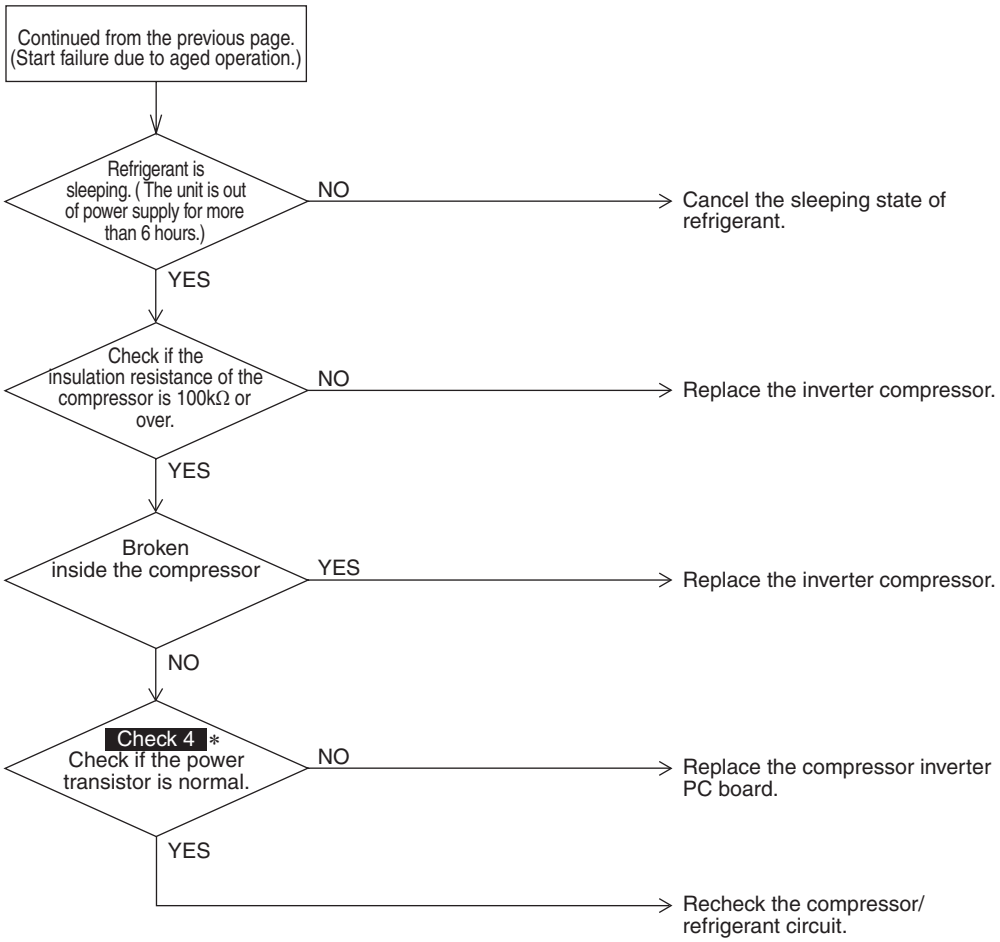
Remote Control Display	L9
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Detect the failure based on the signal waveform of the compressor.
Malfunction Decision Conditions	Starting the compressor does not complete.
Supposed Causes	■ Failure to open the stop valve ■ Defective compressor ■ Wiring connection error to the compressor ■ Large pressure difference before starting the compressor ■ Defective inverter PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Troubleshooting

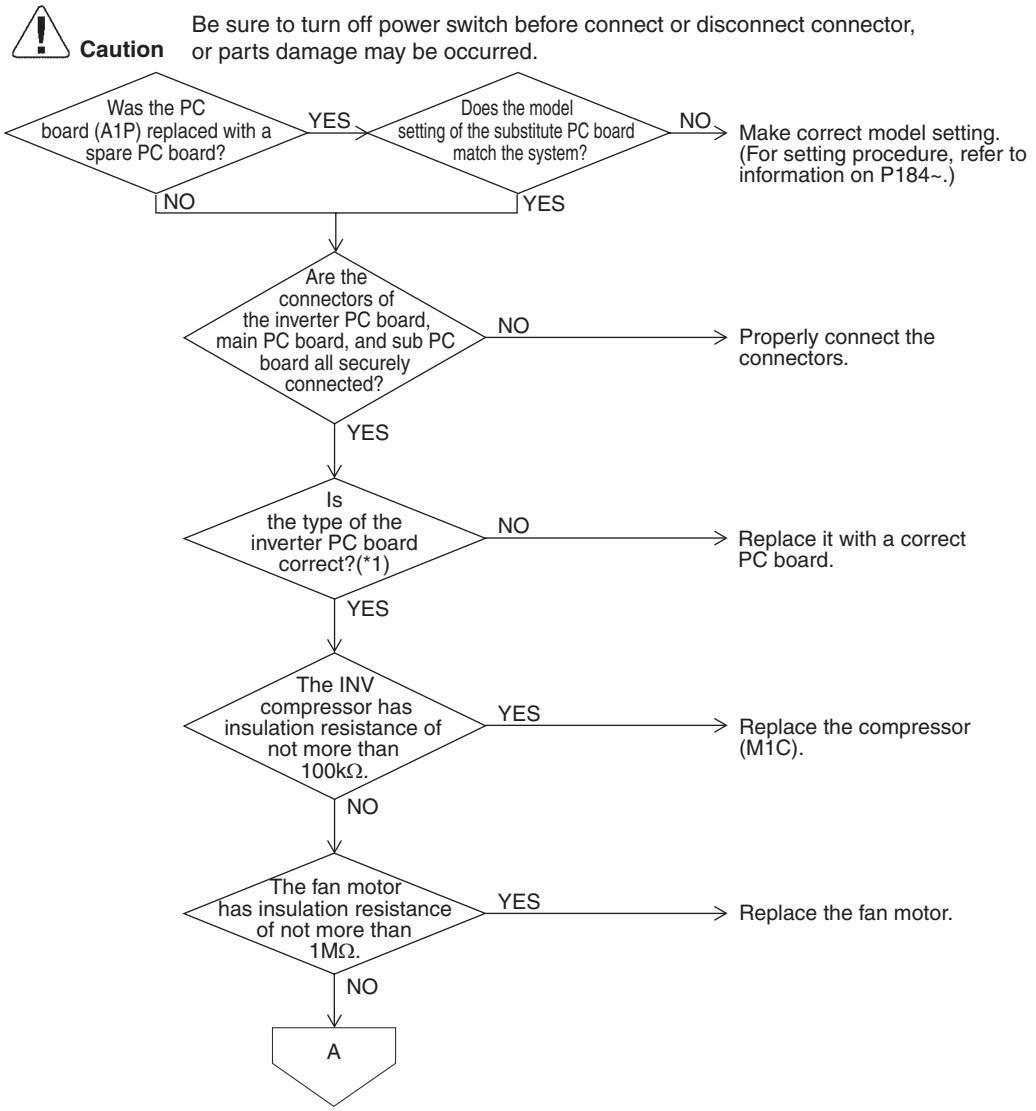


* Check 4 : Referring to the information on P349.

3.40 "LC" Outdoor Unit: Malfunction of Transmission between Inverter and Control PC Board

Remote Control Display	LC
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Check the communication state between inverter PC board and control PC board by micro-computer.
Malfunction Decision Conditions	When the correct communication is not conducted in certain period.
Supposed Causes	■ Malfunction of connection between the inverter PC board and outdoor main PC board ■ Defect of outdoor main PC board (transmission section) ■ Defect of inverter PC board ■ Defect of noise filter ■ Faulty fan inverter ■ Incorrect type of inverter PC board ■ Faulty inverter compressor ■ Faulty fan motor ■ External factor (noise etc.)

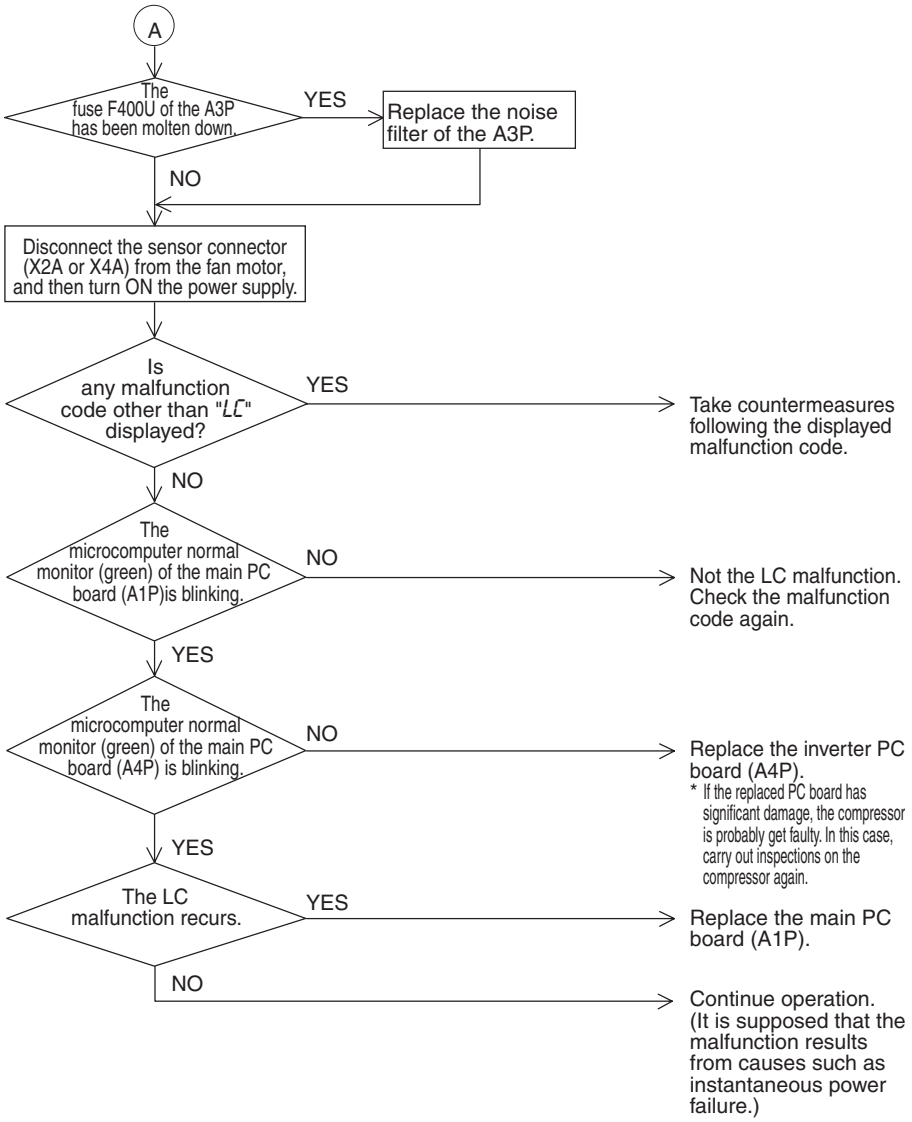
Troubleshooting

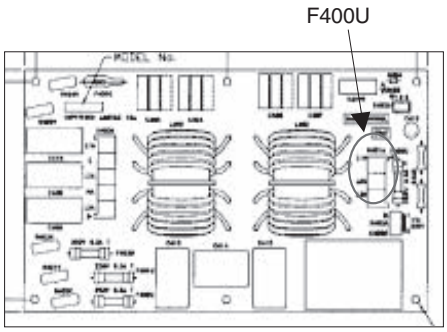


*1. List of Inverter PC boards

	Comp1	Comp2	FAN1	FAN2
REYQ8PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ10PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ12PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ14PY1	PC0509-1	PC0509-1	PC0511-1	PC0511-1
REYQ16PY1	PC0509-1	PC0509-1	PC0511-1	PC0511-1
REMQ8PY1	PC0509-1	—	PC0511-1	—
REMQ10PY1	PC0509-1	—	PC0511-1	—
REMQ12PY1	PC0509-1	—	PC0511-1	—
REMQ14PY1	PC0509-1	—	PC0511-3	PC0511-4
REMQ16PY1	PC0509-1	—	PC0511-3	PC0511-4

