



Si20-701

# Pocket Manual

**Service Diagnosis  
SkyAir**

# SkyAir Series

1.	How to Handle Request for Maintenance .....	1
1.1	Flow Chart .....	1
2.	Troubleshooting Based on Equipment Condition .....	3
2.1	Troubleshooting Based on Equipment Condition .....	3
2.2	Equipment does not Operate .....	5
2.3	Fan Operates, but Compressor does not .....	10
2.4	Cooling/Heating Operation Starts but Stops Immediately .....	14
2.5	After Equipment Shuts Down, It cannot be Restarted for a While .....	16
2.6	Equipment Operates but does not Provide Cooling .....	19
2.7	Equipment Operates but does not Provide Heating .....	22
2.8	Equipment Discharges White Mist .....	25
2.9	Equipment Produces Loud Noise or Shakes .....	27
2.10	Equipment Discharges Dust .....	30
2.11	Remote Controller LCD Displays "88" .....	31
2.12	Swing Flap does not Operate .....	32
3.	Procedure of Self-Diagnosis by Remote Controller .....	34
3.1	The INSPECTION/TEST Button .....	34
3.2	Self-Diagnosis by Wired Remote Controller .....	36
3.3	Fault Diagnosis by Wireless Remote Controller .....	38
3.4	Remote Controller Display Malfunction Code and Contents .....	46
3.5	Troubleshooting by Remote Controller Display .....	62

Series	Indoor Unit	Outdoor Unit	Applicable models (Refer Page)
RZP-D series	FHYCP50-140D	RZP71-140D	iv
	FHYP45-125B		
	FUYP71-125B		
	FAYP71-140D		
RZ(Y)-L series	FHYC71-125K	RZ71L RZY71-125L	v
	FHYB71-125F		
	FAY71/100FA		
	FVY100/125L		
R(Y)-LU series	FHYC35-140K	R(Y)71-140LU	vi
	FHYK71FJ		
	FHYB71-125F		
	FUY71-125FJ		
	FHY35-125B		
	FAY71L		
	FAY71/100FA		
	FVY71-125LA		
	FDYM03-06FA		
	FDY06KA		
	FDY71-160KF		
	FDYB71KA		
RY-KU RY-F RY-G (50Hz) series	FHYC35-140K	RY35F RY50/60G(A) RY71-140KU	vii
	FHYK35-71FJ		
	FHYB35-125F		
	FUY71-125FJ		
	FHY35-125B		
	FAY71/100FA		
	FVY71-125FL		
RY-G (60Hz) RY-FU RY-KU series	FHYC50-140K	RY50/60G RY71-125FU RY140KU	viii
	FHYB71-125F		
	FHY50-125B		
	FAY71-100F		
	FVY71-125L		

Series	Indoor Unit	Outdoor Unit	Applicable models (Refer Page)
R-NU series	FDMG26-56NUV	R18-36NUV R26-48NUY R51/56NUV	ix
	FDBT18-30NUV		
	FDBG18-26NUV		
	FHC18-48NUV		
	FH21-48NUV		
RZQ-K series	FCQ125/140K	RZQ125/140K	x
RZQ-P RZQ-F RZQ-CV series	FCQ100-140P	RZQ100-160P RZQ71F,90C,100F	xi
	FHQ100/125P		
	FDYQ100-160M		
	FCQ71DA		
	FHQ71BV		
	FAQ71BV,90C,100BV		
RZQ-B RZQS-B7 RZQ-C7 RZQS-C7 series	FCQH71-140C7	RZQ71-140B RZQ100-140C7 RZQS71-100B7 RZQS125/140C7	xii
	FCQ35-140C7		
	FFQ35-60BB		
	FBQ35-125B		
	FHQ35-125BU		
	FUQ71-125BU		
	FAQ71/100BU		
	FDQ125B7		
RZQ200, 250C series	FDQ125-250B	RZQ200/250C	xiii
	FBQ50-125B		
	FCQ50-125C		
	FHQ60-125BUV		
	FUQ71-125BUV		
	FAQ71-125BUV		

## Applicable Models

### 1. RZP-D Series(50/60Hz)

#### Indoor Units

FAYP71BV1	FHYCP71DVE	FHYCP125DVE	FHYP60BV1	FUYP71BV1
FAYP100BV1	FHYCP71DVL	FHYCP125DVL	FHYP71BV1	FUYP100BV1
FHYCP50DVE	FHYCP100DVE	FHYCP140DVL	FHYP100BV1	FUYP125BV1
FHYCP60DVE	FHYCP100DVL	FHYP45BV1	FHYP125BV1	

#### Outdoor Units

RZP71DV1	RZP100DV1	RZP125DTAL	RZP140DTAL
RZP71DVAL	RZP100DVAL	RZP125DV1	

## 2. RZ(Y)-L Series(50/60Hz)

### Indoor Units

FAY71FAVE	FHYB71FVAL	FHYC71KVE	FVY100LVE
FAY100FAVE	FHYB100FVAL	FHYC100KVE	FVY125LVE
FHYB71FV1	FHYB125FVAL	FHYC125KVE	

### Outdoor Units

RZ71LV1
RZY100LTAL
RZY125LTAL
RZY71LV1
RZY71LVAL

### 3. R(Y)-LU Series(50/60Hz)

#### Indoor Units

FAY71LVE	FHY71BVE	FHYB125FV1	FHYC100KVE	FUY100FJV1
FAY100FAVE	FHY100BVE	FHYC35KVE	FHYC125KVE	FUY125FJV1
FHY35BVE	FHY125BVE	FHYC50KVE	FHYC140KVE	FVY100LAVE
FHY50BVE	FHYB71FV1	FHYC60KVE	FHYK71FJV1	FVY125LAVE
FHY60BVE	FHYB100FV1	FHYC71KVE	FUY71FJV1	FVY71LAVE

#### Outdoor Units

R100LUV1	R125LUY1	R140LUYAL	RY71LUY1
R100LUVAL	R125LUYAL	R71LUV1	RY100LUY1
R100LUY1	R140LUTAL	R71LUVAL	RY125LUY1
R125LUTAL	R140LUY1	R71LUY1	RY140LUY1

#### 4. RY-KU, RY-F, RY-G Series(50Hz)

##### Indoor Units

FAY71FAVE	FHY125BVE	FHYC35KVE	FHYK35FJV1	FVY71LVE
FAY100FAVE	FHYB35FV1	FHYC50KVE	FHYK45FJV1	FVY100LVE
FHY35BVE	FHYB45FV1	FHYC60KVE	FHYK60FJV1	FVY125LVE
FHY50BVE	FHYB60FV1	FHYC71KVE	FHYK71FJV1	
FHY60BVE	FHYB71FV1	FHYC100KVE	FUY71FJV1	
FHY71BVE	FHYB100FV1	FHYC125KVE	FUY100FJV1	
FHY100BVE	FHYB125FV1	FHYC140KVE	FUY125FJV1	

##### Outdoor Units

RY100KUV1
RY125KUY1
RY140KUY1
RY35FV1A
RY50GV1A
RY60GV1A
RY71KUY1



## 5. RY-G, RY-FU, RY-KU Series(50/60Hz)

## Indoor Units

FA71F	FHC100K	FHY125FU	FHYC125FU	FV125F
FA100F	FHC125FU	FHYB71FVAL	FHYC125KVE	FVY71F
FAY71FVE	FHC125K	FHYB100FVAL	FHYC140KVE	FVY71LVE
FAY100FVE	FHY50BVE	FHYB125FVAL	FUY71FJ	FVY100F
FH71FU	FHY60BVE	FHYC50KVE	FUY100FJ	FVY100LVE
FH100FU	FHY71BVE	FHYC60KVE	FUY125FJ	FVY125F
FH125FU	FHY71FU	FHYC71FU	FV71F	FVY125LVE
FHC71FU	FHY100BVE	FHYC71KVE	FV71L	
FHC71K	FHY100FU	FHYC100FU	FV100F	
FHC100FU	FHY125BVE	FHYC100KVE	FV100L	

## Outdoor Units

R100FU	RY100FU	RY125FUTAL	RY140KUYAL	RY60GVAL
R125FU	RY100FUVAL	RY140KUTAL	RY140KUYALK	RY71FUVAL
R71FU	RY125FU	RY140KUTALK	RY50GVAL	

## 6. R-NU Series(50Hz)

## Indoor Units

FDBG18NUV1	FDMG26NUV15	FDMG56NUV1	FH42NUV1	FHC26NUV1
FDBG18NUV15	FDMG30NUV2S	FDMG56NUV2S	FH42NUV2S	FHC26NUV15
FDBG21NUV1	FDMG36NUV1	FH21NUV1	FH48NUV1	FHC30NUV2S
FDBG21NUV15	FDMG36NUV2S	FH21NUV15	FH48NUV2S	FHC36NUV1
FDBG26NUV1	FDMG42NUV1	FH24NUV2S	FHC18NUV1	FHC36NUV2S
FDBG26NUV15	FDMG42NUV2S	FH26NUV1	FHC18NUV15	FHC42NUV1
FDBT18NUV2S	FDMG48NUV1	FH26NUV15	FHC18NUV2S	FHC42NUV2S
FDBT24NUV2S	FDMG48NUV2S	FH30NUV2S	FHC21NUV1	FHC48NUV1
FDBT30NUV2S	FDMG51NUV1	FH36NUV1	FHC21NUV15	FHC48NUV2S
FDMG26NUV1	FDMG51NUV2S	FH36NUV2S	FHC24NUV2S	

## Outdoor Units

R18NUV1	R24NUV2S	R30NUV2S	R36NUY2S	R51NUY1
R18NUV15	R26NUV1	R30NUY2S	R42NUY1	R51NUY2S
R18NUV2S	R26NUV15	R36NUV1	R42NUY2S	R56NUY1
R21NUV1	R26NUY1	R36NUV2S	R48NUY1	R56NUY2S
R21NUV15	R26NUY15	R36NUY1	R48NUY2S	

## 7. RZQ-K Series(60Hz)

### Indoor Units

FCQ125KVLT
------------

FCQ140KVLT
------------

### Outdoor Units

RZQ125KTLT
------------

RZQ140KTLT
------------

## 8. RZQ-F, RZQ-P, RZQ-C Series(50Hz)

### Indoor Units

FAQ100BVV1B	FCQ100PV4A	FCQ71DAV3B	FDYQ160MV1	FHQ71BVV1B
FAQ71BVV1B	FCQ125PV4A	FDYQ100MV1	FHQ100PV4A	
FAQ90CV4A	FCQ140PV4A	FDYQ125MV1	FHQ125PV4A	

### Outdoor Units

RZQ100FV4A
RZQ100PV4A
RZQ125PV4A
RZQ160PV4A
RZQ71FV4A
RZQ90CV4A

## 9. RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series(50Hz) Indoor Units

FAQ100BUV1B	FBQ71B7V3B	FCQ71C7V3B	FFQ35BV1B	FHQ60BUV1B
FAQ71BUV1B	FCQ100C7V3B	FCQH100C7V3B	FFQ50BV1B	FHQ71BUV1B
FBQ100B7V3B	FCQ125C7VEB	FCQH125C7VEB	FFQ60BV1B	FUQ100BUV1B
FBQ125B7V3B	FCQ140C7V3B	FCQH140C7V3B	FHQ100BUV1B	FUQ125BUV1B
FBQ35B7V1	FCQ35C7V3B	FCQH71C7V3B	FHQ125BUV1B	FUQ71BUV1B
FBQ50B7V1	FCQ50C7V3B	FCQH71C7VEB	FHQ35BUV1B	
FBQ60B7V1	FCQ60C7VEB	FDQ125B7V3B	FHQ50BUV1B	

## Outdoor Units

RZQ100B8W1B	RZQ125C7V1B	RZQ71B9V3B	RZQS140C7V1B
RZQ100C7V1B	RZQ140B8W1B	RZQS100B7V3B	RZQS71B7V3B
RZQ125B8W1B	RZQ140C7V1B	RZQS125C7V1B	

## 10.RZQ200, 250C Series(50Hz)

### Indoor Units

FAQ100BUV1B	FBQ60B7V1	FCQ60C7VEB	FFQ50BV1B	FHQ100BUV1B
FAQ71BUV1B	FBQ71B7V3B	FCQ71C7VEB	FFQ60BV1B	FHQ125BUV1B
FBQ100B7V3B	FCQ100C7VEB	FDQ125B7V3B	FHQ50BUV1B	FUQ100BUV1B
FBQ125B7V3B	FCQ125C7VEB	FDQ200B7V3B	FHQ60BUV1B	FUQ125BUV1B
FBQ50B7V1	FCQ50C7VEB	FDQ250B7V3B	FHQ71BUV1B	FUQ71BUV1B

### Outdoor Units

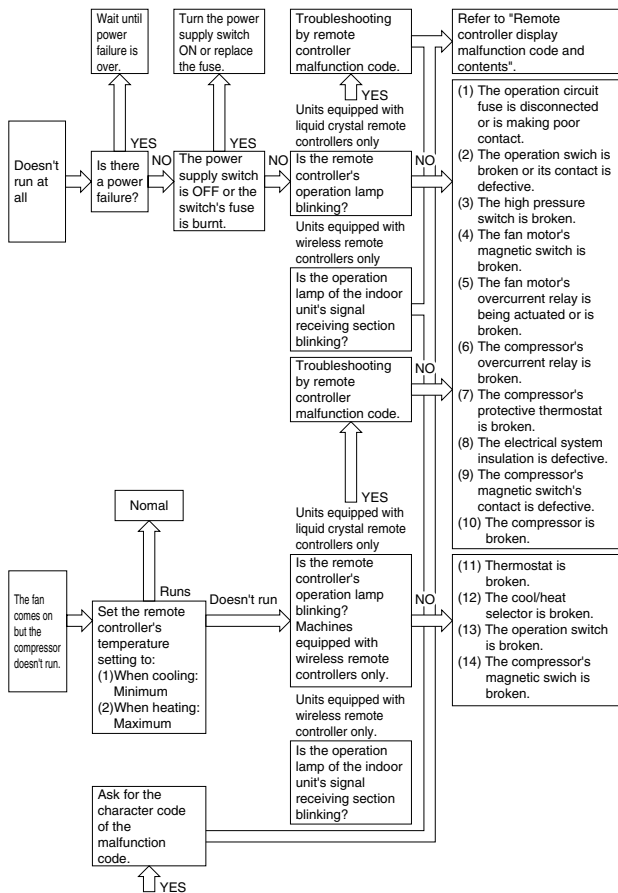
RZQ200C7Y1B
RZQ250C7Y1B



# 1. How to Handle Request for Maintenance

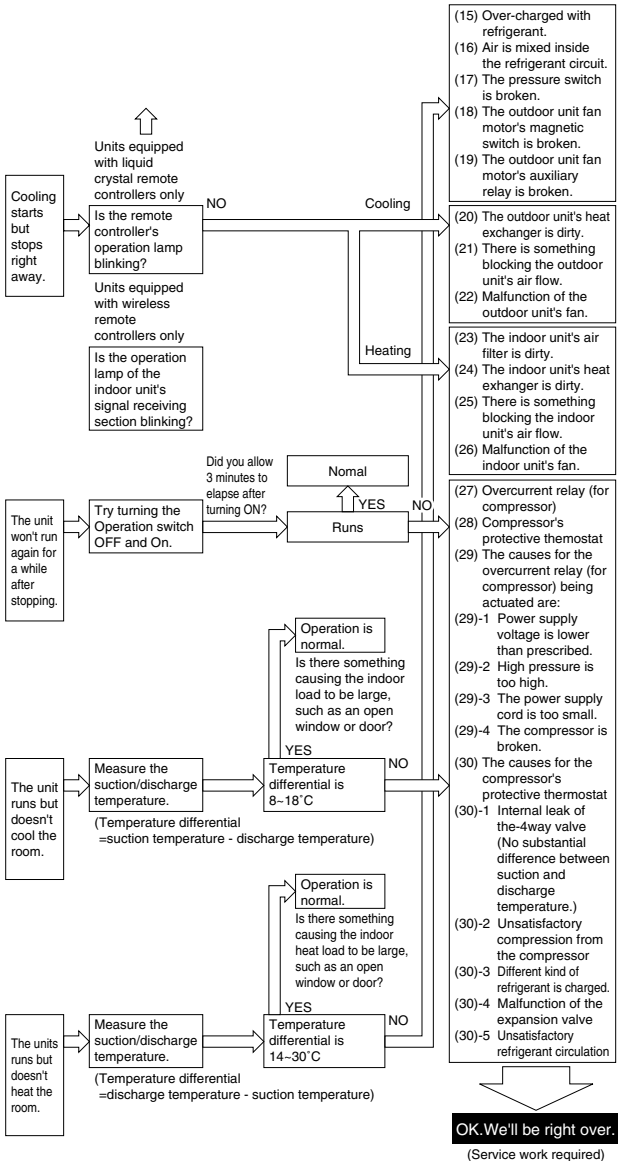
## 1.1 Flow Chart

Find out the situation according to the following procedure when there is a request for service from the customer.





# How to Handle Request for Maintenance



## 2. Troubleshooting Based on Equipment Condition

### 2.1 Troubleshooting Based on Equipment Condition

	Equipment Condition	Remedy
1	Equipment does not operate.	See 5
2	Fan operates, but compressor does not.	See 10
3	Cooling/heating operation starts but stops immediately.	See 14
4	After equipment shuts down, it cannot be restarted for a while.	See 16
5	Equipment operates but does not provide cooling.	See 19
6	Equipment operates but does not provide heating.	See 22
7	Equipment discharges white mist.	See 25
8	Equipment produces loud noise or shakes.	See 27
9	Equipment discharges dust.	See 30
10	Remote controller LCD displays "88".	See 31
11	Swing flap does not operate.	See 32
12	Equipment emits odor.	Room smell and cigarette odors accumulated inside the indoor unit are discharged with air. Inside of the indoor unit must be cleaned.
13	Flap operates when power is turned on.	It is normal. The flap initializes for accurate positioning.
14	Change of operation mode causes flap to move.	It is normal. There is a control function that moves the flap when operation mode is changed.
15	Fan operates in "M" mode during heating even if remote controller is set to "Low".	It is normal. It is caused by the activation of the overload control (airflow shift control).
16	Flap automatically moves during cooling.	It is normal. It is caused by the activation of the dew prevention function or ceiling soiling prevention function.

	Equipment Condition	Remedy
17	Indoor unit fan operates in "L" mode for 1 minute in microcomputer-controlled dry mode even if compressor is not operating.	It is normal. The monitoring function forcibly operates the fan for one minute.
18	In simultaneous ON/OFF multi-system setup, indoor unit (sub) does not operate in sync with the other indoor unit (main). (Flat, fan, etc.)	It is normal. It is caused by a signal transmission lag.
19	Indoor unit fan operates after heating operation stops.	It is normal. The fan operates in the "LL" mode for 60 to 100 seconds to dissipate the residual heat in the heater.
20	Drain pump operates when equipment is not operating.	It is normal. The drain pump continues to operate for several minutes after equipment is turned off.
21	Horizontal wing sends air to different directions in cooling and heating even if it is set to the same position.	It is normal. The airflow direction in cooling/dry operation is different from that in heating/fan operation.
22	Flap remains horizontal even if it is set to Swing.	It is normal. The flap does not swing in the thermostat OFF mode.
23	The group control remote controller is incapable of setting to remote controller thermostat.	It is normal. Remote controller thermostat setting is unavailable during group control.
24	During operation with a remote controller thermostat, the thermostat turns OFF even before the remote controller temperature reaches the setting.	It is normal. In some cases, it is controlled by preset temperature and suction temperature (body thermostat).
25	When a malfunction occurs in a unit equipped with individual remote controllers during one remote controller group control, individual remote controller address display shows 0 regardless of actual address setting.	It is normal. The address display of individual remote controllers is always 0.

## 2.2 Equipment does not Operate

### Applicable Models

All models of SkyAir series

### Possible Causes

- Fuse blown or disorder of contact in operation circuit
- Faulty operation switch or contact point
- Faulty high pressure switch
- Faulty magnetic switch for fan motor
- Activation or fault of overcurrent relay for fan motor
- Faulty overcurrent relay for compressor
- Faulty compressor protection thermostat
- Insufficient insulation in electric system
- Faulty contact point of magnetic switch for compressor
- Malfunction of compressor

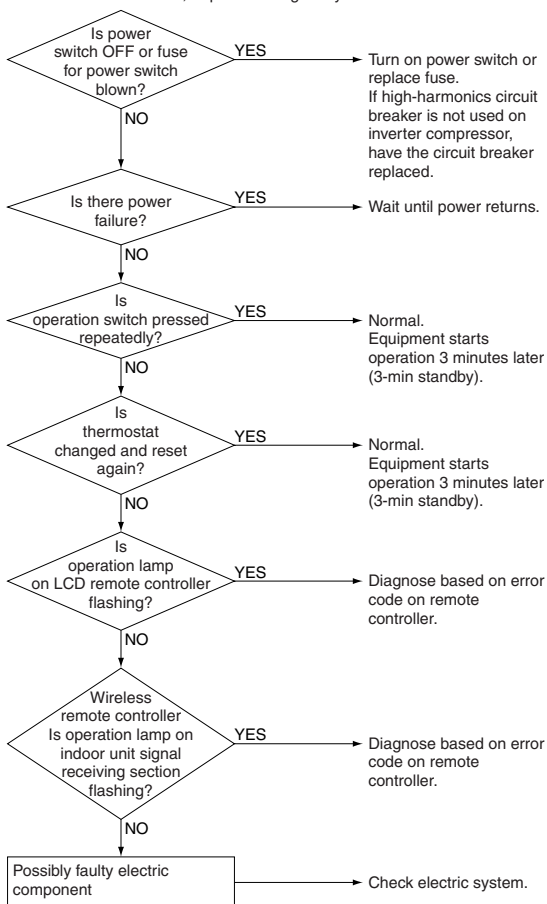
## Troubleshooting

[All models except R(Y)-LU or R-NU series]



**Caution**

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

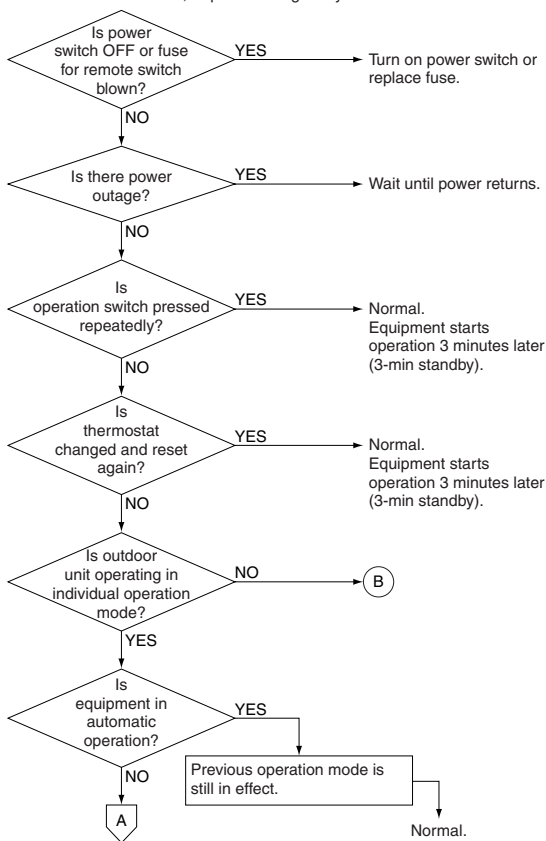


## Troubleshooting [R(Y)-LU Series]



**Caution**

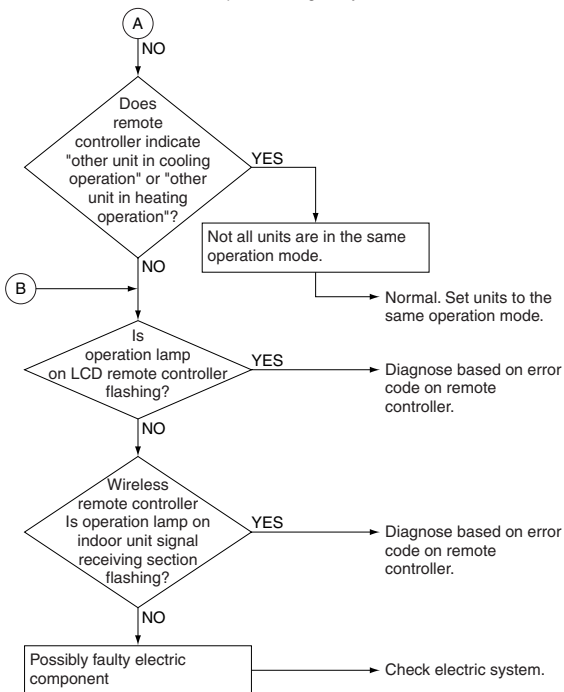
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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

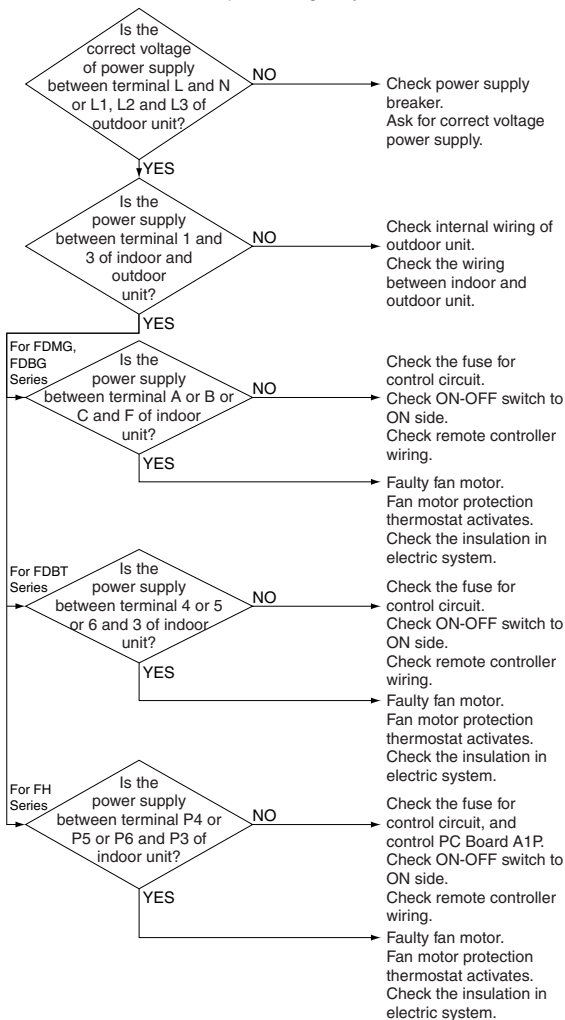


## Troubleshooting [R-NU Series - except FHC-NU]



**Caution**

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





## **2.3 Fan Operates, but Compressor does not**

### **Applicable Models**

All models of SkyAir series

### **Possible Causes**

- Faulty thermistor
- Faulty indoor/outdoor unit PC board
- Faulty magnetic switch
- Faulty power transistor
- Faulty compressor

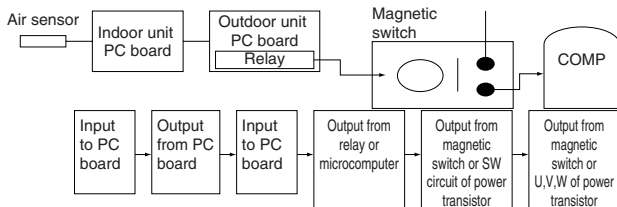
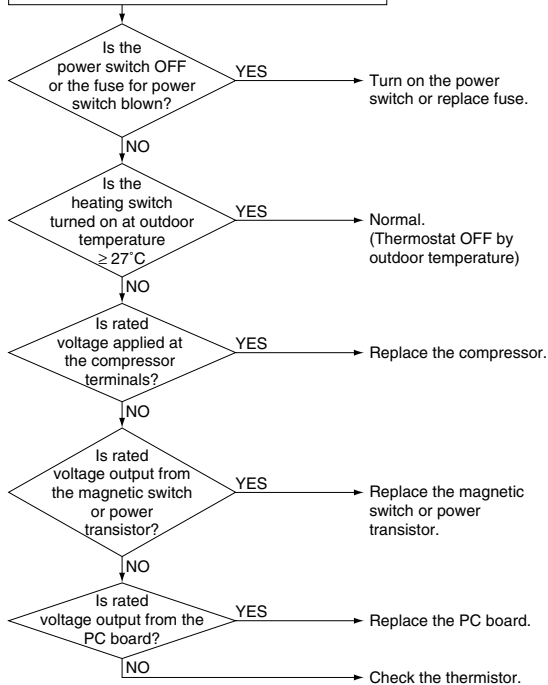
## Troubleshooting

### [All models except R(Y)-LU or R-NU series]



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

- Indoor unit fan runs at set airflow rate.
- (In cooling operation)  
When air thermistor ambient temperature is higher than set temperature
- (In heating operation)  
When air thermistor ambient temperature is lower than set temperature



## Possible Causes

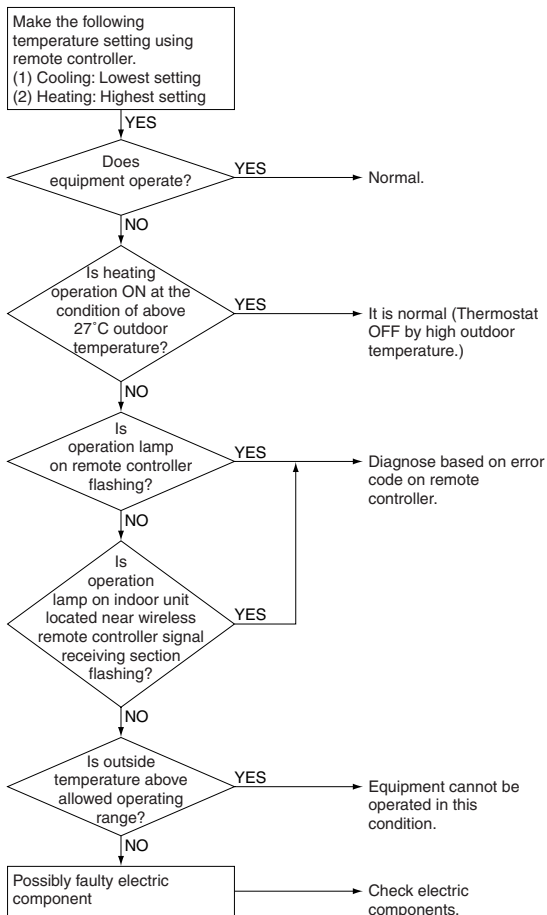
- Faulty remote controller
- Faulty magnetic switch for compressor

## Troubleshooting [R(Y)-LU Series]



### Caution

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



## Possible Causes

- Faulty remote controller
- Faulty magnetic switch for compressor
- Faulty capacitor for compressor or fan motor

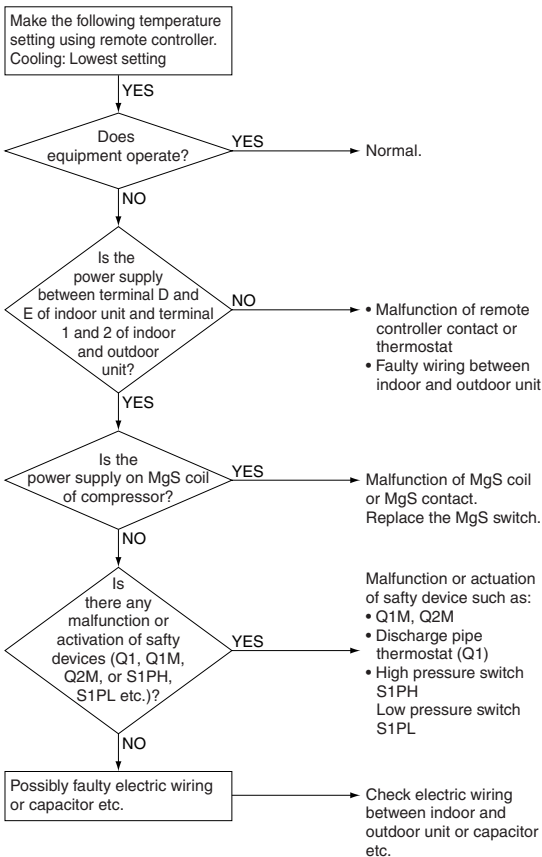
## Troubleshooting

### [R-NU Series - except FHC-NU]



**Caution**

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



## 2.4 Cooling/Heating Operation Starts but Stops Immediately

### Applicable Model

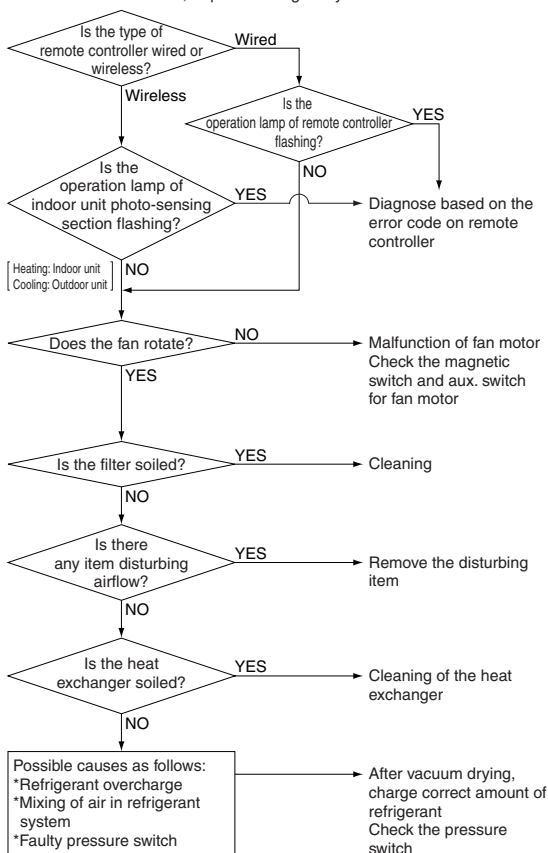
All models of SkyAir series

### Possible Cause

- Excess charge of refrigerant
- Air intrudes into refrigerant system
- Faulty pressure switch
- Faulty magnetic switch for outdoor unit fan motor
- Faulty aux. relay for outdoor unit fan motor
- Soiled heat exchanger of outdoor unit
- There is an interfering item in air flow of outdoor unit
- Malfunction of outdoor unit fan
- Soiled air filter of indoor unit
- Soiled heat exchanger of indoor unit
- There is some interfering item in airflow of indoor unit
- Malfunction of indoor unit fan

## Troubleshooting

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



## 2.5 After Equipment Shuts Down, It cannot be Restarted for a While

### Applicable Model

All models of SkyAir series

### Possible Cause

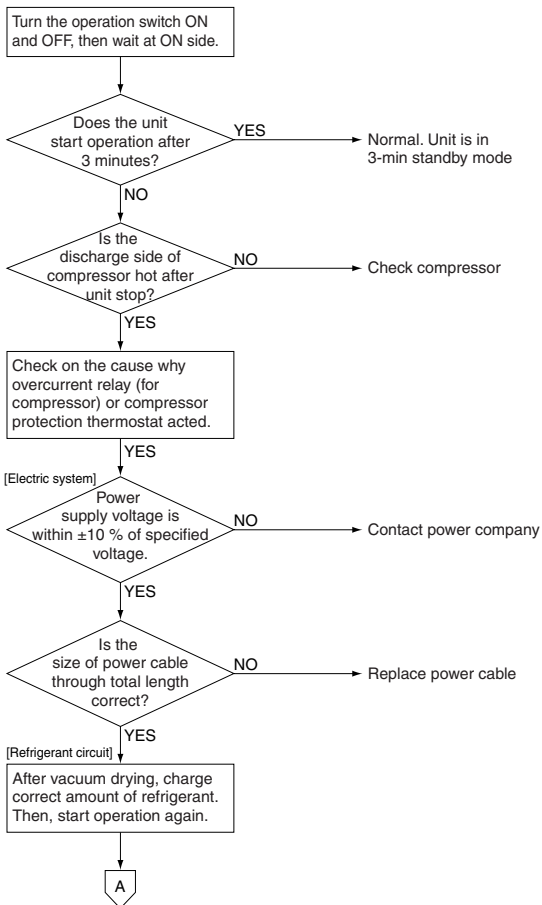
- Overcurrent relay (for compressor)
- Compressor protection thermostat
- Overcurrent relay may act due to the following reasons
  - Lower voltage of power supply
  - Excess level of high pressure
  - Insufficient size of power cable
  - Malfunction of compressor
- Compressor protection thermostat may act due to the following reasons
  - Internal leakage of four-way valve (There is no difference between suction and discharge temperature)
  - Insufficient compression of compressor
  - Incorrect refrigerant
  - Faulty expansion valve
  - Insufficient circulation of refrigerant

## Troubleshooting



**Caution**

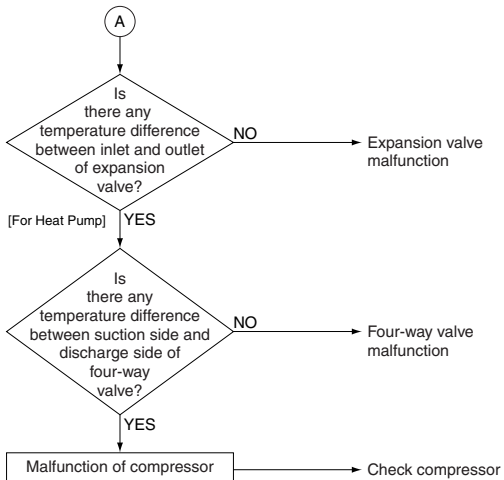
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



## 2.6 Equipment Operates but does not Provide Cooling

### Applicable Model

All models of SkyAir series

### Possible Cause

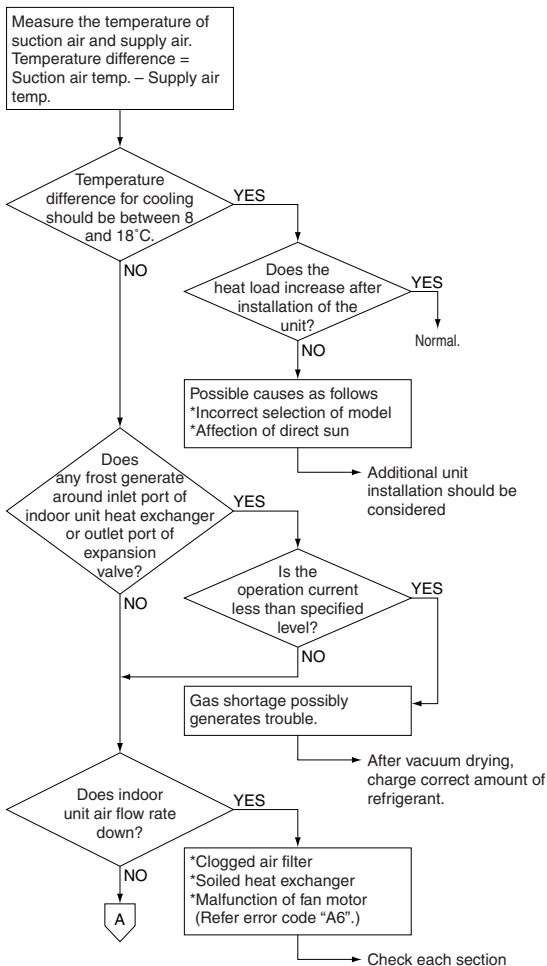
- Overcurrent relay (for compressor)
- Compressor protection thermostat
- Overcurrent relay may act due to the following reasons
  - Lower voltage of power supply
  - Excess level of high pressure
  - Insufficient size of power cable
  - Malfunction of compressor
- Compressor protection thermostat may act due to the following reasons
  - Internal leakage of four-way valve (There is no difference between suction and discharge temperature)
  - Insufficient compression of compressor
  - Incorrect refrigerant
  - Faulty expansion valve
  - Insufficient circulation of refrigerant

## Troubleshooting



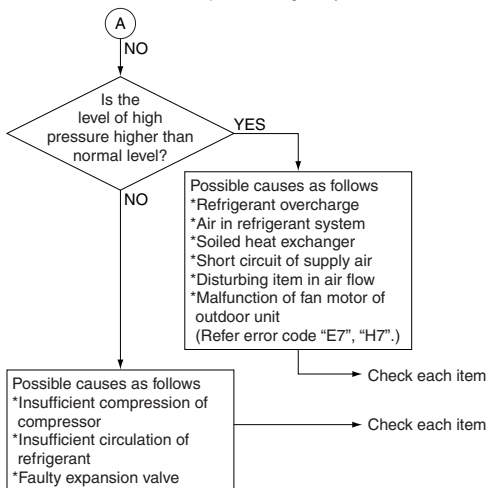
**Caution**

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



**Caution**

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



## 2.7 Equipment Operates but does not Provide Heating

### Applicable Model

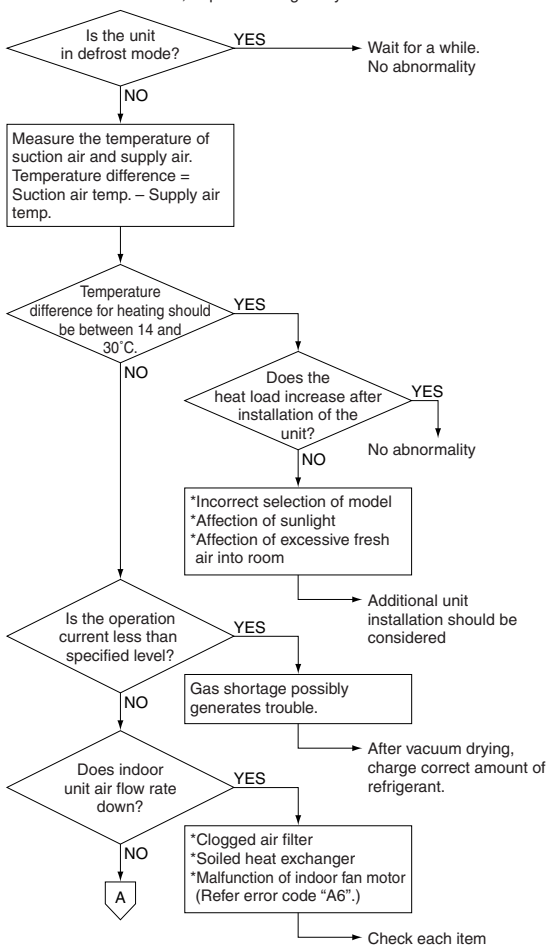
All models of SkyAir series

### Possible Cause

- Excess charge of refrigerant
- Air intrudes into refrigerant system
- Faulty pressure switch
- Faulty magnetic switch for outdoor unit fan motor
- Faulty aux. relay for outdoor unit fan motor
- Soiled heat exchanger of outdoor unit
- There is an interfering item in air flow of outdoor unit
- Malfunction of outdoor unit fan
- Soiled air filter of indoor unit
- Soiled heat exchanger of indoor unit
- There is some interfering item in airflow of indoor unit
- Malfunction of indoor unit fan

## Troubleshooting

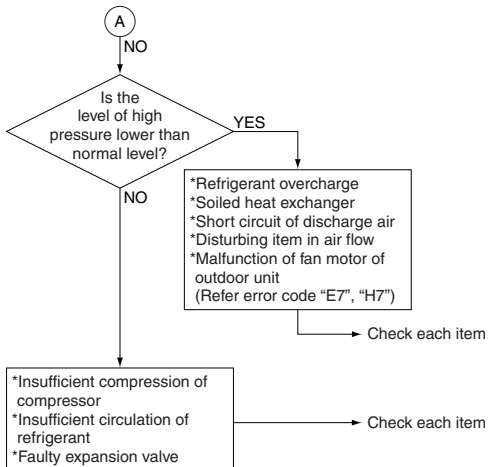
**Caution** Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



## 2.8 Equipment Discharges White Mist

### Applicable Model

All models of SkyAir series

### Possible Cause

- Humid installation site
- Installation site is dirty and with dense oil mists.
- Soiled heat exchanger
- Clogged air filter
- Malfunction of fan motor

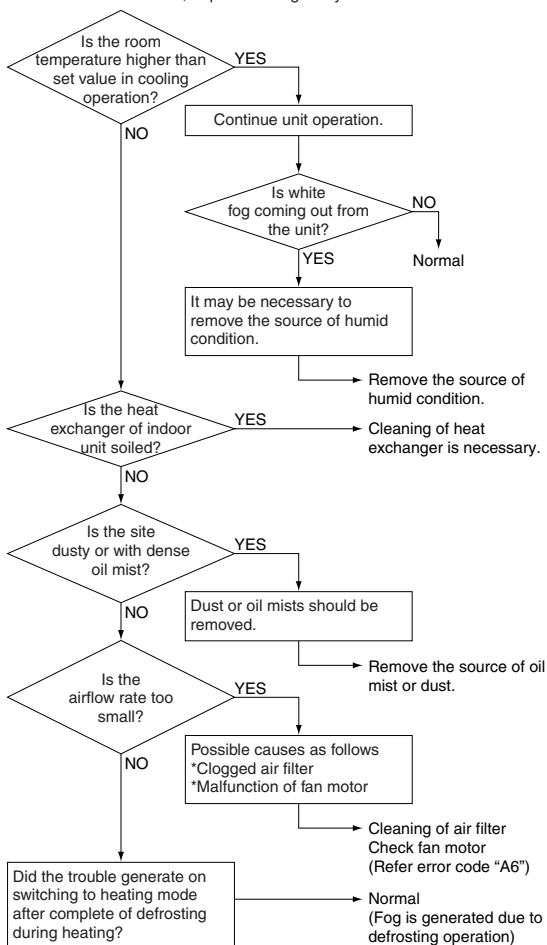


## Troubleshooting



**Caution**

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



## 2.9 Equipment Produces Loud Noise or Shakes

### Applicable Model

All models of SkyAir series

### Supposed Causes

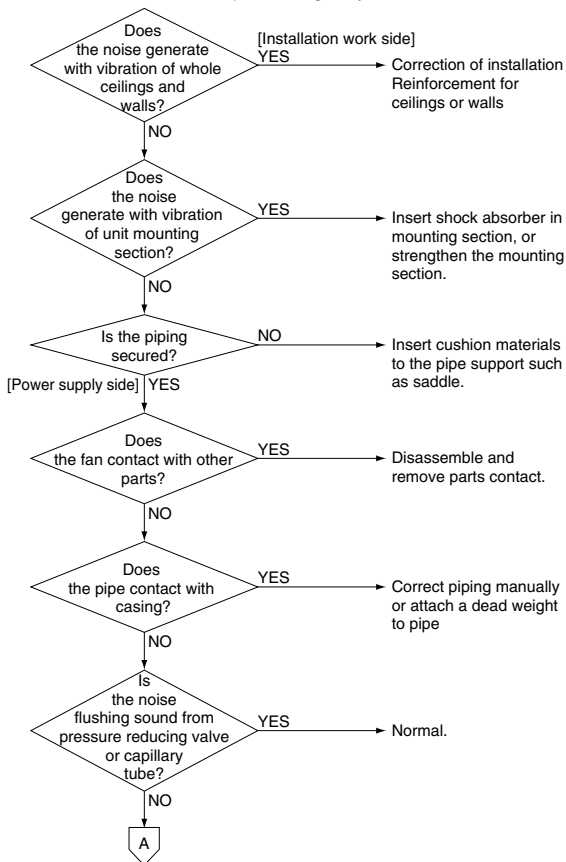
- Faulty installation
- Excess charge of refrigerant
- Air intrudes into refrigerant system
- Flushing noise due to refrigerant shortage. (Sound of shoo...)