Troubleshooting

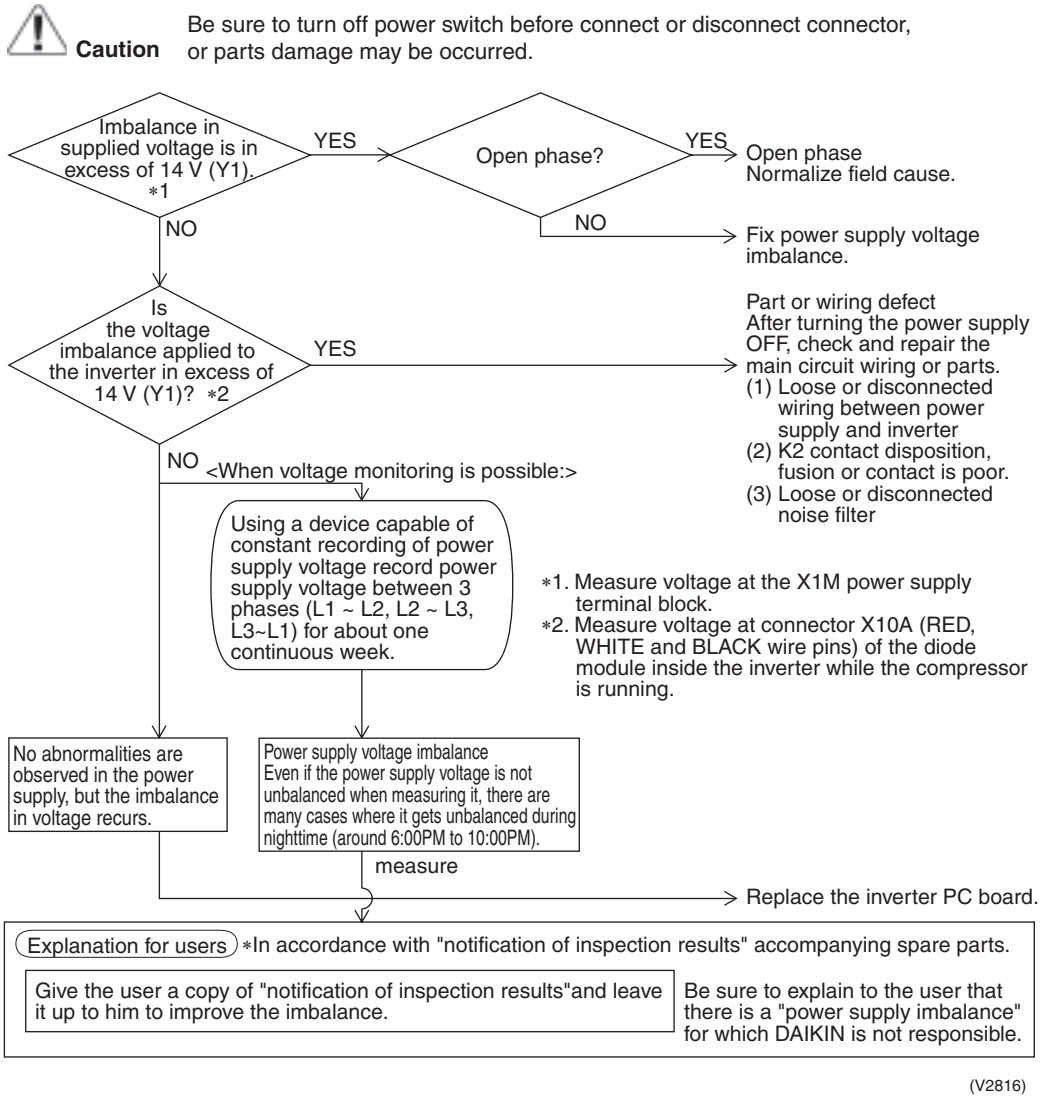




3.41 "P1" Outdoor Unit: Inverter Over-Ripple Protection

Remote Control Display	P1
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Imbalance in supply voltage is detected in PC board. Imbalance in the power supply voltage causes increased ripple of voltage of the main circuit capacitor in the inverter. Consequently, the increased ripple is detected.
Malfunction Decision Conditions	When the resistance value of thermistor becomes a value equivalent to open or short circuited status. ★ Malfunction is not decided while the unit operation is continued. "P1" will be displayed by pressing the inspection button. When the amplitude of the ripple exceeding a certain value is detected for consecutive 4 minutes.
Supposed Causes	■ Open phase ■ Voltage imbalance between phases ■ Defect of main circuit capacitor ■ Defect of inverter PC board ■ Defect of K2 relay in inverter PC board ■ Improper main circuit wiring

Troubleshooting



(V2816)

3.42 "P4" Outdoor Unit: Malfunction of Inverter Radiating Fin Temperature Rise Sensor

Remote Control Display

P4

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Resistance of radiation fin thermistor is detected when the compressor is not operating.

Malfunction Decision Conditions

When the resistance value of thermistor becomes a value equivalent to open or short circuited status.

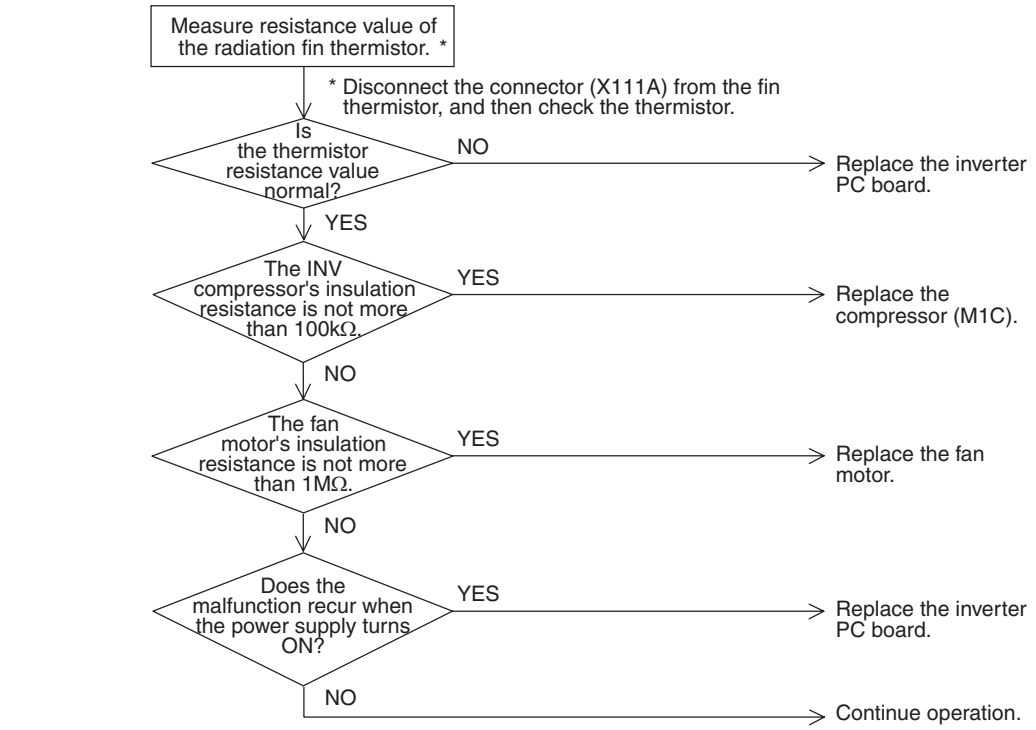
★ Malfunction is not decided while the unit operation is continued.
"P4" will be displayed by pressing the inspection button.

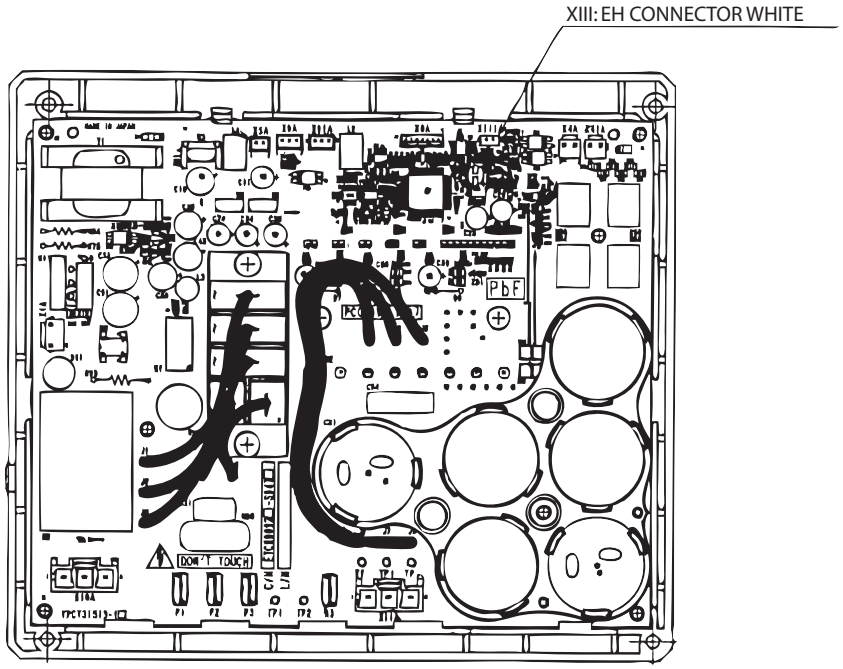
Supposed Causes

- Defect of radiator fin temperature sensor
- Defect of inverter PC board
- Faulty inverter compressor
- Faulty fan motor

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





Inverter PC board for compressor

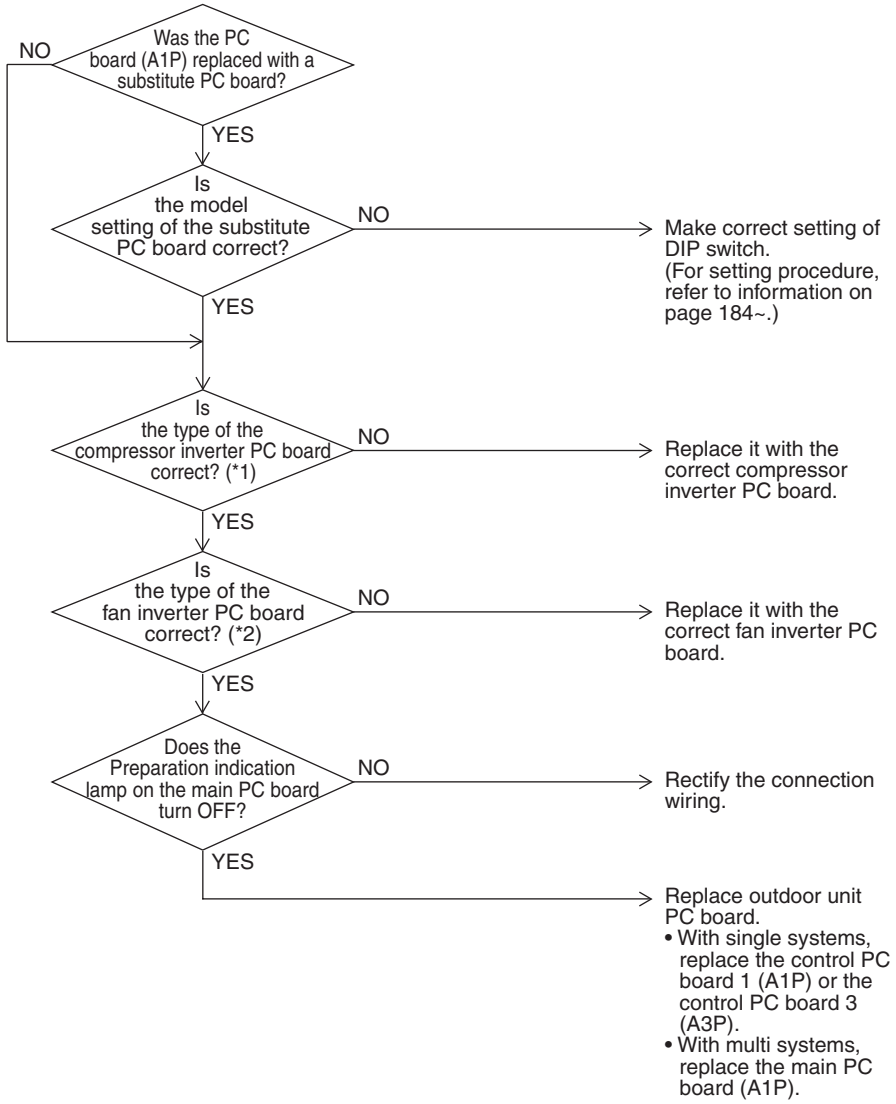
∗ Refer to “Thermistor Resistance / Temperature Characteristics” table on P417.

3.43 "PJ" Outdoor Unit: Faulty Field Setting after Replacing Main PC Board or Faulty Combination of PC Board

Remote Control Display	PJ
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	This malfunction is detected according to communications with the inverter.
Malfunction Decision Conditions	Make judgment according to communication data on whether or not the type of the inverter PC board is correct.
Supposed Causes	■ Faulty (or no) field setting after replacing main PC board ■ Mismatching of type of PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



*1. List of Inverter PC boards

	Comp1	Comp2	FAN1	FAN2
REYQ8PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ10PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ12PY1	PC0509-1	—	PC0511-3	PC0511-4
REYQ14PY1	PC0509-1	PC0509-1	PC0511-1	PC0511-1
REYQ16PY1	PC0509-1	PC0509-1	PC0511-1	PC0511-1
REMQ8PY1	PC0509-1	—	PC0511-1	—
REMQ10PY1	PC0509-1	—	PC0511-1	—
REMQ12PY1	PC0509-1	—	PC0511-1	—
REMQ14PY1	PC0509-1	—	PC0511-3	PC0511-4
REMQ16PY1	PC0509-1	—	PC0511-3	PC0511-4

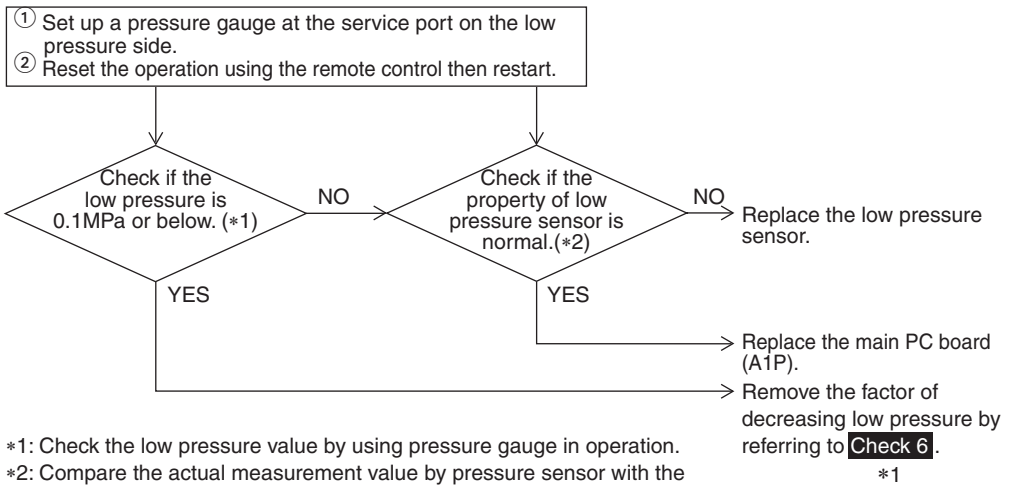
3.44 "UO" Outdoor Unit: Gas Shortage Alert

Remote Control Display	UO
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Detect gas shortage based on the temperature difference between low pressure or suction pipe and heat exchanger.
Malfunction Decision Conditions	[In cooling mode] Low pressure becomes 0.1MPa or below. [In heating mode] The degree of superheat of suction gas becomes 20 degrees and over. SH= Ts1 –Te Ts1: Suction pipe temperature detected by thermistor Te : Saturated temperature corresponding to low pressure ★Malfunction is not determined. The unit continues operation.
Supposed Causes	■ Gas shortage or refrigerant clogging (piping error) ■ Defective thermistor (R4T, R7T, R12T, R15T) ■ Defective low pressure sensor ■ Defective outdoor unit PC board (A1P)

Troubleshooting

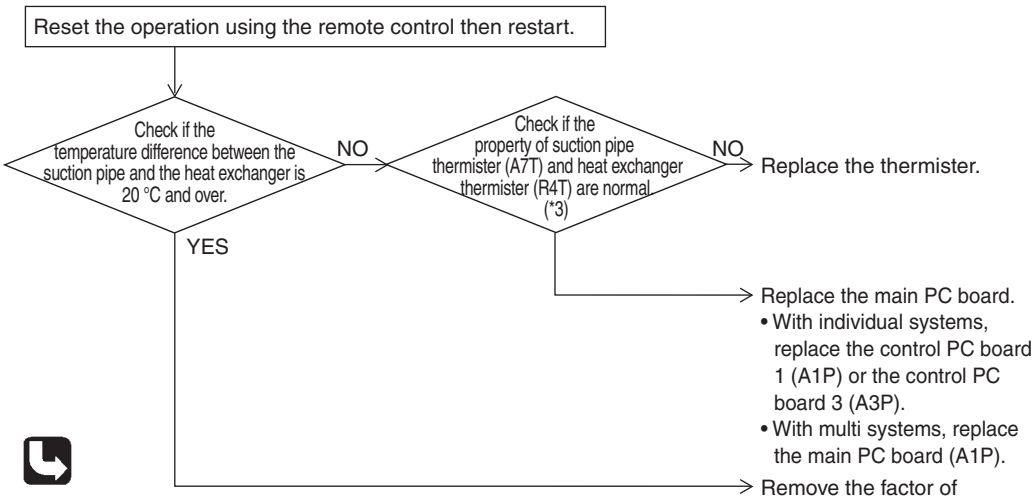
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

In cooling mode



∗1: Check the low pressure value by using pressure gauge in operation.
∗2: Compare the actual measurement value by pressure sensor with the value by the pressure gauge.
(To gain actual measurement value by pressure sensor, measure the voltage at the connector [between (2)-(3)] and then convert the value into pressure referring to P419.)

In heating mode



∗3: Compare the thermister resistance value with the value on the surface thermometer.

∗1 Check 6 : Referring to the information on P351.

∗2 Check 3 : Referring to the information on P348.

3.45 "U1" Reverse Phase, Open Phase

Remote Control Display

U1

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

The phase of each phase are detected by reverse phase detection circuit and right phase or reverse phase are judged.

Malfunction Decision Conditions

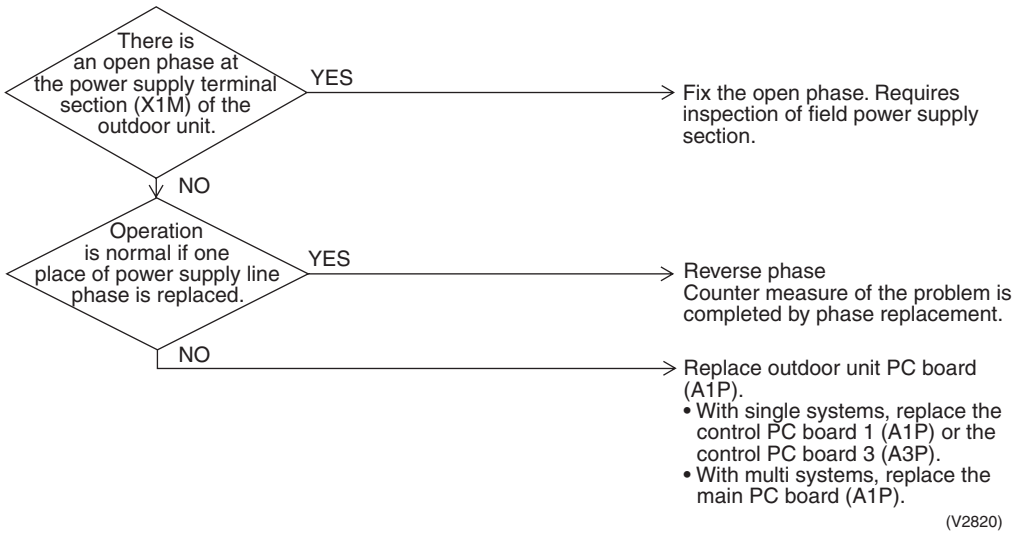
When a significant phase difference is made between phases.

Supposed Causes

- Power supply reverse phase
- Power supply open phase
- Defect of outdoor PC board (A1P)