## Troubleshooting



**Caution**

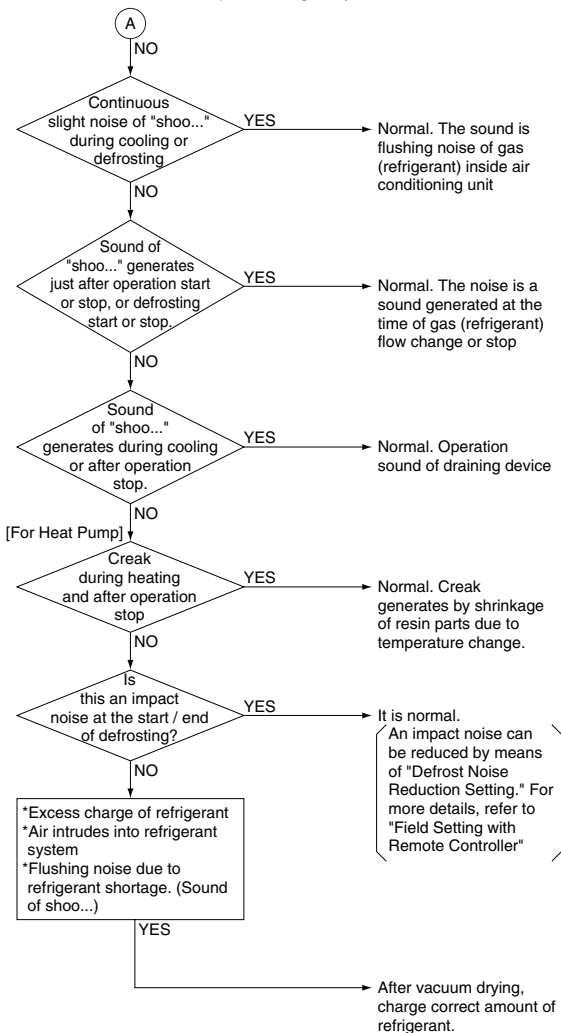
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



## 2.10 Equipment Discharges Dust

### Applicable Model

All models of SkyAir series

### Possible Cause

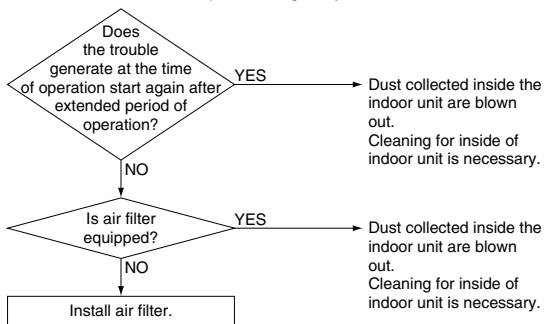
- Carpet spread room
- Animal's hair

### Troubleshooting



**Caution**

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



## 2.11 Remote Controller LCD Displays "88"

### Applicable Model

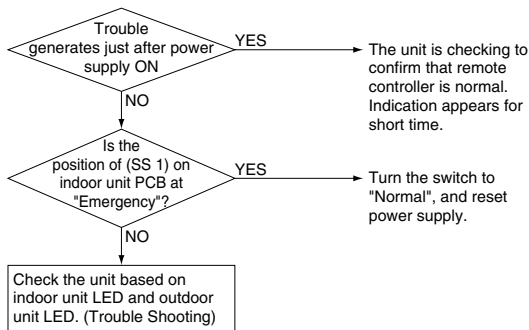
All models of SkyAir series

### Troubleshooting



**Caution**

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



## 2.12 Swing Flap does not Operate

### Applicable Models

RZP-D Series

RZQ200, 250C Series (FAQ, FBQ, FHQ, FUQ)

### Method of Malfunction Detection

Utilizes ON/OFF of the limit switch when the motor turns.

### Malfunction Decision Conditions

When ON/OFF of the micro switch for positioning cannot be reversed even through the swing flap motor for a specified amount of time (about 30 seconds).

### Possible Cause

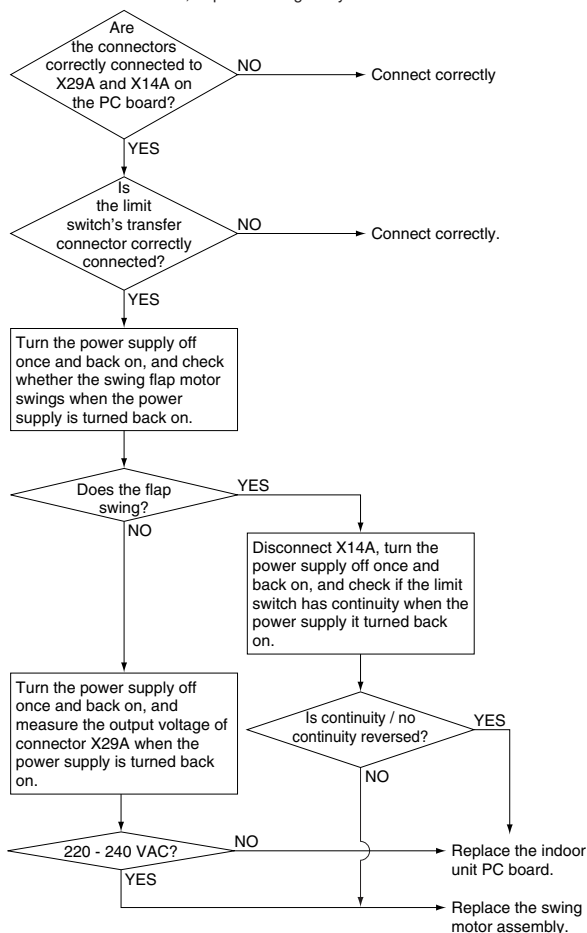
- Faulty swing motor
- Faulty micro switch
- Faulty connector connection
- Faulty indoor unit PC board

## Troubleshooting



**Caution**

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



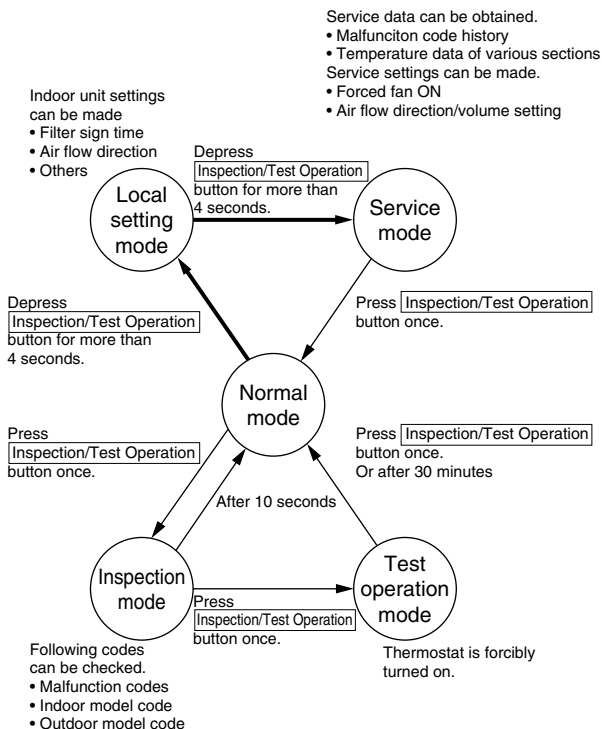


# 3. Procedure of Self-Diagnosis by Remote Controller

## 3.1 The INSPECTION/TEST Button

### Explanation

By turning the remote controller's inspection / test button ON, you can change the mode as shown in the figure below.



- When in the inspection mode, malfunction contents can be cleared by continuing to press the ON/OFF button for 5 seconds.

(Let you know completion timing by blinking.)

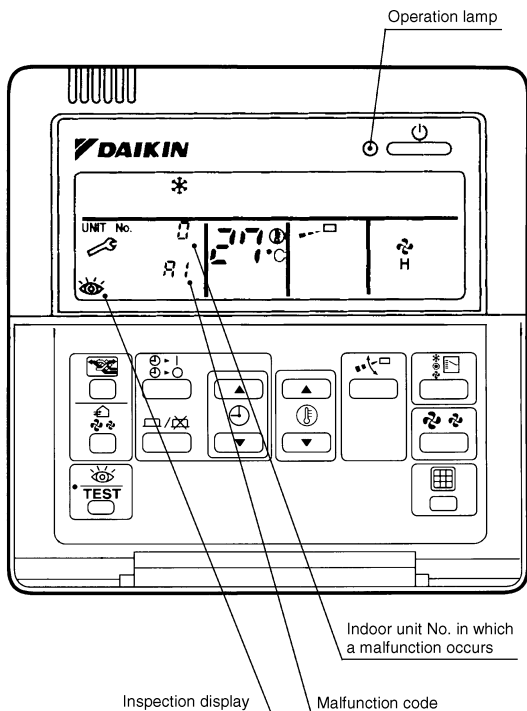
- To carry out a test run, follow the procedure below.
  1. Open the gas side stop valve all the way.
  2. Open the liquid side stop valve all the way.
  3. Energize the crank case heater for 6 hours.
  4. Enter the test run mode.
  5. Continue to operate by the operation switch for 3 minutes.
  6. Enter the normal mode.
  7. Check the functions according to the operation manual.

## 3.2 Self-Diagnosis by Wired Remote Controller

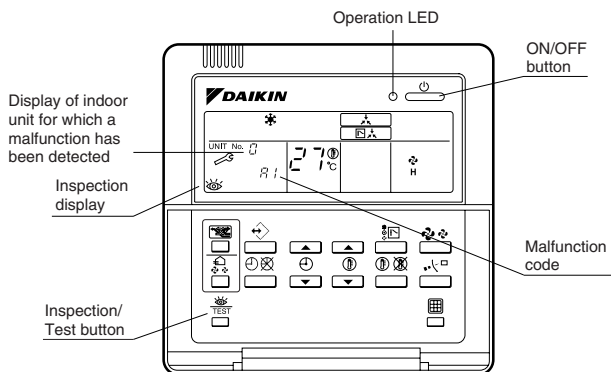
### Explanation

If operation stops due to malfunction, the remote controller'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 46~61 for malfunction code and malfunction contents.

**[BRC1C61]**



## [BRC1D52]



### 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).

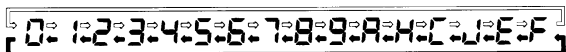
### 3.3 Fault Diagnosis by Wireless Remote Controller

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.)

#### Procedure

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.



⇒ " UP " button    ← " DOWN " button

\*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.

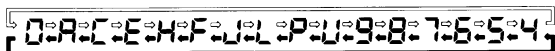
5. Press the MODE selector button.

The right "0" (lower digit) indication of the malfunction code flashes.

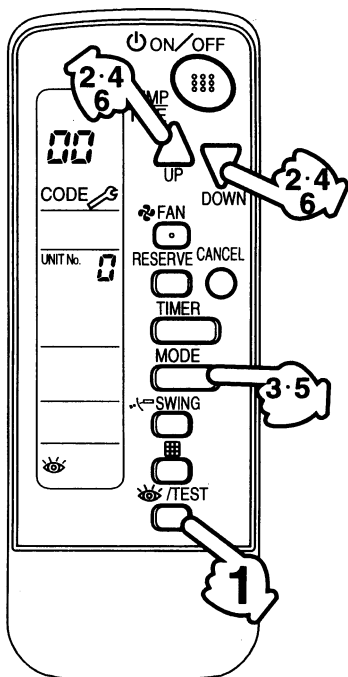
6. Malfunction code lower digit diagnosis

Press the UP or DOWN button and change the malfunction code lower digit until the continuous malfunction code matching buzzer (\*2) is generated.

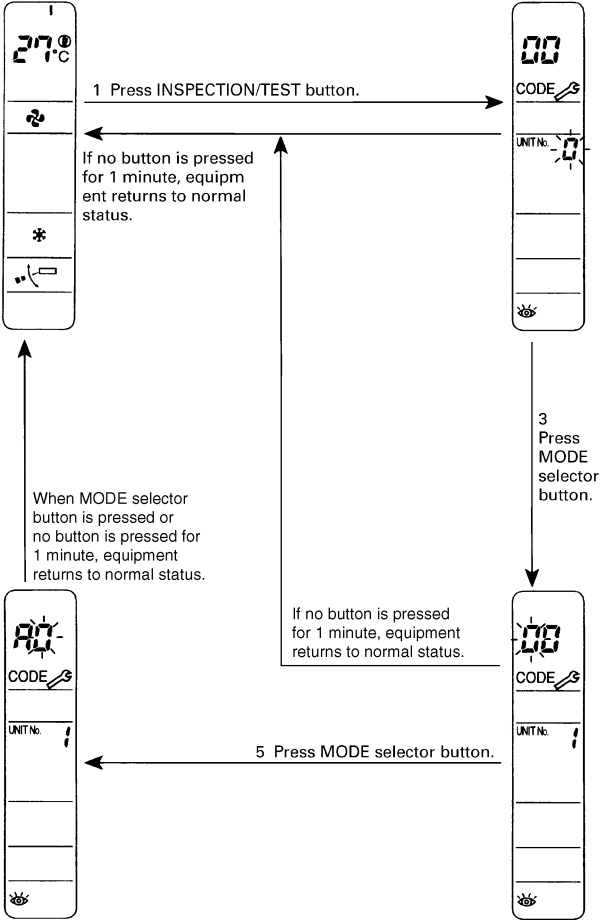
- The lower digit of the code changes as shown below when the UP and DOWN buttons are pressed.



⇒ " UP " button    ← " DOWN " button



Normal status  
Enters inspection mode from normal status when the INSPECTION/TEST button is pressed.





## In Case of BRC7A~ Type

If operation stops due to malfunction, the light reception section operation LED blinks. The malfunction code can be decided by the following procedure. (If operation stops due to malfunction, you can find out the cause by checking the malfunction code, or you can find out what the most recent malfunction code is during normal operation.)

1. Push INSPECTION/TEST, and select "inspection".  
Operation then enters the inspection mode. "UNIT" lights and unit No. display "O" blinks.

2. Unit No. setting

Change the unit No. by pushing the "advance" or "backward" button, and continue pushing until the buzzer (\*1) sounds from the indoor unit.

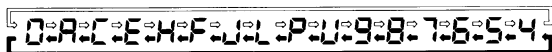
\*1 Buzzer sound times

**3 times** : Carry out all of the following operations.

**1 time** : Carry out operations 3 and 4. Carry out operation 4 until the buzzer sounds continuously. When the buzzer sounds continuously. The malfunction code is set.

**Continuous** : There is no malfunction.

■ The upper digit of the code changes as shown below by pushing the "advance" or "backward" button.



⇒ "Advance" button    ← "Backward" button

3. Push the operation mode selector button. The "O" (upper digit) on the left side of the malfunction code blinks.

4. Malfunction code upper digit diagnosis Push the "advance" or "backward" button until the malfunction code matching buzzer (\*2) sounds and select the malfunction code upper digit.

\*2 Buzzer sound times

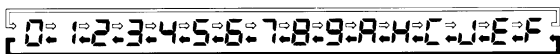
**Continuous** : Both upper and lower digit agree.  
(Malfunction code set)

**2 times** : Upper digit agrees

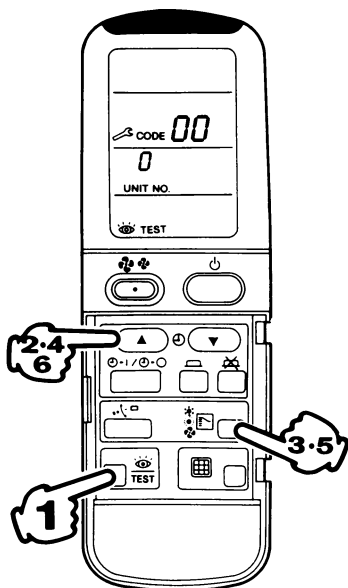
**1 time** : Lower digit agrees

5. Push the operation mode selector button.  
The "0" (upper digit) on the right side of the malfunction code blinks.
6. Malfunction code lower digit diagnosis Push the "advance" or "backward" button until the malfunction code matching buzzer sounds continuously, and select the malfunction code lower digit.

- The lower digit of the code changes as shown below by pushing the "advance" or "backward" button.

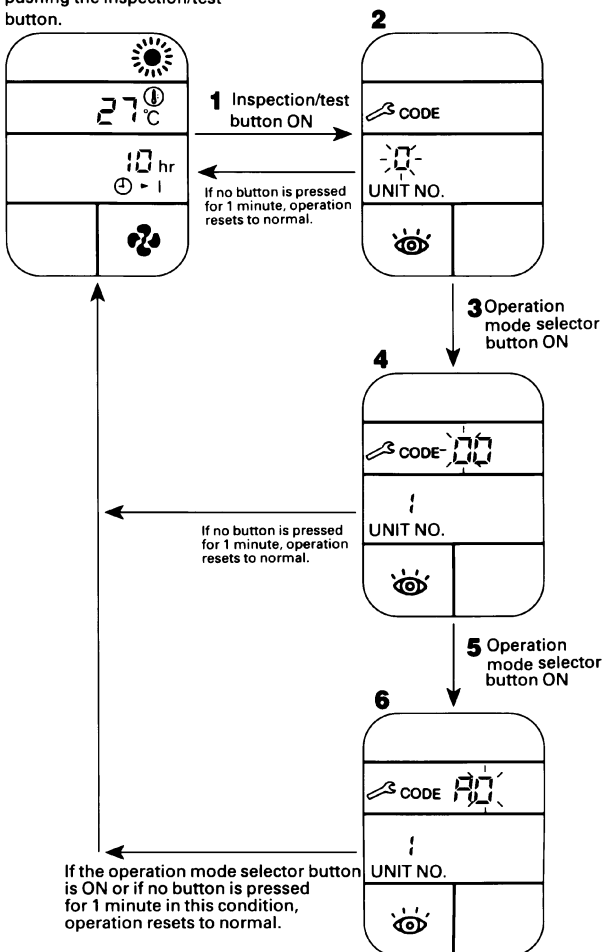


⇒ "Advance" button    ← "Backward" button



## Normal status

You can enter the inspection mode from normal status by pushing the inspection/test button.



## 3.4 Remote Controller Display Malfunction Code and Contents

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
A0	Error of External Protection Device							62
A1	Failure of Indoor Unit PC Board	●	●	●	●	●	●	63
A3	Malfunction of Drain Water Level System	●	●	●	●	●	●	64
	Malfunction of Drain Level Control System (S1L)							67
	Malfunction of Drain Water Level System							70
A6	Indoor Unit Fan Motor Lock	●	●	●	●	●	●	72
	Malfunction of Indoor Unit Fan Motor	●						74
	Malfunction of Indoor Unit Fan Motor							77
	Fan Motor (M1F) Lock, Overlock							79
	Fan Motor Overload, Overcurrent, Lock							81
A7	Swing Flap Motor Malfunction/Lock	●	●	●	●	●	●	83
	Malfunction of Swing Flap Motor (M1S)							85
A9	Malfunction of Moving Part of Electronic Expansion Valve (Y1E)							88
AF	Failure of Drain System	●	●	●	●	●	●	90
	Drain Level above Limit							92
AJ	Failure of Capacity Setting	●	●	●	●	●	●	93
	Malfunction of Capacity Determination Device							95
	Malfunction Capacity Setting (AJ)							97
	Malfunction of Capacity Setting							99
C4	Malfunction of Heat Exchanger Temperature Sensor System	●	●	●	●	●	●	101
	Malfunction Heat Exchanger Termistor System							103

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
A0	Error of External Protection Device		●				62
A1	Failure of Indoor Unit PC Board	●	●	●	●	●	63
A3	Malfunction of Drain Water Level System	●				●	64
	Malfunction of Drain Level Control System (S1L)		●				67
	Malfunction of Drain Water Level System			●	●		70
A6	Indoor Unit Fan Motor Lock				●		72
	Malfunction of Indoor Unit Fan Motor						74
	Malfunction of Indoor Unit Fan Motor	●		●			77
	Fan Motor (M1F) Lock, Overlock		●				79
	Fan Motor Overload, Overcurrent, Lock					●	81
A7	Swing Flap Motor Malfunction/Lock				●	●	83
	Malfunction of Swing Flap Motor (M1S)		●				85
A9	Malfunction of Moving Part of Electronic Expansion Valve (Y1E)		●				88
AF	Failure of Drain System	●		●	●	●	90
	Drain Level above Limit		●				92
AJ	Failure of Capacity Setting						93
	Malfunction of Capacity Determination Device		●			●	95
	Malfunction Capacity Setting (AJ)			●	●		97
	Malfunction of Capacity Setting	●					99
C4	Malfunction of Heat Exchanger Temperature Sensor System	●	●			●	101
	Malfunction Heat Exchanger Termistor System			●	●		103

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
C5	Malfunction of Thermistor (R3T) for gas Pipes							105
	Malfunction Gaspipe Termistor System							107
C9	Malfunction of Suction Air Temperature Sensor System	●	●	●	●	●	●	109
	Malfunction of Thermistor (R1T) for Suction Air							111
	Malfunction Suction Air Termistor System							113
CA	Malfunction of Thermistor for Discharge Air							115
CC	Malfunction of Moisture Sensor System	●						117
	Malfunction of HumiMoisture Sensor System							118
CJ	Malfunction of Remote Controller Air Thermistor	●		●	●	●	●	120
E0	Actuation of Protection Device	●						121
	Activation of Outdoor Unit Protection Device		●					123
	Actuation of Safety Device			●	●	●	●	125
E1	Failure of Outdoor Unit PC Board	●		●				128
	Failure of Outdoor Unit PC Board							129
E3	Abnormal High Pressure Level	●		●				131
	Abnormally High Pressure Level (HPS)		●		●			134
	Actiation of High Pressure Switch							136
E4	Low Pressure System Malfunction	●						139
	Low Pressure System (LPS) Malfunction			●	●			141
	Actuation of Low Pressure Sensor: Single Phase B Series							143
	Actuation of Low Pressure Sensor							145
	Actuation of Low Pressure Sensor: Three Phase B Series							148

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
C5	Malfunction of Thermistor (R3T) for gas Pipes		●				105
	Malfunction Gaspipe Termistor System			●			107
C9	Malfunction of Suction Air Temperature Sensor System	●				●	109
	Malfunction of Thermistor (R1T) for Suction Air		●				111
	Malfunction Suction Air Termistor System			●			113
CA	Malfunction of Thermistor for Discharge Air		●				115
CC	Malfunction of Moisture Sensor System						117
	Malfunction of HumiMoisture Sensor System	●			●	●	118
CJ	Malfunction of Remote Controller Air Thermistor	●	●	●	●	●	120
E0	Actuation of Protection Device						121
	Activation of Outdoor Unit Protection Device						123
	Actuation of Safety Device						125
E1	Failure of Outdoor Unit PC Board		●				128
	Failure of Outdoor Unit PC Board	●		●	●	●	129
E3	Abnormal High Pressure Level	●		●	●	●	131
	Abnormally High Pressure Level (HPS)						134
	Actiation of High Pressure Switch		●				136
E4	Low Pressure System Malfunction		●				139
	Low Pressure System (LPS) Malfunction						141
	Actuation of Low Pressure Sensor: Single Phase B Series				●		143
	Actuation of Low Pressure Sensor		●				145
	Actuation of Low Pressure Sensor: Three Phase B Series				●		148



Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
E4	Actuation of Low Pressure Sensor: Single Phase C Series							150
E5	Compressor Motor Lock	●						152
	Compressor Motor Lock							154
E6	Compressor Overcurrent			●				156
E7	Malfunction of Outdoor Unit Fan Motor	●						159
	Malfunction of Outdoor Unit Fan Motor							161
	Malfunction of Outdoor Unit Fan Motor							165
E9	Malfunction of Electronic Expansion Valve	●						168
	Malfunction of Electronic Expansion Valve		●					170
	Malfunction of Electronic Expansion Valve			●				172
	Malfunction of Moving Part of Electronic Expansion Valve (Y1E, Y3E)							174
	Malfunction of Electronic Expansion Valve							176
F3	Malfunction of Discharge Pipe Temperature	●	●					179
	Discharge Pipe Temperature Malfunction			●				181
F6	Abnormal Heat Exchanging Temperature			●				183
	Refrigerant Overcharged							185
H3	Malfunction of High Pressure Switch System	●	●	●	●			187
H4	Abnormal Low Pressure Sensor							189
H7	Malfunction of Outdoor Fan Motor Signal	●						191
H9	Malfunction of Outdoor Temperature Thermistor System	●						193
	Malfunction of Outdoor Air Temperature Sensor System		●					195

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
E4	Actuation of Low Pressure Sensor: Single Phase C Series	●			●		150
E5	Compressor Motor Lock		●	●	●		152
	Compressor Motor Lock	●				●	154
E6	Compressor Overcurrent						156
E7	Malfunction of Outdoor Unit Fan Motor	●	●	●			159
	Malfunction of Outdoor Unit Fan Motor					●	161
	Malfunction of Outdoor Unit Fan Motor				●		165
E9	Malfunction of Electronic Expansion Valve			●			168
	Malfunction of Electronic Expansion Valve						170
	Malfunction of Electronic Expansion Valve						172
	Malfunction of Moving Part of Electronic Expansion Valve (Y1E, Y3E)		●				174
	Malfunction of Electronic Expansion Valve	●			●	●	176
F3	Malfunction of Discharge Pipe Temperature	●	●	●	●	●	179
	Discharge Pipe Temperature Malfunction						181
F6	Abnormal Heat Exchanging Temperature						183
	Refrigerant Overcharged		●				185
H3	Malfunction of High Pressure Switch System			●	●	●	187
H4	Abnormal Low Pressure Sensor				●		189
H7	Malfunction of Outdoor Fan Motor Signal					●	191
H9	Malfunction of Outdoor Temperature Thermistor System	●		●	●	●	193
	Malfunction of Outdoor Air Temperature Sensor System		●				195

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
H9	Malfunction of Outdoor Temperature Sensor System			●	●	●		196
J1	Malfunction of Pressure Sensor							197
	Malfunction of Pressure Sensor							199
J2	Malfunction of Current Sensor System			●				201
J3	Malfunction of Discharge Pipe Thermistor System	●						203
	Malfunction of Discharge Pipe Temperature Sensor System		●					205
	Malfunction of Heat Exchanger Temperature Sensor System			●		●		207
J5	Malfunction of Suction Pipe Thermistor System	●						208
	Malfunction of Thermistor (R3T, R5T) for Suction Pipe 1, 2							210
J6	Malfunction of Heat Exchanger Temperature Sensor System	●						212
	Malfunction of Heat Exchanger Temperature Sensor System		●					214
	Malfunction of Heat Exchanger Temperature Sensor System			●	●	●		215
J7	Malfunction of Intermediate Heat Exchanger Distribution Pipe Thermistor							216
	Malfunction of Intermediate Heat Exchanger Distribution Pipe Thermistor							218
J8	Malfunction of Liquid Pipe Thermistor							220
J9	Malfunction of Subcooling Heat Exchanger Gas Pipe Thermistor (R6T)							222
JA	Malfunction of High Pressure Sensor							224
	Malfunction of High Pressure Sensor							226

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
H9	Malfunction of Outdoor Temperature Sensor System						196
J1	Malfunction of Pressure Sensor	●					197
	Malfunction of Pressure Sensor				●		199
J2	Malfunction of Current Sensor System						201
J3	Malfunction of Discharge Pipe Thermistor System	●		●	●	●	203
	Malfunction of Discharge Pipe Temperature Sensor System		●				205
	Malfunction of Heat Exchanger Temperature Sensor System						207
J5	Malfunction of Suction Pipe Thermistor System	●		●	●	●	208
	Malfunction of Thermistor (R3T, R5T) for Suction Pipe 1, 2		●				210
J6	Malfunction of Heat Exchanger Temperature Sensor System	●		●	●	●	212
	Malfunction of Heat Exchanger Temperature Sensor System		●				214
	Malfunction of Heat Exchanger Temperature Sensor System						215
J7	Malfunction of Intermediate Heat Exchanger Distribution Pipe Thermistor	●			●	●	216
	Malfunction of Intermediate Heat Exchanger Distribution Pipe Thermistor		●				218
J8	Malfunction of Liquid Pipe Thermistor	●			●	●	220
J9	Malfunction of Subcooling Heat Exchanger Gas Pipe Thermistor (R6T)		●				222
JA	Malfunction of High Pressure Sensor		●				224
	Malfunction of High Pressure Sensor					●	226

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
JC	Malfunction of Suction Pipe Pressure Sensor	●						228
	Malfunction of Low Pressure Sensor							230
	Malfunction of Low Pressure Sensor							232
L1	Malfunction of PC Board							234
	Faulty Outdoor Inverter PC Board							236
	Faulty Outdoor PC Board							238
L4	Radiation Fin Temperature Increased	●	●					240
	Malfunction of Inverter Radiating Fin Temperature Rise							242
	Radiation Fin Temperature Increased							244
L5	DC Output Overcurrent (Instantaneous)	●						247
	Overcurrent of DC Output (Instantaneous)		●					250
	Inverter Compressor Abnormal							252
	DC Output Overcurrent (Instantaneous)							254
	Momentary Overcurrent of Inverter Compressor							258
L8	Electronic Thermal (Time Lag)	●						261
	Electronic Thermal Switch (Time Lag)		●					264
	Inverter Current Abnormal							267
	Electronic Thermal (Time Lag)							269
	Inverter ompressor Overcurrent							271
	Electronic Thermal (Time Lag)							274
L9	Stall Prevention (Time Lag)	●						277
	Stall Prevention (Time Lag)		●					280
	Stall Prevention (Time Lag)							282
	Compressor Inverter Start up Error							284
	Inverter Start up Error							287

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQ-S-B, RZQ-S-C series	RZQ200, 250C series	Reference page
JC	Malfunction of Suction Pipe Pressure Sensor						228
	Malfunction of Low Pressure Sensor		●		●		230
	Malfunction of Low Pressure Sensor					●	232
L1	Malfunction of PC Board	●	●				234
	Faulty Outdoor Inverter PC Board					●	236
	Faulty Outdoor PC Board				●		238
L4	Radiation Fin Temperature Increased	●		●			240
	Malfunction of Inverter Radiating Fin Temperature Rise		●			●	242
	Radiation Fin Temperature Increased				●		244
L5	DC Output Overcurrent (Instantaneous)			●	●		247
	Overcurrent of DC Output (Instantaneous)						250
	Inverter Compressor Abnormal		●				252
	DC Output Overcurrent (Instantaneous)	●					254
	Momentary Overcurrent of Inverter Compressor					●	258
L8	Electronic Thermal (Time Lag)						261
	Electronic Thermal Switch (Time Lag)						264
	Inverter Current Abnormal		●				267
	Electronic Thermal (Time Lag)	●					269
	Inverter Compressor Overcurrent					●	271
	Electronic Thermal (Time Lag)			●	●		274
L9	Stall Prevention (Time Lag)			●	●		277
	Stall Prevention (Time Lag)						280
	Stall Prevention (Time Lag)	●					282
	Compressor Inverter Start up Error					●	284
	Inverter Start up Error		●				287

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
LC	Malfunction of Transmission System (Between Control PC Board and Inverter PC Board)	●						289
	Malfunction of Transmission between Inverter and Control PC Board							292
	Malfunction of Transmission System (Between Control PC Board and Inverter PC Board)							294
	Malfunction of Transmission between Inverter and Control PC Board							296
P1	Open Phase	●						300
	High Voltage of Capacitor in Main Inverter Circuit							302
	Inverter Over-Ripple Protection							303
	Open Phase or Power Supply Voltage Imbalance							305
P4	Malfunction of Radiator Fin Temperature Thermistor	●	●					307
	Malfunction of Radiator Fin Temperature Thermistor	●						309
	Malfunction of Inverter Radiating Fin Temperature Rise Sensor							311
PJ	Failure of Capacity Setting	●	●	●				313
	Defective Combination of Inverter and Fan Driver							315
U0	Gas Shortage (Malfunction)	●						317
	Short of Gas Malfunction		●	●				319
	Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure							320
	Gas Shortage (Malfunction)							322
	Gas Shortage (Malfunction)							324
U1	Reverse Phase			●				326

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
LC	Malfunction of Transmission System (Between Control PC Board and Inverter PC Board)			●	●		289
	Malfunction of Transmission between Inverter and Control PC Board		●				292
	Malfunction of Transmission System (Between Control PC Board and Inverter PC Board)	●					294
	Malfunction of Transmission between Inverter and Control PC Board					●	296
P1	Open Phase	●		●			300
	High Voltage of Capacitor in Main Inverter Circuit		●				302
	Inverter Over-Ripple Protection					●	303
	Open Phase or Power Supply Voltage Imbalance				●		305
P4	Malfunction of Radiator Fin Temperature Thermistor			●	●		307
	Malfunction of Radiator Fin Temperature Thermistor						309
	Malfunction of Inverter Radiating Fin Temperature Rise Sensor	●	●				311
PJ	Failure of Capacity Setting	●		●	●		313
	Defective Combination of Inverter and Fan Driver					●	315
U0	Gas Shortage (Malfunction)						317
	Short of Gas Malfunction			●		●	319
	Low Pressure Drop Due to Refrigerant Shortage or Electronic Expansion Valve Failure		●				320
	Gas Shortage (Malfunction)	●			●		322
	Gas Shortage (Malfunction)				●		324
U1	Reverse Phase	●				●	326



Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
U2	Abnormal Power Supply Voltage	●						328
	Insufficient Voltage		●					330
	Abnormal Power Supply Voltage							332
	Power Supply Insuffient or Instantaneous Failure							334
	Power Supply Insuffient or Instantaneous Failure							336
U3	Check Operation not Executed							340
U4	Malfunction of Transmission (Between Indoor and Outdoor Unit)	●	●	●	●			341
	Malfunction of Transmission (Between Indoor and Outdoor Unit)					●		344
	Malfunction of Transmission (Between Indoor and Outdoor Unit)							347
	Malfunction of Transmission between Indoor Units and Outdoor Units							351
	Malfunction of Transmission between Indoor and Outdoor Unit							354
U5	Malfunction of Transmission (Between Indoor Unit and Remote Controller)	●	●	●	●	●	●	358
	Malfunction of Transmission (Between Indoor Unit and Remote Controller)							360
U8	Transmission Error Between Main Remote Controller and Sub Remote Controller	●	●	●	●			362
	Malfunction of Transmission between Main Remote Controller and Sub Remote Controller							364
U9	Malfunction of Transmission between Indoor and Outdoor Units in the Same System							366

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
U2	Abnormal Power Supply Voltage				●		328
	Insufficient Voltage			●			330
	Abnormal Power Supply Voltage	●					332
	Power Supply Insufficient or Instantaneous Failure		●				334
	Power Supply Insufficient or Instantaneous Failure					●	336
U3	Check Operation not Executed		●				340
U4	Malfunction of Transmission (Between Indoor and Outdoor Unit)						341
	Malfunction of Transmission (Between Indoor and Outdoor Unit)						344
	Malfunction of Transmission (Between Indoor and Outdoor Unit)	●		●		●	347
	Malfunction of Transmission between Indoor Units and Outdoor Units		●				351
	Malfunction of Transmission between Indoor and Outdoor Unit				●		354
U5	Malfunction of Transmission (Between Indoor Unit and Remote Controller)		●	●	●		358
	Malfunction of Transmission (Between Indoor Unit and Remote Controller)	●				●	360
U8	Transmission Error Between Main Remote Controller and Sub Remote Controller		●				362
	Malfunction of Transmission between Main Remote Controller and Sub Remote Controller	●		●	●	●	364
U9	Malfunction of Transmission between Indoor and Outdoor Units in the Same System		●			●	366

Malfunction Code	Contents of Malfunction	RZP-D series	RZ(Y)-L series	R(Y)-LU series	RY-KU, RY-F, RY-G (50Hz) series	RY-FU, RY-G (60Hz)	R-NU series	Reference page
UA	Malfunction of Field Setting Switch	●						368
	Failure of Field Setting Switch			●	●			371
	Excessive Number of Indoor Units							374
	Malfunction of Field Setting Switch and Transmission Line							376
	Malfunction of Field Setting Switch and Transmission Line							378
UC	Centralized Address Setting Error	●						381
UE	Malfunction of Transmission between Central Remote Controller and Indoor Unit							382
UF	Malfunction of Transmission (Between Indoor and Outdoor Unit)	●		●	●			384
	Mis-connection of Field Wiring					●	●	387
	System is not Set yet							388
	Transmission System Malfunction (Between Indoor and Outdoor Units)/Gas Shortage							390
	Transmission System Malfunction (Between Indoor and Outdoor Units)							392
	Malfunction of Transmission System between Indoor and Outdoor Units/ Piping and Wiring Mismatch/Gas Shortage							396
	Transmission System Malfunction (Between Indoor and Outdoor Units)							398
UH	Malfunction of System, Refrigerant System Address Undefined							399

Malfunction Code	Contents of Malfunction	RZQ-K series	RZQ-P series	RZQ-F series	RZQ-B, RZQS-B, RZQS-C series	RZQ200, 250C series	Reference page
UA	Malfunction of Field Setting Switch						368
	Failure of Field Setting Switch			●	●		371
	Excessive Number of Indoor Units		●				374
	Malfunction of Field Setting Switch and Transmission Line	●					376
	Malfunction of Field Setting Switch and Transmission Line					●	378
UC	Centralized Address Setting Error	●	●	●	●	●	381
UE	Malfunction of Transmission between Central Remote Controller and Indoor Unit	●	●			●	382
UF	Malfunction of Transmission (Between Indoor and Outdoor Unit)						384
	Mis-connection of Field Wiring						387
	System is not Set yet		●				388
	Transmission System Malfunction (Between Indoor and Outdoor Units)/Gas Shortage	●					390
	Transmission System Malfunction (Between Indoor and Outdoor Units)				●		392
	Malfunction of Transmission System between Indoor and Outdoor Units/ Piping and Wiring Mismatch/Gas Shortage				●		396
	Transmission System Malfunction (Between Indoor and Outdoor Units)					●	398
UH	Malfunction of System, Refrigerant System Address Undefined		●				399

## 3.5 Troubleshooting by Remote Controller Display

### (1) Error of External Protection Device

#### Remote Controller Display

*AO*

#### Applicable Models

Inverter (RZQ100-160P) Series

#### Supposed Causes

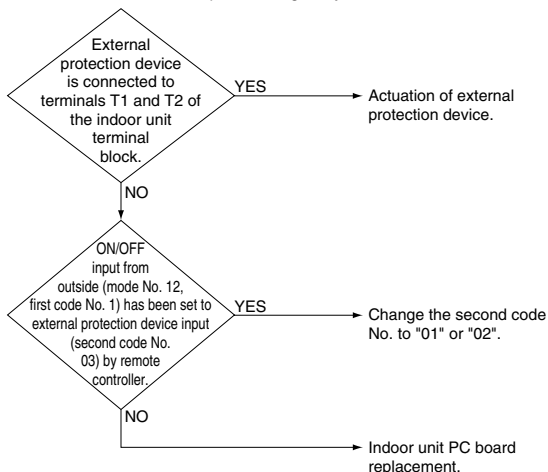
- Actuation of external protection device
- Improper field set
- Defect of indoor unit PC board

#### Troubleshooting



**Caution**

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



## (2) Failure of Indoor Unit PC Board

### Remote Controller Display

**A1**

### Applicable Models

All indoor unit models

### Method of Malfunction Detection

Check data from E<sup>2</sup>PROM.

### Malfunction Decision Conditions

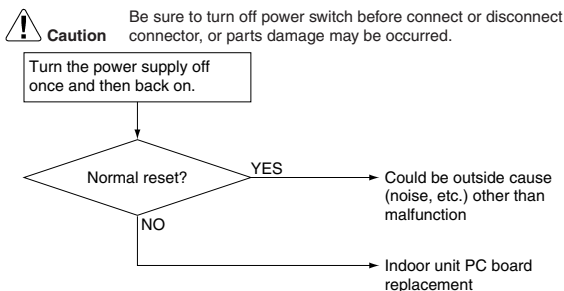
When data could not be correctly received from the E<sup>2</sup>PROM

E<sup>2</sup>PROM : Type of nonvolatile memory. Maintains memory contents even when the power supply is turned off.