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

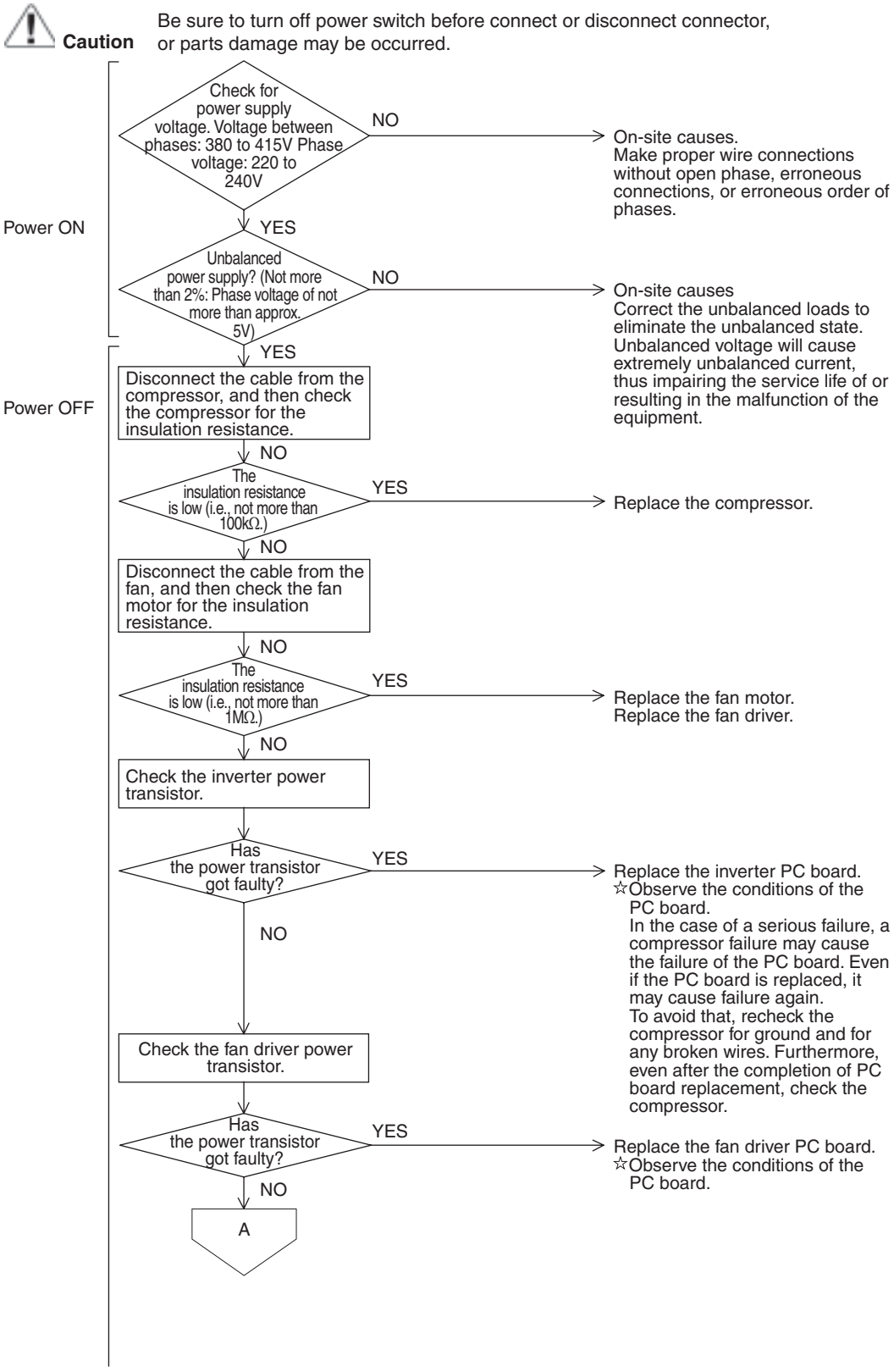


(V2820)

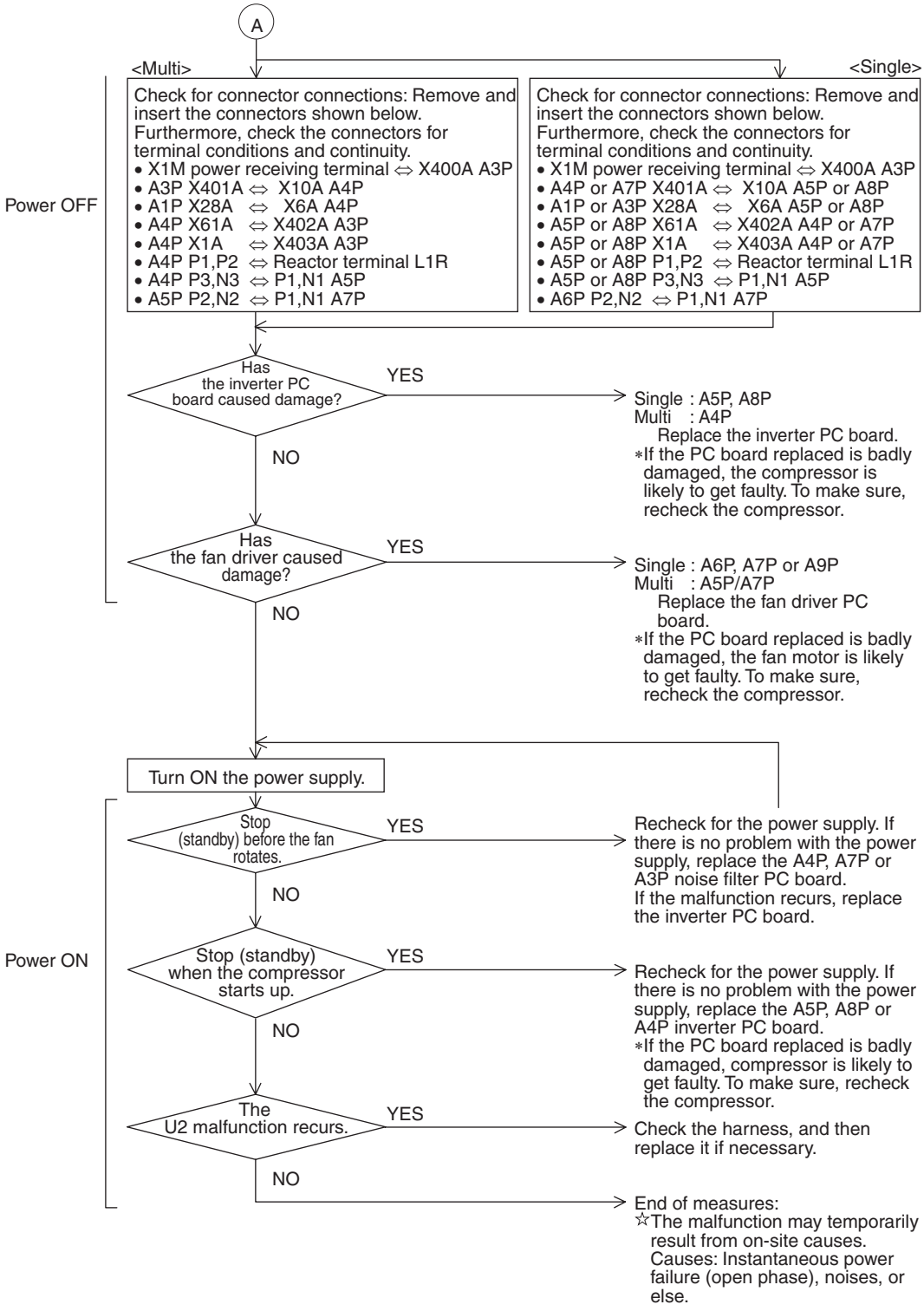
3.46 "U2" Outdoor Unit: Power Supply Insufficient or Instantaneous Failure

Remote Control Display	U2
Applicable Models	REYQ8P~48P
Method of Malfunction Detection	Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.
Malfunction Decision Conditions	When the voltage aforementioned is not less than 780V or not more than 320V, or when the current-limiting voltage does not reach 200V or more or exceeds 740V.
Supposed Causes	■ Power supply insufficient ■ Instantaneous power failure ■ Open phase ■ Defect of inverter PC board ■ Defect of outdoor control PC board ■ Main circuit wiring defect ■ Faulty compressor ■ Faulty fan motor ■ Faulty connection of signal cable

Troubleshooting



Troubleshooting



3.47 "U3" Outdoor Unit: Check Operation not Executed

Remote Control Display

U3

Applicable Models

REYQ8P~48P

Method of Malfunction Detection

Check operation is executed or not

Malfunction Decision Conditions

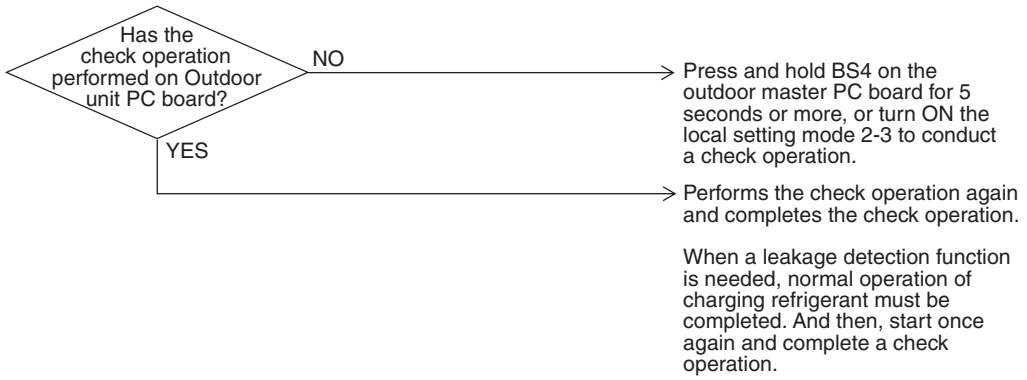
Malfunction is decided when the unit starts operation without check operation.

Supposed Causes

- Check operation is not executed.

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



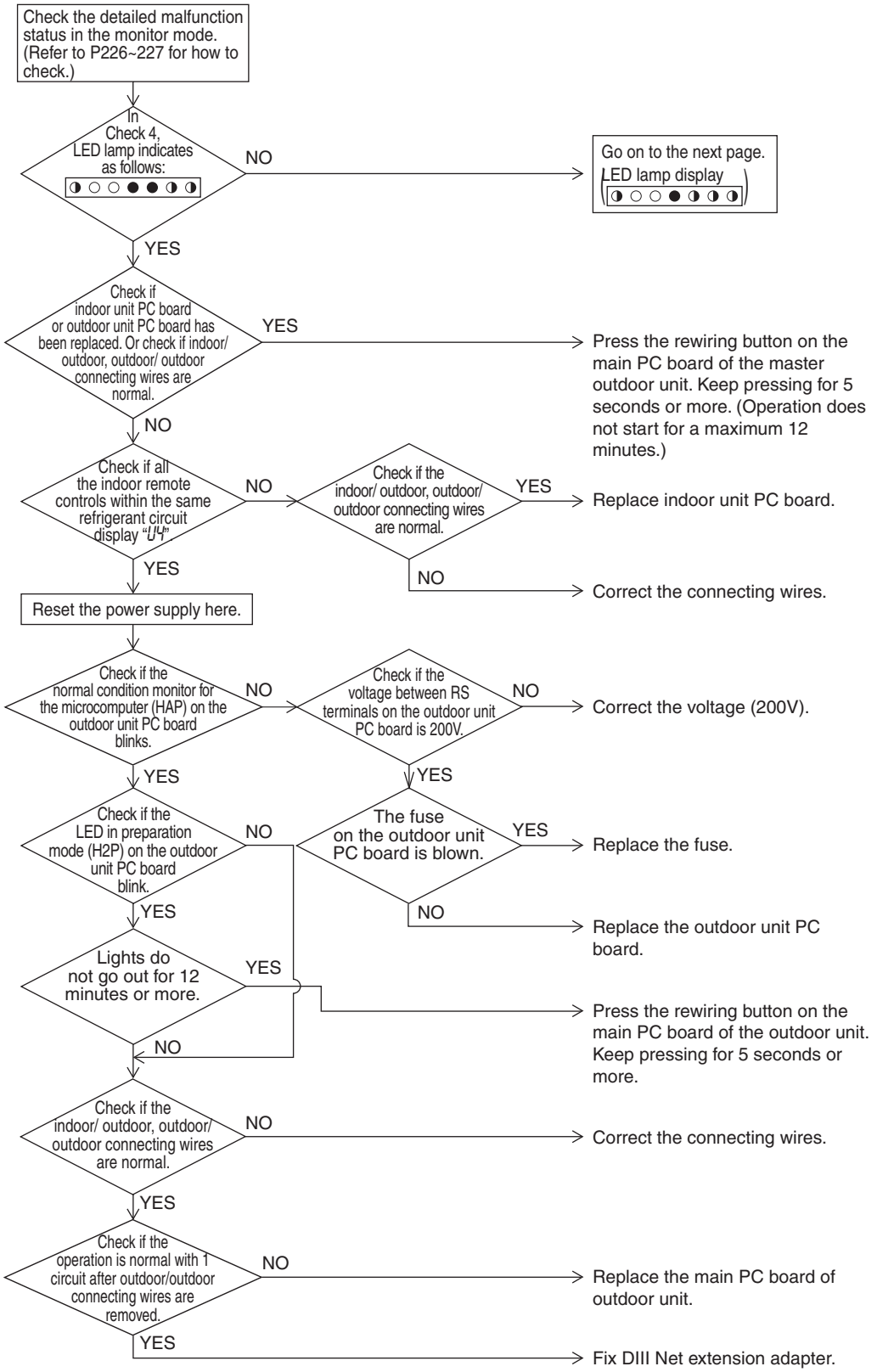
(V3052)