### Supposed Causes

- Failure of PC board

### Troubleshooting



**A0**

**A1**

### **(3) Malfunction of Drain Water Level System**

#### **Remote Controller Display**

*A3*

#### **Applicable Models**

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU, RY-KU, R-NU, RZQ-K and Inverter (RZQ-B, RZQS-B, RZQ-C7V1B, RZQS-C7V1B) Series

#### **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**

- Failure of drain pump
- Improper drain piping work
- Drain piping clogging
- Failure of float switch
- Failure of indoor unit PC board
- Failure of short-circuit connector

## Troubleshooting

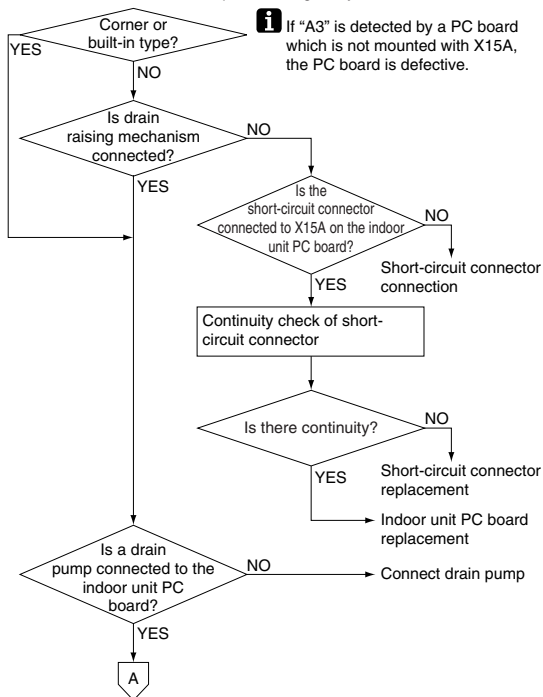


**Caution**

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



If "A3" is detected by a PC board which is not mounted with X15A, the PC board is defective.



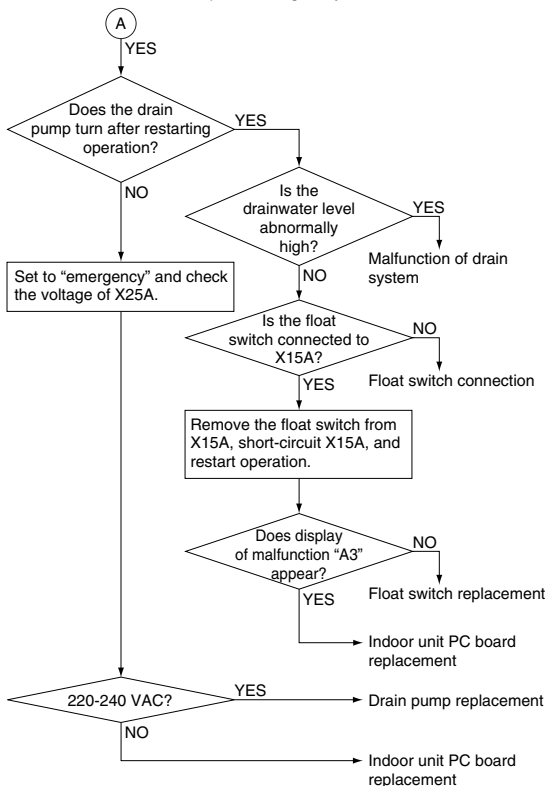
**A3**





**Caution**

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



## Remote Controller Display

A3

### Applicable Models

Inverter (RZQ100-160P) series

### 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

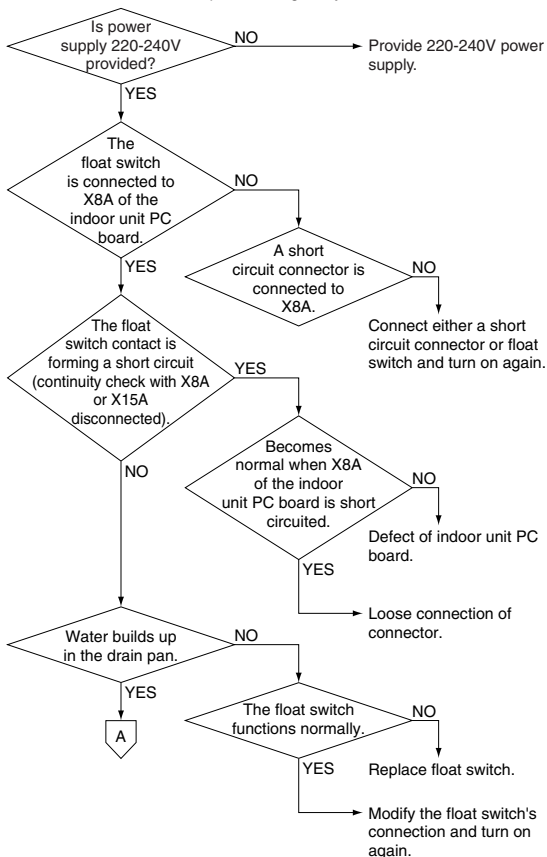
A3

## Troubleshooting



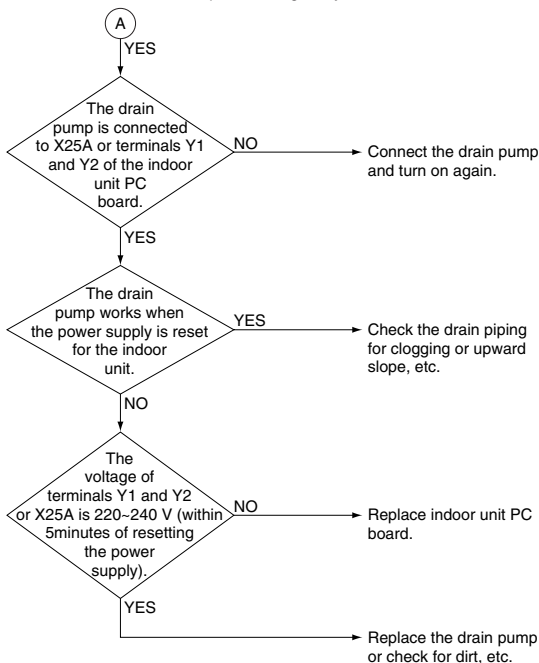
**Caution**

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



**Caution**

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

**A3**

## Remote Controller Display

**A3**

### Applicable Models

Inverter (RZQ71F • 90C • 100F) and Inverter (RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7) Series

### Method of Malfunction Detection

By float switch OFF detection

### Malfunction Decision Conditions

The error is generated when the water level reaches its upper limit and when the float switch turns OFF.

### Supposed Causes

The possible causes are:

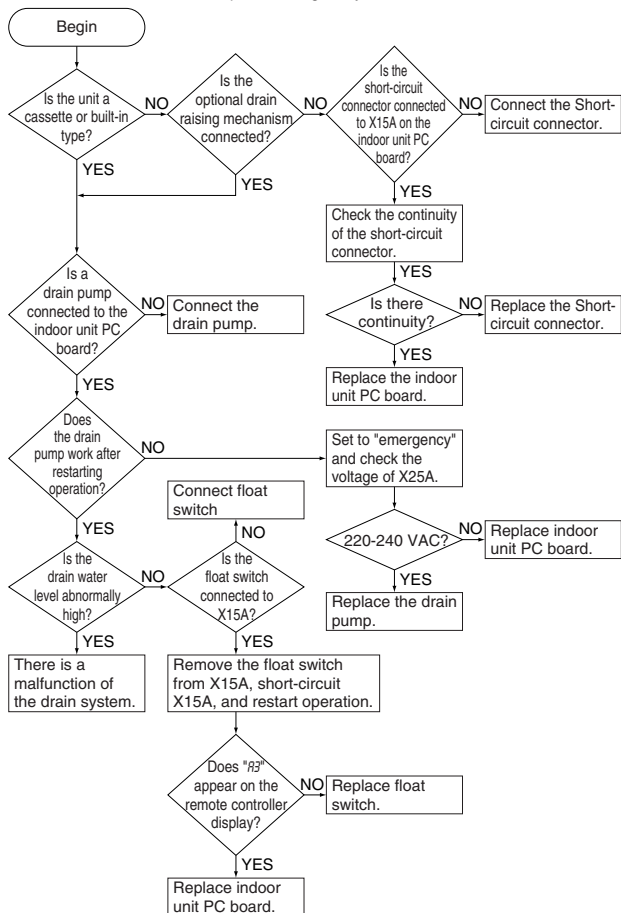
- Malfunctioning drain pump
- Improper drain piping work
- Drain piping clogging
- Malfunctioning float switch
- Malfunctioning indoor unit PC board
- Malfunctioning short-circuit connector X15A on PC board.

## Troubleshooting



**Caution**

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



**A3**

**Remark**

If "R3" is detected by a PC board which is not mounted with X15A, the PC board is defective.

## **(4) Indoor Unit Fan Motor Lock**

### **Remote Controller Display**

*As*

### **Applicable Models**

RZP-D Series (except FHYCP)  
RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU,  
RY-KU, R-NU and Inverter (RZQ-B, RZQS-B7, RZQ-C7,  
RZQS-C7) Series

### **Method of Malfunction Detection**

Detection by failure of signal for detecting number of turns to come from the fan motor

### **Malfunction Decision Conditions**

When number of turns can't be detected even when output voltage to the fan is maximum

### **Supposed Causes**

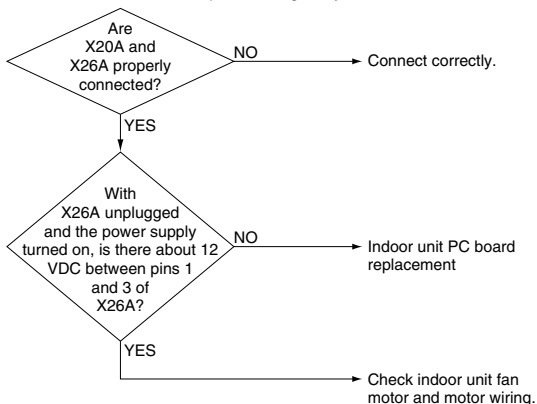
- Failure of indoor unit fan motor
- Broken or disconnected wire
- Failure of contact
- Failure of indoor unit PC board

## Troubleshooting



**Caution**

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



**A6**



## Remote Controller Display

*RS*

### Applicable Models

RZP-D Series (FHYCP)

### Method of Malfunction Detection

Detection of abnormal fan speed by signal from the fan motor

### Malfunction Decision Conditions

When fan speed does not increase

### Supposed Causes

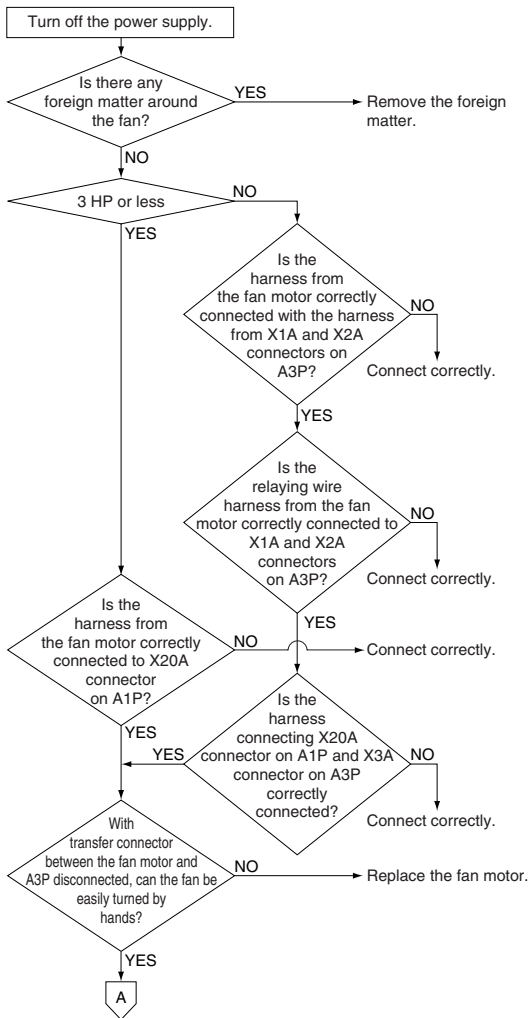
- Disconnection, short circuit or disengagement of connector in fan motor harness
- Faulty fan motor (disconnection, poor insulation)
- Abnormal signal from fan motor (faulty circuit)
- Faulty PC board
- Instantaneous fluctuation of power supply voltage
- Fan motor lock  
(Caused by motor or other external factors)
- Fan does not turn due to a tangle of foreign matters.

## Troubleshooting



**Caution**

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

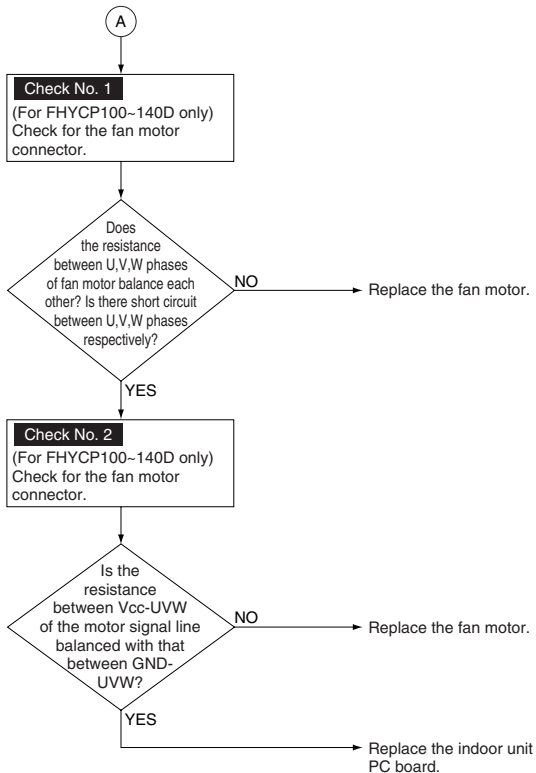


**A6**



**Caution**

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



Refer to Check No. 1, 2 on page 401, 402.

## Remote Controller Display

**A6**

### Applicable Models

RZQ-K and Inverter (RZQ71F • 90C • 100F) Series

### Method of Malfunction Detection

Detection of abnormal fan speed by signal from the fan motor

**A6**

### Malfunction Decision Conditions

When fan speed does not increase

### Supposed Causes

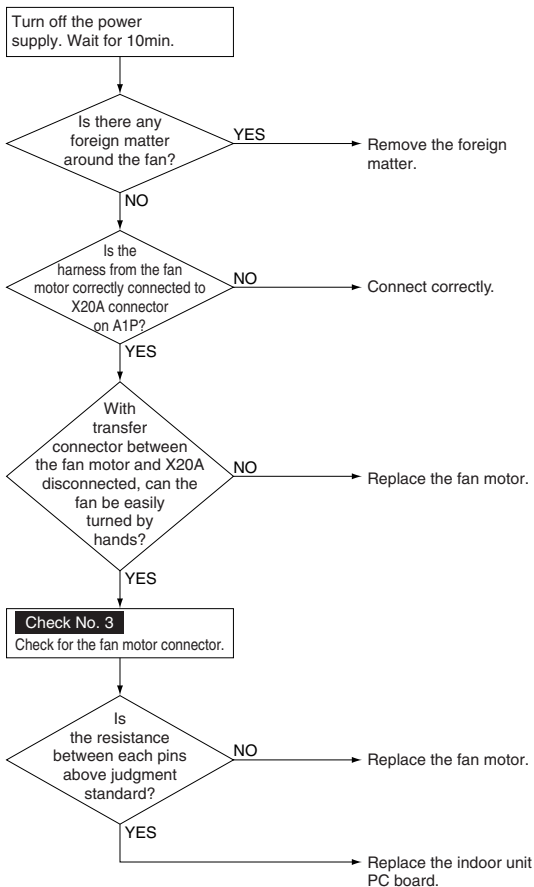
- Disconnection, short circuit or disengagement of connector in fan motor harness
- Faulty fan motor (disconnection, poor insulation)
- Abnormal signal from fan motor (faulty circuit)
- Faulty Indoor unit PC board
- Instantaneous fluctuation of power supply voltage
- Fan motor lock  
(Caused by motor or other external factors)
- Fan does not turn due to a tangle of foreign matters.

## Troubleshooting



**Caution**

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



Refer to Check No. 3 on page 403.

## Remote Controller Display

**A6**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Detection by failure of signal for detecting number of turns to come from the fan motor

**A6**

### Malfunction Decision Conditions

When number of turns can't be detected even when output voltage to the fan is maximum

### Supposed Causes

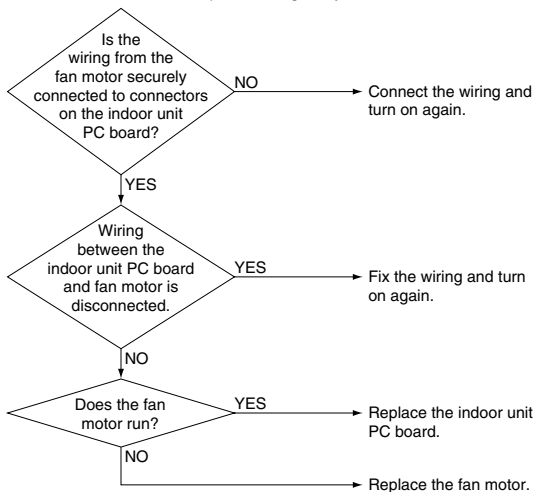
- Fan motor lock
- Disconnected or faulty wiring between fan motor and PC board

## Troubleshooting



**Caution**

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



## Remote Controller Display

**A6**

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Detect the status in which the separate power supply for the fan is cut OFF.

**A6**

### Malfunction Decision Conditions

Unable to detect that separate power supply for the indoor unit fan is turned ON.

### Supposed Causes

- Defective power supply for the indoor unit fan motor
- Clogging in the drain pipe
- Protection device for the indoor unit fan is operated.
- Defective contact for the fan wiring circuit

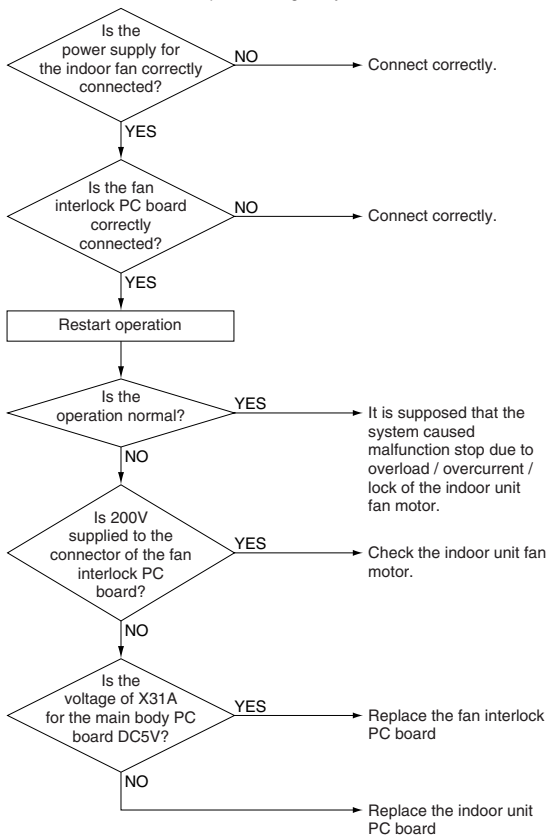


## Troubleshooting



**Caution**

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



## (5) Swing Flap Motor Malfunction / Lock

### Remote Controller Display

A7

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G,  
RY-FU, RY-KU, R-NU RZQ-B, RZQS-B7, RZQ-C7,  
RZQS-C7 and RZQ200, 250C Series

A6

A7

### 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).

### Supposed Causes

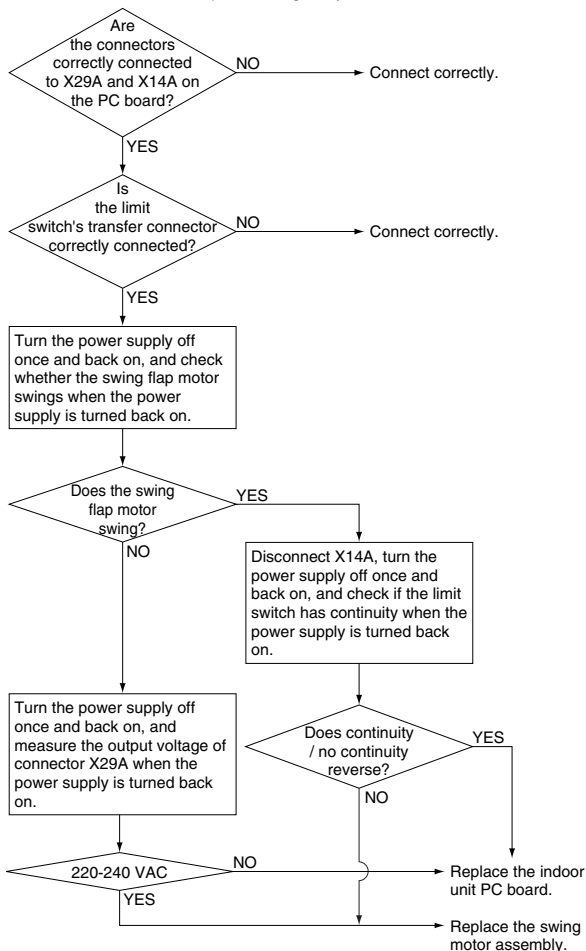
- Failure of motor
- Failure of microswitch
- Failure of connector connection
- Failure of indoor unit PC board

## Troubleshooting



**Caution**

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



## Remote Controller Display

**A7**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Utilizes ON/OFF of the limit switch when the motor turns.

**A7**

### 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).

### Supposed Causes

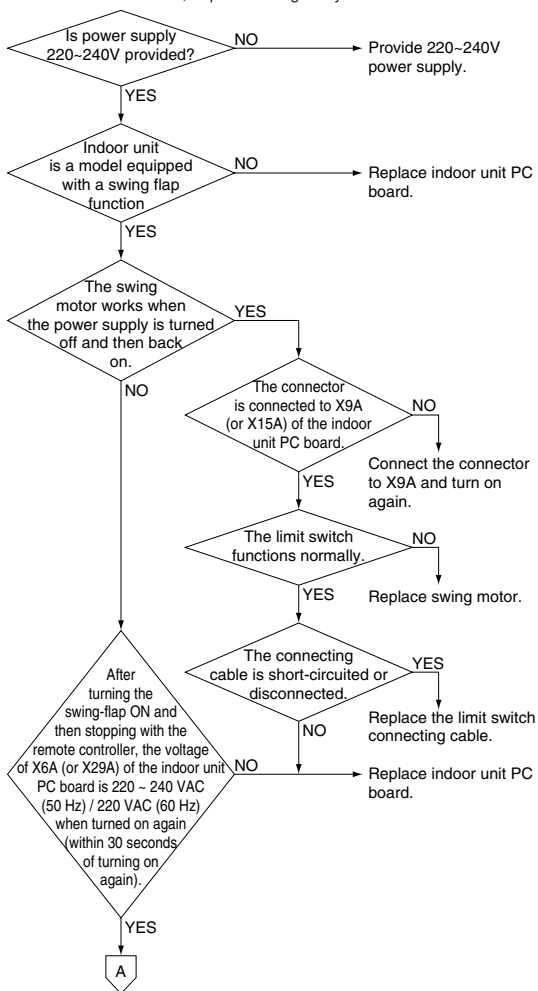
- Defect of swing motor
- Defect of connection cable (power supply and limit switch)
- Defect of air flow direction adjusting flap-cam
- Defect of indoor unit PC board

## Troubleshooting



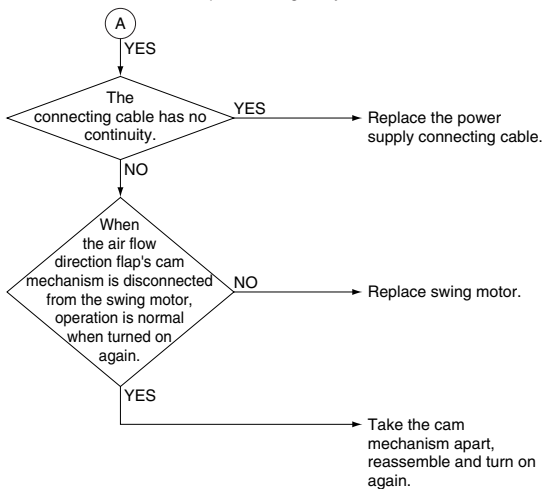
**Caution**

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



**Caution**

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



## **(6) Malfunction of Moving Part of Electronic Expansion Valve (Y1E)**

**Remote Controller Display**

*A9*

### **Applicable Models**

Inverter (RZQ100-160P) Series

### **Supposed Causes**

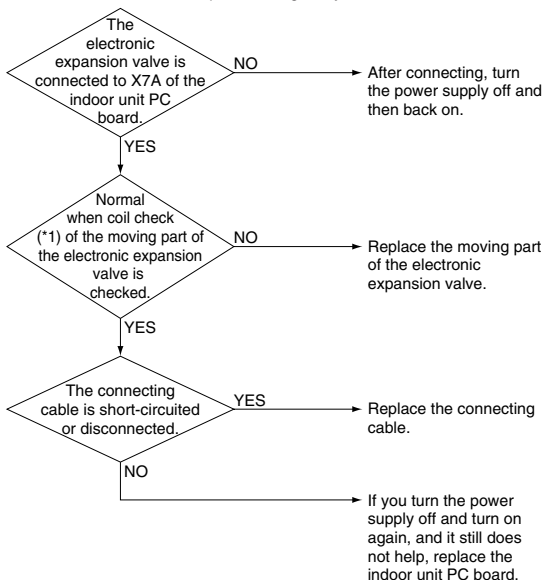
- Malfunction of moving part of electronic expansion valve
- Defect of indoor unit PC board
- Defect of connecting cable

## Troubleshooting



**Caution**

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



**A9**



Refer to Check No. 12 on page 421.



## **(7) Failure of Drain System**

### **Remote Controller Display**

*AF*

### **Applicable Models**

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G,  
RY-FU, RY-KU, R-NU, RZQ-K Inverter (RZQ71F • 90C •  
100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and  
RZQ200, 250C Series

### **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.

### **Supposed Causes**

- Error in drain pipe installation
- Faulty float switch
- Faulty indoor unit PC board

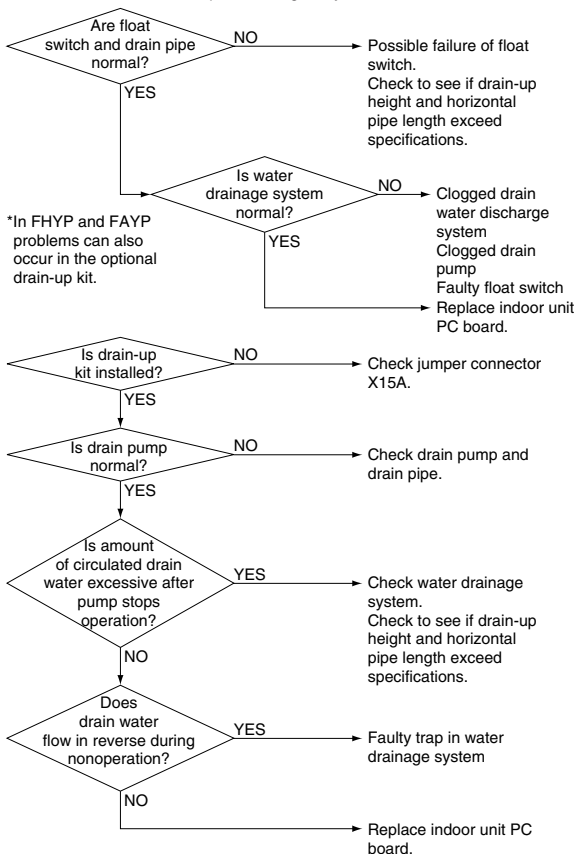
## Troubleshooting

**AF**



**Caution**

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



## Remote Controller Display

**AF**

### Applicable Models

Inverter (RZQ100-160P) Series

### 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.

### Supposed Causes

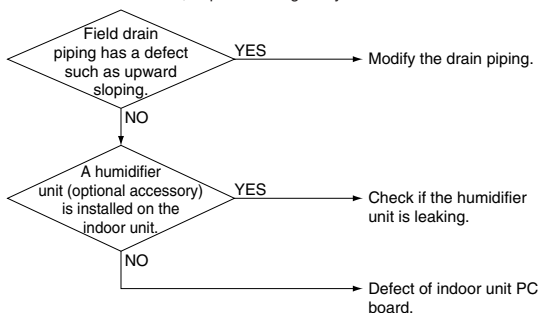
- Humidifier unit (optional accessory) leaking
- Defect of drain pipe (upward slope, etc.)
- Defect of indoor unit PC board

### Troubleshooting



**Caution**

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



## (8) Failure of Capacity Setting

### Remote Controller Display

*AJ*

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G,  
RY-FU, RY-KU and R-NU Series

**AF**

**AJ**

### Method of Malfunction Detection

Capacity is determined according to resistance of the capacity setting adaptor 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

Operation and:

1. When the capacity code is not contained in the PC board's memory, and the capacity setting adaptor is not connected.
2. When a capacity that doesn't exist for that unit is set.

### Supposed Causes

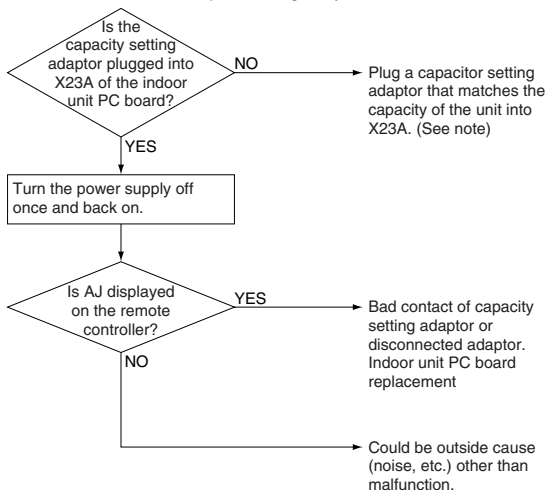
- Failure of capacity setting adaptor connection
- Failure of indoor unit PC board

## Troubleshooting



**Caution**

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



**Note:**

Capacity is factory set in the data IC on the PC board. A capacity setting adaptor that matches the capacity of the unit is required in the following case.

If the indoor PC board installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PC board.

If you connect a capacity setting adaptor to a PC board in which the capacity is memorized, the capacity setting for the PC board will become the capacity setting of the adaptor. (Priority of capacity setting adaptor)

## Remote Controller Display

*AJ*

### Applicable Models

Inverter (RZQ100-160P) and RZQ200, 250C Series

### Method of Malfunction Detection

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

**AJ**

### Malfunction Decision Conditions

Operation and:

1. When the capacity code is not contained in the PC board's memory, and the capacity setting adaptor is not connected.
2. When a capacity that doesn't exist for that unit is set.

### Supposed Causes

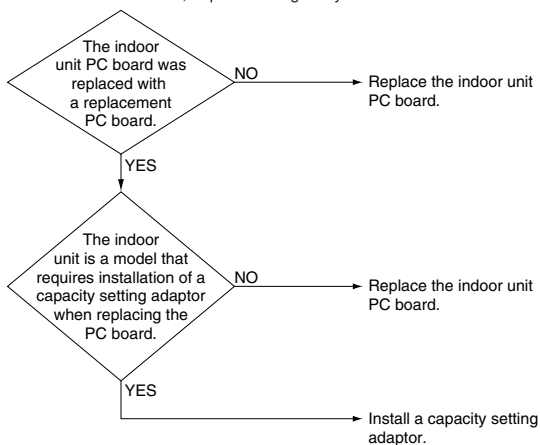
- You have forgotten to install the capacity setting adaptor.
- Defect of indoor unit PC board

## Troubleshooting



**Caution**

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



## Remote Controller Display

*AJ*

### Applicable Models

Inverter (RZQ71F • 90C • 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

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

**AJ**

### Malfunction Decision Conditions

The error is generated when the following conditions are fulfilled:

Condition	Description
1	<ul style="list-style-type: none"> <li>■ The unit is in operation.</li> <li>■ The PC board's memory IC does not contain the capacity code.</li> <li>■ The capacity setting adaptor is not connected.</li> </ul>
2	<ul style="list-style-type: none"> <li>■ The unit is in operation.</li> <li>■ The capacity that is set, does not exist for that unit.</li> </ul>

### Supposed Causes

The possible causes are:

- Malfunctioning capacity setting adaptor connection
- Malfunctioning indoor unit PC board.

### Capacity setting adaptor

The capacity is set in the PC board's memory IC. A capacity setting adaptor that matches the capacity of the unit is required in the following case:

In case the indoor PC board installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PC board. To set the correct capacity for the PC board you have to connect a capacity setting adaptor with the correct capacity setting to the PC board. The capacity setting for



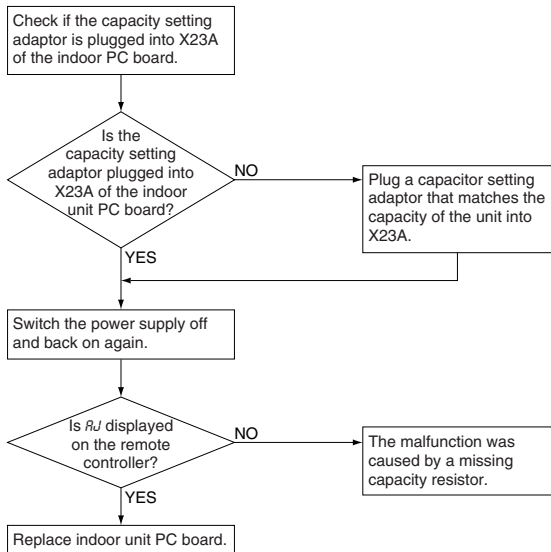
the PC board will become the capacity setting of the adaptor because the capacity setting adaptor has priority.

## Troubleshooting



**Caution**

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



## Remote Controller Display

*AJ*

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

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

**AJ**

### Malfunction Decision Conditions

Operation and:

1. When the capacity code is not contained in the PC board's memory, and the capacity setting adaptor is not connected.
2. When a capacity that doesn't exist for that unit is set.

### Supposed Causes

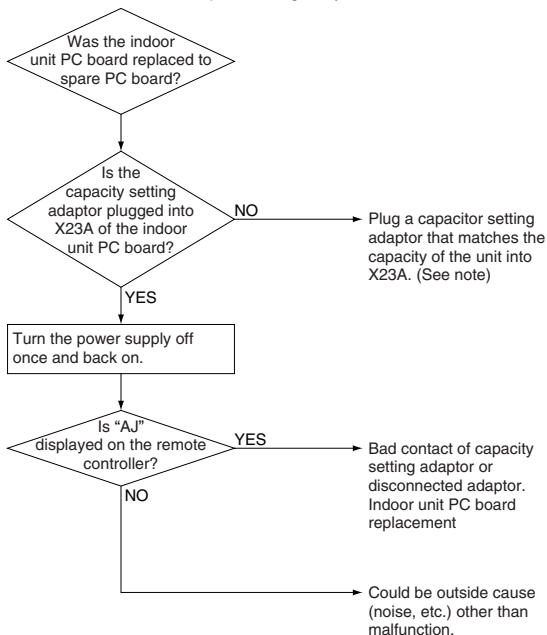
- Failure of capacity setting adaptor connection
- Failure of indoor unit PC board

## Troubleshooting



**Caution**

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



**Note:**

Capacity is factory set in the data IC on the PC board. A capacity setting adaptor that matches the capacity of the unit is required in the following case.

If the indoor PC board installed at the factory is for some reason changed at the installation site, the capacity will not be contained in the replacement PC board.

If you connect a capacity setting adaptor to a PC board in which the capacity is memorized, the capacity setting for the PC board will become the capacity setting of the adaptor. (Priority of capacity setting adaptor)

## (9) Malfunction of Heat Exchange Temperature Sensor System

### Remote Controller Display

C4

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU, RY-KU, R-NU, RZQ-K, Inverter (RZQ100-160P) and RZQ200, 250C Series

AJ

C4

### Method of Malfunction Detection

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

### Malfunction Decision Conditions

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

### Supposed Causes

- Failure of the sensor itself
- Broken or disconnected wire
- Failure of electronic circuitry (indoor unit PC board)
- Failure of connector contact

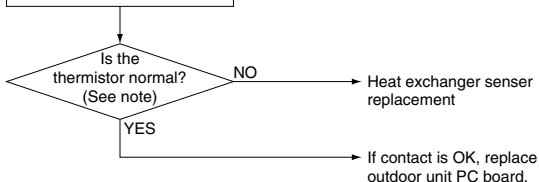
## Troubleshooting



**Caution**

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

Disconnect the heat exchange sensor (R2T) from X18A on the indoor unit PC board and measure the resistance.



Refer to Check No. 5 on page 409.

## Remote Controller Display

C4

### Applicable Models

Inverter (RZQ71F • 90C • 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by thermistor.

C4

### Malfunction Decision Conditions

The error is generated when the remote controller thermistor becomes disconnected or shorted while the unit is running.

### Supposed Causes


The possible causes are:

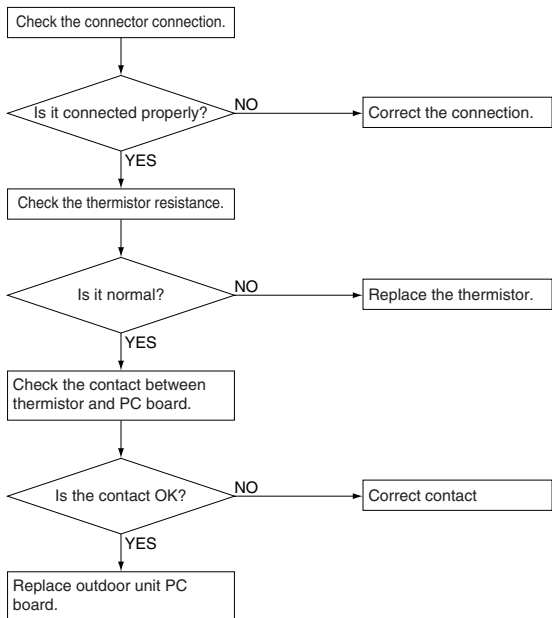
- Malfunctioning connector connection
- Malfunctioning thermistor
- Malfunctioning PC board
- Broken or disconnected wire.



Refer to Check No. 4 on page 405.

## Troubleshooting

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



## (10) Malfunction of Thermistor (R3T) for Gas Pipes

### Remote Controller Display

C5

### Applicable Models

Inverter (RZQ100-160P) Series

C4

### Method of Malfunction Detection

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

C5

### 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

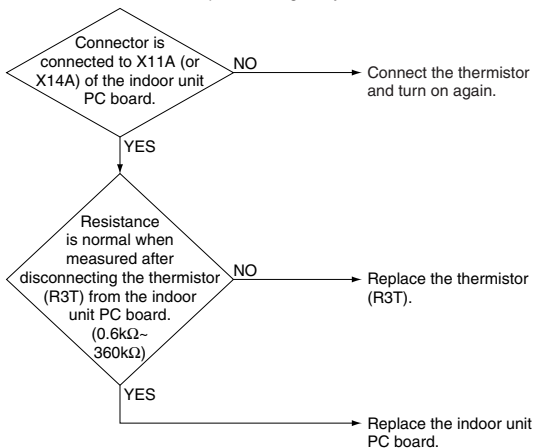


## Troubleshooting



**Caution**

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



Refer to Check No. 4 on page 405.

## Remote Controller Display

C5

### Applicable Models

Inverter (RZQ71F • 90C • 100F) Series

### Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by thermistor.

C5

### Malfunction Decision Conditions

The error is generated when the remote controller thermistor becomes disconnected or shorted while the unit is running.

### Supposed Causes

The possible causes are:

- Malfunctioning connector connection
- Malfunctioning thermistor
- Malfunctioning PC board
- Broken or disconnected wire.



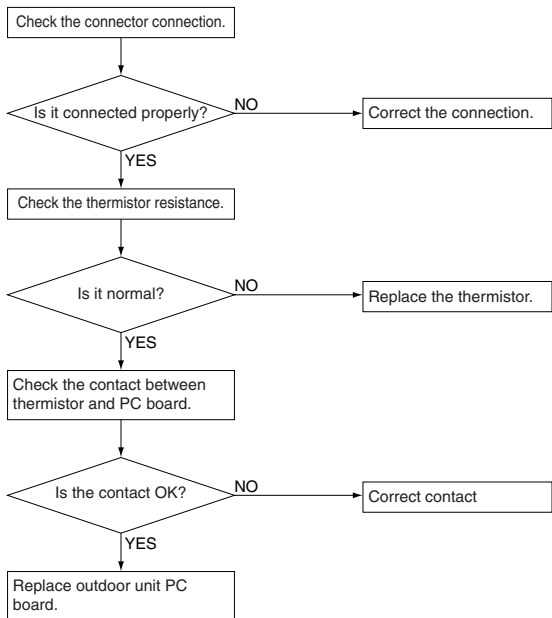
Refer to Check No. 4 on page 405.

## Troubleshooting



**Caution**

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



## (11) Malfunction of Suction Air Temperature Sensor System

### Remote Controller Display

C9

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU, RY-KU, R-NU, RZQ-K and RZQ200, 250C Series

C5

C9

### Method of Malfunction Detection

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

### Malfunction Decision Conditions

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

### Supposed Causes

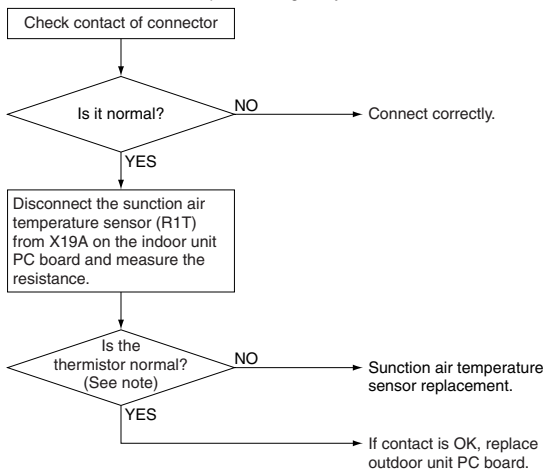
- Failure of the sensor itself
- Broken or disconnected wire
- Failure of indoor unit PC board
- Failure of connector contact

## Troubleshooting



**Caution**

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



Refer to Check No. 4 on page 405.

## Remote Controller Display

C9

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

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

C9

### Malfunction Decision Conditions

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

### Supposed Causes

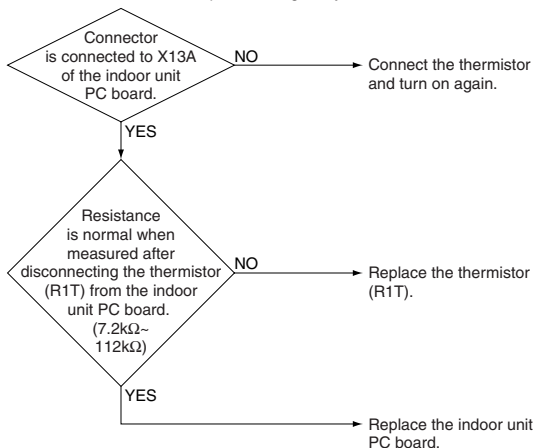
- Defect of indoor unit thermistor (R1T) for air inlet
- Defect of indoor unit PC board

## Troubleshooting



**Caution**

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



Refer to Check No. 4 on page 405.

## Remote Controller Display

C9

### Applicable Models

Inverter (RZQ71F • 90C • 100F) Series

### Method of Malfunction Detection

Malfunction detection is carried out by temperature detected by thermistor.

C9

### Malfunction Decision Conditions

The error is generated when the remote controller thermistor becomes disconnected or shorted while the unit is running.

### Supposed Causes

- Malfunctioning connector connection
- Malfunctioning thermistor
- Malfunctioning PC board
- Broken or disconnected wire.



Refer to Check No. 4 on page 405.