3.48 "U4" Malfunction of Transmission between Indoor Units

Remote Control Display	U4
Applicable Models	All model of indoor unit REYQ8P~48P
Method of Malfunction Detection	Check if the transmission between indoor unit and outdoor unit is correctly executed using microcomputer.
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time
Supposed Causes	■ Indoor to outdoor, outdoor to outdoor transmission wiring F1, F2 disconnection, short circuit or wrong wiring ■ Outdoor unit power supply is OFF ■ System address doesn't match ■ Defect of indoor unit PC board ■ Defect of outdoor unit PC board

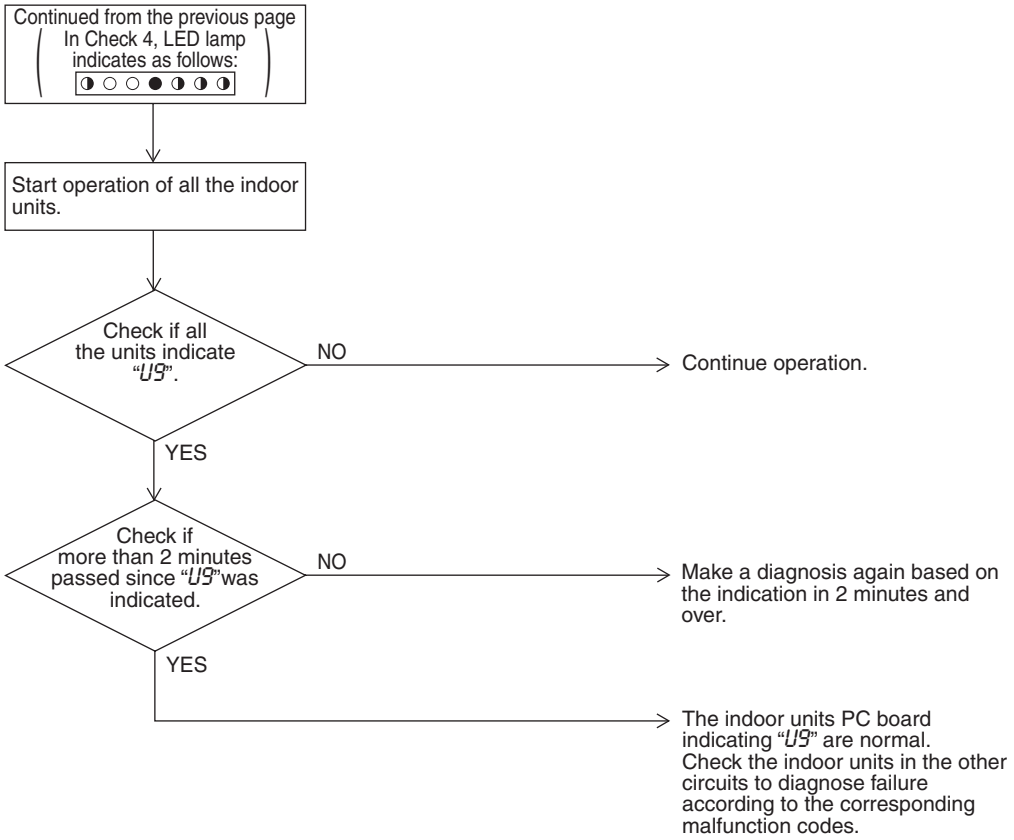
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.49 "U5" Indoor Unit: Malfunction of Transmission between Remote Control and Indoor Unit

Remote Control Display

U5

Applicable Models

All models of indoor units

Method of Malfunction Detection

In case of controlling with 2-remote control, check the system using microcomputer is signal transmission between indoor unit and remote control (main and sub) is normal.

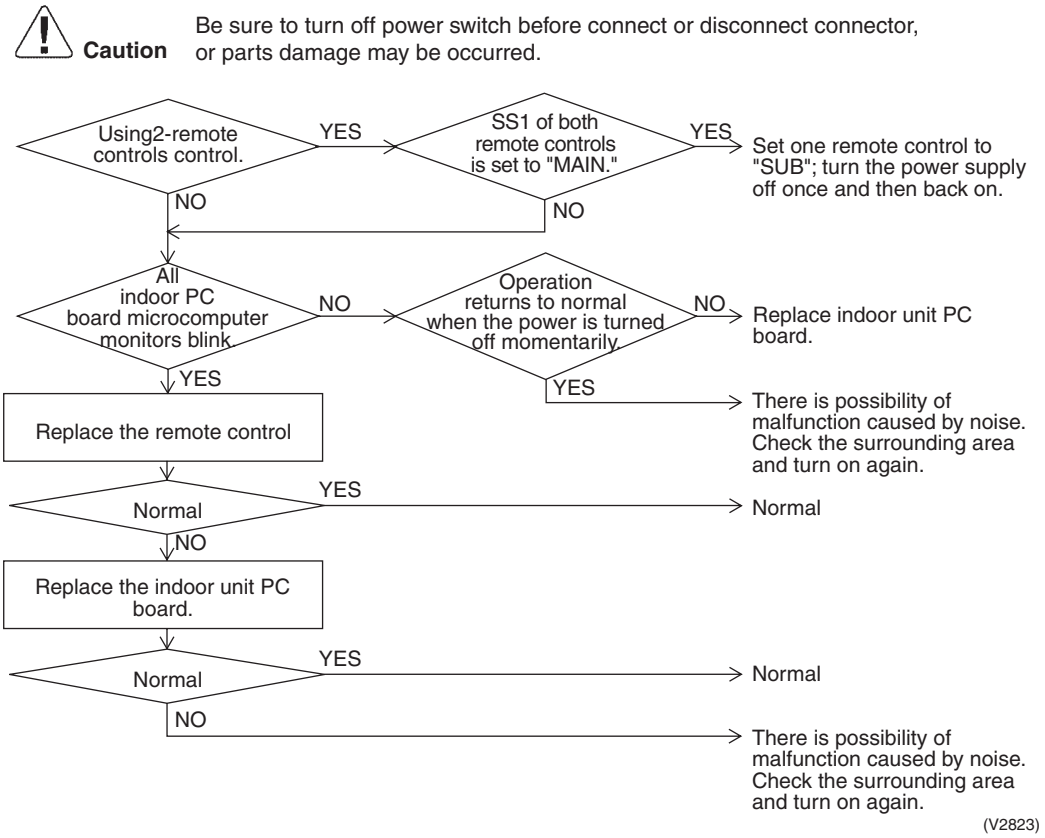
Malfunction Decision Conditions

Normal transmission does not continue for specified period.

Supposed Causes

- Malfunction of indoor unit remote control transmission
- Connection of two main remote controls (when using 2 remote controls)
- Defect of indoor unit PC board
- Defect of remote control PC board
- Malfunction of transmission caused by noise

Troubleshooting



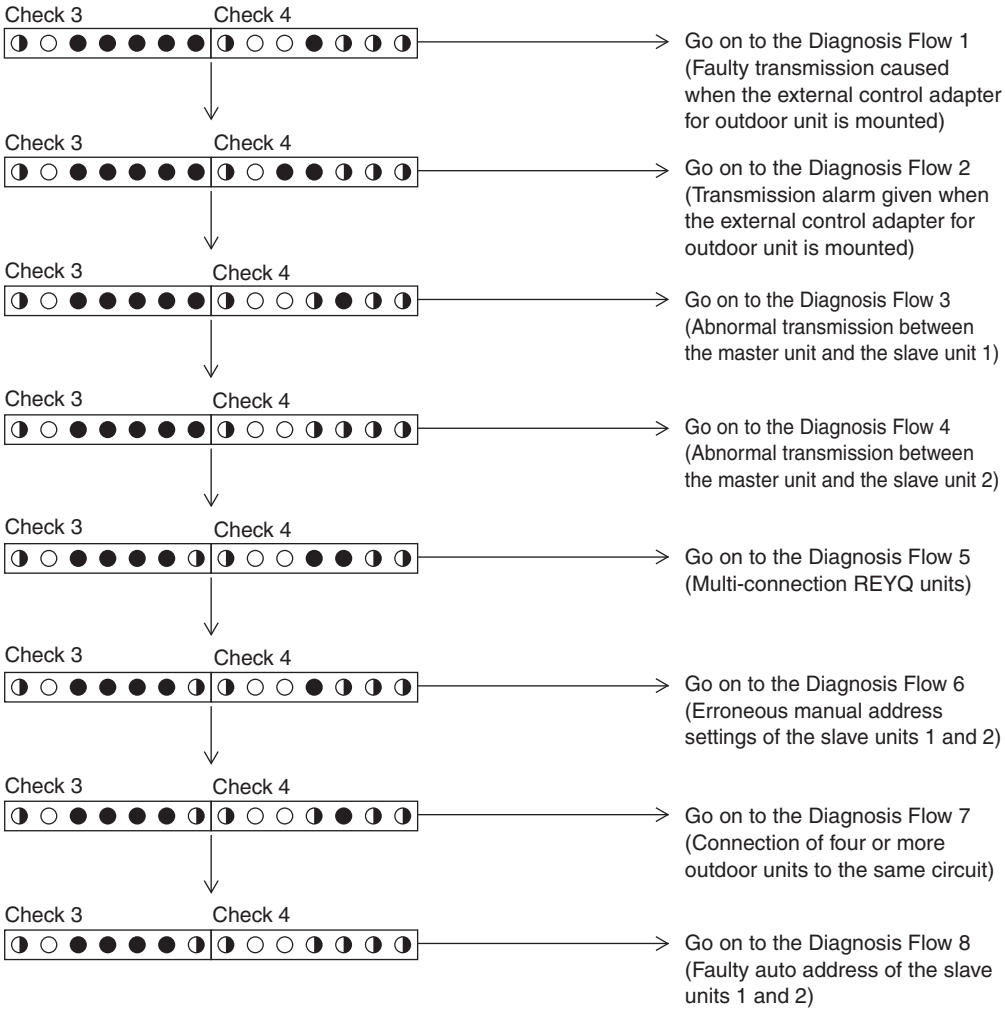
3.50 "U7" Outdoor Unit: Transmission Failure (Across Outdoor Units)

Remote Control Display	U7
Applicable Models	All models of outdoor units
Method of Malfunction Detection	Microcomputer checks if transmission between outdoor units.
Malfunction Decision Conditions	When transmission is not carried out normally for a certain amount of time
Supposed Causes	■ Connection error in connecting wires between outdoor unit and outdoor unit outside control adapter ■ Connection error in connecting wires across outdoor units ■ Setting error in switching cooling/ heating ■ Integrated address setting error for cooling/ heating (function unit, outdoor unit outside control adapter) ■ Defective outdoor unit PC board (A1P or A3P) ■ Defective outdoor unit outside control adapter

Troubleshooting

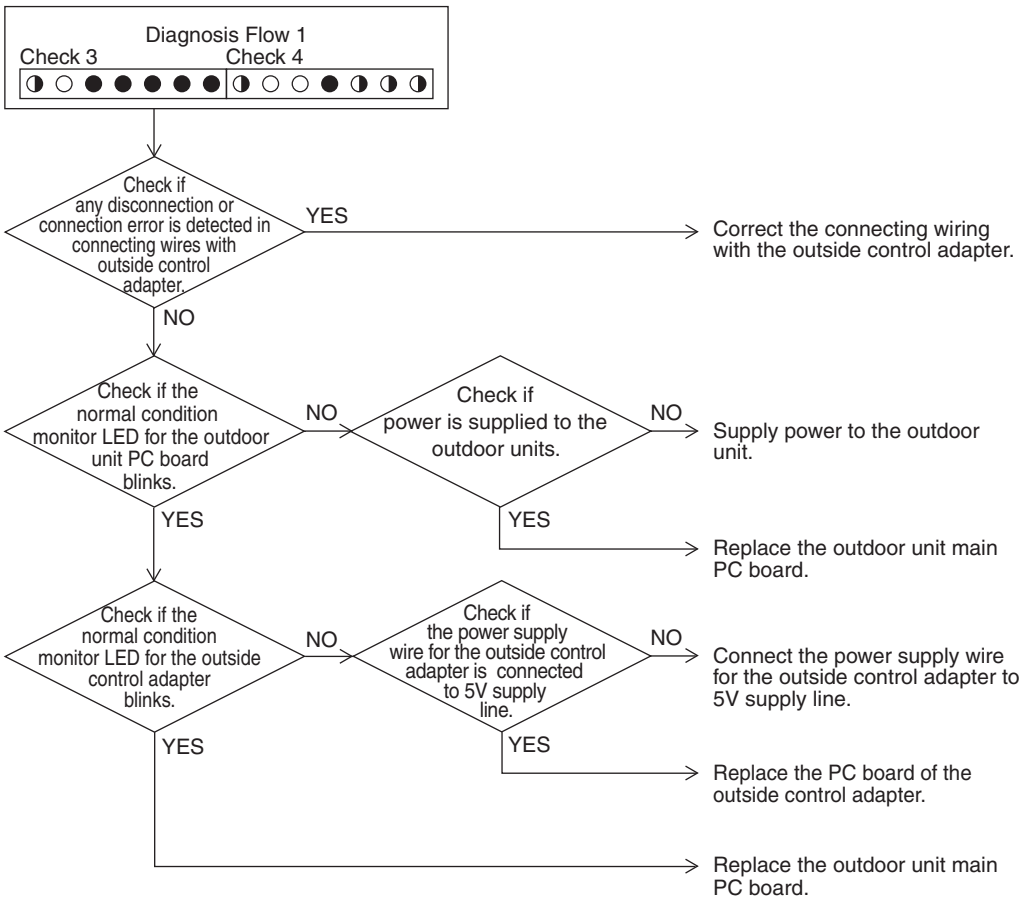
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check the LED lamps for "Check 3" corresponding to the malfunction code "*U7*" and for Check 4 in the monitor mode. (Refer to P228~229 for how to check)



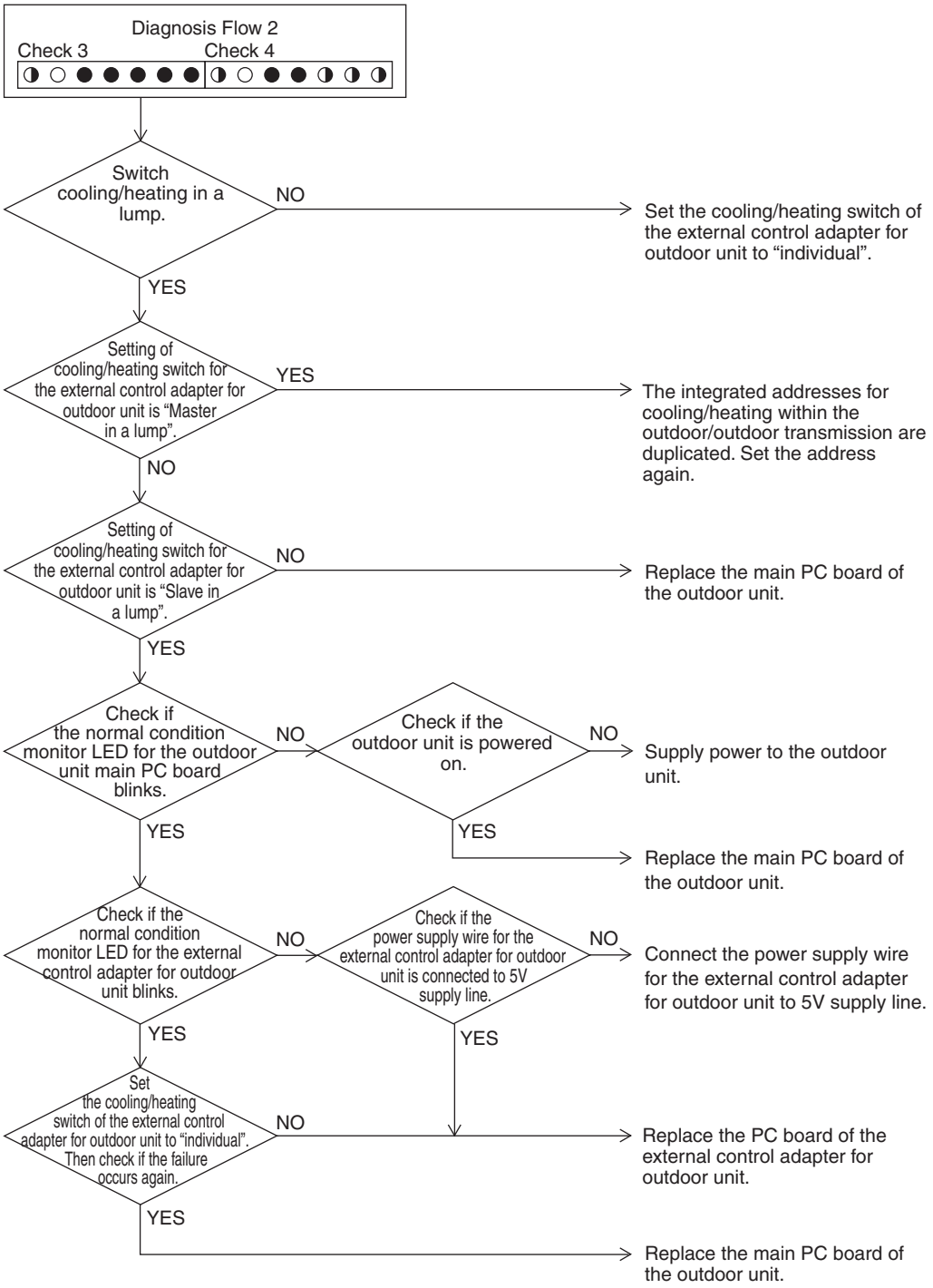
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



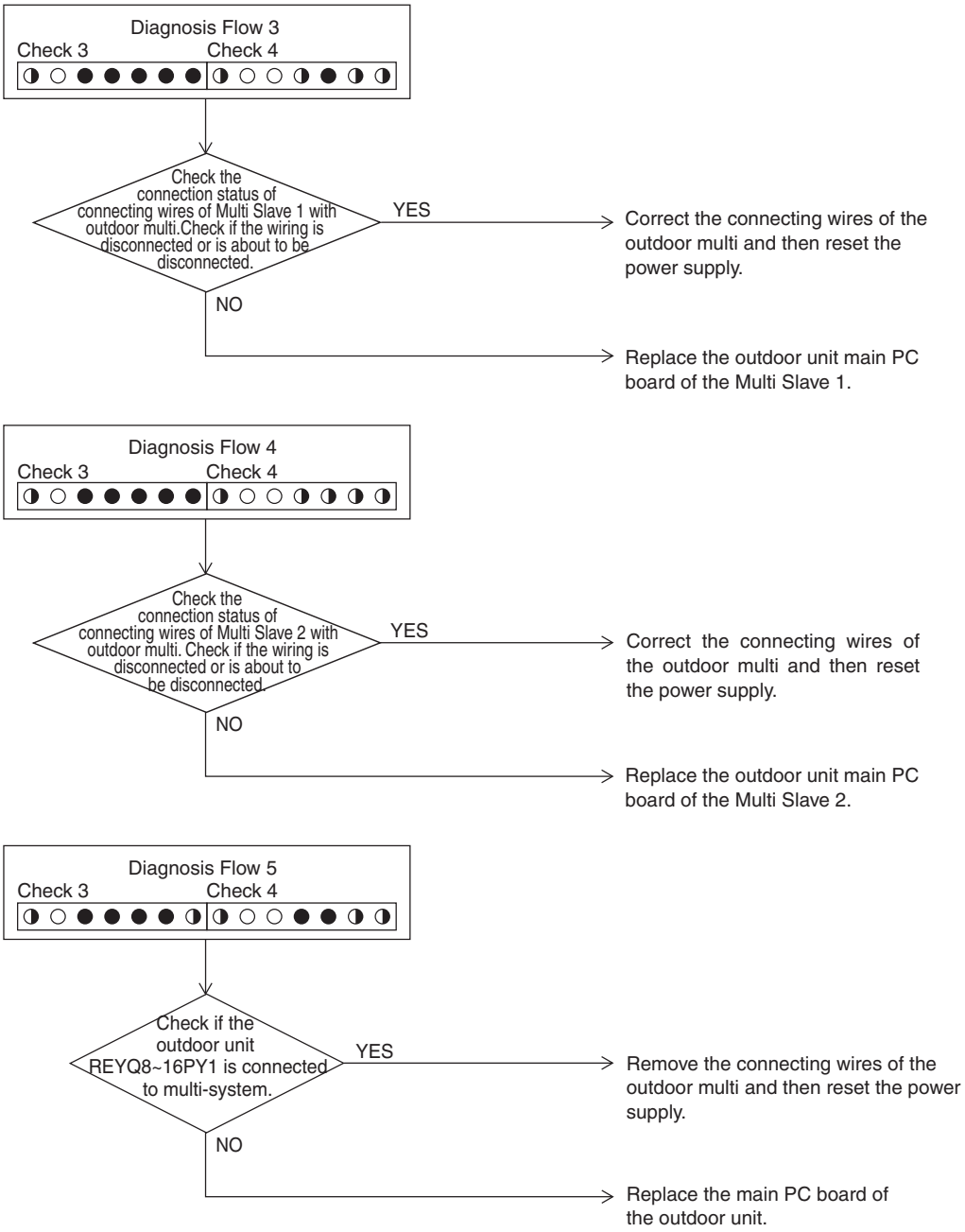
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