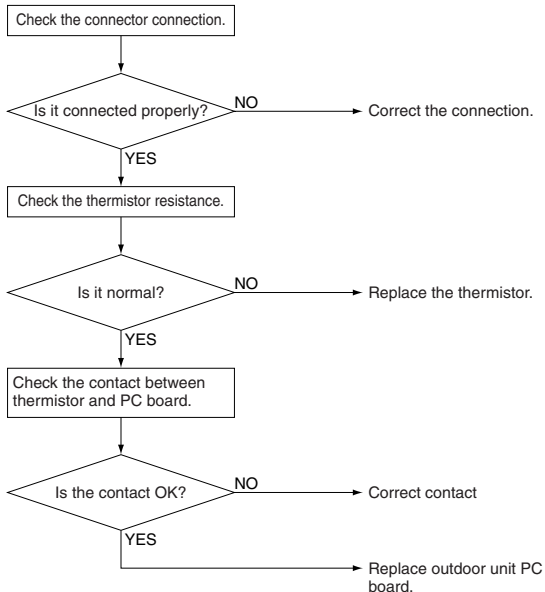


## Troubleshooting



**Caution**

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



## (12) Malfunction of Thermistor for Discharge Air

### Remote Controller Display

CA

### Applicable Models

Inverter (RZQ100-160P) Series

C9

### Method of Malfunction Detection

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

CA

### Malfunction Decision Conditions

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

### Supposed Causes

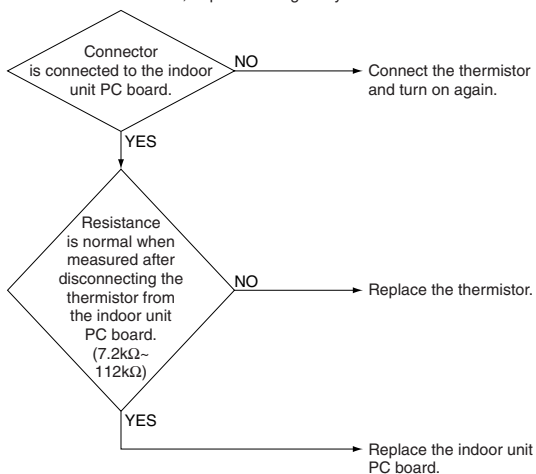
- Defect of indoor unit thermistor for air outlet
- Defect of indoor unit PC board

## Troubleshooting



**Caution**

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



Refer to Check No. 4 on page 405.

## (13) Malfunction of Moisture Sensor System

### Remote Controller Display



### Applicable Models

RZP-D Series (FHYCP)

CA

CC

### Method of Malfunction Detection

Even if a malfunction occurs, operation still continues. Malfunction is detected according to the moisture (output voltage) detected by the moisture sensor.


### Malfunction Decision Conditions

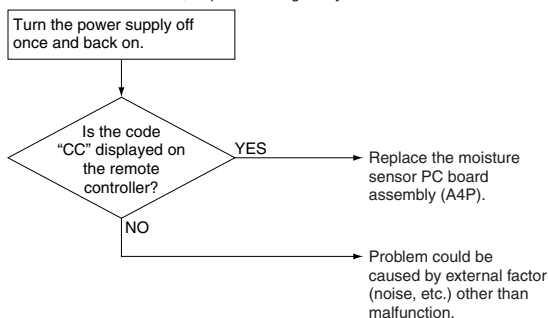
When the moisture sensor is disconnected or short-circuited

### Supposed Causes

- Faulty sensor
- Disconnection

### Troubleshooting

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



\*When pushing the  button, the code is displayed.

## Remote Controller Display



### Applicable Models

RZQ-K, Inverter Series

### Method of Malfunction Detection

Even if a malfunction occurs, operation still continues.

Malfunction is detected according to the moisture (output voltage) detected by the moisture sensor.


### Malfunction Decision Conditions

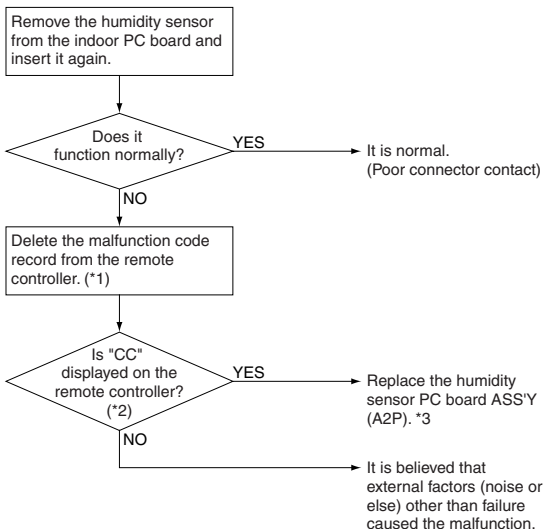
When the moisture sensor is disconnected or short-circuited

### Supposed Causes

- Faulty sensor
- Disconnection

## Troubleshooting

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



\*1: To delete the record, the **ON/OFF** button of the remote controller must be pushed and held for 5 seconds in the check mode.

\*2: To display the code, the **Inspection/Test Operation** button of the remote controller must be pushed and held in the normal mode.

\*3: If "CC" is displayed even after replacing the humidity sensor PC board ASS'Y (A2P) and taking the steps \*1 and 2, replace the indoor PC board ASS'Y (A1P).



## (14) Malfunction of Remote Controller Air Thermistor

### Remote Controller Display



### Applicable Models

RZP-D, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU, RY-KU, R-NU, RZQ-K, Inverter Series

### Method of Malfunction Detection

Even if remote controller thermistor is faulty, system is possible to operate by system thermistor.

Malfunction detection is carried out by temperature detected by remote controller thermistor.

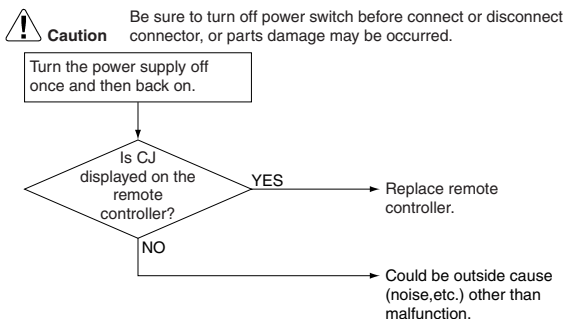
### Malfunction Decision Conditions

When the remote controller thermistor becomes disconnected or shorted while the unit is running.

### Supposed Causes

- Failure of sensor itself
- Broken wire

### Troubleshooting



## (15) Actuation of Protection Device

### Remote Controller Display

*E0*

### Applicable Models

RZP-D Series

### Method of Malfunction Detection

The protection device input circuit checks the actuation of each individual protection device.

(Batch detection of all protection devices)

CJ

E0

### Supposed Causes

- Actuation of outdoor unit protection device
- Faulty outdoor unit PC board
- Instantaneous power failure

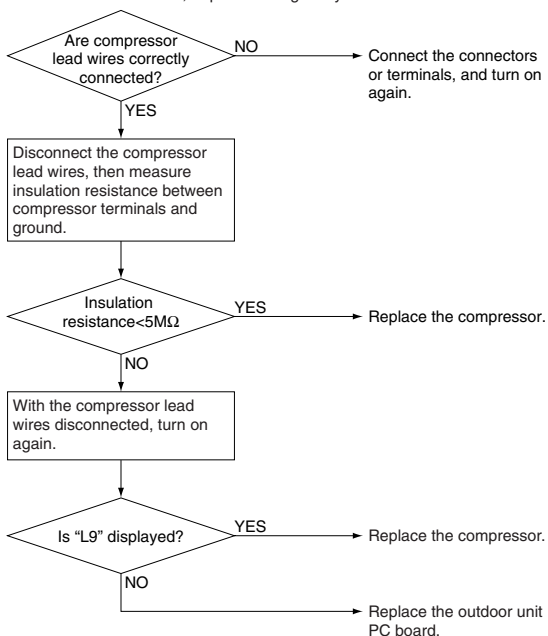


## Troubleshooting



**Caution**

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



## Remote Controller Display

**E0**

### Applicable Models

RZ(Y)-L Series

### Method of Malfunction Detection

Motor abnormality is detected when the temperature of outdoor fan motor coil rises excessively due to motor seizing or other reason and the thermal switch turns off.

**E0**

### Malfunction Decision Conditions

When fan motor coil temperature increases abnormally.

### Supposed Causes

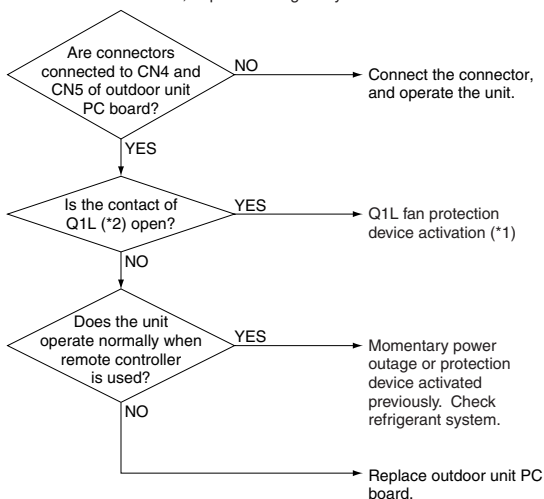
- Activation of outdoor unit protection device
- Faulty outdoor unit PC board
- Momentary power outage
- Open phase in power supply

## Troubleshooting



**Caution**

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



**Notes:**

\* 1 Faulty fan motor, faulty capacitor, etc.

\* 2

	Q1L
RZ(Y)71L	X6A
RZY100 ~ 125L	X6A X7A

## Remote Controller Display

**E0**

### Applicable Models

R(Y)-LU, RY-KU, RY-F, RY-G, RY-G, RY-FU, RY-KU and R-NU Series

### Method of Malfunction Detection

Actuation of each safety device is detected with safety device input circuit.

(Unified detection of actuation of each safety device)

**E0**

### Possible Causes

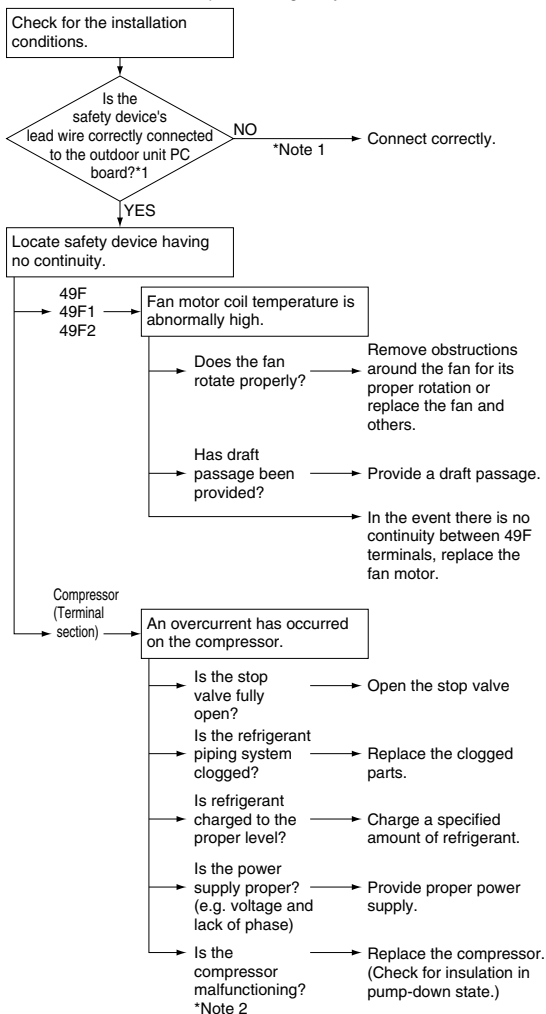
- Faulty input connection of safety device
- Faulty harness of safety device
- Closed stop valve
- Clogged refrigerant piping system
- Actuation of internal safety device of compressor  
(Only on R(Y)71 and 100)
- Faulty compressor

## Troubleshooting



**Caution**

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



**i** **Notes:**

1. In the case of R(Y)71, or 100, make sure the short-circuiting connector of X12A is correctly mounted.
2. R(Y)71, and 100, are provided with a safety device for malfunctions in the compressor. If the compressor malfunctions due to closed stop valve or shortage of gas, this safety device may be actuated.

In this case, the compressor cannot restart and its terminal section has no continuity until the internal temperature of the compressor falls and the safety device is reset. (The temperature will fall in a couple of ten minutes to a couple of hours.)

**E0**

## (16) Failure of Outdoor Unit PC Board

### Remote Controller Display

**E1**

### Applicable Models

RZP-D, R(Y)-LU and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Microcomputer checks whether E<sup>2</sup>PROM is normal.

### Malfunction Decision Conditions

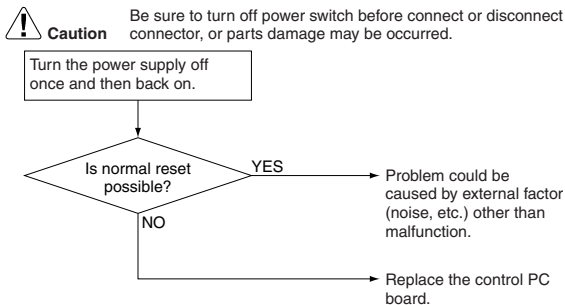
E<sup>2</sup>PROM:

When E<sup>2</sup>PROM malfunctions when turning the power supply on

### Supposed Causes

- Faulty outdoor unit PC board

### Troubleshooting



## Remote Controller Display

**E1**

### Applicable Models

RZQ-K, Inverter (RZQ71F • 90C • 100F), Inverter (RZQ-B, RZQS-B7, RZQ-C, RZQS-C, RZQ200, 250C) Series

### Method of Malfunction Detection

Microcomputer checks whether E<sup>2</sup>PROM is normal.

**E1**

### Malfunction Decision Conditions

E<sup>2</sup>PROM:

When E<sup>2</sup>PROM malfunctions when turning the power supply on

### Supposed Causes

- Faulty outdoor unit PC board (A1P)

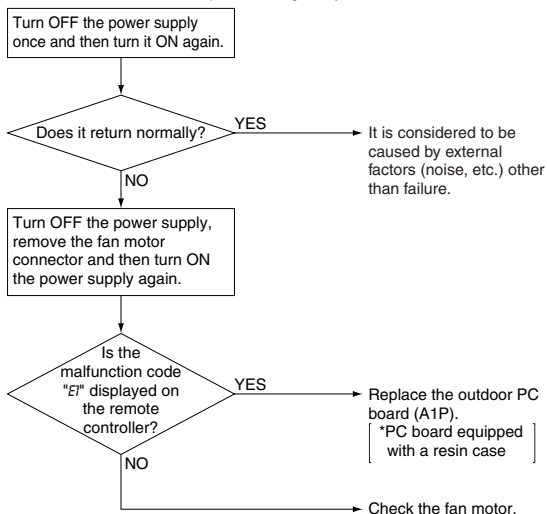


## Troubleshooting



**Caution**

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



## (17) Abnormal High Pressure Level

### Remote Controller Display

**E3**

### Applicable Models

RZP-D, R(Y)-LU, RZQ-K, Inverter (RZQ71F • 90C • 100F), Inverter (RZQ-B, RZQS-B7, RZQ-C, RZQS-C, RZQ200, 250C) Series

**E1**

**E3**

### Method of Malfunction Detection

The protection device circuit checks continuity in the high pressure switch.

### Malfunction Decision Conditions

When the high pressure switch is actuated  
Actuating pressure

### Supposed Causes

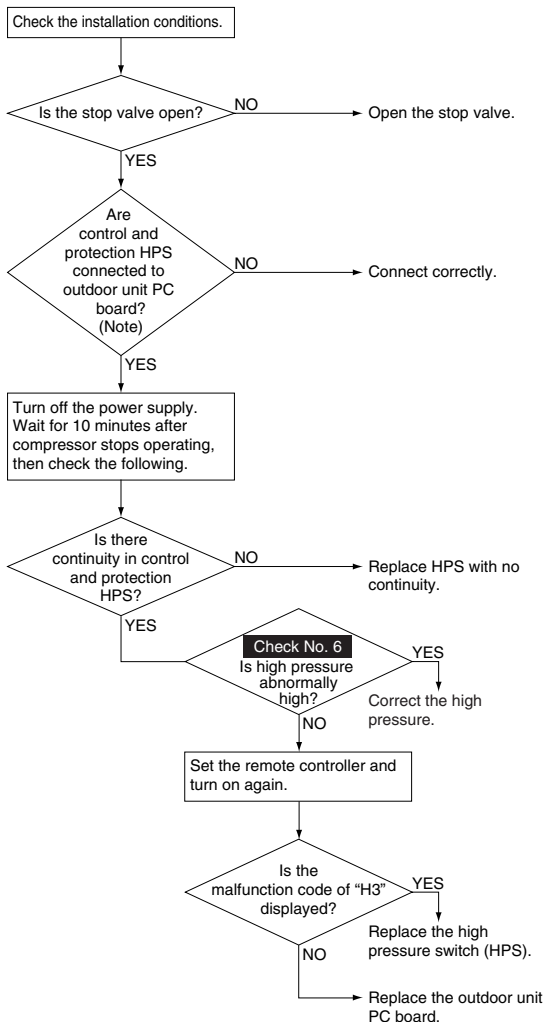
- Faulty high pressure switch
- Disconnection in high pressure switch harness
- Faulty connection of high pressure switch connector
- Clogged indoor unit suction filter (in heating operation)
- Dirty outdoor unit heat exchanger
- Faulty outdoor unit fan
- Refrigerant overcharge
- Stop valve is left in closed.

## Troubleshooting



**Caution**

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





**Note:**

Some models are not equipped with protection or control HPS.



Refer to Check No. 6 on page 411.

## Remote Controller Display

**E3**

### Applicable Models

RZ(Y)-L and RY-KU, RY-F, RY-G Series

### Method of Malfunction Detection

Abnormality is detected when the contact of the high pressure protection switch opens.


### Malfunction Decision Conditions

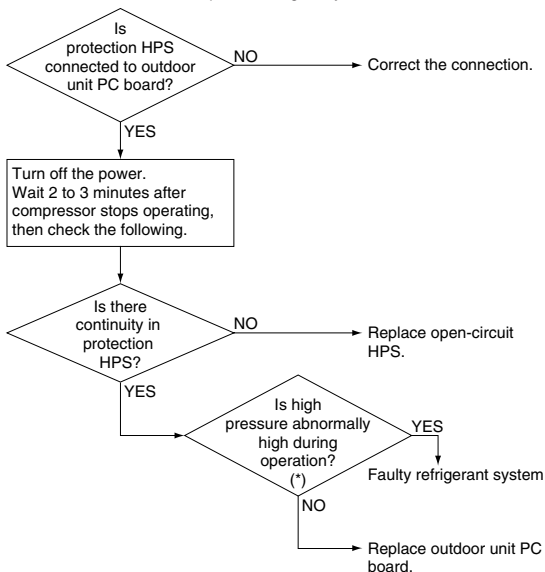
Error is generated when the HPS activation count reaches the number specific to the operation mode.

### Supposed Causes

- Disconnection of connector or terminal on outdoor unit PC board
- Dirty outdoor unit heat exchanger
- Faulty outdoor unit fan
- Refrigerant overcharge
- Faulty high pressure switch

## Troubleshooting

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



**E3**

 **Note:**

(\*) HPS activating value is approximately 3.0 MPa

## Remote Controller Display

E3

### Applicable Models

Inverter (RZQ100-160P) Series

### 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: 3.0MPa

### Supposed Causes

- Actuation of outdoor unit high pressure switch
- Defect of High pressure switch
- Defect of outdoor unit PC board
- Instantaneous power failure
- Faulty high pressure sensor

## Troubleshooting

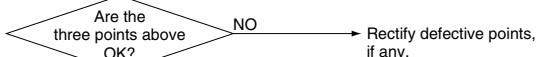


**Caution**

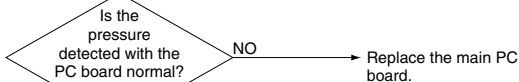
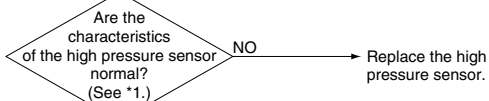
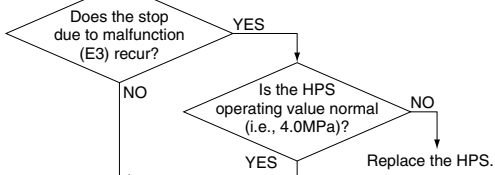
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.

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?



- Mount a pressure gauge on the high-pressure service port.
- Connect the Service Checker.
- Reset the operation using the remote controller, and then restart the operation.



- 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 No. 7** :Referring to information on page 172, remove the causes by which the high pressure has become

**E3**



\*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

**Check No.9** .)

\*2: Make a comparison between the high pressure value checked with the Service Checker and the voltage of the pressure sensor (see \*1).



Refer to Check No. 7~9 on page 413~416.

## (18) Low Pressure System Malfunction

### Remote Controller Display

E4

### Applicable Models

RZP-D and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

LP < 0.03 MPa for 5 minutes continuously is detected by the low pressure sensor.

E3

E4

### Malfunction Decision Conditions

Error is generated when the compressor stops 11 times in 200 minutes by above detection.

### Supposed Causes

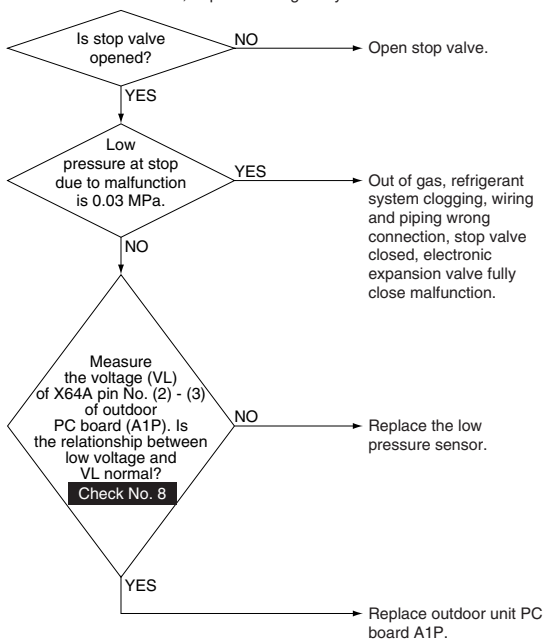
- Abnormal drop of low pressure (Lower than 0.03MPa)
- Defect of low pressure sensor
- Defect of outdoor unit PC board
- Stop valve is not opened.

## Troubleshooting



**Caution**

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



Refer to Check No. 8 on page 415.

## Remote Controller Display

**E4**

### Applicable Models

R(Y)-LU and RY-KU, RY-F, RY-G Series

### Method of Malfunction Detection

Continuity of the low pressure switch is detected by the safety device circuitry.

**E4**

### Malfunction Decision Conditions

Case where low pressure switch is actuated when the compressor is operating

### Supposed Causes

<Causes related to PC board>

- Failure of low pressure switch
- Low pressure switch's harness is broken or disconnected
- Failure of low pressure switch's connector connection
- Failure of outdoor unit PC board

<Causes related to product as a whole>

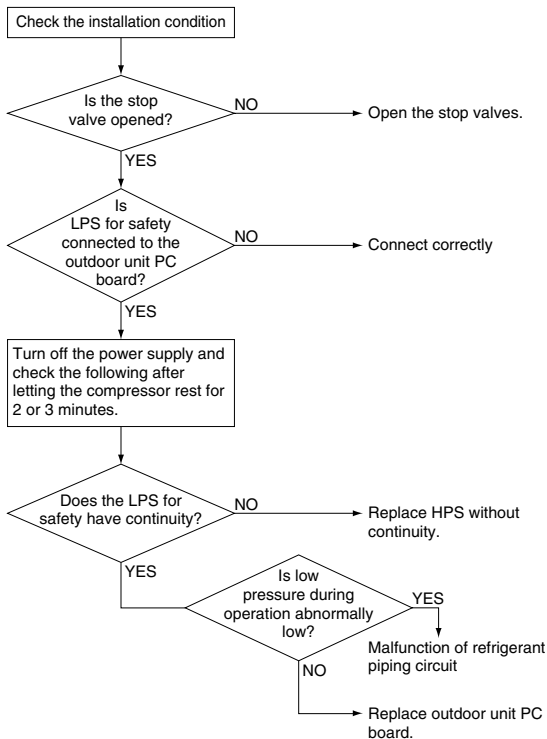
- Malfunction of refrigerant piping circuit
- Stop valve is left in close

## Troubleshooting



**Caution**

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



## Remote Controller Display

**E4**

### Applicable Models

Inverter Series (Single Phase B Series)

### Method of Malfunction Detection

Actual value of the low pressure is continuously measured using the low pressure sensor.

**E4**

### Malfunction Decision Conditions

Error is generated when the low pressure is dropped under specific pressure.

### Supposed Causes

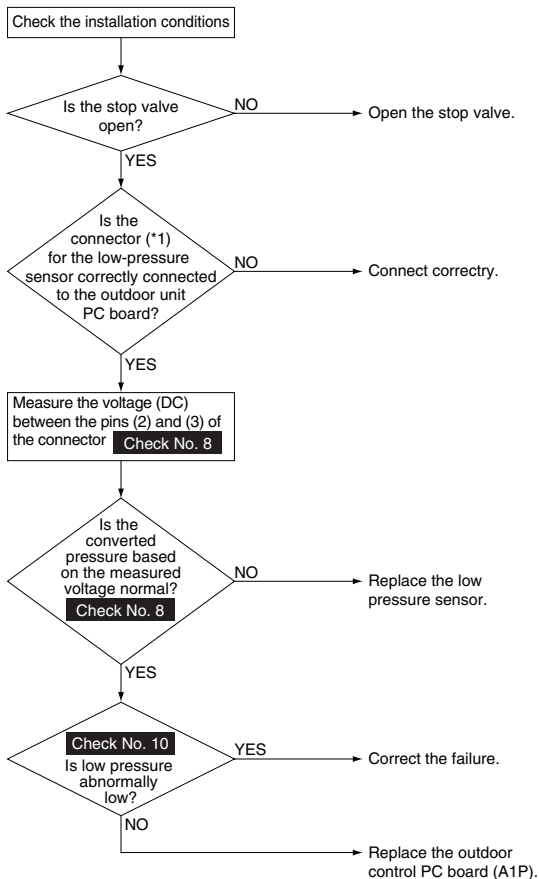
- Abnormal drop of low pressure (Lower than 0.15MPa)
- Defect of low pressure sensor
- Defect of outdoor unit PC board
- Stop valve is not opened.

## Troubleshooting



**Caution**

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



Refer to Check No. 8, 10 on page 415, 417.

\*1: Connector code: X31A

## Remote Controller Display

**E4**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Abnormality is detected by the pressure value with the low pressure sensor.

**E4**

### Malfunction Decision Conditions

Error is generated when the low pressure is dropped under specific pressure.

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.

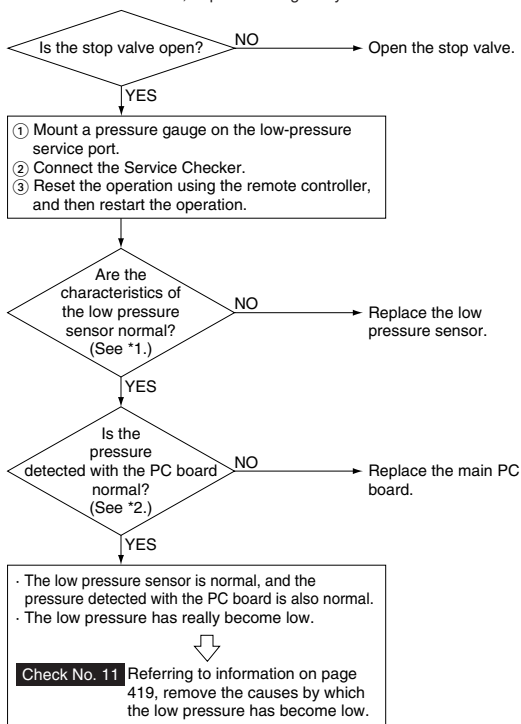


## Troubleshooting



**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

**Check No.5** .)

- \*2: Make a comparison between the low pressure value checked with the Service Checker and the voltage of the pressure sensor (see \*1).
- \*3: Make measurement of voltage of the pressure sensor.

**E4**



Refer to Check No. 5, 8, 11 on page 409, 415, 419.

## Remote Controller Display

**E4**

### Applicable Models

Inverter Series (Three Phase B Series)

### Method of Malfunction Detection

The protection device circuit checks continuity in the low pressure sensor.

### Error generation

The error is generated when the low pressure sensor is activated during compressor operation.

### Supposed Causes

The possible causes are:


- Malfunctioning refrigerant piping circuit
- Malfunctioning low pressure sensor
- Disconnected or broken low pressure sensor harness
- Malfunctioning low pressure sensor connector connection
- Malfunctioning outdoor unit PC board
- Stop valve is not opened.

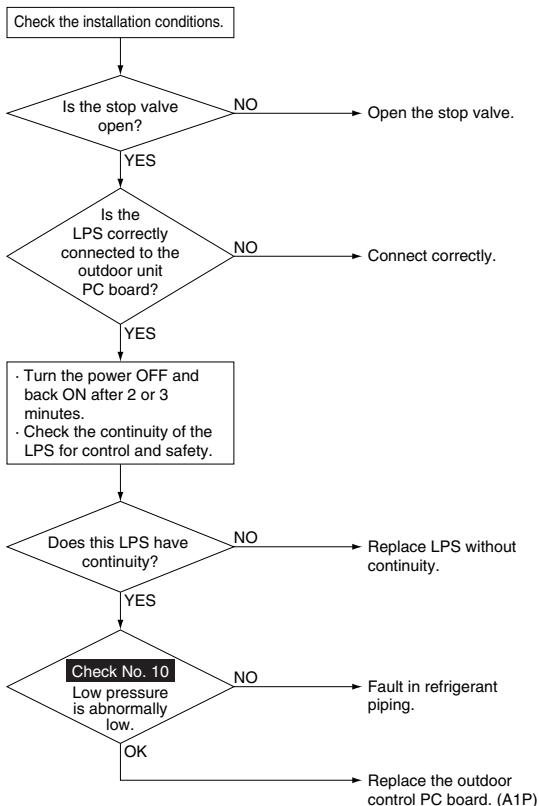
### LPS settings

The table below contains the preset LPS values.

Applicable units	Abnormal	Reset
RZQ100~140	< 1.2 bar	> 2 bar

## Troubleshooting

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



E4



Refer to Check No. 10 on page 417.

## Remote Controller Display

**E4**

### Applicable Models

RZQ-K and Inverter Series (Single Phase C Series)

### Method of Malfunction Detection

[In cooling]

Detect malfunctions by the pressure sensor (S1NPH).

[In heating]

Detect malfunctions by the heat exchanger distribution pipe thermistor (R4T).

### Malfunction Decision Conditions

[In cooling]

When the detection pressure is the following value

0.12 MPa or less continues for 5 minutes

When the saturated pressure equivalent to the detection temperature is the following value

0.12 MPa or less continues for 5 minutes

### Supposed Causes

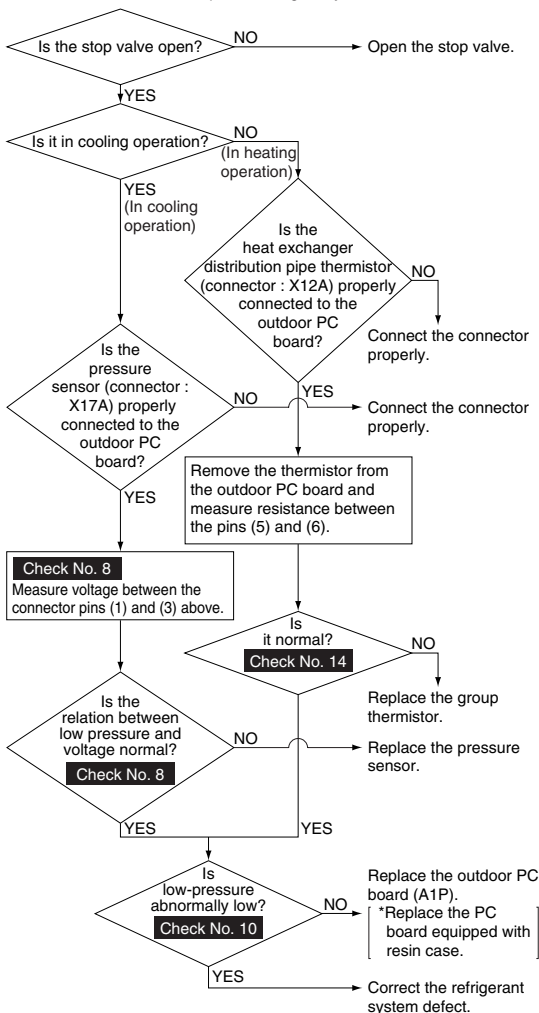
- The stop valve remained closed
- Faulty pressure sensor and intermittent harness
- Faulty outdoor PC board
- Abnormal drop of low pressure  
(Inadequate refrigerant)  
(Abnormal refrigerant piping system (liquid pipe system))  
(Faulty electronic expansion valve)

## Troubleshooting



**Caution**

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



**E4**



Refer to Check No. 8, 10, 14 on page 415, 417, 423.

## **(19) Compressor Motor Lock**

### **Remote Controller Display**

**E5**

### **Applicable Models**

RZP-D, RZQ-F, P, C, B, RZQS-B, C Series

### **Method of Malfunction Detection**

Inverter PC board takes the position signal from UVWN line connected between the inverter and compressor, and detects the position signal pattern.

### **Malfunction Decision Conditions**

The position signal with 3 times cycle as imposed frequency is detected when compressor motor operates normally, but 2 times cycle when compressor motor locks. When the position signal in 2 times cycle is detected

### **Supposed Causes**

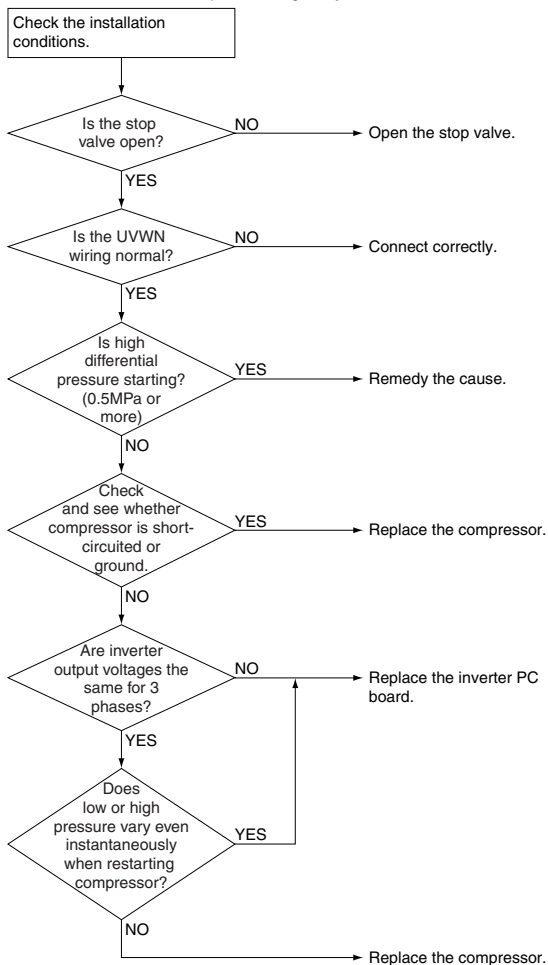
- Compressor lock
- High differential pressure (0.5MPa or more) starting
- Incorrect UVWN wiring
- Faulty inverter PC board
- Stop valve is left in closed.

## Troubleshooting



**Caution**

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



**E5**



## Remote Controller Display

**E5**

### Applicable Models

RZQ-K and RZQ200, 250C Series

### Method of Malfunction Detection

Detect the motor lock when the compressor is energized.

### Malfunction Decision Conditions

If the motor rotor does not rotate when the compressor is energized.

### Supposed Causes

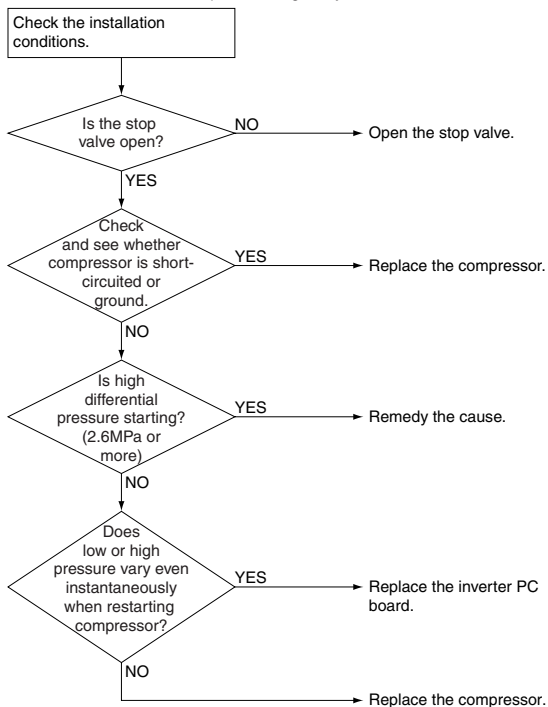
- Compressor lock
- High differential pressure (2.6MPa or more) starting
- Incorrect UVWN wiring
- Faulty inverter PC board
- Stop valve is left in closed.

## Troubleshooting



**Caution**

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



**E5**

## **(20) Compressor Overcurrent**

### **Remote Controller Display**

**E6**

### **Applicable Models**

R(Y)-LU Series

### **Method of Malfunction Detection**

The input current value is detected with a current sensor.

### **Malfunction Decision Conditions**


When the compressor input current exceeds the specified input current value.

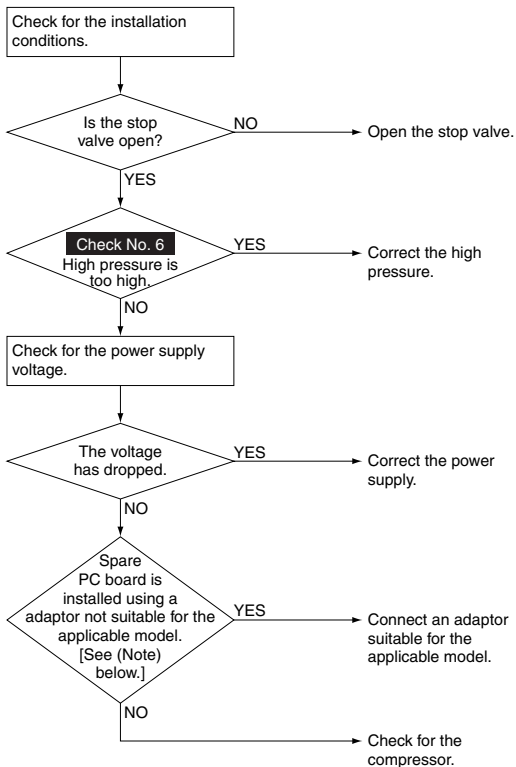
★Refer “Approximate Input current value” on P. 158.

### **Possible Causes**

- High pressure increased too high
- Voltage drop
- Failure to open the stop valve
- Faulty compressor (compressor lock)

## Troubleshooting

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



**E6**



Refer to Check No. 6 on page 411.

**Note:**

For details, refer to information in Section "Failure of PJ Capacity Setting".

**\*Approximate Input current value**

	Input current value
R71LUVAL	25.30
R(Y)71LUV1	25.30
R(Y)71LUY1	8.63
R100LUVAL	29.90
R(Y)100LUV1	29.90
R(Y)100LUY1	11.50
R125LUTAL	25.30
R125LUYAL	14.95
R(Y)125LUY1	14.95
R(Y)140LUTAL	32.20
R(Y)140LUYAL	17.25
R(Y)140LUY1	17.25
RY160LUY1	17.25

## (21) Malfunction of Outdoor Unit Fan Motor

### Remote Controller Display

**E7**

### Applicable Models

RZP-D, RZQ-K and RZQ-P, RZQ-F, RZQ-CV Series

**E6**

### Method of Malfunction Detection

Abnormality of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

**E7**

### Malfunction Decision Conditions

When the fan runs with speed less than a specified one for 15 seconds or more when the fan motor running conditions are met

When connector detecting fan speed is disconnected

When malfunction is generated 4 times, the system shuts down.

### Supposed Causes

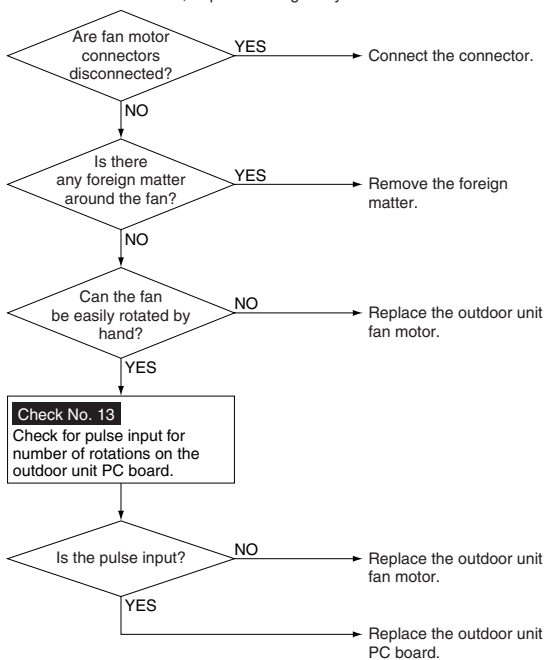
- Malfunction of fan motor
- The harness connector between fan motor and PC board is left in disconnected, or faulty connector
- Fan does not run due to foreign matters tangled
- Clearing condition: Operate for 5 minutes (normal)

## Troubleshooting



**Caution**

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



Refer to Check No. 13 on page 422.

## Remote Controller Display

**E7**

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Abnormality of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

**E7**

### Malfunction Decision Conditions

When the fan runs with speed less than a specified one for 6 seconds or more when the fan motor running conditions are met

When connector detecting fan speed is disconnected

When malfunction is generated 4 times, the system shuts down.