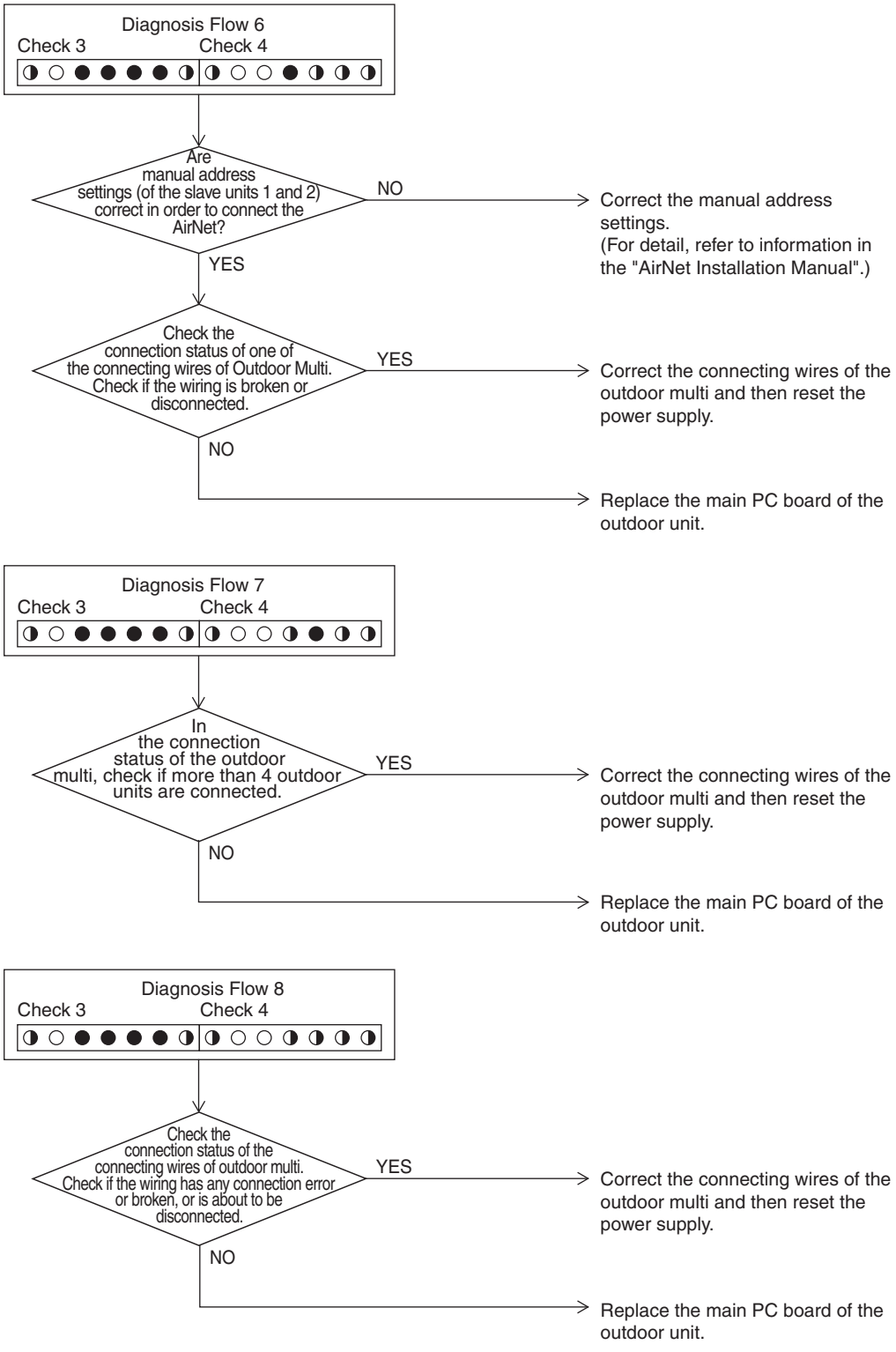
Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



3.51 "U8" Indoor Unit: Malfunction of Transmission between Main and Sub Remote Controls

Remote Control Display

U8

Applicable Models

All models of indoor units

Method of Malfunction Detection

In case of controlling with 2-remote control, check the system using microcomputer if signal transmission between indoor unit and remote control (main and sub) is normal.

Malfunction Decision Conditions

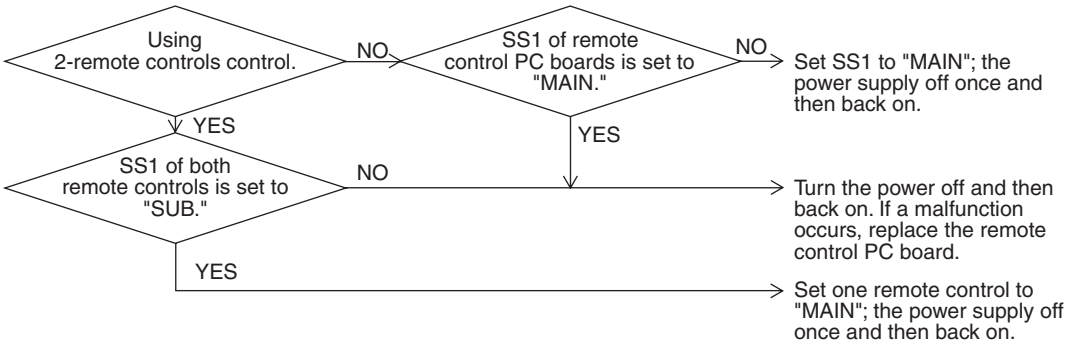
Normal transmission does not continue for specified period.

Supposed Causes

- Malfunction of transmission between main and sub remote control
- Connection between sub remote controls
- Defect of remote control PC board

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



(V2825)

3.52 "U9" Indoor Unit: Malfunction of Transmission between Indoor and Outdoor Units in the Same System

Remote Control Display

U9

Applicable Models

All models of indoor units
REYQ8P~48P

Method of Malfunction Detection

Detect malfunction signal for the other indoor units within the circuit by outdoor unit PC board.

Malfunction Decision Conditions

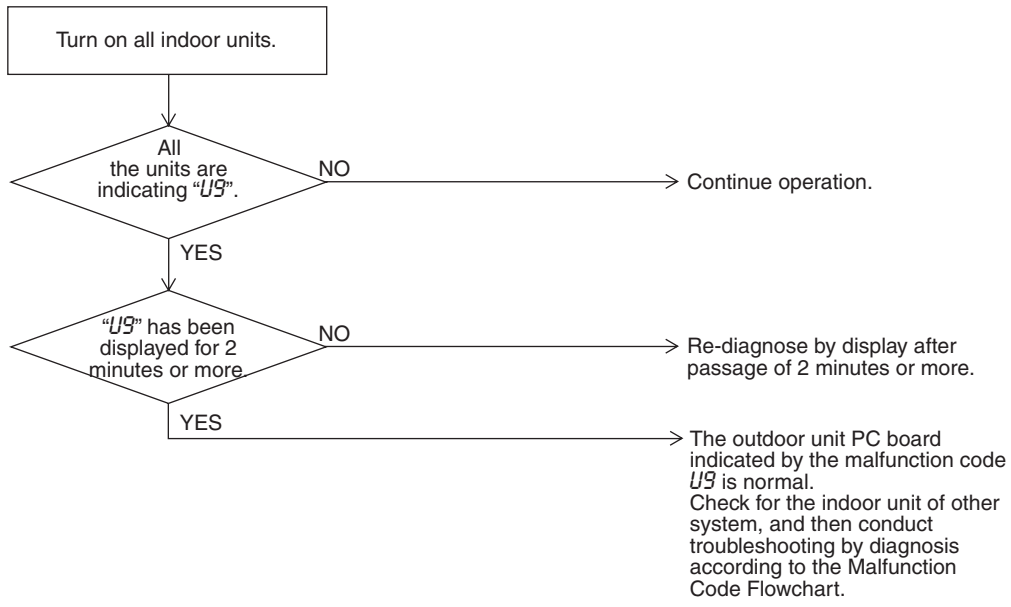
When the malfunction decision is made on any other indoor unit within the system concerned.

Supposed Causes

- Malfunction of transmission within or outside of other system
- Malfunction of electronic expansion valve in indoor unit of other system
- Defect of PC board of indoor unit in other system
- Improper connection of transmission wiring between indoor and outdoor unit

Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



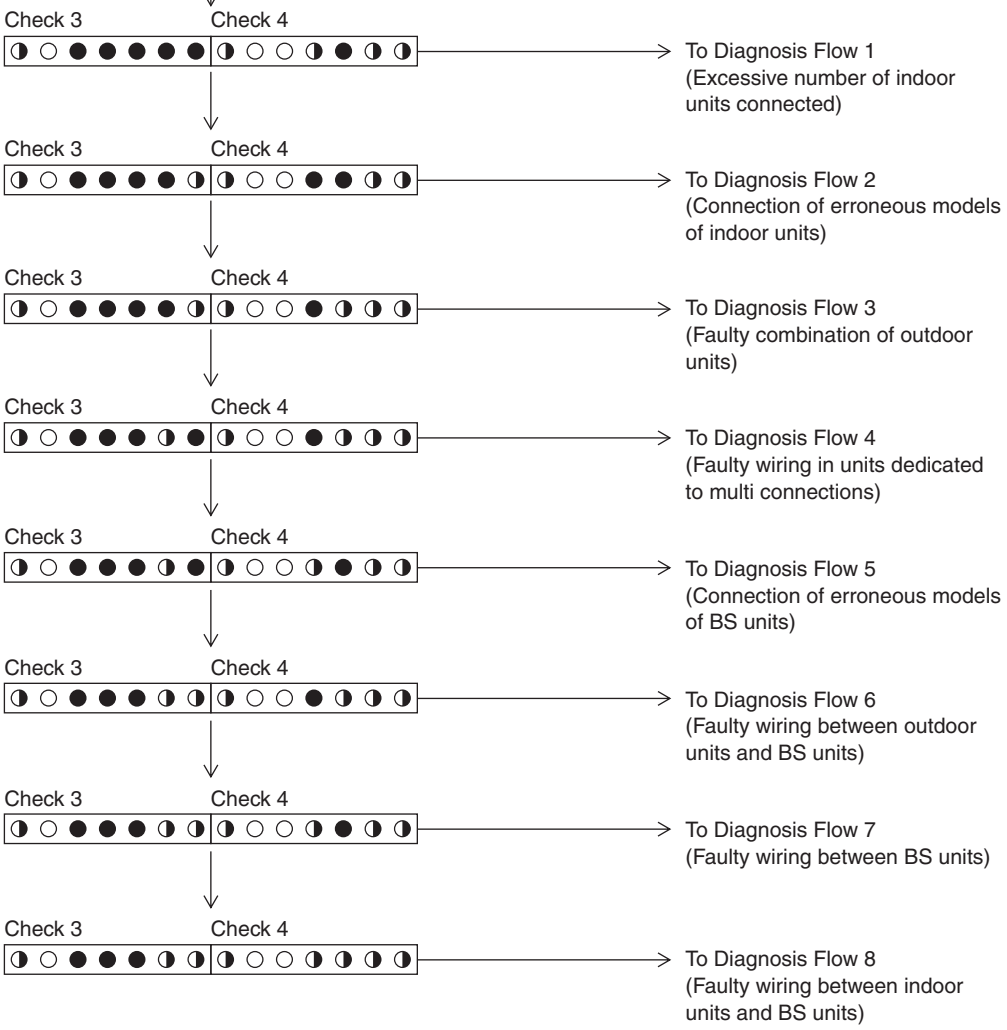
3.53 "UA" Improper Combination of Indoor and Outdoor Units, Indoor Units and Remote Control

Remote Control Display	UA
Applicable Models	All models of indoor unit REYQ8P~48P
Method of Malfunction Detection	A difference occurs in data by the type of refrigerant between indoor and outdoor units. The number of indoor units is out of the allowable range. Incorrect signals are transmitted among the indoor unit, BS unit, and outdoor unit.
Malfunction Decision Conditions	The malfunction decision is made as soon as either of the abnormalities aforementioned is detected.
Supposed Causes	■ Excess of connected indoor units ■ Defect of outdoor unit PC board (A1P) ■ Mismatching of the refrigerant type of indoor and outdoor unit. ■ Setting of outdoor PC board was not conducted after replacing to spare parts PC board.

Troubleshooting

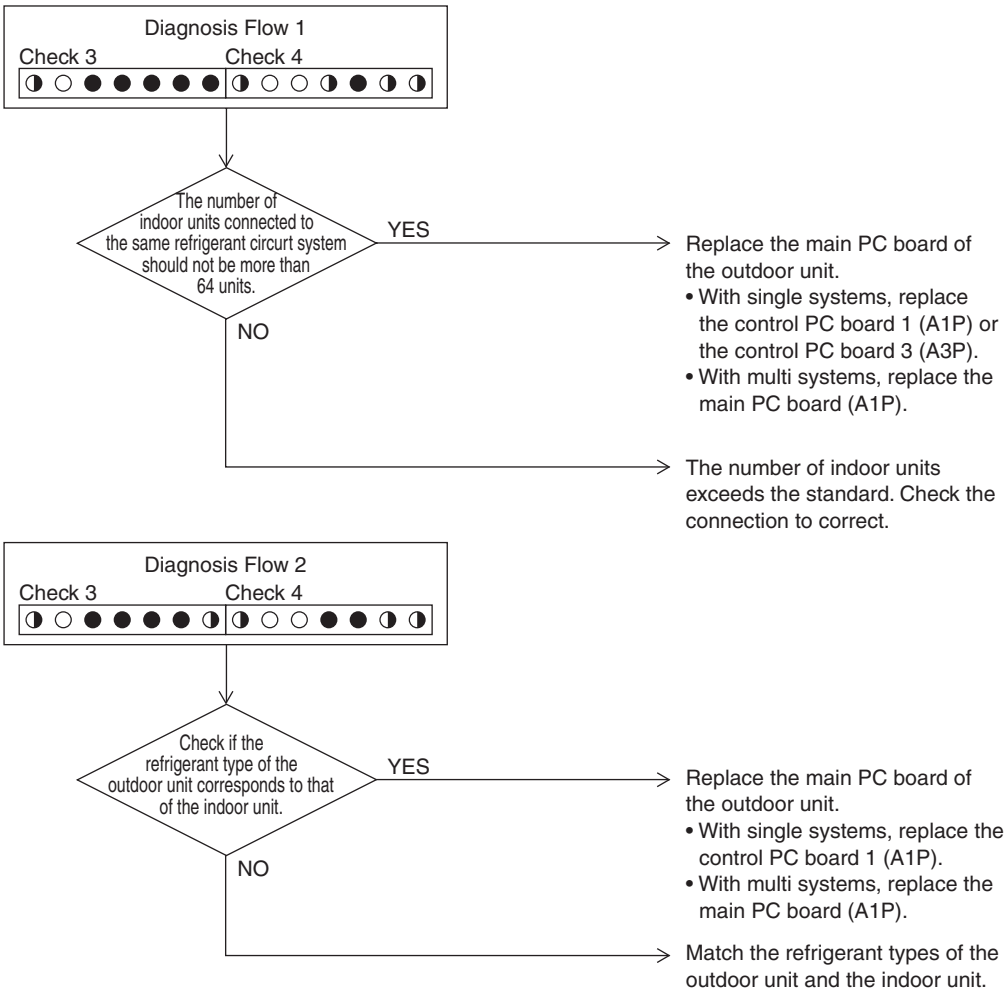
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

Check the LED lamps for "Check 3" corresponding to the malfunction code "*UA*" and for Check 4 in the monitor mode. (Refer to P228~229 for how to check.)



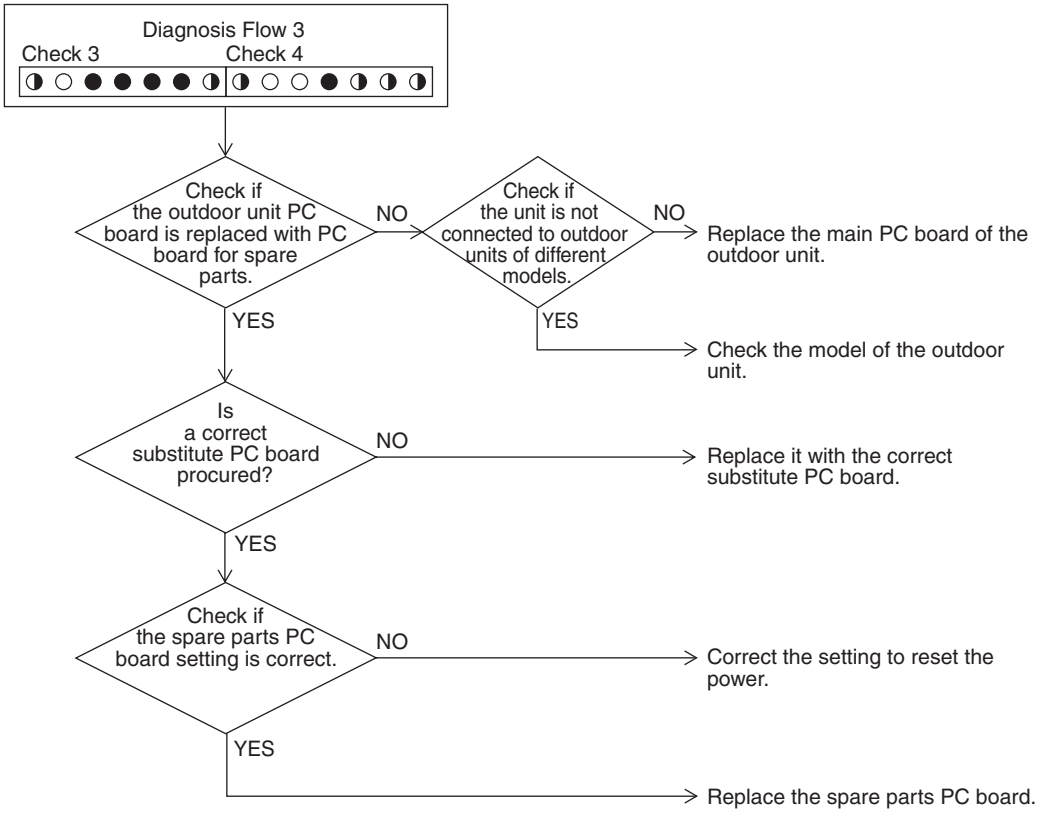
Troubleshooting

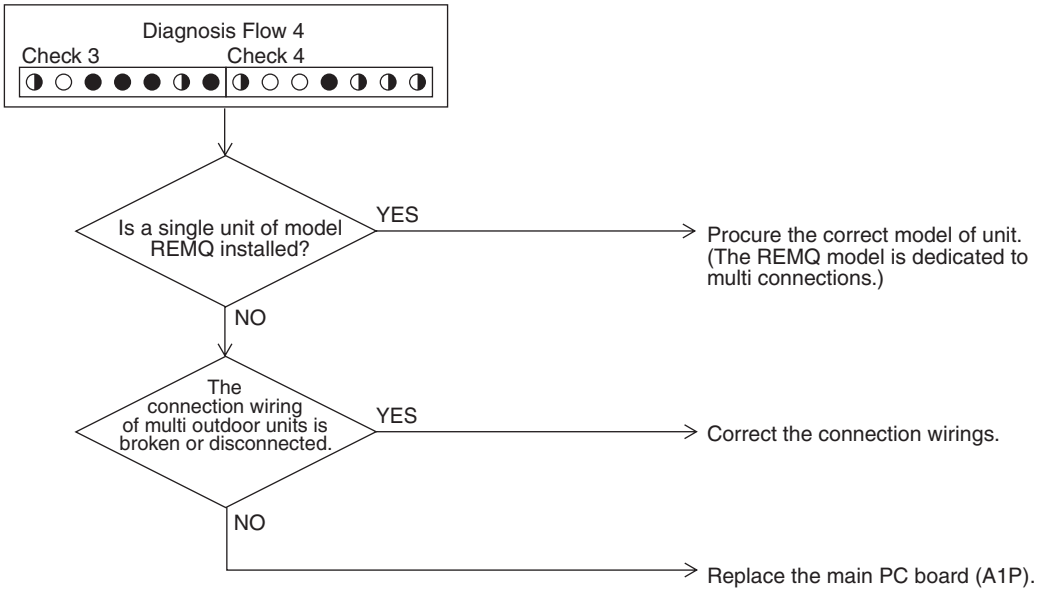
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Troubleshooting

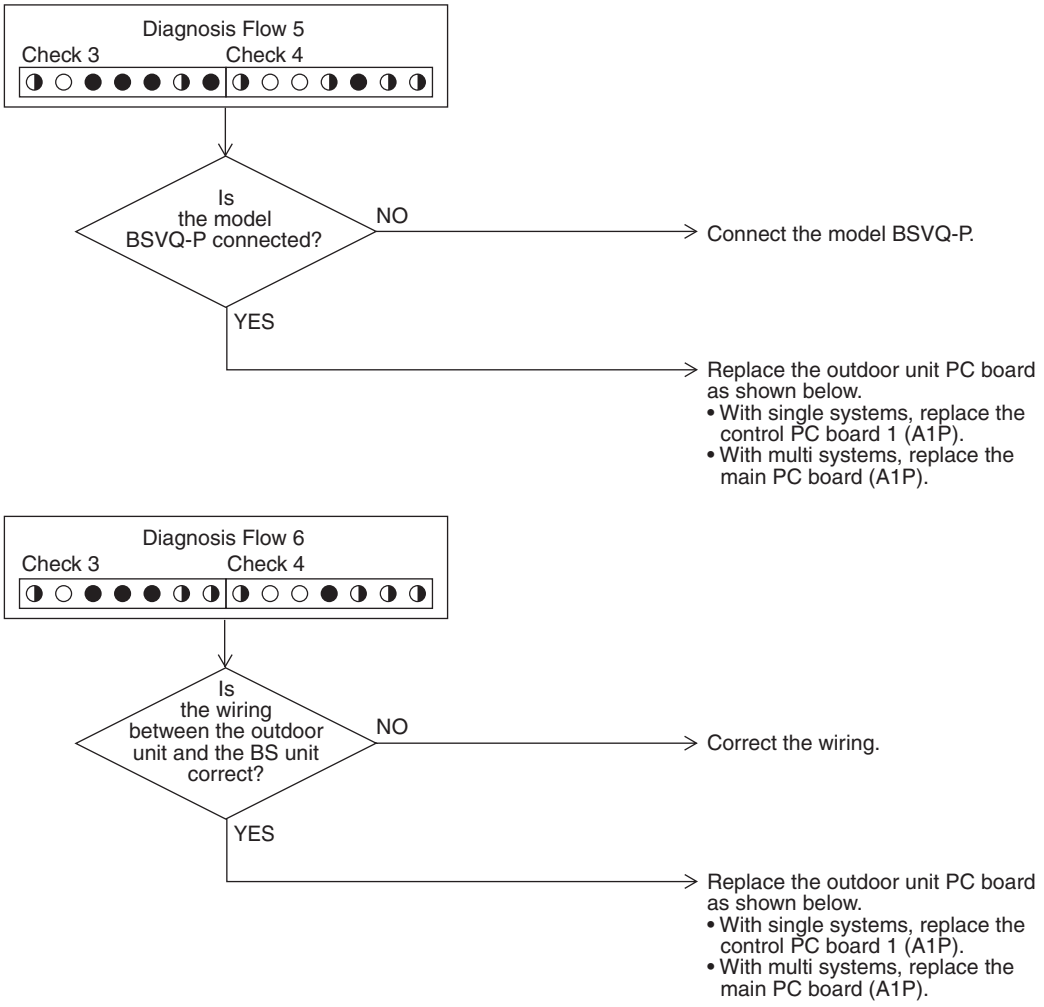
Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



Troubleshooting

Caution Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.