### Supposed Causes

- Disconnection of connector
- Malfunction of fan motor
- The harness connector between fan motor and PC board is left in disconnected, or faulty connector
- Fan does not run due to foreign matters tangled
- Clearing condition: Operate for 5 minutes (normal)

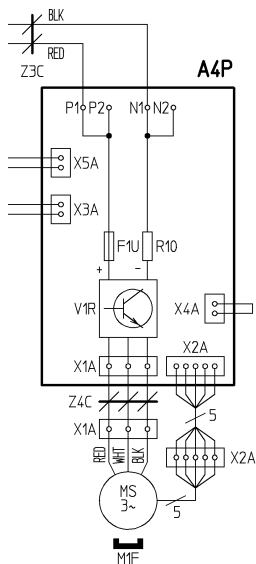
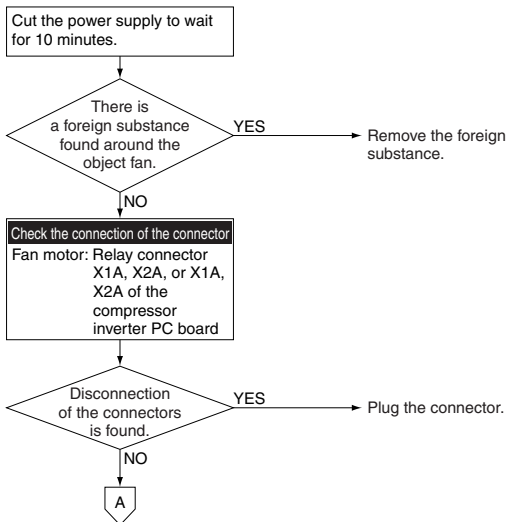


## Troubleshooting



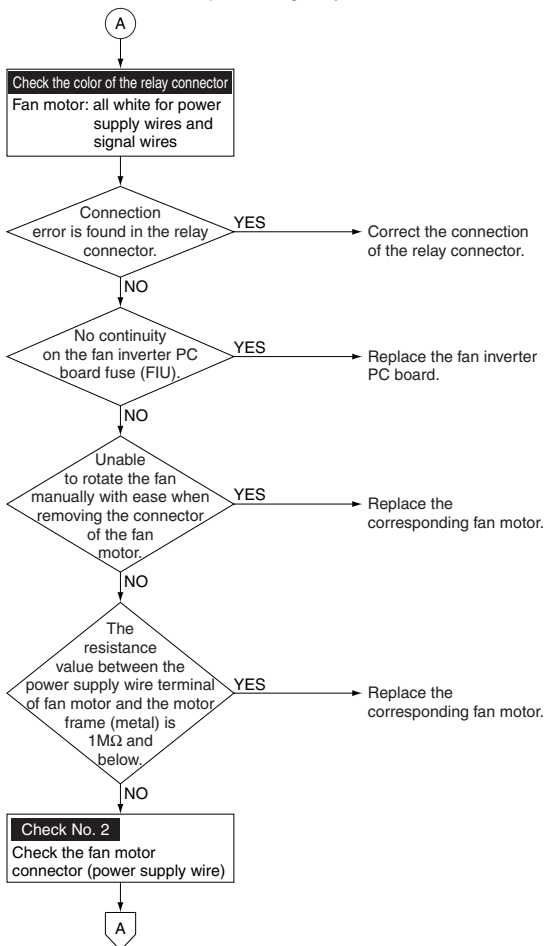
**Caution**

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



**Caution**

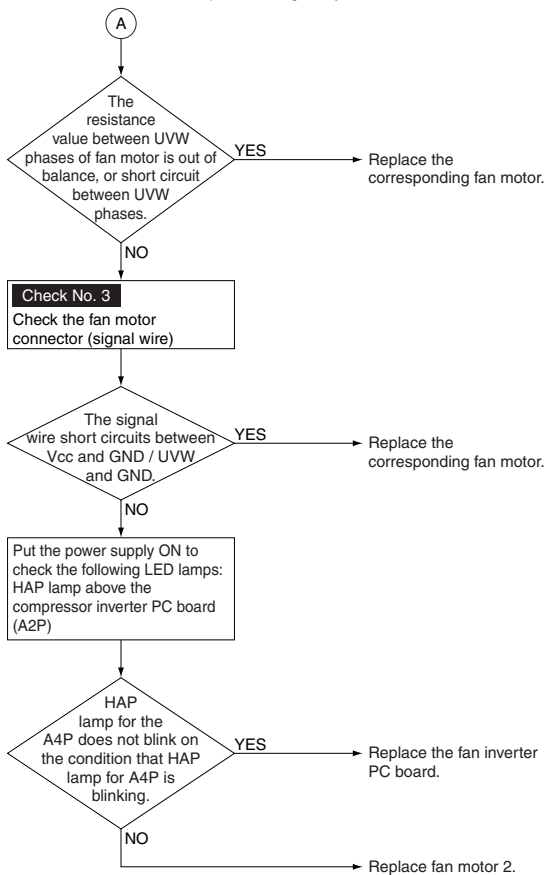
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



Refer to Check No. 2, 3 on page 402, 403.

## Remote Controller Display

**E7**

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

Abnormality of fan motor system is detected according to the fan speed detected by hall IC when the fan motor runs.

**E7**

### Malfunction Decision Conditions

When the fan runs with speed less than a specified one for 15 seconds or more when the fan motor running conditions are met

When connector detecting fan speed is disconnected

When malfunction is generated 4 times, the system shuts down.

### Supposed Causes

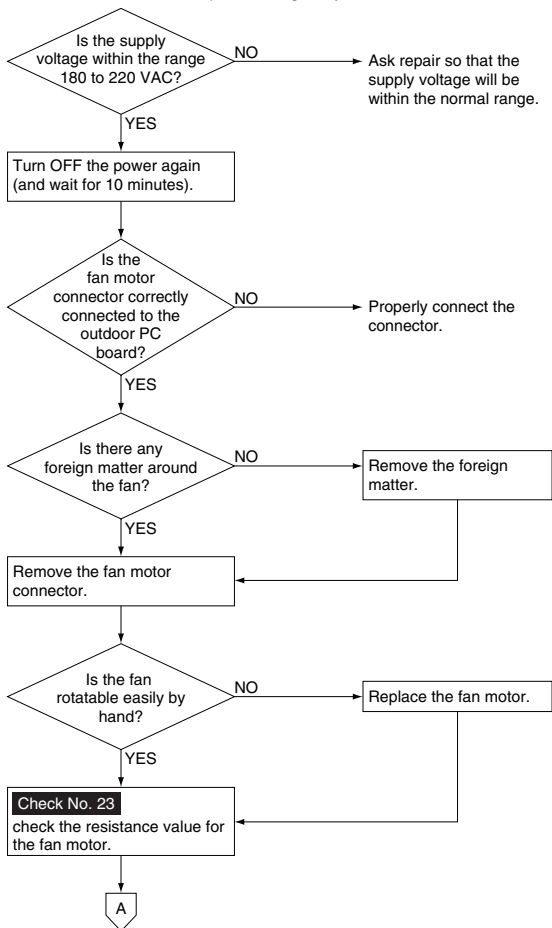
- Malfunction of fan motor
- The harness connector between fan motor and PC board is left in disconnected, or faulty connector
- Fan does not run due to foreign matters tangled
- Malfunction of the outdoor (inverter) PC board
- Blowout of fuse

## Troubleshooting



**Caution**

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

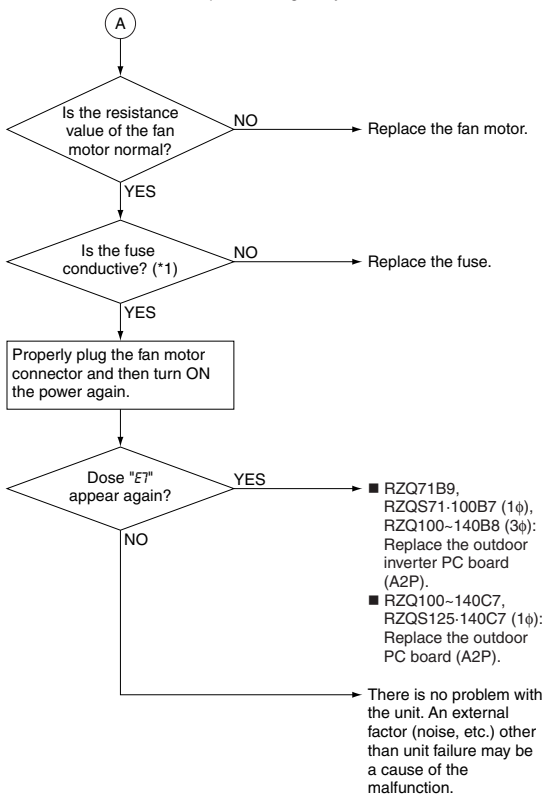


Refer to Check No. 23 on page 448.



**Caution**

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



**E7**

**\*1 Fuse conductive**

RZQ100~140C7V1B, RZQS125~140C7V1B	F6U
RZQ100~140B8W1B	F1U (A2P)
RZQ71B9V3B, RZQS71~100B7V3B	No Fuse

## **(22) Malfunction of Electronic Expansion Valve**

### **Remote Controller Display**

**E9**

### **Applicable Models**

RZP-D and Inverter (RZQ71F • 90C • 100F) Series

### **Method of Malfunction Detection**

Method is determined according to the suction pipe superheat degree and electronic expansion valve opening degree calculated by values of low pressure sensor and suction pipe temperature thermistor.

### **Malfunction Decision Conditions**

When the following conditions are met for 10 minutes

Suction pipe superheat degree < 2°C

Minimum electronic expansion valve opening degree

### **Supposed Causes**

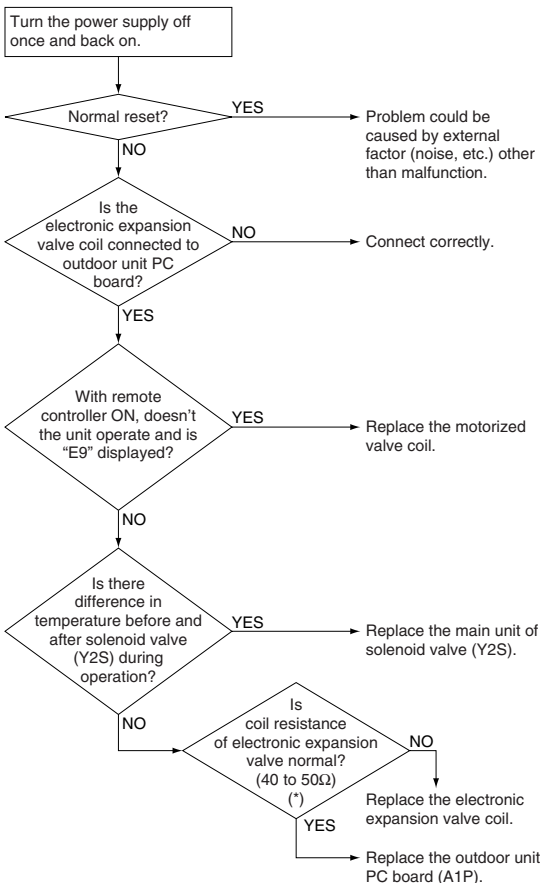
- Faulty electronic expansion valve
- Faulty solenoid valve
- Faulty check valve

## Troubleshooting



**Caution**

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



**E9**



Refer to Check No. 15 on page 424.



## Remote Controller Display

**E9**

### Applicable Models

RZ(Y)-L Series

### Method of Malfunction Detection

The electronic expansion valve error detection function detects coil current to determine open circuit and short circuit.

### Malfunction Decision Conditions

Error is generated under the following condition.

Coil current:

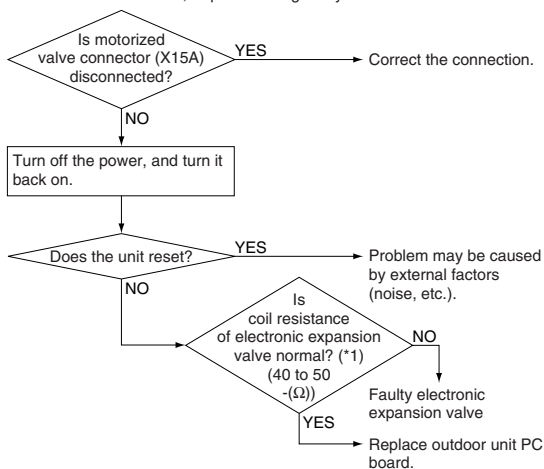
Open circuit < Normal < Short circuit

### Supposed Causes

- Faulty electronic expansion valve
- Open circuit in electronic expansion valve harness
- Faulty connection of electronic expansion valve connector
- Faulty outdoor unit PC board
- External factor (noise, etc.)

## Troubleshooting

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



E9

**Note:**

- \* 1 Between pins 1 and 2, between 1 and 3, between 1 and 4, or between 1 and 5

## Remote Controller Display

**E9**

### Applicable Models

R(Y)-LU Series

### Method of Malfunction Detection

With electronic expansion valve malfunction detection, coil current is detected and open and short circuits are detected.

### Malfunction Decision Conditions

Malfunction is determined by the following condition.  
There is no common power supply when the power is ON.

### Supposed Causes

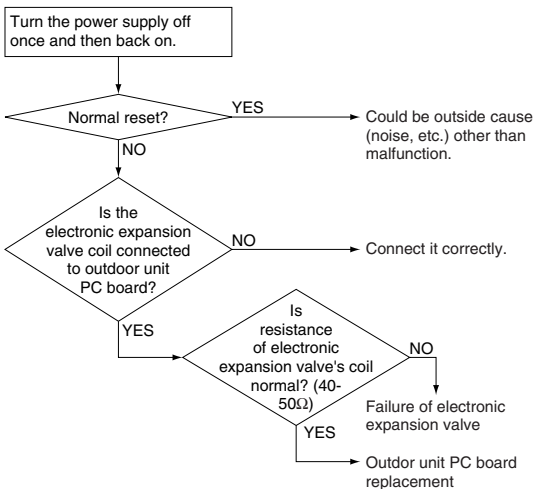
- Failure of electronic expansion valve
- Electronic expansion valve's harness is broken or disconnected.
- Failure of electronic expansion valve's connector connection
- Failure of outdoor unit PC board
- Outside cause (noise, etc.)

## Troubleshooting



**Caution**

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



**E9**



Refer to Check No. 15 on page 424.

## Remote Controller Display

**E9**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

- Check disconnection of connector
- Check continuity of expansion valve coil

### Malfunction Decision Conditions

Error is generated under no common power supply when the power is on.

### Supposed Causes

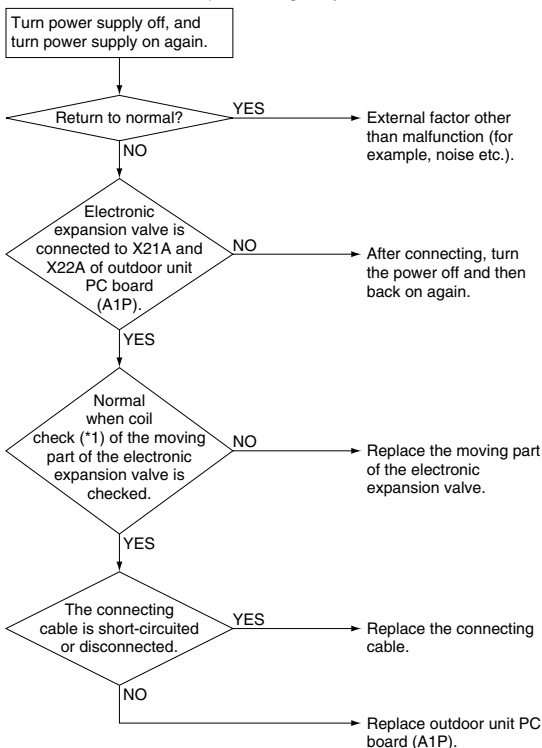
- Defect of moving part of electronic expansion valve
- Defect of outdoor unit PC board (A1P)
- Defect of connecting cable

## Troubleshooting



**Caution**

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



**E9**



Refer to Check No. 15 on page 424.

## Remote Controller Display

**E9**

### Applicable Models

RZQ-K, RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

### Method of Malfunction Detection

Method is determined according to the suction pipe superheat degree and electronic expansion valve opening degree calculated by values of low pressure sensor and suction pipe temperature thermistor.

### Malfunction Decision Conditions

When the following conditions are met for 10 minutes

Suction pipe superheat degree  $< 4^{\circ}\text{C}$

Minimum electronic expansion valve opening degree

Connector of electronic expansion valve is missing when the power is on.

### Supposed Causes

- Faulty electronic expansion valve
- Faulty solenoid valve
- Faulty check valve
- Disconnection of electronic expansion valve harness
- Faulty connection of electronic expansion valve connector
- Faulty each thermistor
- Faulty mounting
- Faulty pressure sensor
- Faulty Outdoor control PC board

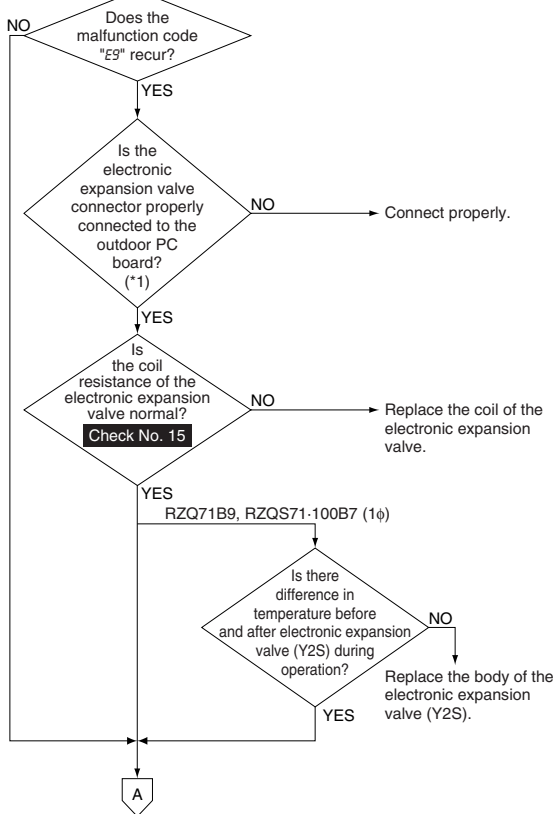
## Troubleshooting



**Caution**

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

Turn OFF the power supply once and then turn it ON again.

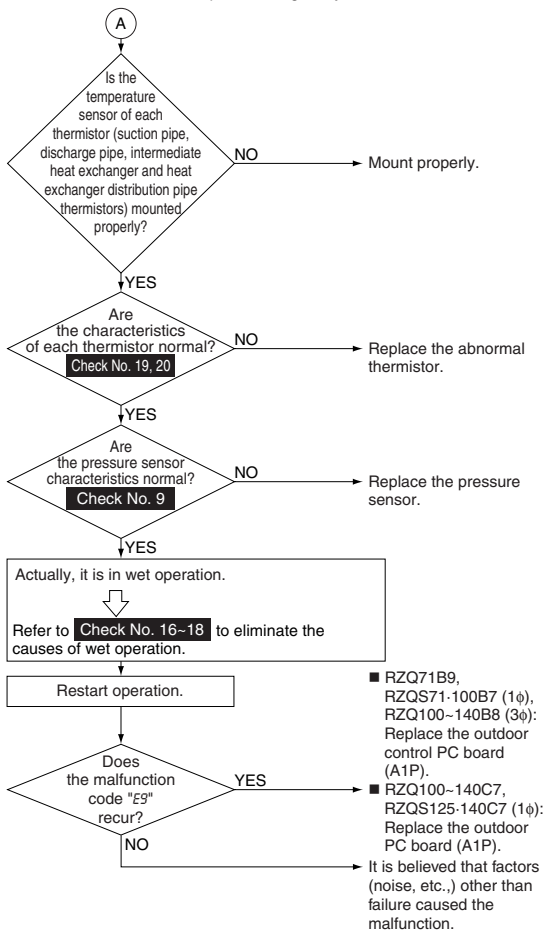


**E9**





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



Refer to Check No. 9, 15~20 on page 416, 424~438.

\*1: Electronic expansion valve and connector No.

- RZQ71B9, RZQS71·100B7 (1φ) → X12A
- RZQ100~140C7, RZQS125·140C7 (1φ)  
RZQ100~140B8 (3φ) → X21A

## (23) Malfunction of Discharge Pipe Temperature

### Remote Controller Display

F3

### Applicable Models

RZP-D, RZ(Y)-L, RZQ-K and Inverter Series

E9

### Method of Malfunction Detection

Abnormality is detected according to the temperature detected by the discharge pipe temperature sensor.

F3

### Malfunction Decision Conditions

When the discharge pipe temperature rises to an abnormally high level

When the discharge pipe temperature rises suddenly

### Supposed Causes

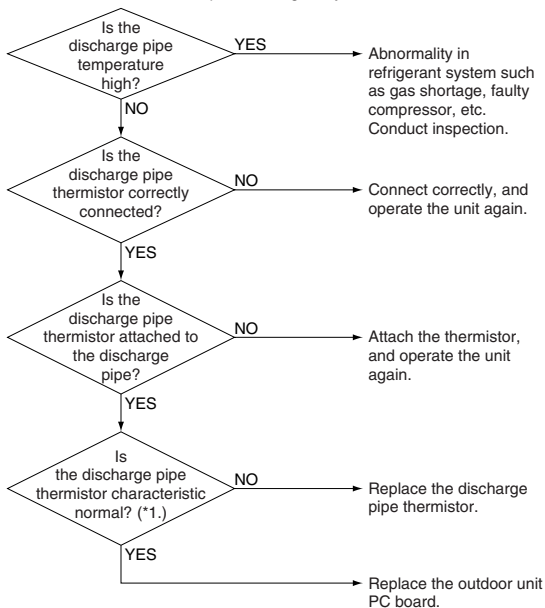
- Faulty discharge pipe thermistor
- Faulty connection of discharge pipe thermistor
- Insufficient refrigerant amount
- Faulty compressor
- Disconnection of discharge pipe temperature thermistor piping

## Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

**F3**

### Applicable Models

R(Y)-LU Series

### Method of Malfunction Detection

Malfunction is detected according to temperature detected by discharge pipe temperature sensor.

**F3**

### Malfunction Decision Conditions

When discharge pipe temperature becomes abnormally high

When discharge pipe temperature rises suddenly

When the discharge pipe sensor comes out of its installed position

### Supposed Causes

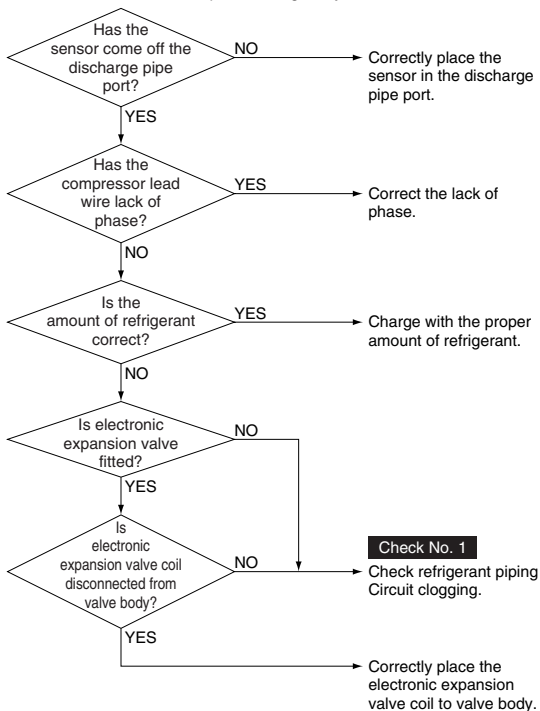
- Improper amount of refrigerant
- Refrigerant piping circuit clogging
- Discharge pipe temperature sensor comes off the discharge pipe port
- Electronic expansion valve coil is disconnected from valve body
- Compressor lead wire has lack of phase

## Troubleshooting



**Caution**

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



Refer to Check No. 1 on page 401.

## (24) Abnormal Heat Exchanging Temperature

### Remote Controller Display

*F6*

### Applicable Models

R(Y)-LU Series

**F3**

### Method of Malfunction Detection

The high pressure control (stop) is made according to temperature detected with outdoor unit heat exchanging thermistor in cooling operation or indoor unit heat exchanging thermistor in heating operation.

**F6**

### Malfunction Decision Conditions

When the outdoor unit heat exchanging temperature in cooling operation or the indoor unit heat exchanging temperature in heating operation exceeds a rated value. (Refer to information in "Function and Operation".)

### Possible Causes

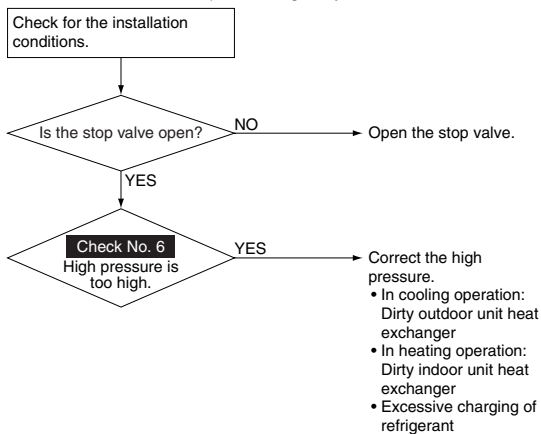
- Clogged indoor unit suction filter (in heating operation)
- Dirty outdoor unit heat exchanger
- Faulty outdoor unit fan
- Excessive charging of refrigerant
- Failure to open the stop valve

## Troubleshooting



**Caution**

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



Refer to Check No. 6 on page 411.

## Remote Controller Display

**F6**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Excessive charging of refrigerant is detected by using the heat exchanging deicer temperature during a check operation.

**F6**

### Malfunction Decision Conditions

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

### Supposed Causes

- Refrigerant overcharge
- Misalignment of the thermistor for heat exchanger
- Defect of the thermistor for heat exchanger (R4T)

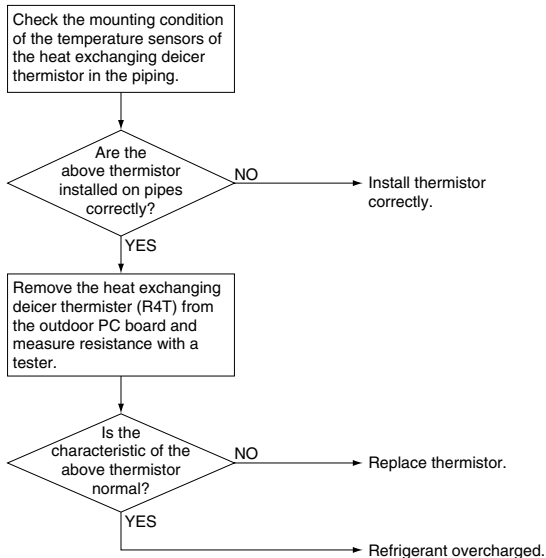


## Troubleshooting



**Caution**

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



Refer to Check No. 4 on page 405.

## (25) Malfunction of High Pressure Switch System

### Remote Controller Display

H3

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

F6

H3

### Method of Malfunction Detection

The protection device circuit checks continuity in the high pressure switch.

### Malfunction Decision Conditions

When there is no continuity in the high pressure switch during compressor stops operating

### Supposed Causes

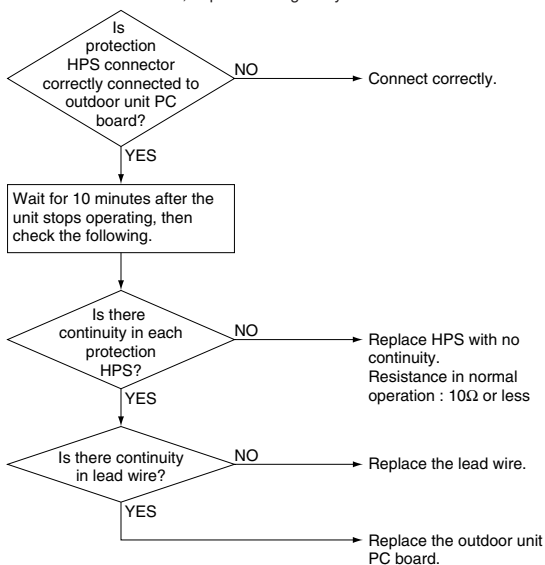
- Incomplete high pressure switch
- Disconnection in high pressure switch harness
- Faulty connection of high pressure switch connector
- Faulty outdoor unit PC board
- Disconnected lead wire

## Troubleshooting



**Caution**

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



## (26) Abnormal Low Pressure Sensor

### Remote Controller Display

H4

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

Check the continuity of LPS

LPS is not operated when the low pressure is dropped under specific pressure (0.12MPa).

### Malfunction Decision Conditions

When there is no continuity in the LPS during compressor start operating.

LPS is not operated when the low pressure is dropped under specific pressure (0.12MPa) during compressor operating.

### Supposed Causes

- Faulty LPS
- Disconnection in LPS harness
- Faulty connection of LPS connector
- Defect of outdoor unit PC board
- Refrigerant shortage
- Stop valve is not opened
- Defective expansion valve
- Clogged check valve

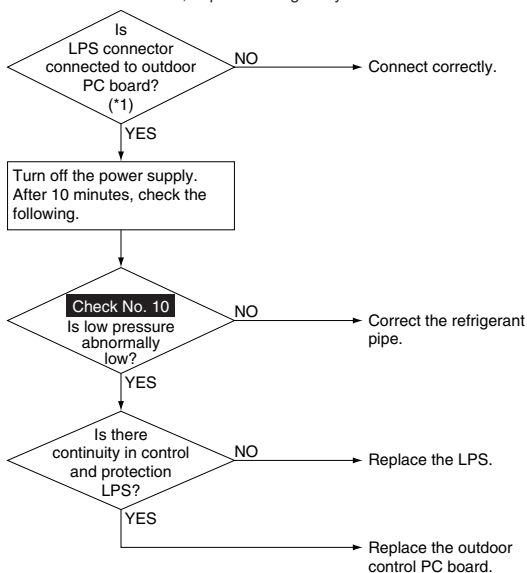
H3

H4

## Troubleshooting


**Caution**

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



\*1

Model name		
RZQ100 ~140B8 (3φ)	S1PL	X31A



Refer to Check No. 10 on page 417.

## (27) Malfunction of Outdoor Fan Motor Signal

### Remote Controller Display

H7

### Applicable Models

RZP-D and RZQ200, 250C Series

H4

### Method of Malfunction Detection

Detection of signal malfunction from outdoor fan motor

H7


### Malfunction Decision Conditions

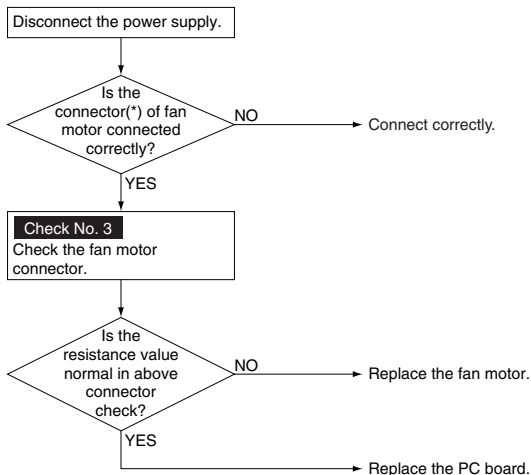
When malfunction signal is detected at the start of fan motor operation.

### Supposed Causes

- Malfunction of fan motor signal (circuit failure)
- Disconnection, short of fan motor lead wire and coming off the connector
- Faulty PC board

## Troubleshooting

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



### \*Connector symbol of fan motor

Model name	Connector symbol
RZP71D	X206A
RZP100 to 140D	X206A, X207A

#### ★Caution for service

If the outdoor fan rotates due to strong wind, voltage generates in main circuit capacitor.

To prevent electric shock, make sure the low voltage of main circuit (50 VDC or lower) before carrying out troubleshooting. To prevent PC board from being damaged, touch the earth connector in an electric parts box immediately before the inserting and extracting the connector, which discharges the static from human body.



Refer to Check No. 3 on page 403.

## (28) Malfunction of Outdoor Temperature Thermistor System

### Remote Controller Display

H9

### Applicable Models

RZP-D, RZQ-K, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

H7

H9

### Method of Malfunction Detection

Abnormality is detected according to the temperature detected by each individual thermistor.

### Malfunction Decision Conditions

When thermistor is disconnected or short-circuited during operation

### Supposed Causes

- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

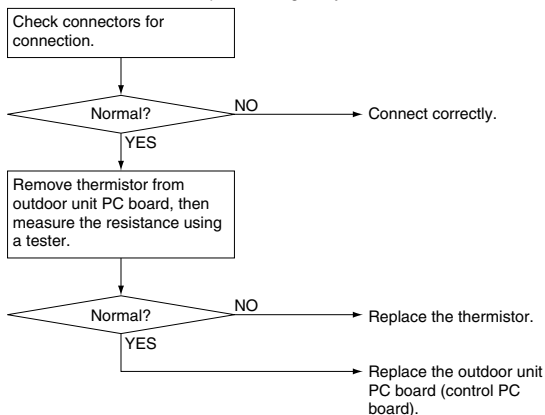


## Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

H9

### Applicable Models

RZ(Y)-L and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

The detection is based on abnormal resistance value of the thermistor.

H9

### Malfunction Decision Conditions

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

### Supposed Causes

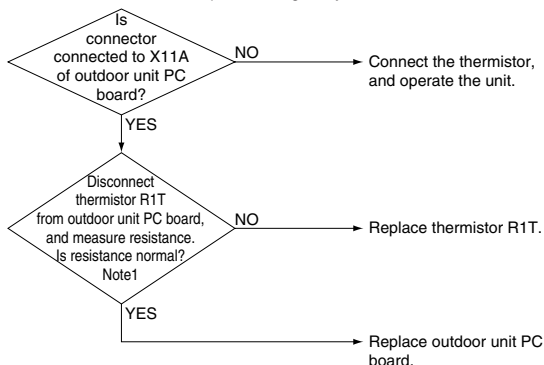
- Faulty outside air temperature sensor
- Faulty connection of outside air temperature sensor connector
- Faulty outdoor unit PC board

### Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

H9

### Applicable Models

R(Y)-LU, RY-KU, RY-F, RY-G and RY-G, RY-FU, RY-KU Series

### Malfunction Decision Conditions

Case where the outdoor temperature sensor has a short or open circuit

### Supposed Causes

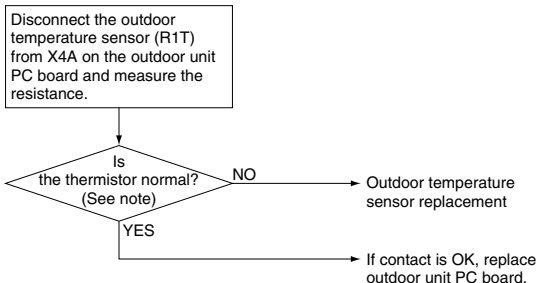
- Failure of outdoor temperature sensor
- Failure of outdoor temperature sensor's connector connection
- Failure of outdoor unit PC board

### Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## (29) Malfunction of Pressure Sensor

### Remote Controller Display

J1

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

The malfunction is detected by the pressure measured with pressure sensor (S1NPH)

H9

J1

### Malfunction Decision Conditions

When the detect pressure becomes following;  
Detected pressure  $\leq -0.05\text{MPa}$  continues 185 sec.  
Detected pressure  $\geq 4.4\text{MPa}$  continues 185 sec.

### Supposed Causes

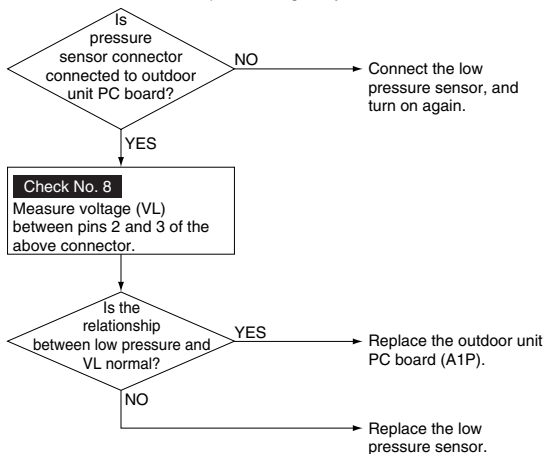
- Faulty pressure sensor
- Faulty outdoor unit PC board
- Incorrect connection of connector

## Troubleshooting



**Caution**

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



Refer to Check No. 8 on page 415.

## Remote Controller Display

**J1**

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

The malfunction is detected by the pressure measured with pressure sensor (S1NPH)

**J1**

### Malfunction Decision Conditions

When the detect pressure becomes following;  
Detected pressure  $\leq$  -0.05MPa continues 185 sec.  
Detected pressure  $\geq$  4.4MPa continues 185 sec.

### Supposed Causes

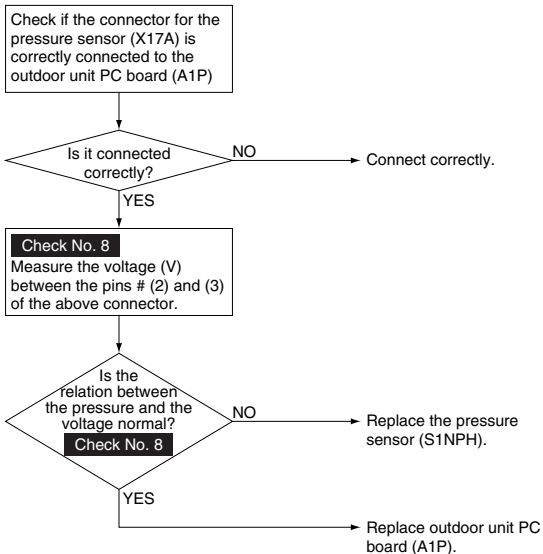
- Faulty pressure sensor
- Faulty outdoor unit PC board
- Incorrect connection of connector

## Troubleshooting



**Caution**

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



Refer to Check No. 8 on page 415.

## (30) Malfunction of Current Sensor System

### Remote Controller Display



### Applicable Models

R(Y)-LU Series

J1

### Method of Malfunction Detection

The malfunction of current sensor is detected through the current detected with the current sensor.

J2

### Malfunction Decision Conditions

#### While in operation:

When the current detected with the current sensor is not more than a constant value (1.5A).

#### While in stopping:

When the current detected with the current sensor is not less than a constant value (5A).

### Possible Causes

- Faulty current sensor
- Faulty outdoor unit PC board
- Actuation of internal safety device of compressor (Only on R(Y)71 and 100)

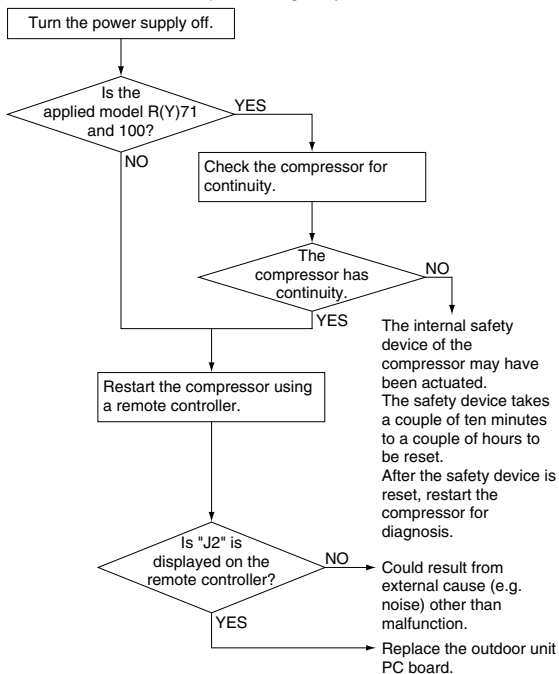


## Troubleshooting



**Caution**

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



## (31) Malfunction of Discharge Pipe Thermistor System

### Remote Controller Display

J3

### Applicable Models

RZP-D, RZQ-K, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

J2

J3

### Method of Malfunction Detection

Abnormality is detected according to the temperature detected by each individual thermistor.

### Malfunction Decision Conditions

When thermistor is disconnected or short-circuited during operation

### Supposed Causes

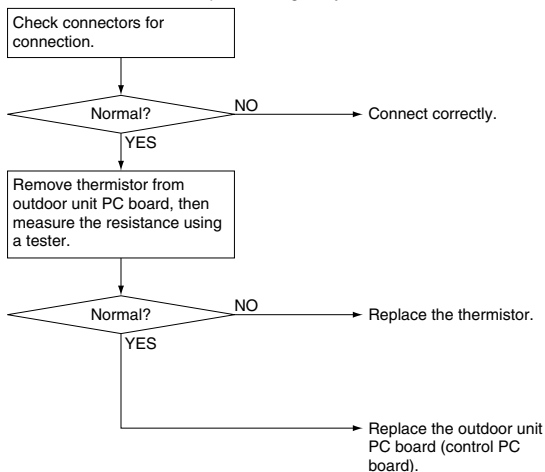
- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

## Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

J3

### Applicable Models

RZ(Y)-L and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected whether the resistance of thermistor is abnormal or normal.

J3

### Malfunction Decision Conditions

When a short circuit or an open circuit in the outdoor temperature sensor is detected.

### Supposed Causes

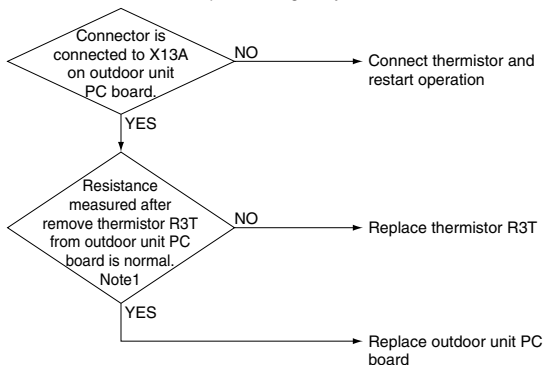
- Faulty discharge pipe temperature sensor
- Incomplete connection of discharge pipe temperature sensor
- Faulty outdoor unit PC board

## Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

J3

### Applicable Models

R(Y)-LU and RY-G, RY-FU, RY-KU Series

### Malfunction Decision Conditions

Case where the discharge pipe temperature sensor has a short or open circuit

J3

### Supposed Causes

- Failure of discharge pipe temperature sensor
- Failure of discharge pipe temperature sensor's connector connection
- Failure of outdoor unit PC board

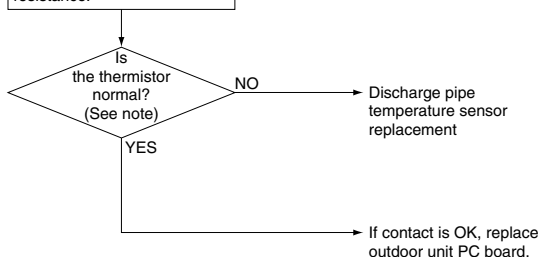
### Troubleshooting



**Caution**

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

Disconnect the discharge pipe temperature sensor (R3T) from X6A on the outdoor unit PC board and measure the resistance.



Refer to Check No. 5 on page 409.

## **(32) Malfunction of Suction Pipe Thermistor System**

### **Remote Controller Display**

**J5**

### **Applicable Models**

RZP-D, RZQ-K, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

### **Method of Malfunction Detection**

Abnormality is detected according to the temperature detected by each individual thermistor.

### **Malfunction Decision Conditions**

When thermistor is disconnected or short-circuited during operation

### **Supposed Causes**

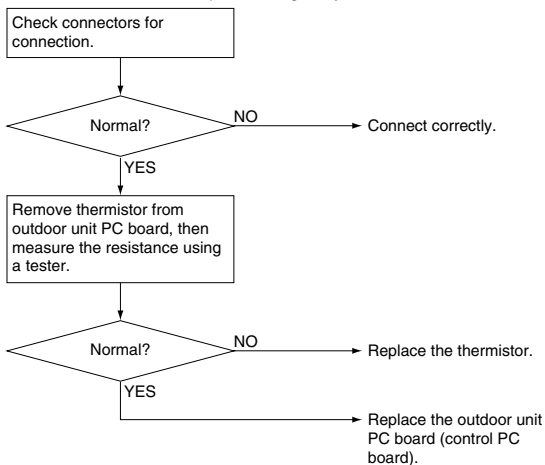
- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

## Troubleshooting



**Caution**

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



**J5**



Refer to Check No. 5 on page 409.



## Remote Controller Display

**J5**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected from the temperature detected by the thermistor for suction pipe 1, 2.

### Malfunction Decision Conditions

When a short circuit or an open circuit in the thermistor for suction pipe 1, 2 are detected.

### Supposed Causes

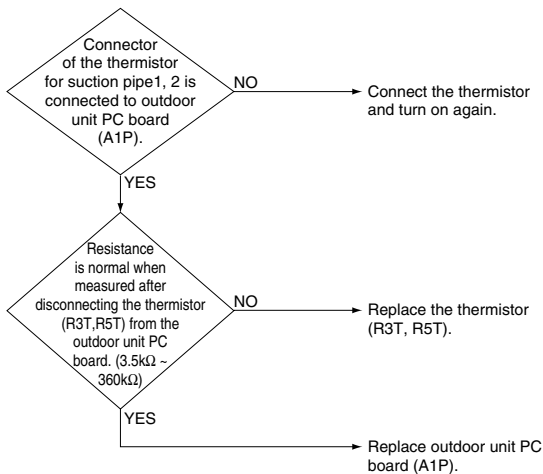
- Defect of thermistor (R3T, R5T) for outdoor unit suction pipe
- Defect of outdoor unit PC board (A1P)

## Troubleshooting



**Caution**

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



**J5**



Refer to Check No. 4 on page 405.

## **(33) Malfunction of Heat Exchanger Temperature Sensor System**

### **Remote Controller Display**

**U6**

### **Applicable Models**

RZP-D, RZQ-K, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

### **Method of Malfunction Detection**

Abnormality is detected according to the temperature detected by each individual thermistor.

### **Malfunction Decision Conditions**

When thermistor is disconnected or short-circuited during operation

### **Supposed Causes**

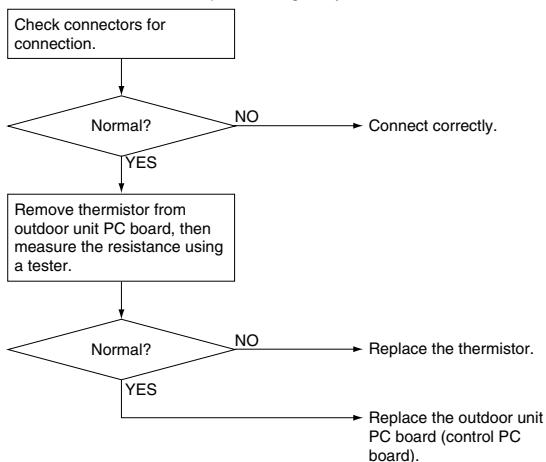
- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

## Troubleshooting



**Caution**

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



**J6**



Refer to Check No. 5 on page 409.

## Remote Controller Display

# J6

### Applicable Models

RZ(Y)-L and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected whether the resistance of thermistor is abnormal or normal.

### Malfunction Decision Conditions

When a short circuit or an open circuit in the outdoor temperature sensor is detected.

### Supposed Causes

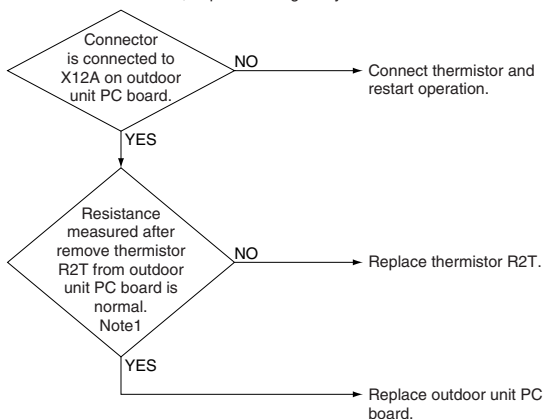
- Faulty heat exchanger temperature sensor
- Incomplete connection of heat exchanger temperature sensor
- Faulty outdoor unit PC board

### Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

J6

### Applicable Models

R(Y)-LU, RY-KU, RY-F, RY-G and R-NU Series

### Malfunction Decision Conditions

Case where the heat exchanger temperature sensor has a short or open circuit

J6

### Supposed Causes

- Failure of heat exchanger sensor
- Failure of heat exchanger sensor's connector connection
- Failure of outdoor unit PC board

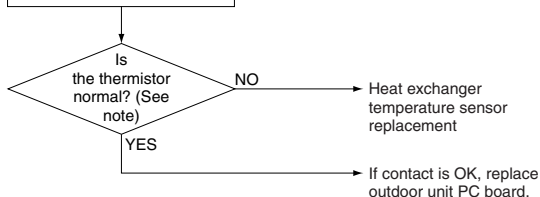
### Troubleshooting



**Caution**

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

Disconnect the heat exchanger temperature sensor (R2T) from X5A on the outdoor unit PC board and measure the resistance.



Refer to Check No. 5 on page 409.

## **(34) Malfunction of Intermediate Heat Exchanger Distribution Pipe Thermistor System**

### **Remote Controller Display**

**J7**

### **Applicable Models**

RZQ-K, RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

### **Method of Malfunction Detection**

Abnormality is detected according to the temperature detected by each individual thermistor.

### **Malfunction Decision Conditions**

When thermistor is disconnected or short-circuited during operation

### **Supposed Causes**

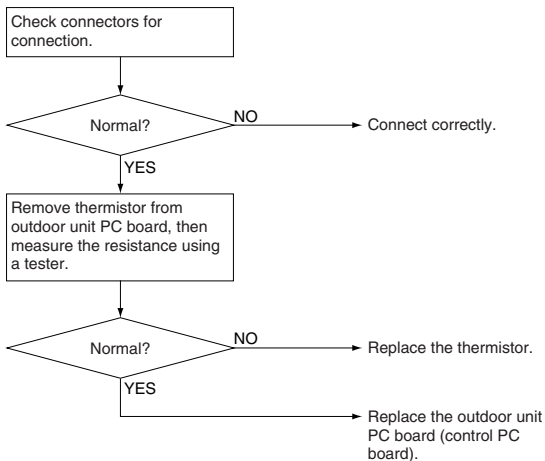
- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

## Troubleshooting



**Caution**

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



**J7**



Refer to Check No. 8 on page 415.



## Remote Controller Display

J7

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

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

### Malfunction Decision Conditions

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

### Supposed Causes

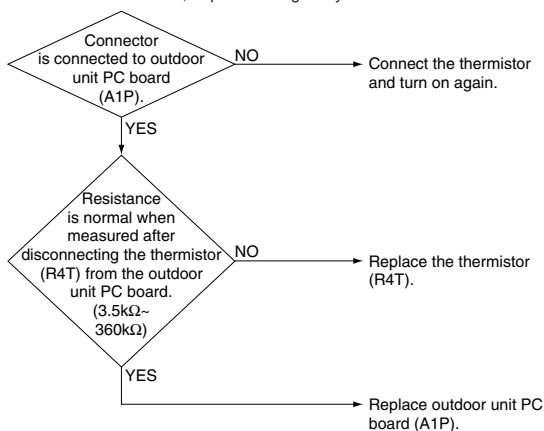
- Defect of thermistor (R7T) for outdoor unit liquid pipe
- Defect of outdoor unit PC board (A1P)

## Troubleshooting



**Caution**

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



**J7**



Refer to Check No. 4 on page 405.

## **(35) Malfunction of Liquid Pipe Thermistor System**

### **Remote Controller Display**

**J8**

### **Applicable Models**

RZQ-K, RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and  
RZQ200, 250C Series

### **Method of Malfunction Detection**

Abnormality is detected according to the temperature  
detected by each individual thermistor.


### **Malfunction Decision Conditions**

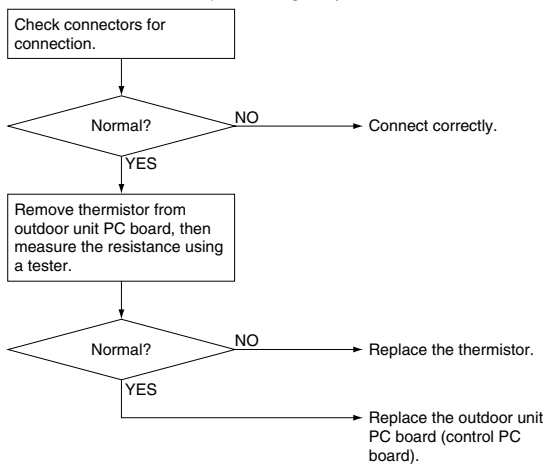
When thermistor is disconnected or short-circuited during  
operation

### **Supposed Causes**

- Faulty thermistor
- Faulty connection of connector
- Faulty outdoor unit PC board (control PC board)

## Troubleshooting

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



**J8**



Refer to Check No. 8 on page 415.

## **(36) Malfunction of Subcooling Heat Exchanger Gas Pipe Thermistor (R6T)**

### **Remote Controller Display**

*J9*

### **Applicable Models**

Inverter (RZQ100-160P) Series

### **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**

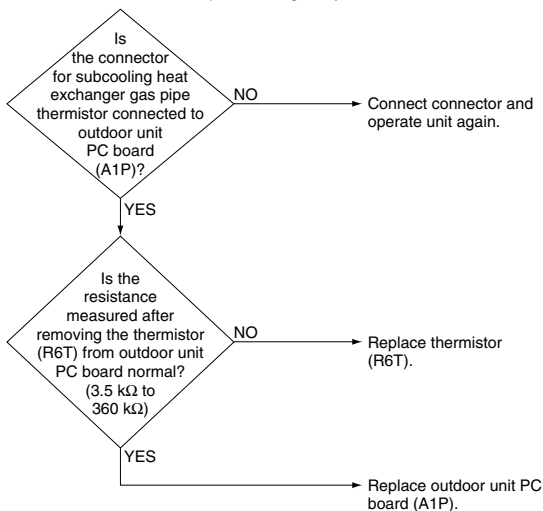
- Faulty subcooling heat exchanger gas pipe thermistor (R6T)
- Faulty outdoor unit PC board

## Troubleshooting



**Caution**

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



**J9**



Refer to Check No. 4 on page 405.

## **(37) Malfunction of High Pressure Sensor**

### **Remote Controller Display**

*JA*

### **Applicable Models**

Inverter (RZQ100-160P) Series

### **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.

### **Supposed Causes**

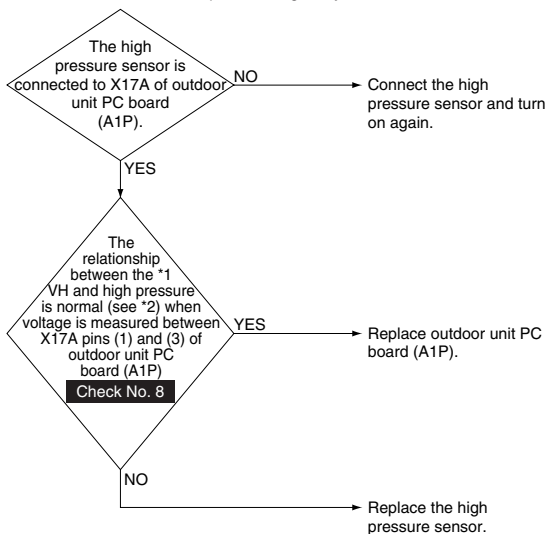
- Defect of high pressure sensor
- Connection of low pressure sensor with wrong connection.
- Defect of outdoor unit PC board.

## Troubleshooting



**Caution**

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



JA



Refer to Check No. 7, 8 on page 413, 415.



## Remote Controller Display

*JA*

### Applicable Models

RZQ200, 250C Series

### 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.

### Supposed Causes

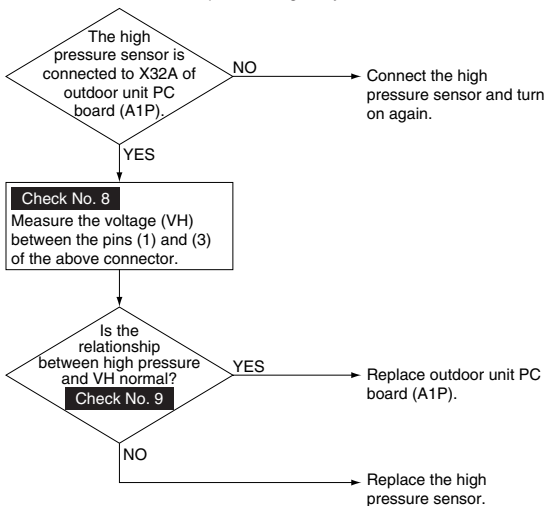
- Defect of high pressure sensor
- Connection of low pressure sensor with wrong connection.
- Defect of outdoor unit PC board.

## Troubleshooting



**Caution**

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



**JA**



Refer to Check No. 8, 9 on page 415, 416.

## **(38) Malfunction of Low Pressure Sensor**

### **Remote Controller Display**



### **Applicable Models**

RZP-D Series

### **Supposed Causes**

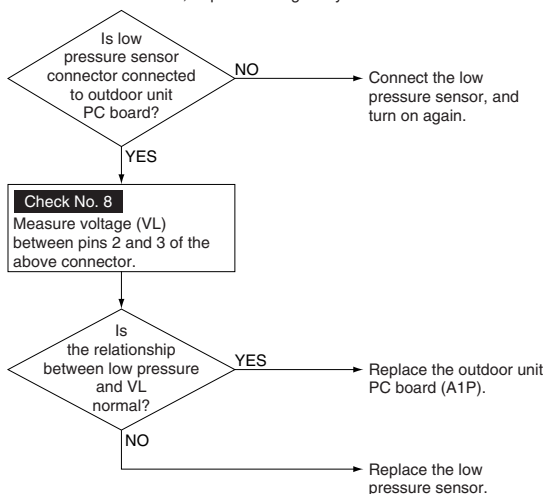
- Faulty low pressure sensor
- Connection of low pressure sensor with wrong connection
- Faulty outdoor unit PC board
- Incorrect connection of connector

## Troubleshooting



**Caution**

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



JC



Refer to Check No. 8 on page 415.

## Remote Controller Display



### Applicable Models

Inverter (RZQ100-160P) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### 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.

### Supposed Causes

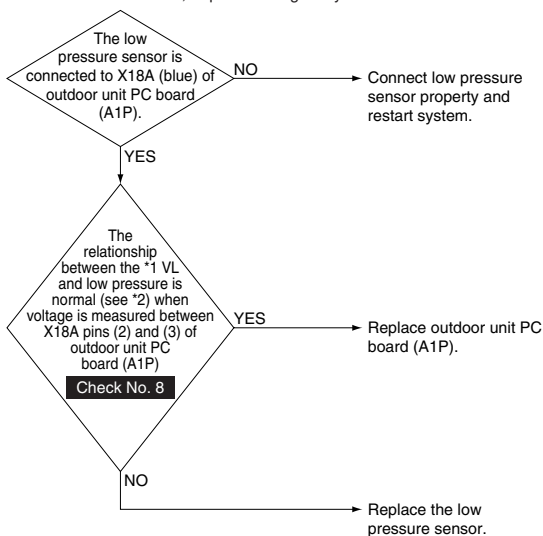
- Defect of low pressure sensor
- Connection of high pressure sensor with wrong connection.
- Defect of outdoor unit PC board.

## Troubleshooting



**Caution**

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



JC



Refer to Check No. 8, 9 on page 415, 416.

## Remote Controller Display



### Applicable Models

RZQ200, 250C Series

### 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.

### Supposed Causes

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

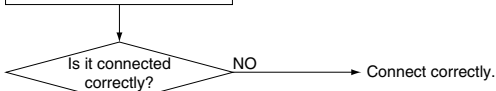
## Troubleshooting



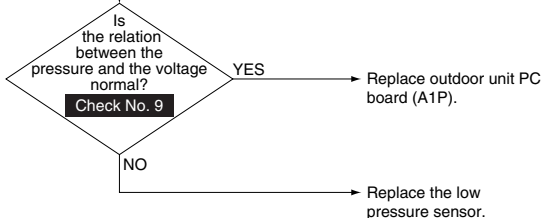
**Caution**

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

Check if the connector for the low-pressure sensor (X31A) is correctly connected to the outdoor unit PC board (A1P)



**Check No. 8**  
 Measure the voltage (V) between the pins # (2) and (3) of the above connector.



Refer to Check No. 8, 9 on page 415, 416.

JC



## **(39) Malfunction of PC Board**

### **Remote Controller Display**

**L1**

### **Applicable Models**

RZQ-K and Inverter (RZQ100-160P) Series

### **Method of Malfunction Detection**

Detect malfunctions by current value during waveform output before compressor startup.

Detect malfunctions by current sensor value during synchronized operation at the time of startup.

Detect malfunctions using an SP-PAM series capacitor overvoltage sensor.

### **Malfunction Decision Conditions**

In case of overcurrent (OCP) during waveform output

When the current sensor malfunctions during synchronized operation

When overvoltage occurs in SP-PAM

In case of IGBT malfunction

### **Supposed Causes**

- Faulty outdoor PC board (A1P)
  - IPM failure
  - Current sensor failure
  - SP-PAM failure
  - Failure of IGBT or drive circuit

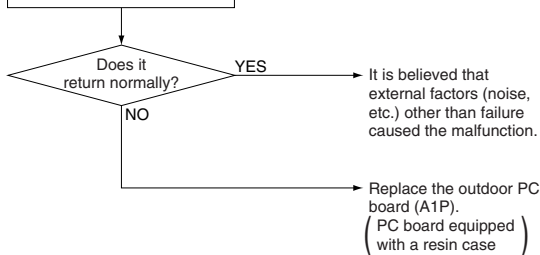
## Troubleshooting



**Caution**

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

Turn OFF the power supply once and then turn it ON again.



L1

## Remote Controller Display

L1

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Detect malfunctions by current value during waveform output before compressor startup.

Detect malfunctions by current sensor value during synchronized operation at the time of startup.

### Malfunction Decision Conditions

In case of overcurrent (OCP) during waveform output

When the current sensor malfunctions during synchronized operation

In case of IPM malfunction

### Supposed Causes

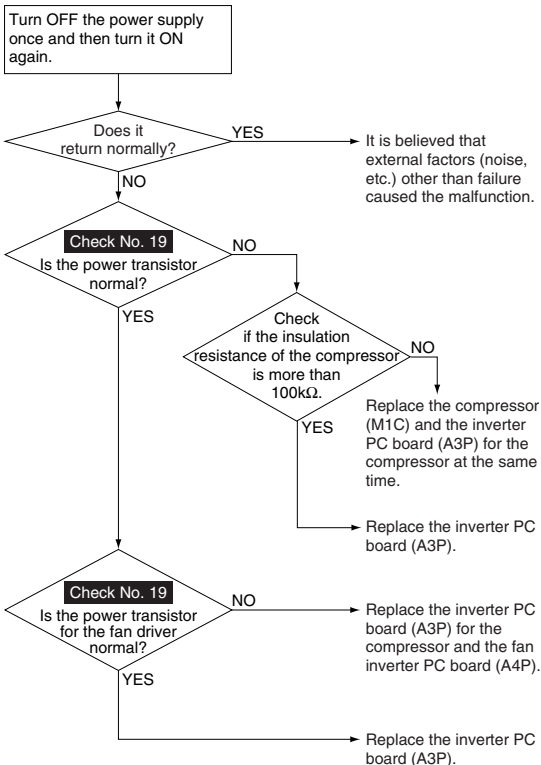
- Faulty outdoor inverter PC board (A3P)
  - IPM failure
  - Current sensor failure
  - Failure of IGBT or drive circuit

## Troubleshooting



**Caution**

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



L1



Refer to Check No. 19 on page 436.

## Remote Controller Display

L1

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Method of Malfunction Detection

Detect malfunctions by current value during waveform output before compressor startup.

Detect malfunctions by current sensor value during synchronized operation at the time of startup.

Detect malfunctions using an MP-PAM series capacitor overvoltage sensor.

### Malfunction Decision Conditions

When over-current is detected at the time of waveform output before operating the compressor

When the current sensor malfunctions during synchronized operation

When overvoltage occurs in MP-PAM

In case of IGBT malfunction

In case of faulty jumper setting

### Supposed Causes

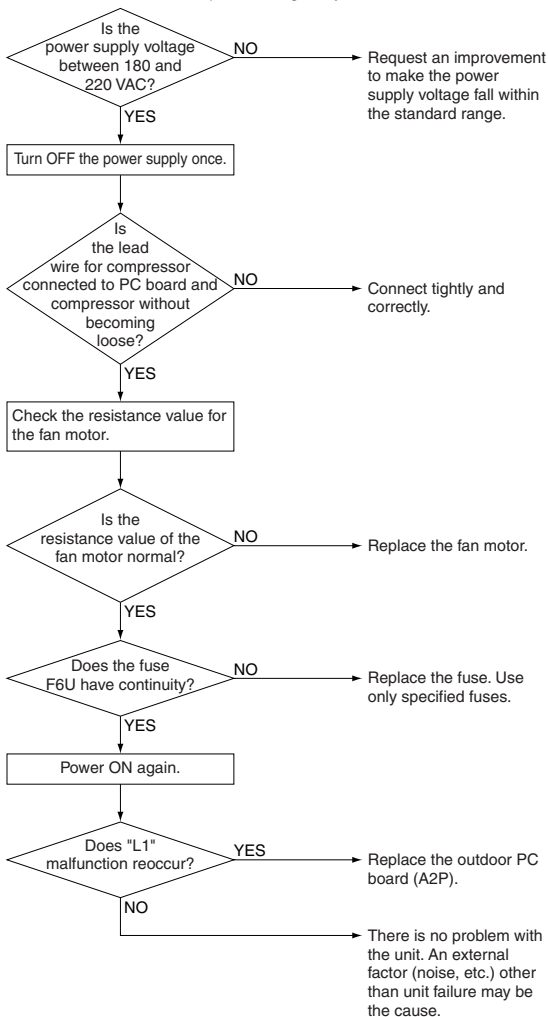
- Faulty outdoor PC board (A1P)
  - IPM failure
  - Current sensor failure
  - MP-PAM failure
  - Failure of IGBT or drive circuit

## Troubleshooting



**Caution**

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



**L1**

## **(40) Radiation Fin Temperature Increased**

### **Remote Controller Display**

L4

### **Applicable Models**

RZP-D, RZ(Y)-L, RZQ-K and Inverter (RZQ71F • 90C • 100F) Series

### **Method of Malfunction Detection**

Fin temperature is detected by the thermistor of the radiation fin.

(Thermistor for RZP 100, 125, 140D is on power transistor (IGBT).)

### **Malfunction Decision Conditions**

When the temperature of the inverter radiation fin increases abnormally due to faulty heat dissipation.

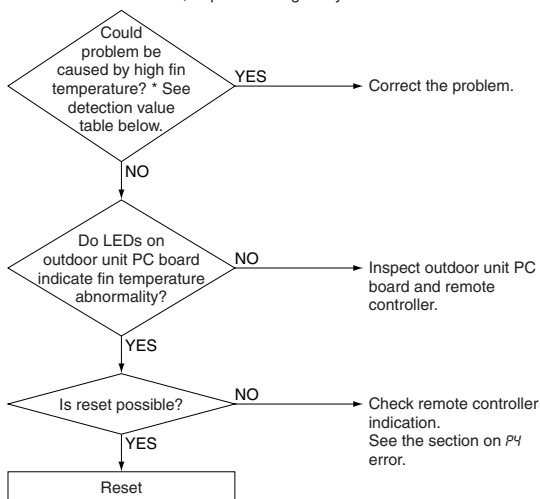
### **Supposed Causes**

- Activation of fin thermal switch
- Faulty fin thermistor
- High outside air temperature
- Insufficient cooling of inverter radiation fin
- Blocked suction opening
- Dirty radiation fin
- 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.


**L4**

### \* Fin temperature detection values

	Detection	Reset
RZP71D	90°C	80°C
RZP100~140D	98°C	88°C
RZ(Y)71L	85.5°C	80.5°C
RZY100~125L	85°C	80°C
RZQ125·140KTLT	98°C	88°C
RZQ71F·90C·100FV4A	87°C	77°C



## Remote Controller Display

L4

### Applicable Models

Inverter (RZQ100-160P) and RZQ200, 250C Series

### 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 83°C (\*1).

### Supposed Causes

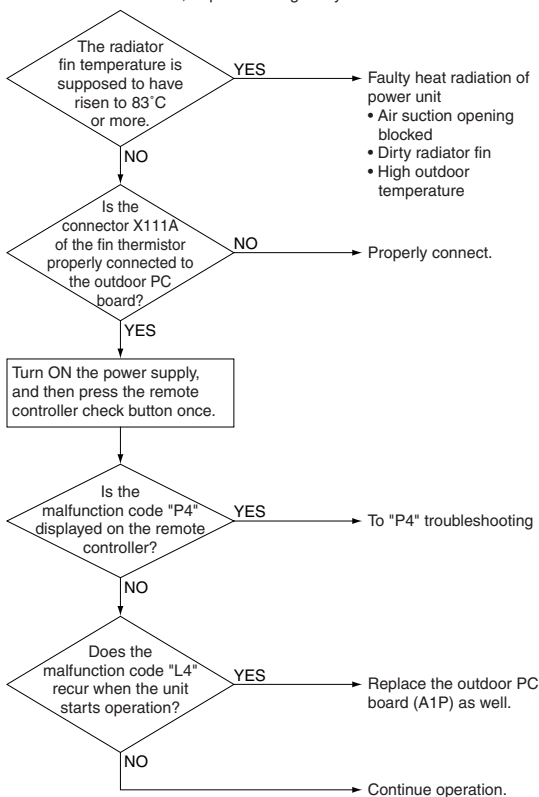
- Actuation of fin thermal (Actuates above 83°C \*1)
- Defect of inverter PC board
- Defect of fin thermistor

## Troubleshooting



**Caution**

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



**L4**

\*1 RZQ200, 250C Series : 93°C

## Remote Controller Display

L4

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### 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 abnormally due to faulty heat dissipation.

### Supposed Causes

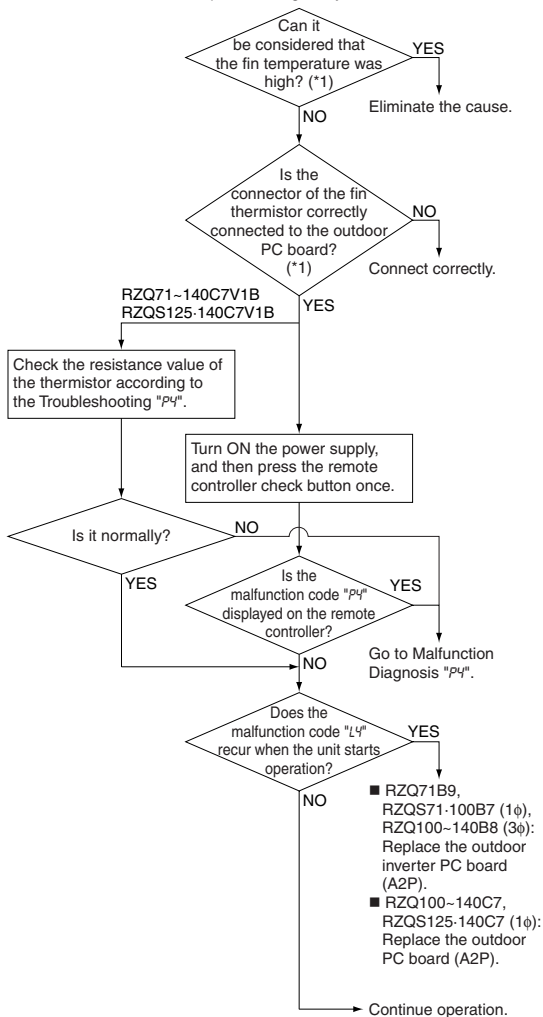
- Activation of fin thermal switch
- Faulty fin thermistor
- High outside air temperature
- Insufficient cooling of inverter radiation fin
- Blocked suction opening
- Dirty radiation fin
- Faulty outdoor inverter PC board

## Troubleshooting



**Caution**

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



**L4**

\* Fin temperature detection value

	Detection	Reset
RZQ71B9V3B, RZQS71·100B7V3B	87°C	77°C
RZQ100~140, RZQS125·140C7V1B	88°C	78°C
RZQ100~140B8W1B	76°C	66°C

## **(41) DC Output Overcurrent (Instantaneous)**

### **Remote Controller Display**

**L5**

### **Applicable Models**

RZP-D, Inverter (RZQ71F • 90C 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

**L4**

**L5**

### **Method of Malfunction Detection**

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

### **Malfunction Decision Conditions**

When overcurrent has run to power transistor.  
(Actuated even by instantaneous overcurrent)

### **Supposed Causes**

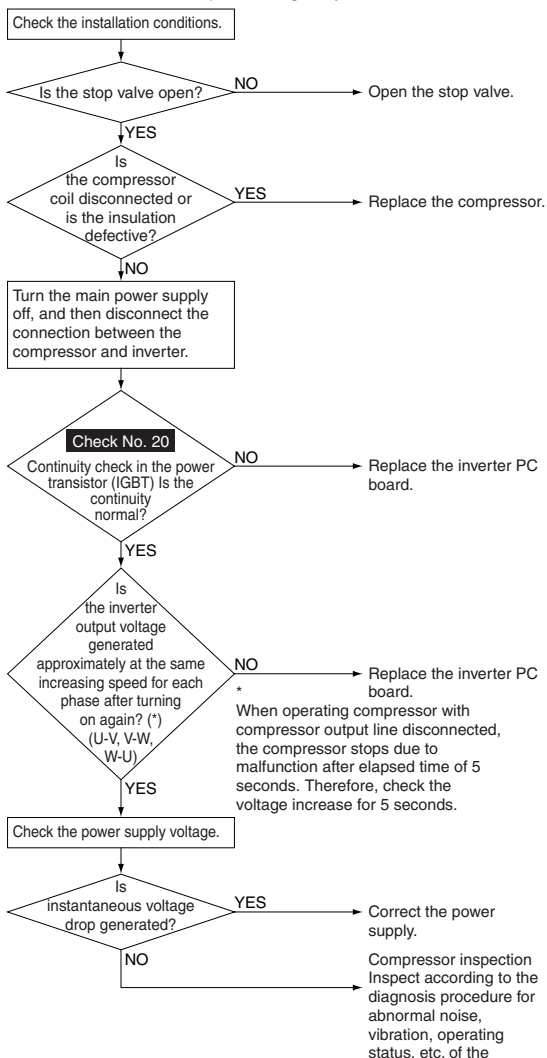
- Faulty compressor coil (disconnection, poor insulation)
- Compressor startup malfunction (mechanical lock)
- Faulty inverter PC board
- Instantaneous fluctuation of power supply voltage
- Faulty compressor (if bearing is scratched)
- The stop valve is left in closed.

## Troubleshooting



**Caution**

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





Refer to Check No. 20 on page 438.

★ Approximate value

	Instantaneous overcurrent detection value
RZP71DV1 RZP71DVAL	20A
RZP100 ~ 140DV1 RZP100DVAL	65A
RZP125DTAL RZP140DTAL	65A
RZQ71F·90C·100FV4A	32A
RZQ(S)71B9V3B RZQS100BV3B	32A
RZQ100·140 RZQS125·140C71B	51.7A
RZQ100·140B8W1B	32.3A

L5



## Remote Controller Display

**L5**

### Applicable Models

RZ(Y)-L Series

### Method of Malfunction Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

### Malfunction Decision Conditions

When an excessive current flows in the power transistor. (Instantaneous overcurrent also causes activation.)

### Supposed Causes

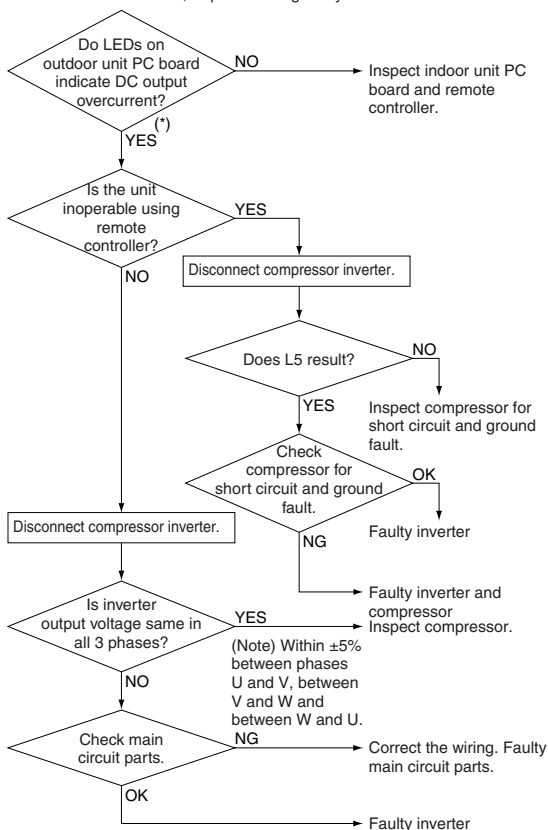
- Faulty compressor coil (open circuit, faulty insulation)
- Faulty compressor startup (seizing)
- Faulty inverter
- Faulty outdoor unit PC board
- Momentary disturbance in supply voltage

## Troubleshooting



**Caution**

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



\* Guideline values

	Instantaneous overcurrent detection value
RZ(Y)71~125L	65A



**Note:**

If an overcurrent results during motor pre-heating, reset by remote controller may not be possible.

## Remote Controller Display

**L5**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected from current flowing in the power transistor.


### Malfunction Decision Conditions

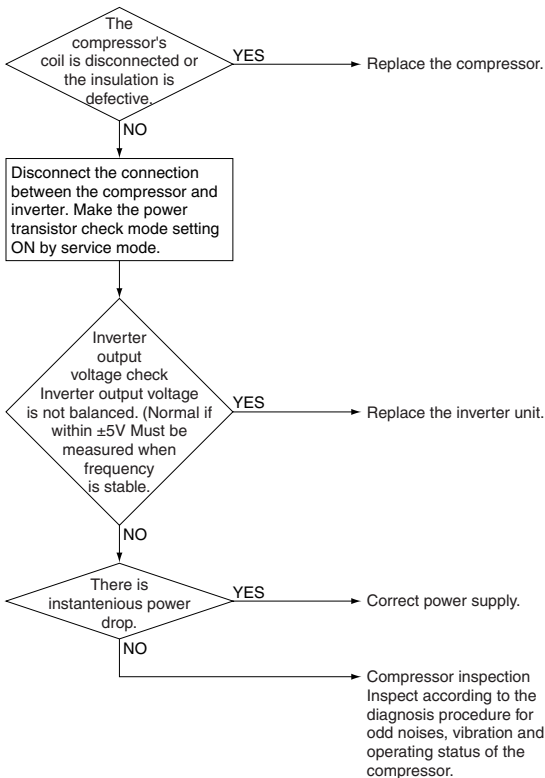
When an excessive current flows in the power transistor.  
(Instantaneous overcurrent also causes activation.)

### Supposed Causes

- Defect of compressor coil (disconnected, defective insulation)
- Compressor start-up malfunction (mechanical lock)
- Defect of inverter PC board

## Troubleshooting

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



L5

Higher voltage than actual is displayed when the inverter output voltage is checked by tester.

## Remote Controller Display

L5

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

### Malfunction Decision Conditions

When overcurrent has run to power transistor.  
(Actuated even by instantaneous overcurrent)

### Supposed Causes

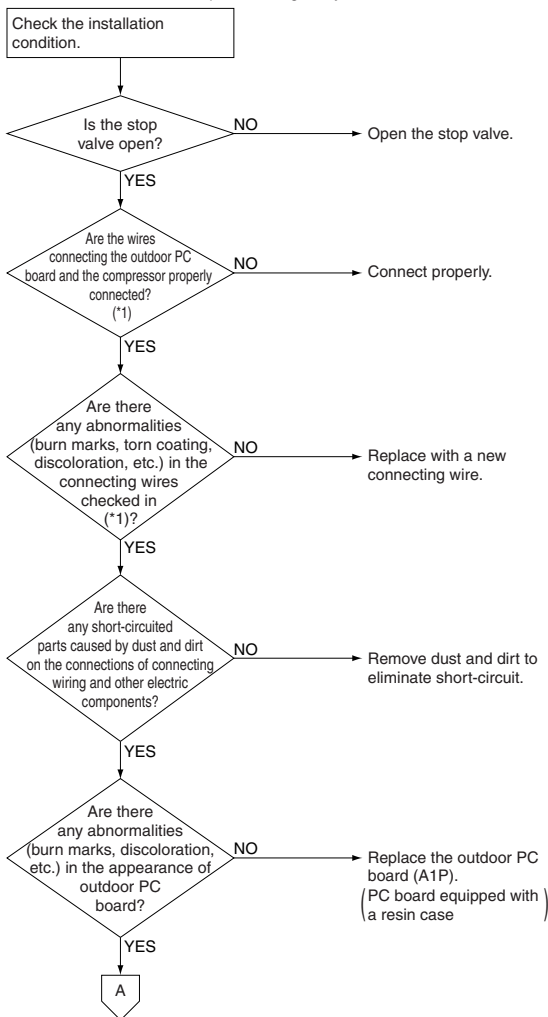
- Faulty compressor coil (disconnection, poor insulation)
- Compressor startup malfunction (mechanical lock)
- Faulty outdoor PC board
- Instantaneous fluctuation of power supply voltage
- Faulty compressor (if bearing is scratched)
- The stop valve is left in closed.

## Troubleshooting



**Caution**

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

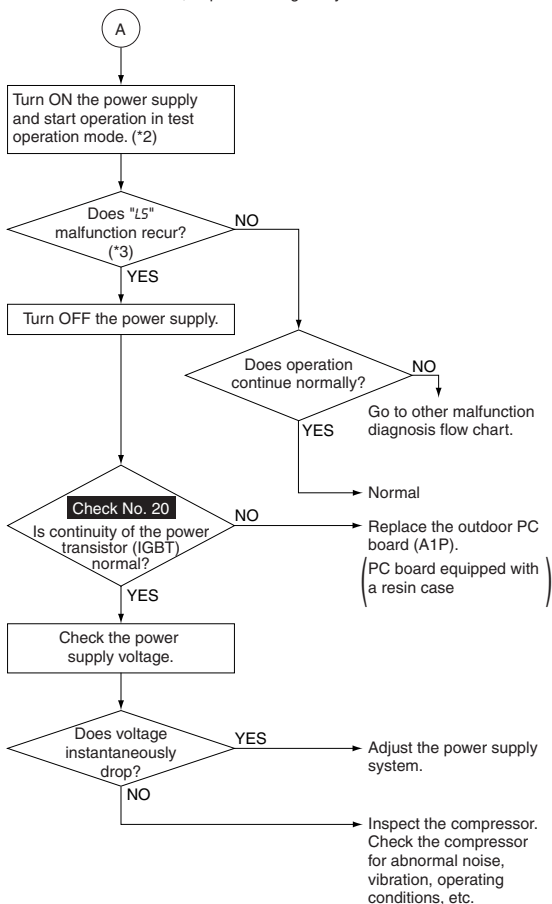


L5



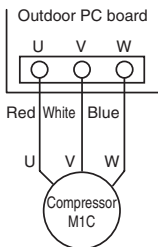
**Caution**

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



Refer to Check No. 20 on page 438.

- \*1: Check to make sure that the wires connecting the outdoor PC board and the compressor are not switched.  
Disconnect and then reconnect the relay connector.



L5

- \*2: In order to ensure that the compressor starts operation, use a remote controller to set to test operation mode.  
The test operation mode automatically ends in 30 minutes and then it is switched to normal mode.  
In order to continue test operation, test operation mode must be set again.
- \*3: For confirming "L5" malfunction, operation time at least 30 minutes is required.



## Remote Controller Display

**L5**

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing in the power transistor.

### Malfunction Decision Conditions

When an excessive current flows in the power transistor (32.3A).

### Supposed Causes

- Faulty compressor coil (disconnection, poor insulation)
- Compressor startup malfunction (mechanical lock)
- Faulty outdoor inverter PC board
- Instantaneous power failure
- Lightning surge

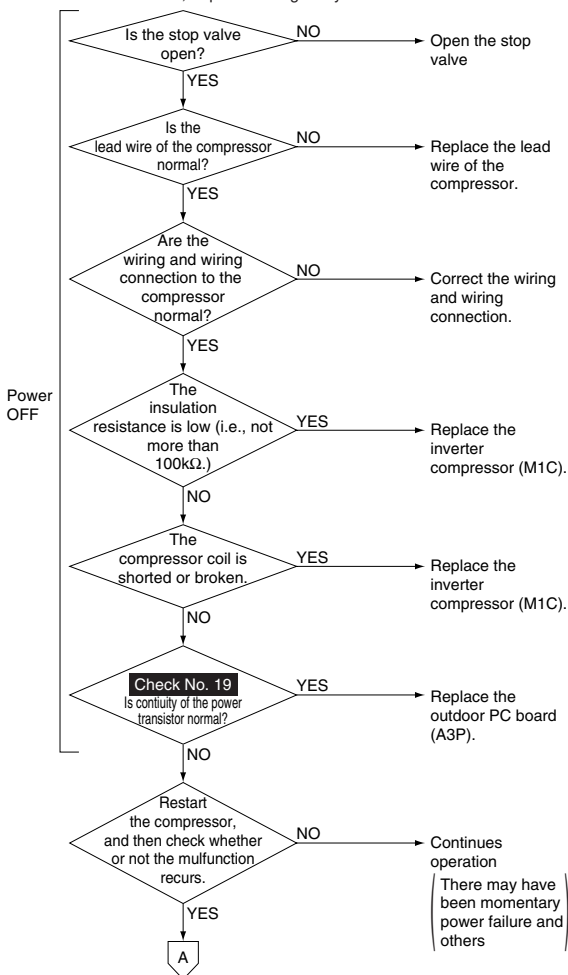
## Troubleshooting

L5



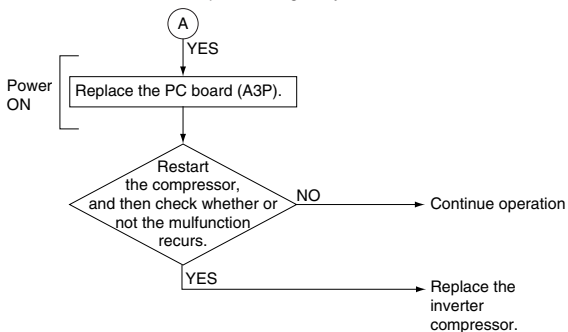
**Caution**

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



**Caution**

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



Refer to Check No. 19 on page 436.

## (42) Electronic Thermal (Time Lag)

### Remote Controller Display

**L8**

### Applicable Models

RZP-D Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Inverter PC board detects the disorder of position signal.

### Malfunction Decision Conditions

When compressor overload (except for when startup) is detected.

### Supposed Causes

- Compressor overload (during operation)
- Disconnected compressor coil
- Faulty inverter
- Faulty compressor (if bearing is scratched)

**L5**

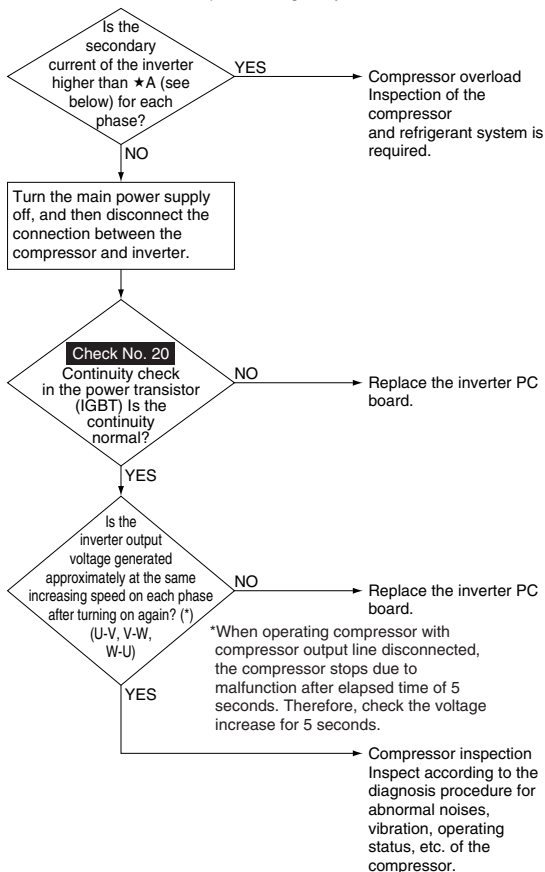
**L8**

## Troubleshooting



**Caution**

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



★ **Electronic thermal detection value**

		Detection value
RZP71D	Cooling	22A × 5 seconds or 13.6A (cooling), 15.1A (heating) × 260 seconds
	Heating	
RZP100 ~ 140D	Cooling	33A × 5 seconds or 26A × 260 seconds
	Heating	



Refer to Check No. 20 on page 438.

**L8**

## Remote Controller Display

*L8*

### Applicable Models

RZ(Y)-L Series

### Method of Malfunction Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

### Malfunction Decision Conditions

When overload in the compressor is detected (exception: at startup).

\* In RZ(Y), error is not generated by the electronic thermal switch. Instead, the unit repeats retry operations. The remote controller does not indication "L8". Therefore, check the LED indication in the outdoor unit for problem diagnosis.

### Supposed Causes

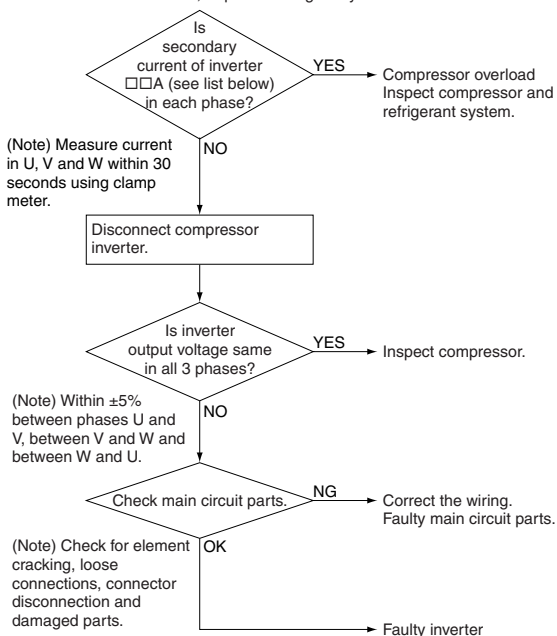
- Compressor overload (in operation)
- Open circuit in compressor coil
- Faulty outdoor unit PC board
- Faulty inverter

## Troubleshooting



**Caution**

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



L8



\* Electronic thermal switch detecting value

		Detection Value
RZY71L	Cool *1	20.5~22.0A
	Heat *1	24.0A
RZY100L	Cool *1	20.1~23.0A
	Heat *1	21.8~23.0A
RZY125L	Cool *1	21.0~23.7A
	Heat *1	21.3~23.7A



**Notes:**

- \* 1. Detecting values vary according to operating frequency.
- \* 2. Detecting value decrease 10% for each HPS activation.

## Remote Controller Display

**L8**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected by current flowing in the power transistor.

**L8**

### Malfunction Decision Conditions

When overload in the compressor is detected.

### Supposed Causes

- Compressor overload
- Compressor coil disconnected
- Defect of outdoor unit PC board (A1P)

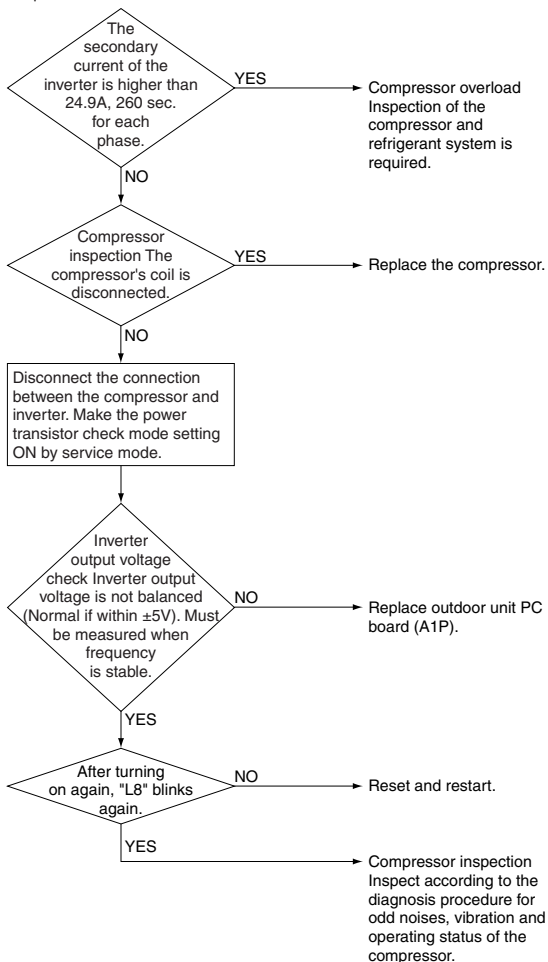
## Troubleshooting



**Caution**

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

Output current check



## Remote Controller Display

**L8**

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Inverter PC board detects the disorder of position signal.

**L8**

### Malfunction Decision Conditions

When compressor overload (except for when startup) is detected.

### Supposed Causes

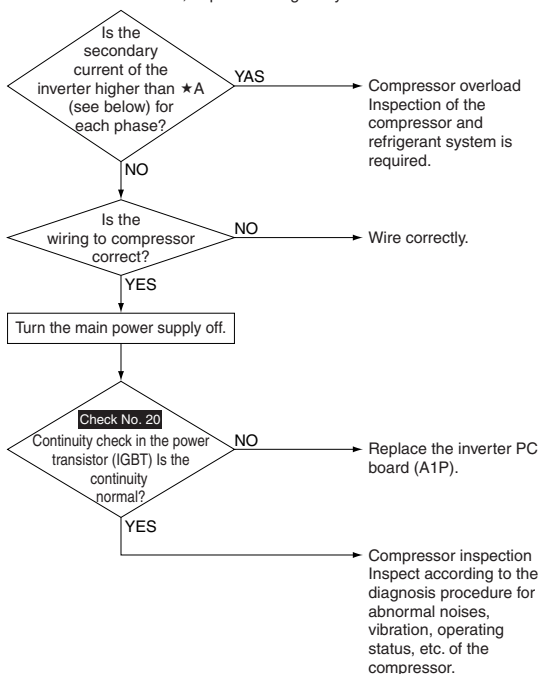
- Compressor overload (during operation)
- Disconnected compressor coil
- Faulty inverter
- Faulty compressor (if bearing is scratched)

## Troubleshooting



**Caution**

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



### Electronic thermal detection value

Model		Detection value
RZQ125·140KTLT	Cooling	22.1A × 260 sec.
	Heating	24.6A × 260 sec.



Refer to Check No. 20 on page 438.

## Remote Controller Display

**L8**

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Detect the current flowing at the power transistor.

**L8**

### Malfunction Decision Conditions

When the current at the inverter 2nd side shows the following values:

- (1) Current of 16.1A and over continues for 5 seconds.
- (2) Current of 19.0A and over continues for 260 seconds.

### Supposed Causes

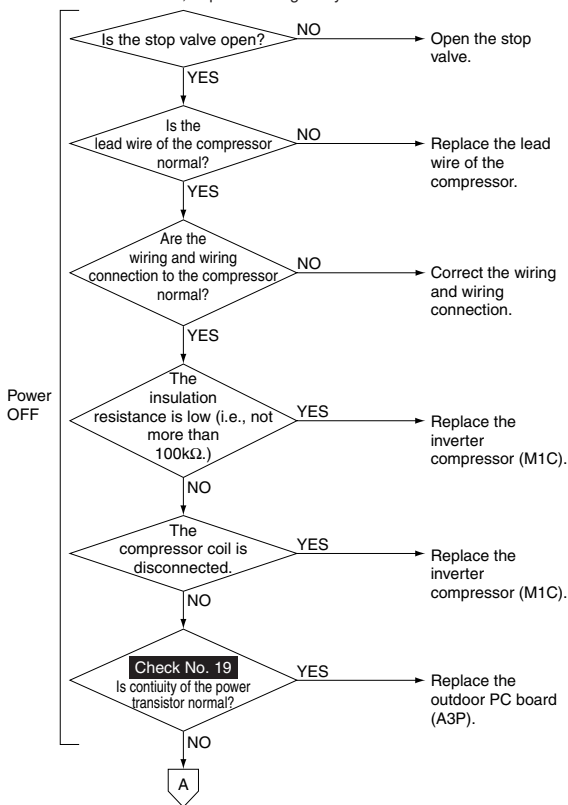
- Compressor overload (during operation)
- Shorted or broken compressor coil
- Faulty compressor (if bearing is scratched)
- Faulty inverter PC board

## Troubleshooting



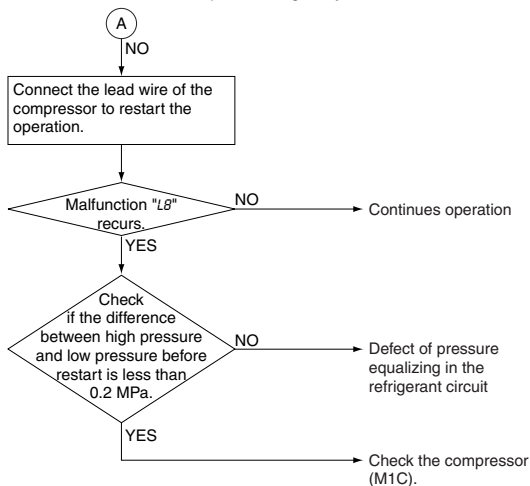
**Caution**

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



**Caution**

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

**L8**

Refer to Check No. 19 on page 436.



## Remote Controller Display

**L8**

### Applicable Models

RZQ-F and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7  
Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Inverter PC board detects the disorder of position signal.

### Malfunction Decision Conditions

When compressor overload (except for when startup) is detected.

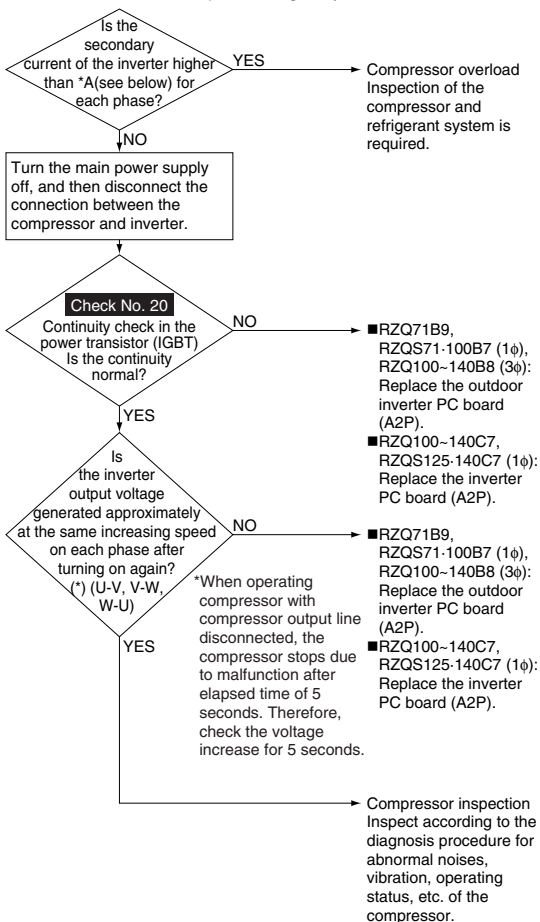
### Supposed Causes

- Compressor overload (during operation)
- Disconnected compressor coil
- Faulty inverter
- Faulty compressor (if bearing is scratched)

## Troubleshooting



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



L8



Refer to Check No. 20 on page 438.

\* Electronic thermal detection value

		Detection value
RZQ71B9V3B RZQS71·100B7V3B	Cooling	17A × 5 seconds or 14.8A × 260 seconds
	Heating	
RZQ100~140 RZQS125·140C7V1B	Cooling	31A × 5 seconds or 21.1A × 260 seconds
	Heating	
RZQ100~140 B8W1B	Cooling	17A × 5 seconds or 12.1A × 260 seconds
	Heating	17A × 5 seconds or 14.1A × 260 seconds
RZQ71F·90C·100FV4A	Cooling	17A × 5 seconds or 12.8A × 260 seconds
	Heating	17A × 5 seconds or 14A × 260 seconds

## (43) Stall Prevention (Time Lag)

### Remote Controller Display

L9

### Applicable Models

RZQ-D, Inverter (RZQ71F • 90C • 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

L8

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

L9

Inverter PC board detects the disorder of position signal.

### Malfunction Decision Conditions

When compressor overload (except for when startup) is detected

When position signal is disordered

### Supposed Causes

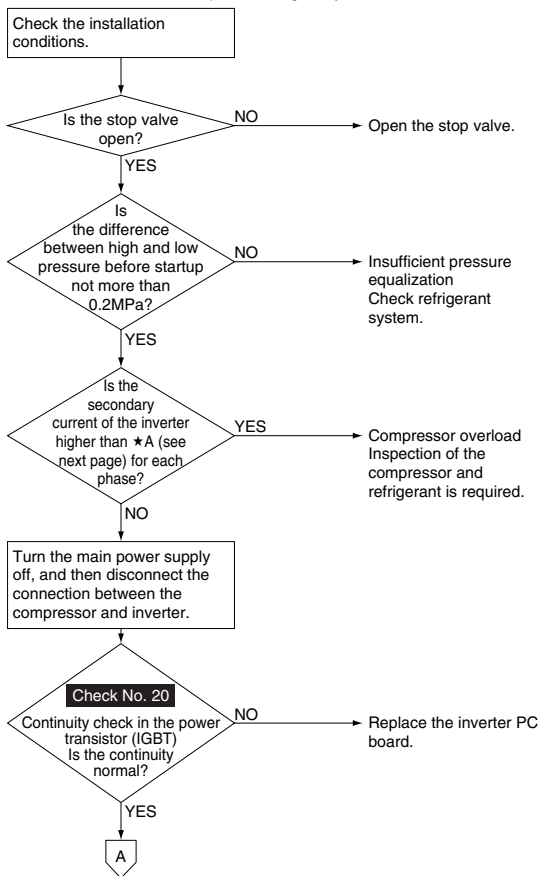
- Faulty compressor (lock)
- Pressure differential startup
- Faulty inverter
- The stop valve is left in closed.

## Troubleshooting



**Caution**

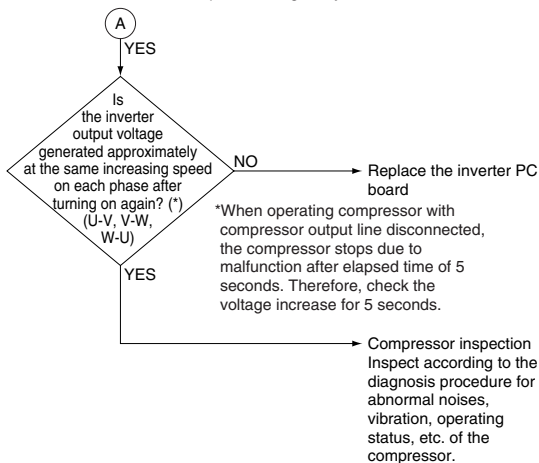
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



**L9**



Refer to Check No. 20 on page 438.

★ Approximate value

	Detection value
RZP71D	22.0A
RZP100 ~ 140D	33.0A

## Remote Controller Display

**L9**

### Applicable Models

RZ(Y)-L Series

### Method of Malfunction Detection

Current flowing in the power transistor is converted to voltage by T1C (DC current sensor) for detection.

### Malfunction Decision Conditions

When overload in the compressor is detected during startup

### Supposed Causes

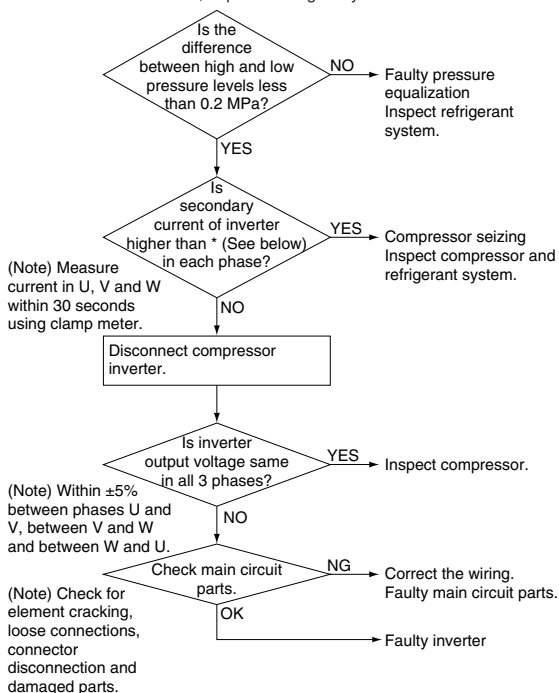
- Faulty compressor (seizing)
- Pressure difference during startup
- Faulty inverter
- Faulty outdoor unit PC board

## Troubleshooting



**Caution**

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



L9

**\* Guideline values**

	Instantaneous overcurrent detection value
RZ(Y)71~125L	24.0A



## Remote Controller Display

**L9**

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Malfunction is detected by converting the current flowing to power transistor into voltage with CT1 (DC current sensor).

Inverter PC board detects the disorder of position signal.

### Malfunction Decision Conditions

When compressor overload (except for when startup) is detected

### Supposed Causes

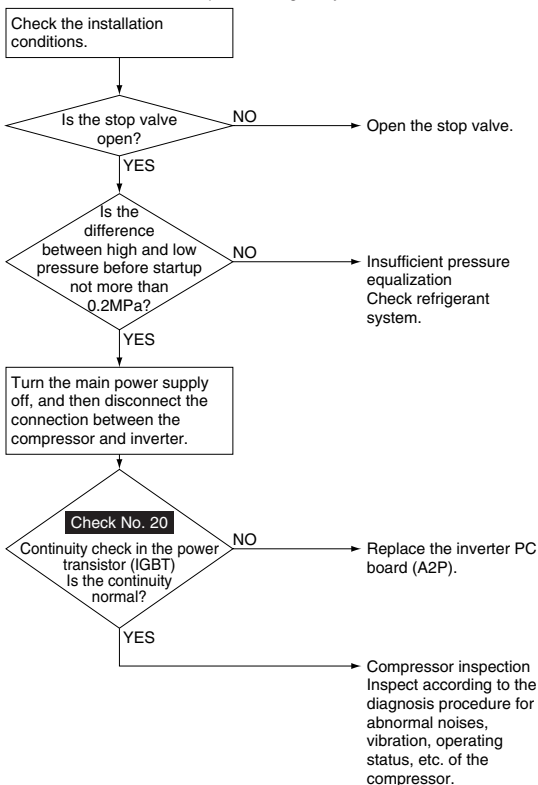
- Faulty compressor (lock)
- Pressure differential startup
- Faulty inverter PC board (A2P)
- The stop valve is left in closed.

## Troubleshooting



**Caution**

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



L9



Refer to Check No. 20 on page 438.

## Remote Controller Display

**L9**

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

This malfunction code will be output if overcurrent occurs at the time of startup.

### Malfunction Decision Conditions

When the startup control is failed.

When an overcurrent is passed to the inverter due to the malfunction of a compressor or electrical system.

### Supposed Causes

- Defect of compressor
- Failure to open the stop valve
- Pressure differential start
- Faulty compressor connection
- Defect of inverter PC board

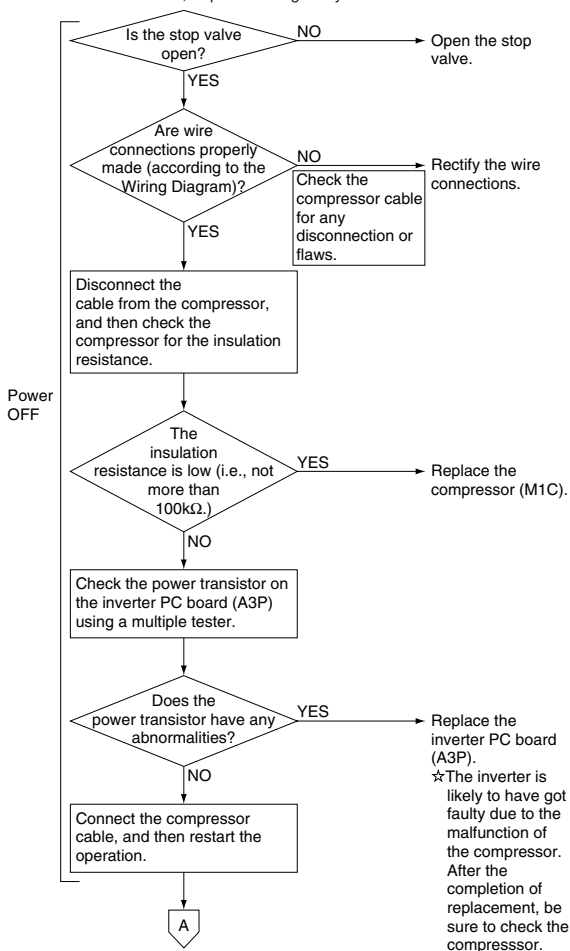
## Troubleshooting

L9



**Caution**

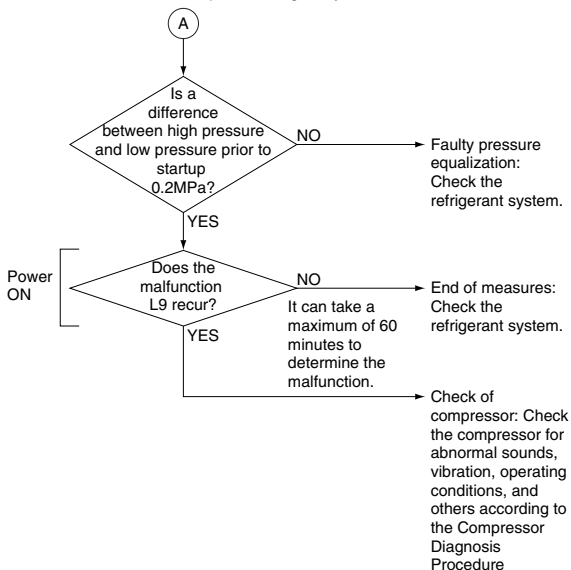
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



## Remote Controller Display

**L9**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected from current flowing in the power transistor.

**L9**

### Malfunction Decision Conditions

When overload in the compressor is detected during startup

### Supposed Causes

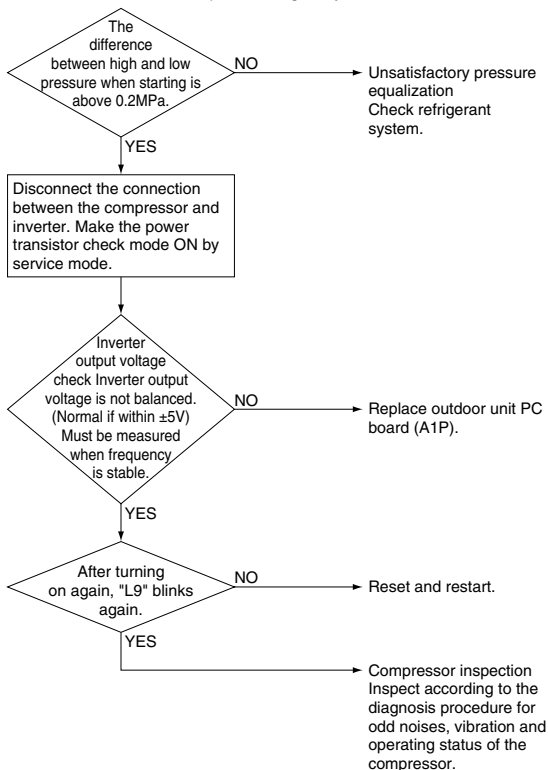
- Defect of compressor
- Pressure differential start
- Defect of outdoor unit PC board (A1P)

## Troubleshooting



**Caution**

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



## **(44) Malfunction of Transmission System (Between Control PC Board and Inverter PC Board)**

### **Remote Controller Display**

LC

### **Applicable Models**

RZP-D, Inverter (RZQ71F • 90C • 100F) and RZQ-B,  
RZQS-B7, RZQ-C7, RZQS-C7 Series

L9

LC

### **Method of Malfunction Detection**

Checks and sees whether transmission between control and inverter PC board is carried out normally.

### **Malfunction Decision Conditions**


When the transmission is not carried out in a specified period of time or longer

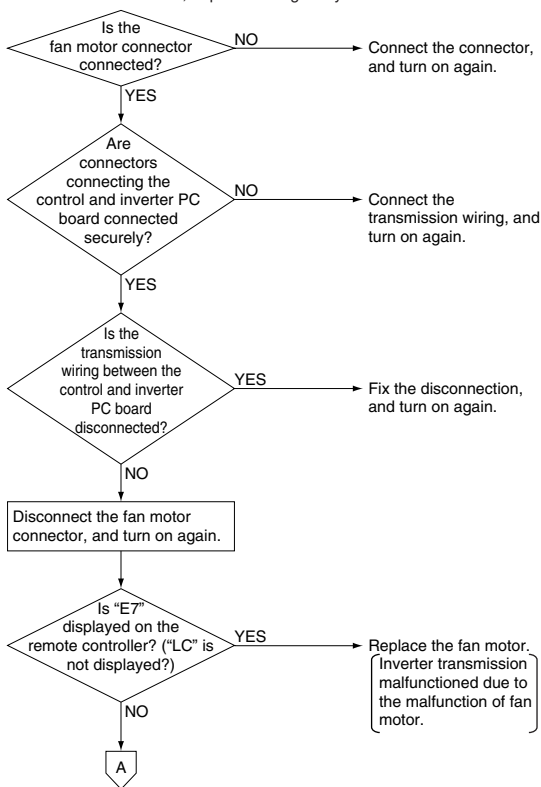
### **Supposed Causes**

- Incorrect transmission wiring between control and inverter PC board/insufficient contact in wiring
- Faulty control and inverter PC board
- External factors (noise, etc.)



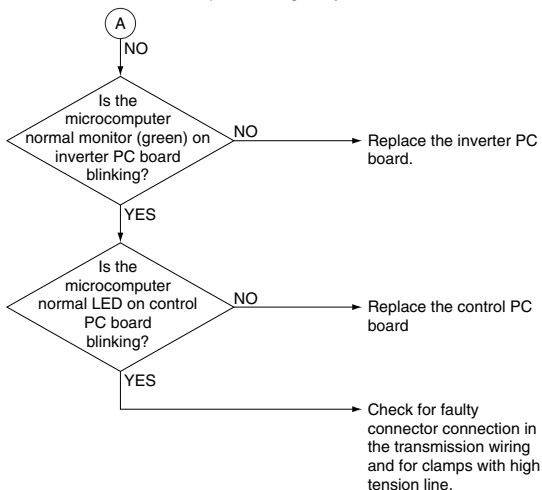
## Troubleshooting

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



**Caution**

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

**LC**

## Remote Controller Display

LC

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Check the communication state between inverter PC board and control PC board by microcomputer.

### Malfunction Decision Conditions

When the correct communication is not conducted in certain period.

### Supposed Causes

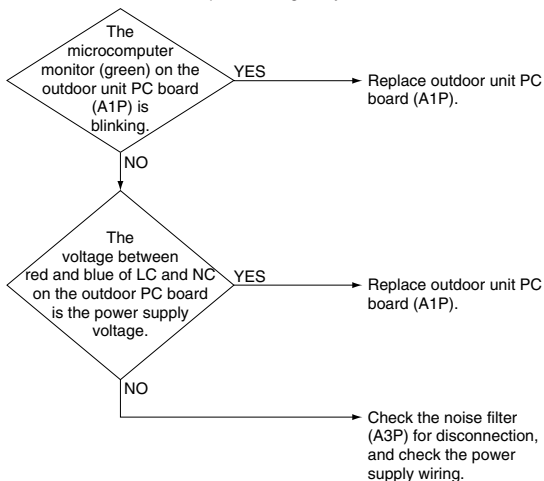
- Malfunction of connection between the inverter microcomputer and outdoor control microcomputer
- Defect of outdoor unit PC board
- Defect of noise filter
- External factor (Noise etc.)

## Troubleshooting



**Caution**

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



**LC**

## Remote Controller Display

LC

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Checks and sees whether transmission between control and inverter PC board is carried out normally.

### Malfunction Decision Conditions

When the transmission is not carried out in a specified period of time or longer

### Supposed Causes

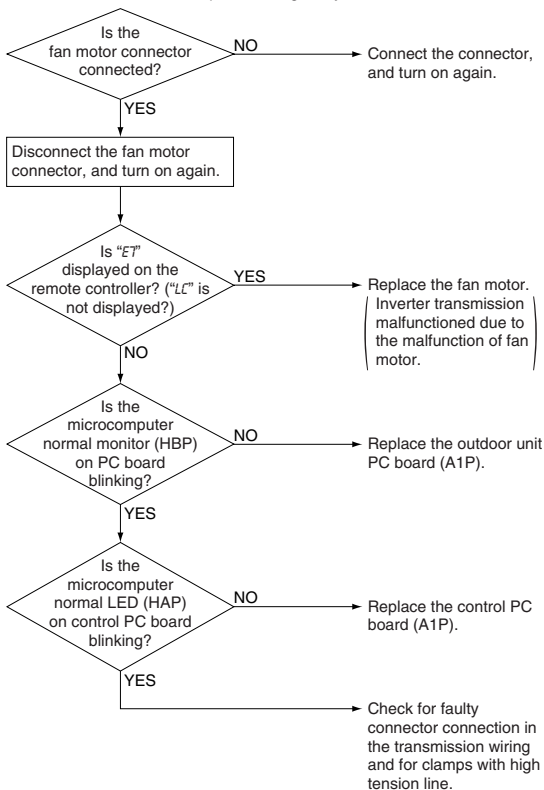
- Incorrect transmission wiring between control and inverter PC board/insufficient contact in wiring
- Faulty control and inverter PC board
- External factors (noise, etc.)

## Troubleshooting



**Caution**

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



LC

## Remote Controller Display

LC

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Check the communication state between inverter PC board and control PC board by microcomputer.

### Malfunction Decision Conditions

When the correct communication is not conducted in certain period.

### Supposed Causes

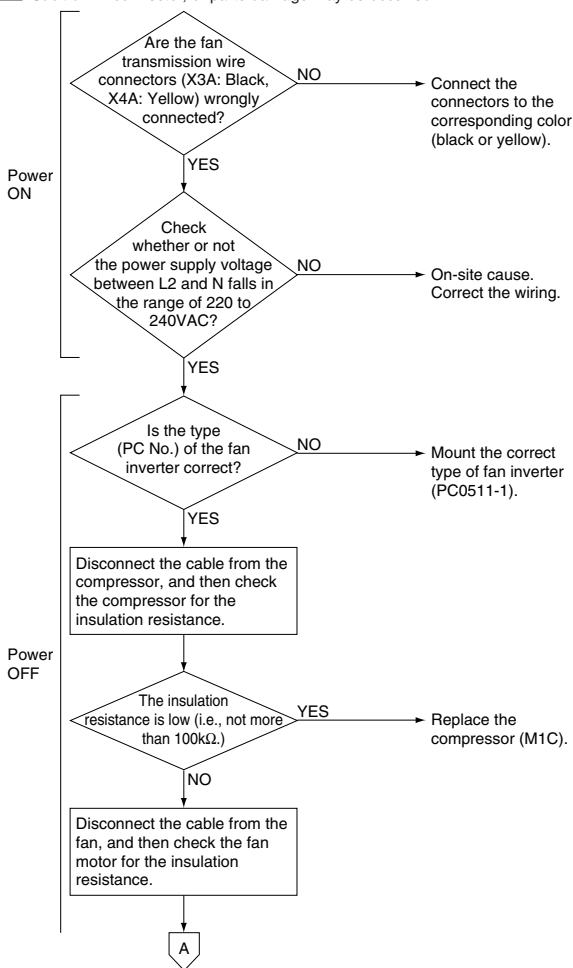
- Malfunction of connection between the inverter PC board and outdoor control PC board
- Defect of outdoor control PC board (transmission section)
- Defect of inverter PC board
- Defect of noise filter
- Faulty fan inverter
- Incorrect type of fan inverter
- Faulty compressor
- Faulty fan motor

## Troubleshooting



**Caution**

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

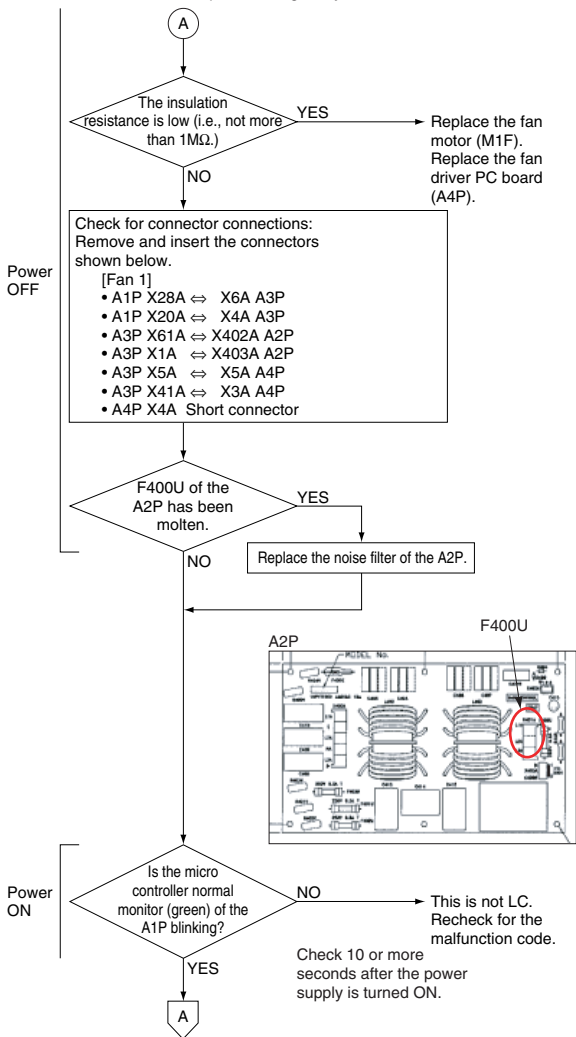






**Caution**

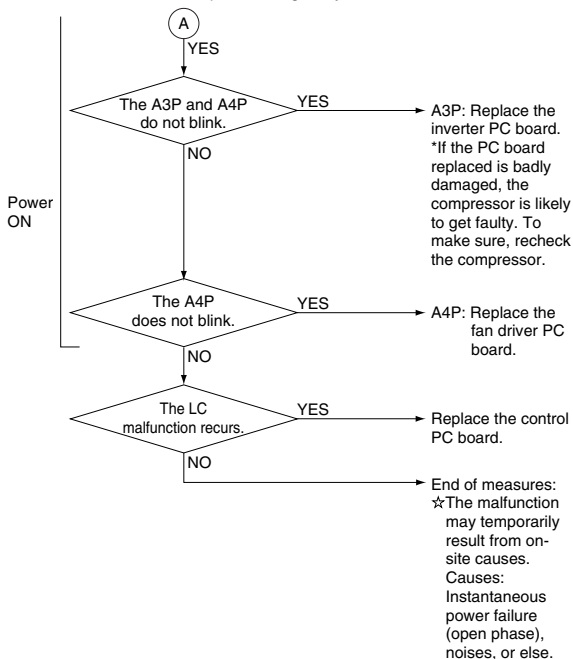
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



**LC**

## **(45) Open Phase**

### **Remote Controller Display**

*P1*

### **Applicable Models**

RZP-D, RZQ-K and Inverter (RZQ71F • 90C • 100F)  
Series

### **Method of Malfunction Detection**

Malfunction is detected according to the voltage waveform of main circuit capacitor built in inverter.

### **Malfunction Decision Conditions**

When the aforementioned voltage waveform becomes identical with the waveform of the power supply open phase.

### **Supposed Causes**

- Open phase
- Voltage imbalance between phases
- Faulty main circuit capacitor
- Power unit (Disconnection in diode module)
- Faulty outdoor unit PC board
- Faulty Magnetic Relay (K11R, K12R)
- Improper main circuit wiring

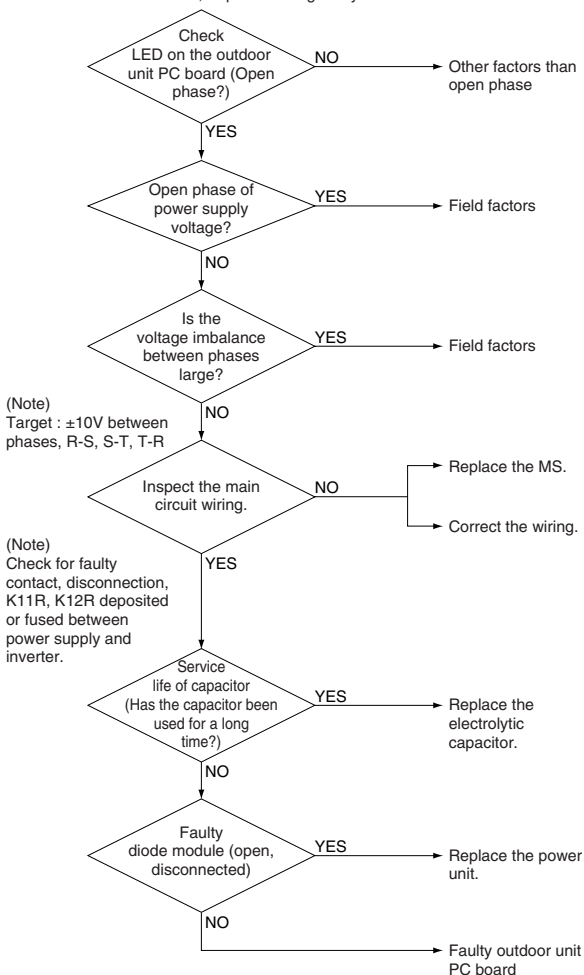
## Troubleshooting

P1



**Caution**

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



## Remote Controller Display

*P1*

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Malfunction is detected according to the voltage waveform of main circuit capacitor built in the inverter.

### Malfunction Decision Conditions

When the aforementioned voltage waveform becomes identical with the waveform of the power supply open phase.

### Supposed Causes

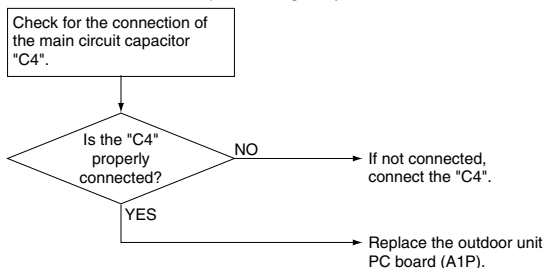
- Defect of main circuit capacitor
- Improper main circuit wiring
- Defect of outdoor unit PC board (A1P)

### Troubleshooting



**Caution**

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



## Remote Controller Display

**P1**

### Applicable Models

RZQ200, 250C Series

### 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.

**P1**

### 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

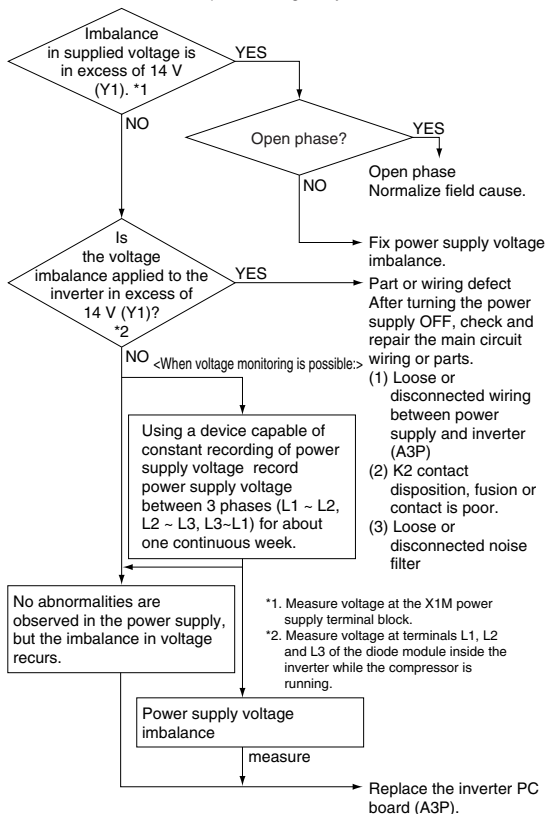
- Open phase
- Voltage imbalance between phases
- Defect of main circuit capacitor
- Defect of inverter PC board
- Defect of K2 relay in inverter PC board
- Improper main circuit wiring

## Troubleshooting



**Caution**

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



Explanation for users

\*In accordance with "notification of inspection results" accompanying spare parts.

Give the user a copy of "notification of inspection results" and leave it up to him to improve the imbalance.

Be sure to explain to the user that there is a "power supply imbalance" for which DAIKIN is not responsible.

## Remote Controller Display

*P1*

### Applicable Models

RZQ200, 250C Series (RZQ(S)71~140)

### Method of Malfunction Detection

Malfunction is detected according to the voltage waveform of main circuit capacitor built in inverter.

**P1**

### Malfunction Decision Conditions

When the aforementioned voltage waveform becomes identical with the waveform of the power supply open phase.

### Supposed Causes

- Open phase
- Voltage imbalance between phases
- Faulty outdoor inverter PC board
  - Faulty main circuit capacitor
  - Power unit (Disconnection in diode module)
  - Faulty Magnetic Relay (K11R, K12R)
  - Improper main circuit wiring

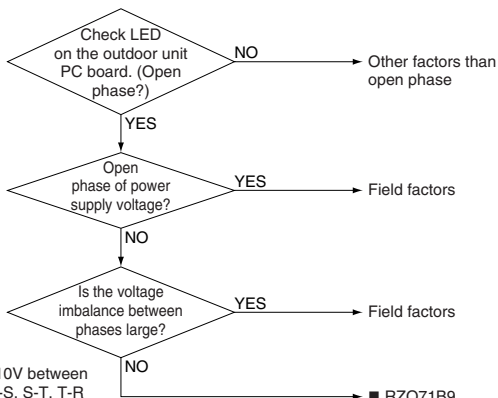


## Troubleshooting



**Caution**

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



(Note)  
Target :  $\pm 10V$  between phases, R-S, S-T, T-R

- RZQ71B9, RZQS71-100B7 (1 $\phi$ ), RZQ100~140B8 (3 $\phi$ ): Replace the outdoor inverter PC board (A2P).
- RZQ100~140C7, RZQS125-140C7 (1 $\phi$ ): Replace the outdoor PC board (A2P).

## **(46) Malfunction of Radiator Fin Temperature Thermistor**

### **Remote Controller Display**

*P4*

### **Applicable Models**

RZP-D, RZ(Y)-L, Inverter (RZQ71F • 90C • 100F) and  
RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

**P1**

**P4**

### **Method of Malfunction Detection**

Detection by open or short circuit of the radiator fin temperature thermistor during the compressor stops operating.

### **Malfunction Decision Conditions**

When open or short circuit of the radiator fin temperature thermistor is detected during the compressor stops operating

### **Supposed Causes**

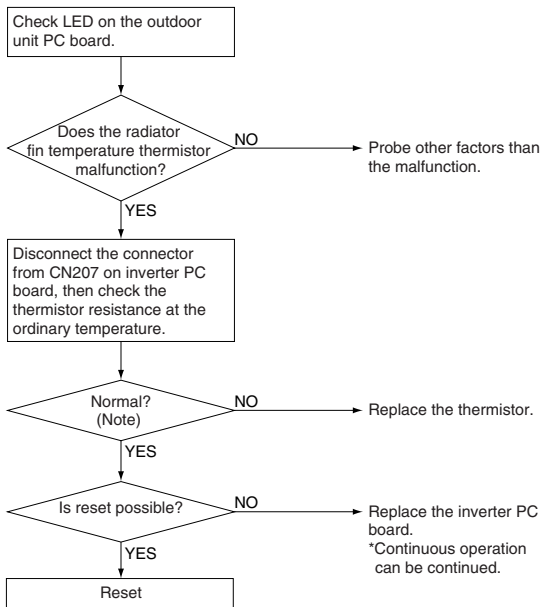
- Faulty radiator fin temperature thermistor
- Faulty outdoor unit PC board

## Troubleshooting



**Caution**

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



Refer to Check No. 5 on page 409.

## Remote Controller Display

P4

### Applicable Models

RZP-D Series

### Method of Malfunction Detection

Detection by open or short circuit of the radiator fin temperature thermistor during the compressor stops operating.

P4

### Malfunction Decision Conditions

When open or short circuit of the radiator fin temperature thermistor is detected during the compressor stops operating

### Supposed Causes

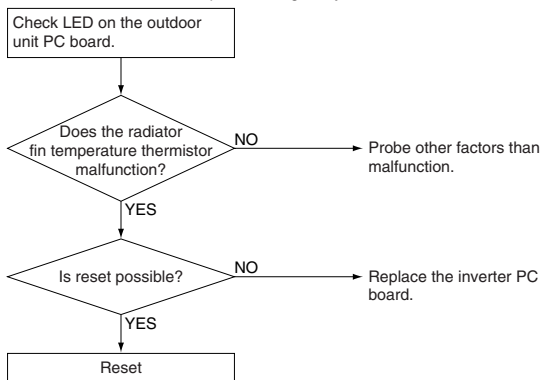
- Faulty inverter PC board
- Faulty radiator fin temperature thermistor  
(Independent replacement of the thermistor is not allowed.)


## Troubleshooting



**Caution**

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



- \*1. This error code is displayed only when  button is pushed. While the normal operation still continues, inverter protection cannot be actuated.
- \*2. On this unit, the radiator fin temperature thermistor cannot be mantled/dismantled independently. Replace by inverter PC board.



Refer to Check No. 5 on page 409.

## Remote Controller Display

P4

### Applicable Models

RZQ-K and Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

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

P4

### 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

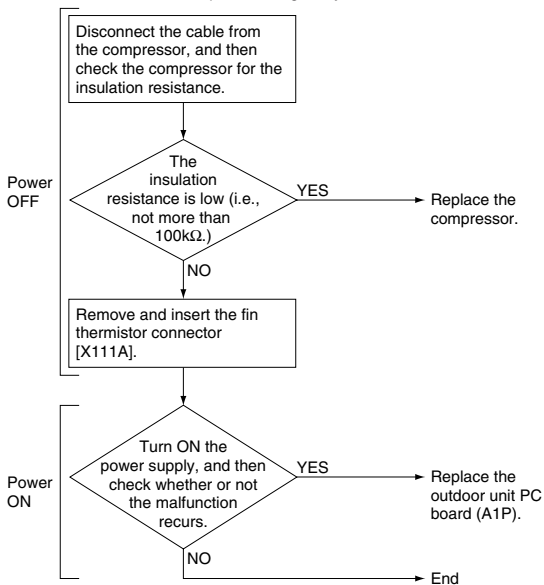
- Defect of radiator fin temperature sensor
- Defect of outdoor unit PC board (A1P)

## Troubleshooting



**Caution**

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



## (47) Failure of Capacity Setting

### Remote Controller Display

PJ

### Applicable Models

RZP-D, RZ(Y)-L, R(Y)-LU, RZQ-K, Inverter (RZQ71F • 90C • 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

P4

PJ

### Method of Malfunction Detection

Check whether set value written in E<sup>2</sup>PROM (at factory) or set value of capacity setting adapter (for replacement) is the same as outdoor unit capacity.

### Malfunction Decision Conditions

When the set value on E<sup>2</sup>PROM differs from the outdoor unit capacity or a capacity setting adapter except for PC board applicable models is installed. (Malfunction decision is made only when turning the power supply on.)

### Supposed Causes

- Improper set value of E<sup>2</sup>PROM
- Improper capacity setting adapter
- Faulty outdoor unit PC board

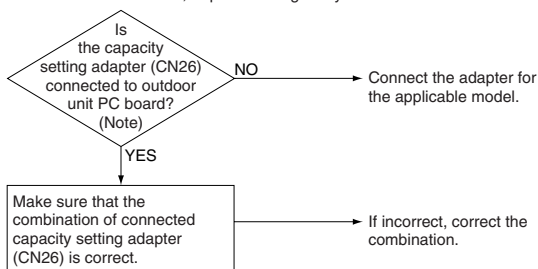


## Troubleshooting



**Caution**

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



**(Note)**

Capacity setting adapter is not connected at factory. (Capacity is written in E<sup>2</sup>PROM.) Capacity setting adapter is required only when the PC board was replaced with spare PC board.

## Remote Controller Display

PJ

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

To be detected based on the data transmission with INV.

PJ

### Malfunction Decision Conditions

Judge if the INV PC board type is correct based on the data transmission.

### Supposed Causes

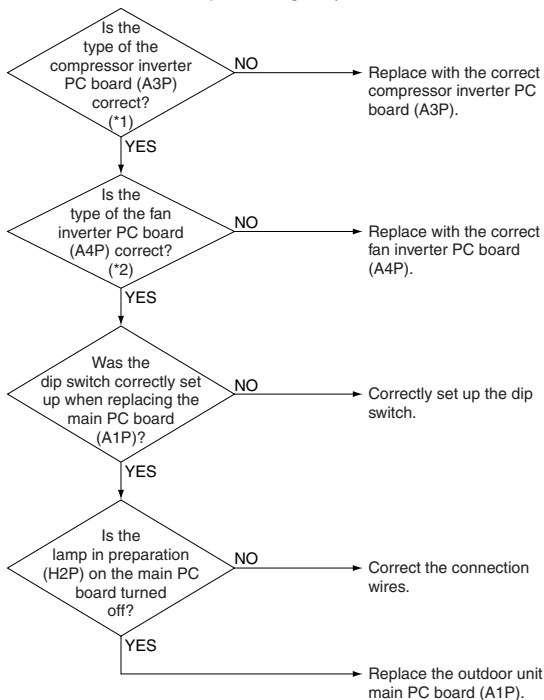
- Mismatch of the PC board types
- Field setting error

## Troubleshooting



**Caution**

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



### \*1. The types of compressor inverter PC board

Type	Corresponding models
PC0509-1	RZQ200 · 250C

### \*2. The types of fan inverter PC board

Type	Corresponding models
PC0511-1	RZQ200 · 250C

## (48) Gas Shortage (Malfunction)

### Remote Controller Display

U0

### Applicable Models

RZP-D Series

### Method of Malfunction Detection

(In test operation)

Detection by closed stop valve.

(In normal operation)

Gas shortage is detected according to the discharge pipe temperature.

### Malfunction Decision Conditions

(In test operation)

Variations of the indoor unit heat exchange temperature judge whether stop valve is open or closed.

(In normal operation)

When microcomputer judges and detects gas shortage.

- \* Gas shortage is not decided repeating retry. When INSPECTION button on the remote controller is pushed, "U0" is displayed.

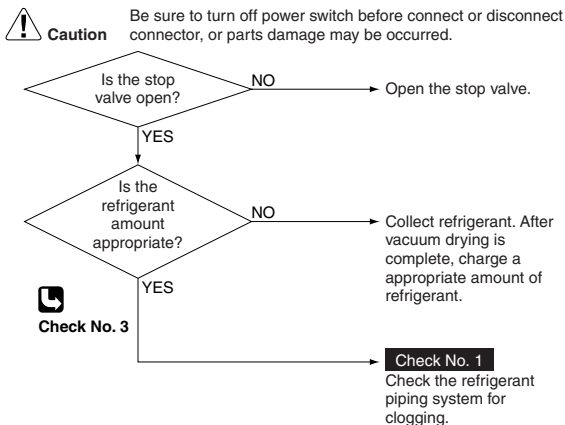
### Supposed Causes

- The stop valve is left in closed.
- Insufficient refrigerant amount
- Clogged refrigerant piping system

PJ

U0

## Troubleshooting



★For RZP71~100D models, gas shortage alarm is indicated but operation continues. On other models than aforementioned, operation halts due to malfunction.

 Refer to Check No. 1 on page 401.

## Remote Controller Display

U0

### Applicable Models

RZ(Y)-L, R(Y)-LU, Inverter (RZQ71F • 90C • 100F) and RZQ200, 250C Series

### Method of Malfunction Detection

Lack of gas is detected according to discharge pipe temperature.

U0

### Malfunction Decision Conditions

Microcomputer decides whether there is a lack of gas and detects malfunction.

- Stop due to malfunction does not occur even though a malfunction is determined to have occurred.

### Supposed Causes

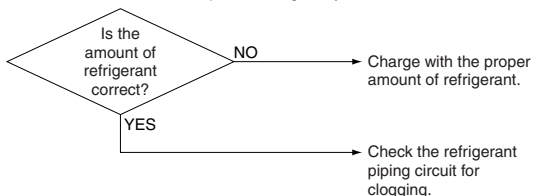
- Lack of refrigerant
- Refrigerant piping circuit clogging

### Troubleshooting



**Caution**

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



## Remote Controller Display

U0

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Short of gas malfunction is detected by discharge pipe temperature thermistor and low pressure saturation temperature.

### Malfunction Decision Conditions

Microcomputer judge and detect if the system is short of refrigerant.

- ★ Malfunction is not decided while the unit operation is continued.

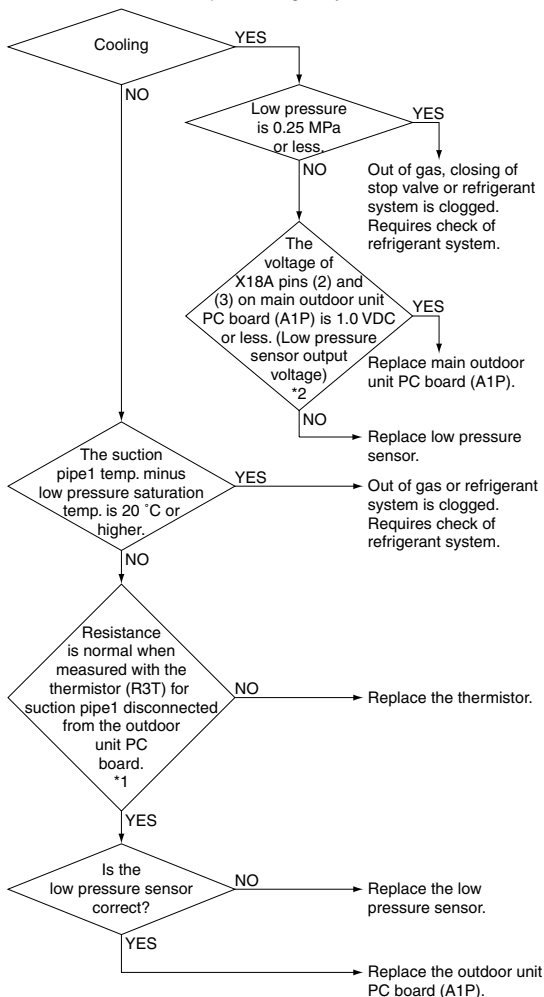
### Supposed Causes

- Out of gas or refrigerant system clogging (incorrect piping)
- Defect of pressure sensor
- Defect of outdoor unit PC board (A1P)
- Defect of thermistor R3T

## Troubleshooting



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



U0



Refer to Check No. 4, 8, 9 on page 405, 415, 416.



## Remote Controller Display

U0

### Applicable Models

RZQ-K and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7  
(RZQ100~140C7V1B, RZQ125·140C7V1B) Series

### Method of Malfunction Detection

[In cooling]

Detect malfunctions based on difference between temperature set by the remote controller and indoor suction temperature, electronic expansion valve opening degree, compressor frequency and low pressure.

[In heating]

Detect malfunctions based on difference between temperature set by the remote controller and indoor suction temperature, electronic expansion valve opening degree during suction superheat control, high pressure, indoor heat exchanger temperature, indoor suction temperature, etc.

### Malfunction Decision Conditions

[In cooling]

In cases where compressor frequency does not rise even when the electronic expansion valve opening degree is the maximum and load is large.

[Malfunction is confirmed when low pressure is low with compressor frequency of 41 Hz.]

[In heating]

Despite of large heating load, suction gas superheat degree is large, compressor frequency is low and the electronic expansion valve opening degree is the maximum.

[Malfunction is confirmed when high pressure drops below the saturated pressure of indoor heat exchanger temperature (or indoor suction temperature).]

## Supposed Causes

- Inadequate refrigerant quantity (gas shortage)
- Clogging in the refrigerant piping system
- Inconsistent wiring and piping

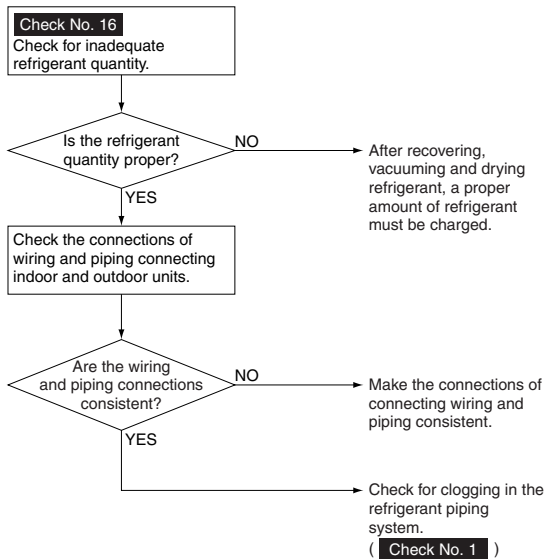
## Troubleshooting



**Caution**

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

**U0**



Refer to Check No. 1, 16 on page 401, 425.

## Remote Controller Display

U0

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 (RZQ71B9V3B, RZQS71·100B7V3B, RZQ100~140B8W1B) Series

### Method of Malfunction Detection

[In normal]

Gas shortage is detected according to the electronic expansion valve opening degree and measured temperatures and pressures.

### Malfunction Decision Conditions

[In cooling]

When the electronic expansion valve opens fully and low pressure is below 0.1 MPa continuously for 30 minutes.


[In heating]

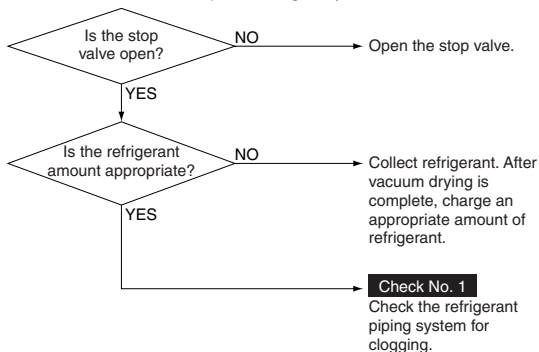
When the electronic expansion valve opens fully and the suction superheat is large (more than 20°C) continuously for 30 minutes.

### Supposed Causes

- The stop valve is left in closed.
- Insufficient refrigerant amount
- Clogged refrigerant piping system

## Troubleshooting

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



\* For B Series (RZQ71B9V3B, RZQS71·100B7V3B, RZQ100~140B8W1B models), gas shortage alarm is indicated but operation continues.



Refer to Check No. 1 on page 401.

U0

## **(49) Reverse Phase**

### **Remote Controller Display**

**U1**

### **Applicable Models**

R(Y)-LU, RZQ-K and RZQ200, 250C Series

### **Method of Malfunction Detection**

The reverse phase detection circuit detects the phase of each phase and judge whether it is normal or reverse.

### **Possible Causes**

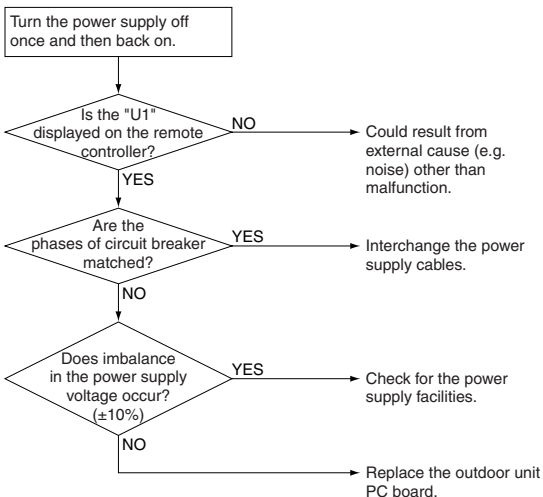
- Faulty connection of power supply wiring
- Disconnection in power supply wiring

## Troubleshooting



**Caution**

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



**U1**

## **(50) Abnormal Power Supply Voltage**

### **Remote Controller Display**

**U2**

### **Applicable Models**

RZP-D and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### **Method of Malfunction Detection**

Malfunction is detected according to the voltage of main circuit capacitor built in the inverter and power supply voltage.

### **Malfunction Decision Conditions**

When the voltage of main circuit capacitor built in the inverter and power supply voltage drop (150-170 VAC) or when the power failure of several tons of ms or longer is generated.

\* Remote controller does not decide the abnormality.

### **Supposed Causes**

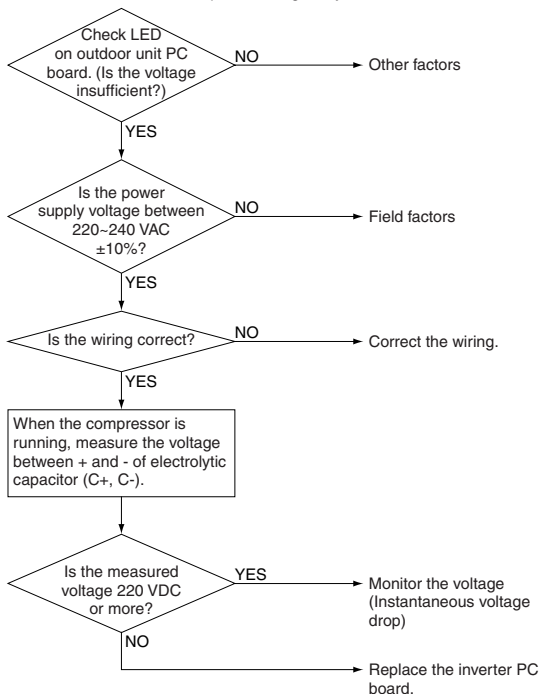
- Drop in power supply voltage (180 V or less)
- Instantaneous power failure
- Inverter open phase (Phase T)
- Faulty main circuit wiring
- Faulty outdoor unit PC board
- Main circuit parts damaged

## Troubleshooting



**Caution**

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



**U2**



## Remote Controller Display

**U2**

### Applicable Models

RZ(Y)-L and Inverter (RZQ71F • 90C • 100F) Series

### Method of Malfunction Detection

Detection is based on the voltage in main circuit capacitor for inverter and the supply voltage.

### Malfunction Decision Conditions

When the voltage in main circuit capacitor for inverter and the supply voltage drop (171 - 190 VAC), or when power outage of more than 20 or 30 ms occurs.

### Supposed Causes

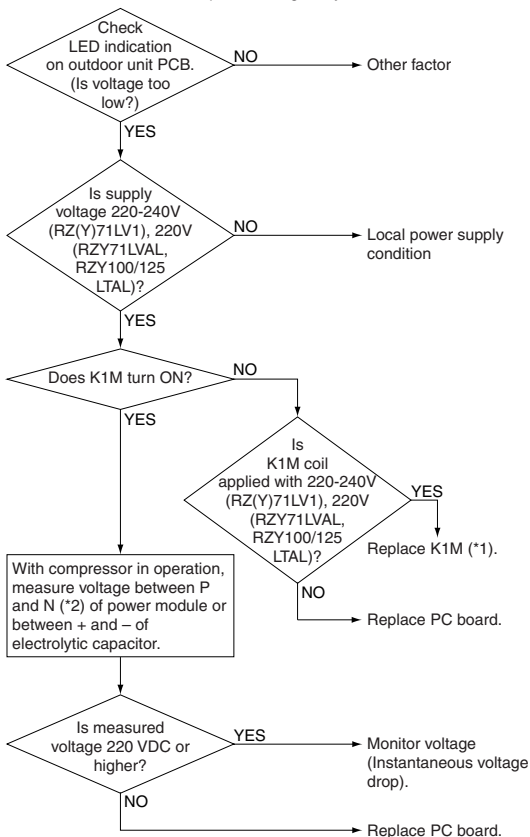
- Supply voltage drop (lower than 198 V)
- Momentary power outage
- Open phase
- Faulty K1M
- Faulty contact or open circuit in X51A
- Faulty wiring in main circuit
- Faulty outdoor unit PC board
- Damaged main circuit parts

## Troubleshooting



**Caution**

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



**U2**



**Notes:**

1. \* 1 K1M replacement possible in RZY100/125L.
2. \* 2 For RZY71: Between terminals P1 and N1  
For RZY100~125L : Between terminals P2 and N1

## Remote Controller Display

**U2**

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Malfunction is detected according to the voltage of main circuit capacitor built in the inverter and power supply voltage.


### Malfunction Decision Conditions

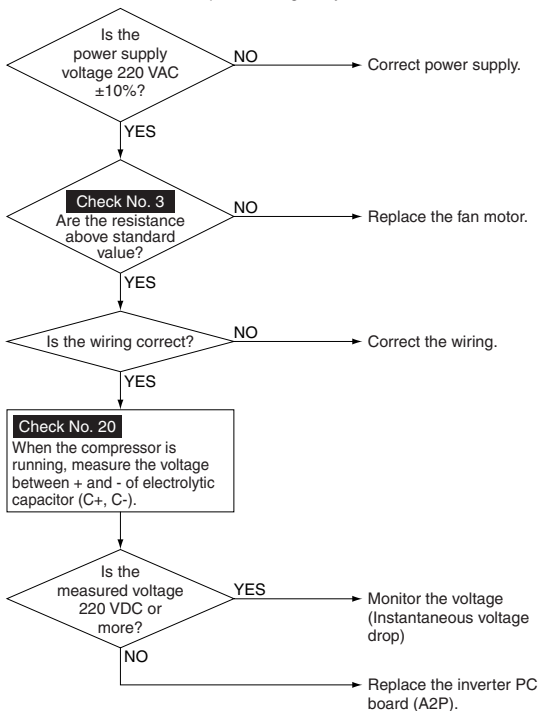
When the abnormal voltage of main circuit capacitor built in the inverter and abnormal power supply voltage are detected.

### Supposed Causes

- Drop in power supply voltage (180 V or less)
- Instantaneous power failure
- Inverter open phase (Phase T)
- Faulty main circuit wiring
- Faulty outdoor unit PC board
- Main circuit parts damaged

## Troubleshooting

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



**U2**



Refer to Check No. 3, 20 on page 403, 438.

## Remote Controller Display

U2

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Detection of voltage of main circuit capacitor built in the inverter and power supply voltage.

### Malfunction Decision Conditions

When the abnormal voltage of main circuit capacitor built in the inverter and abnormal power supply voltage are detected.

### Supposed Causes

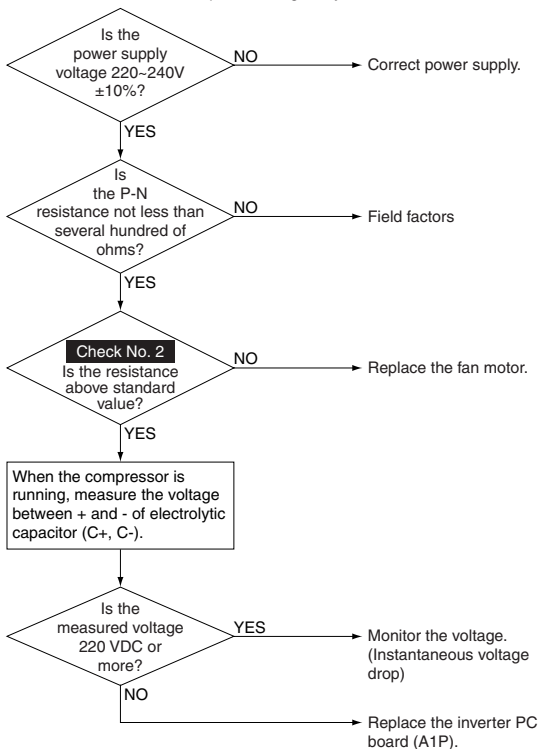
- Power supply insufficient
- Instantaneous power failure
- Defect of outdoor unit fan motor
- Defect of outdoor control PC board (A1P)

## Troubleshooting



**Caution**

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



**U2**



Refer to Check No. 2 on page 402.

## Remote Controller Display

**U2**

### Applicable Models

RZQ200, 250C Series

### 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

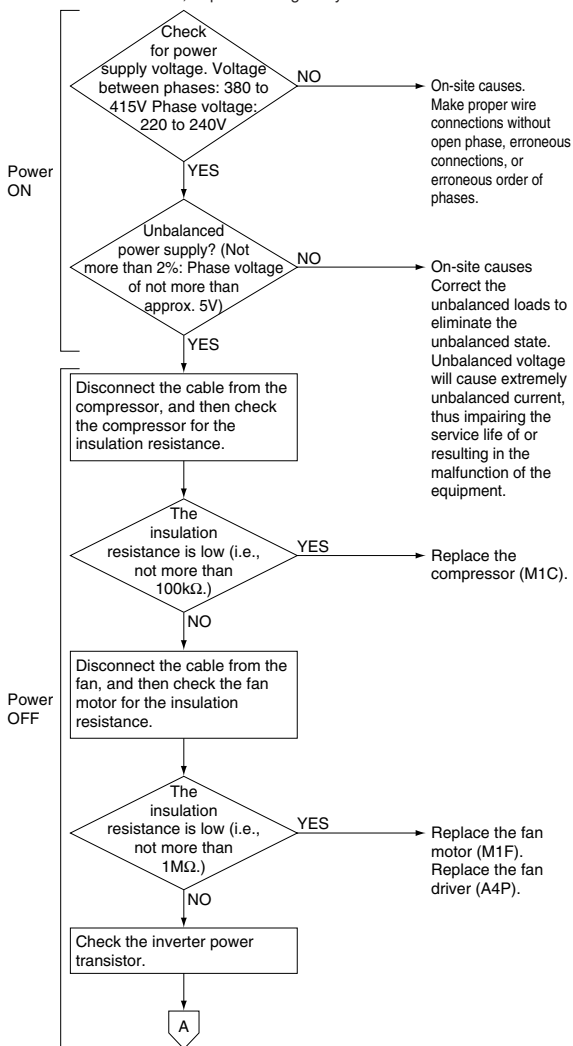
## Troubleshooting

**U2**



**Caution**

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

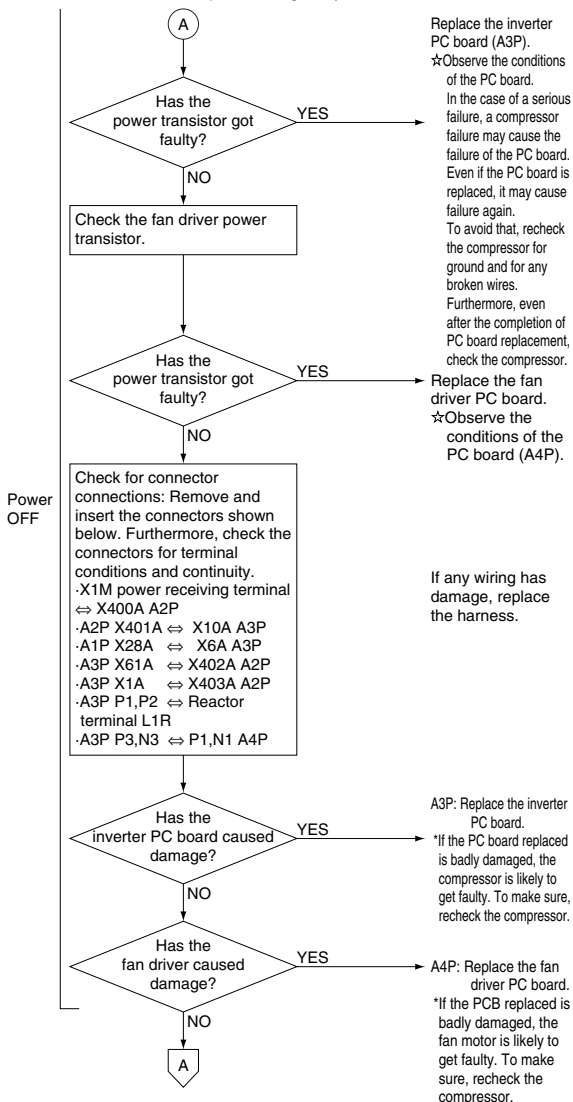






**Caution**

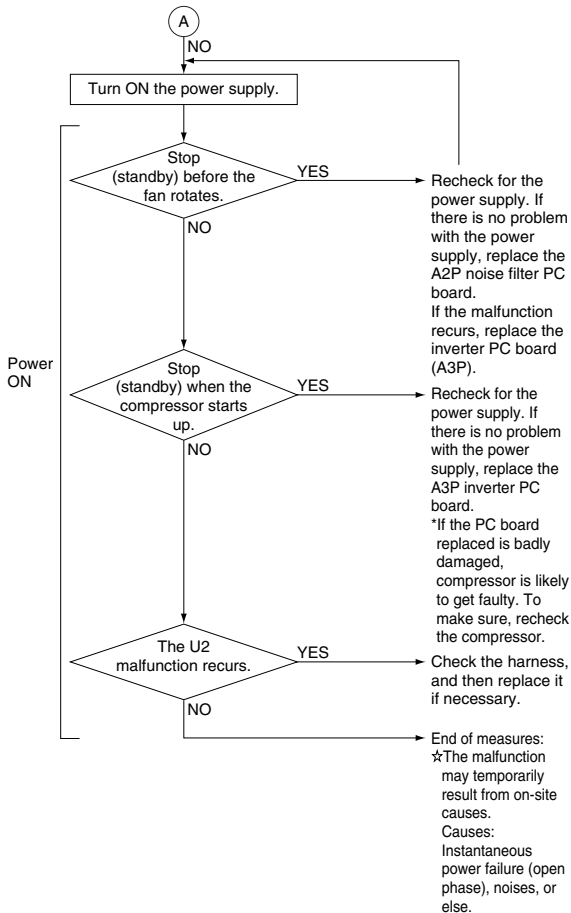
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



**U2**

## (51) Check Operation not Executed

### Remote Controller Display

U3

### Applicable Models

Inverter Series

### 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

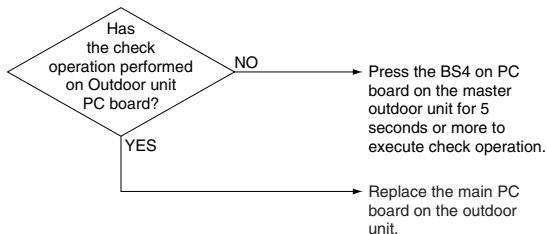
- Check operation is not executed.

### Troubleshooting



**Caution**

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



## **(52) Malfunction of Transmission (Between Indoor and Outdoor Unit)**

### **Remote Controller Display**

**U4**

### **Applicable Models**

RZP-D, RZ(Y)-L, R(Y)-LU, and RY-KU, RY-F, RY-G Series

**U3**

**U4**

### **Method of Malfunction Detection**

Microcomputer checks if transmission between indoor and outdoor units is normal.

### **Malfunction Decision Conditions**

When transmission is not carried out normally for a certain amount of time

### **Supposed Causes**

- Wiring indoor-outdoor transmission wire is incorrect.
- Failure of indoor unit PC board
- Failure of outdoor unit PC board
- Outside cause (noise, etc.)
- Power supply -open phase

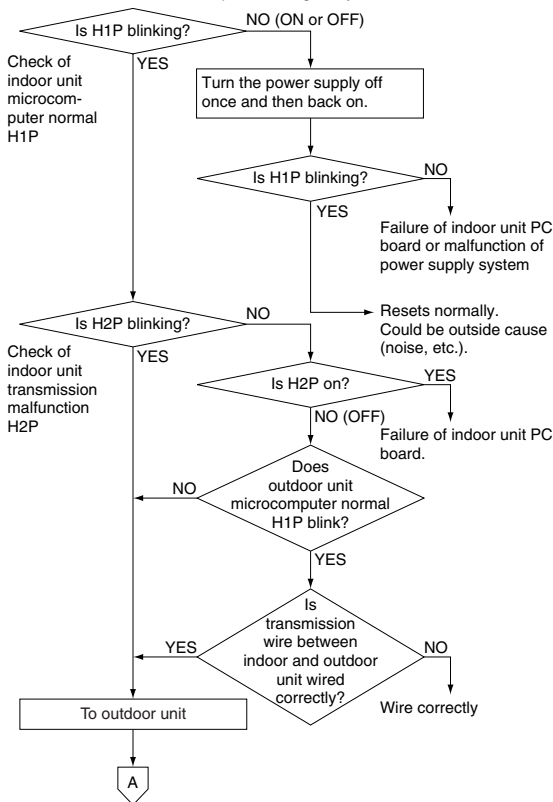
## Troubleshooting1

Diagnosis of incorrect or broken/disconnected wiring  
 If the LEDs on the indoor unit PC board are off, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.



**Caution**

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

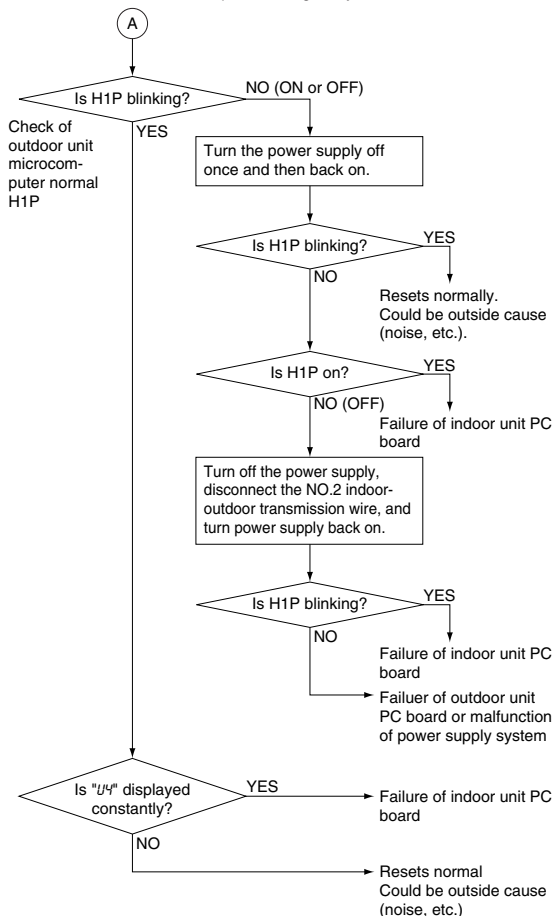


## Troubleshooting2



**Caution**

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



**U4**

## Remote Controller Display

U4

### Applicable Models

RY-G, RY-FU, RY-KU Series

### Method of Malfunction Detection

Microcomputer checks if transmission between indoor and outdoor units is normal.

### Malfunction Decision Conditions

When transmission is not carried out normally for a certain amount of time

### Supposed Causes

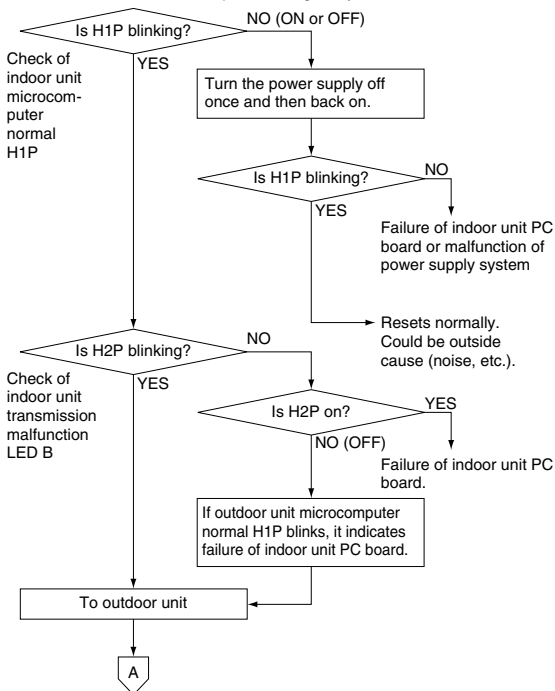
- Wiring indoor-outdoor transmission wire is incorrect.
- Failure of indoor unit PC board
- Failure of outdoor unit PC board
- Outside cause (noise, etc.)

## Troubleshooting1

Diagnosis of incorrect or broken/disconnected wiring  
 If the LEDs on the indoor unit PC board are off, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.



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



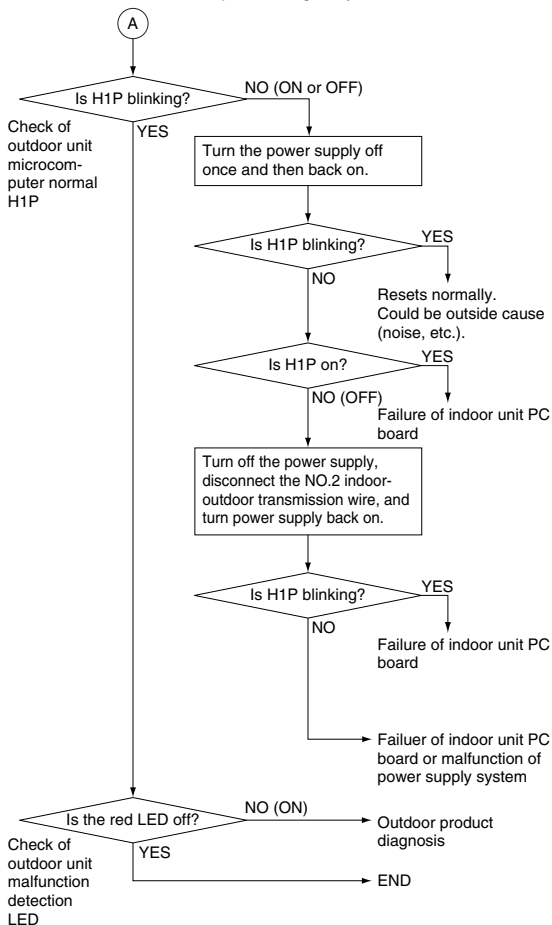


## Troubleshooting2



**Caution**

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



## Remote Controller Display

U4

### Applicable Models

RZQ-K, Inverter (RZQ71F • 90C • 100F) and RZQ200, 250C Series

### Method of Malfunction Detection

Check on the microcomputer whether or not the Indoor-Outdoor transmission is normal.

U4

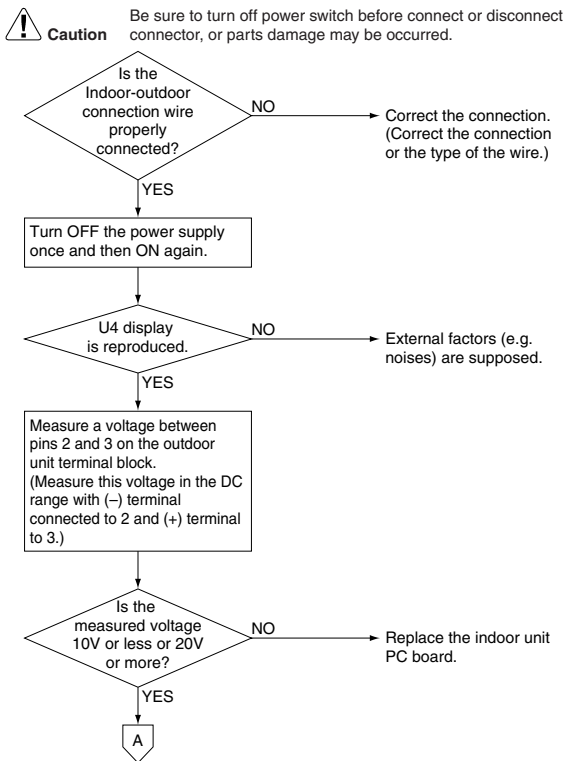
### Malfunction Decision Conditions

When the normal transmission is not conducted for a given period of time or more.

### Supposed Causes

- Erroneous connection of connection wire between indoor and outdoor units
- External factors (e.g. noises)
- Faulty indoor unit PC board
- Faulty outdoor unit PC board
- Faulty outdoor unit fan motor
- Abnormal power supply

## Troubleshooting1

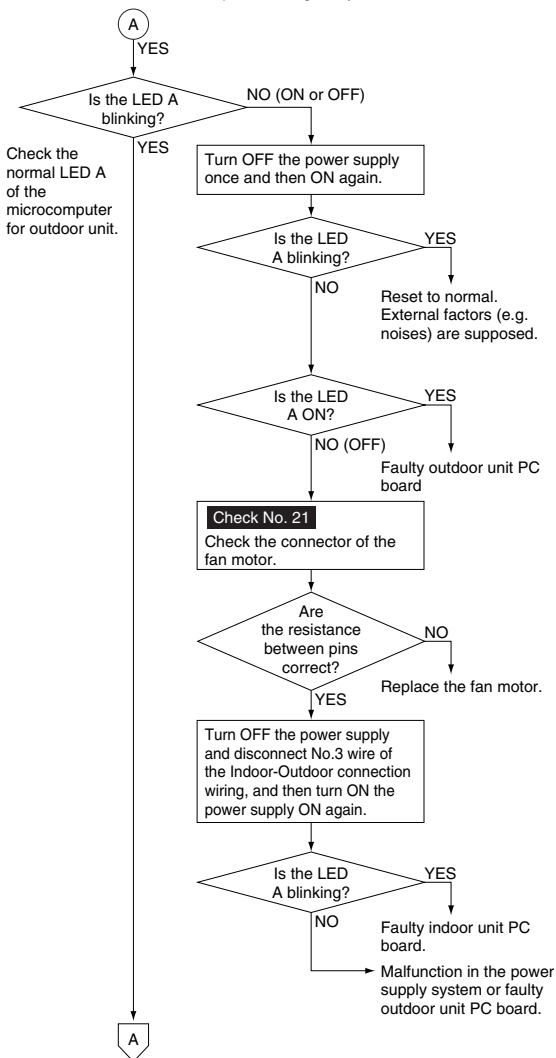


## Troubleshooting2



**Caution**

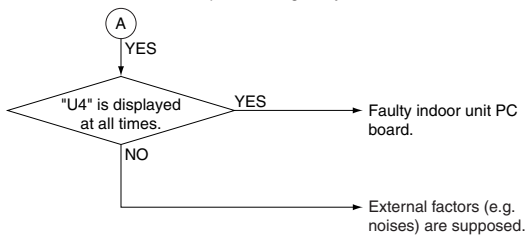
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



**U4**

**Caution**

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



Refer to Check No. 21 on page 442.

## Remote Controller Display

U4

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

Microcomputer checks if transmission between indoor and outdoor units is normal.

U4

### Malfunction Decision Conditions

When transmission is not carried out normally for a certain amount of time

### Supposed Causes

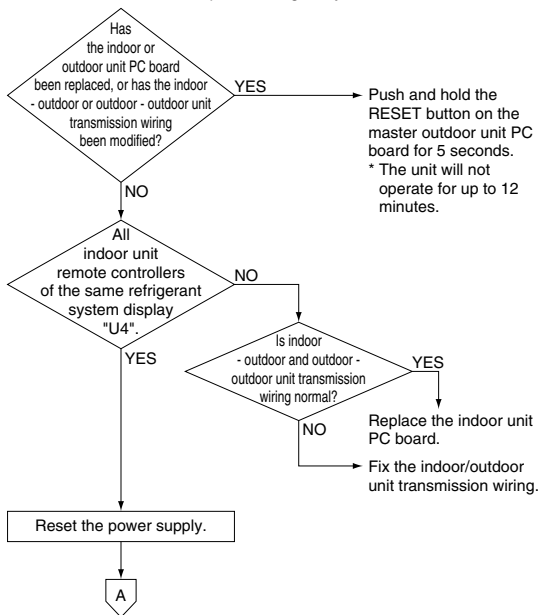
- Indoor to outdoor, outdoor to outdoor transmission wiring F1, F2 disconnection, short circuit or wrong wiring
- Outdoor unit power supply is OFF
- System address doesn't match
- Defect of outdoor unit PC board
- Defect of indoor unit PC board

## Troubleshooting



**Caution**

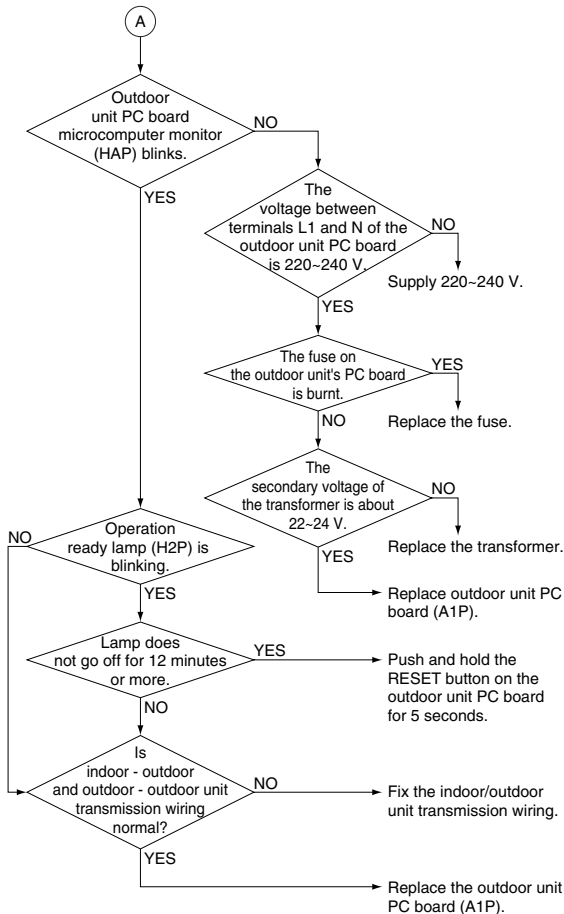
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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





## Remote Controller Display

U4

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 (RZQ(S)71~140)  
Series

### Error Generation

The error is generated when the microprocessor detects that the transmission between the indoor and the outdoor unit is not normal over a certain amount of time.

### Supposed Causes

- Wiring indoor-outdoor transmission wire is incorrect
- Malfunctioning indoor unit PC board
- Malfunctioning outdoor unit PC board
- Burning out fuse
- Faulty fan motor
- Outside cause (noise, etc.)

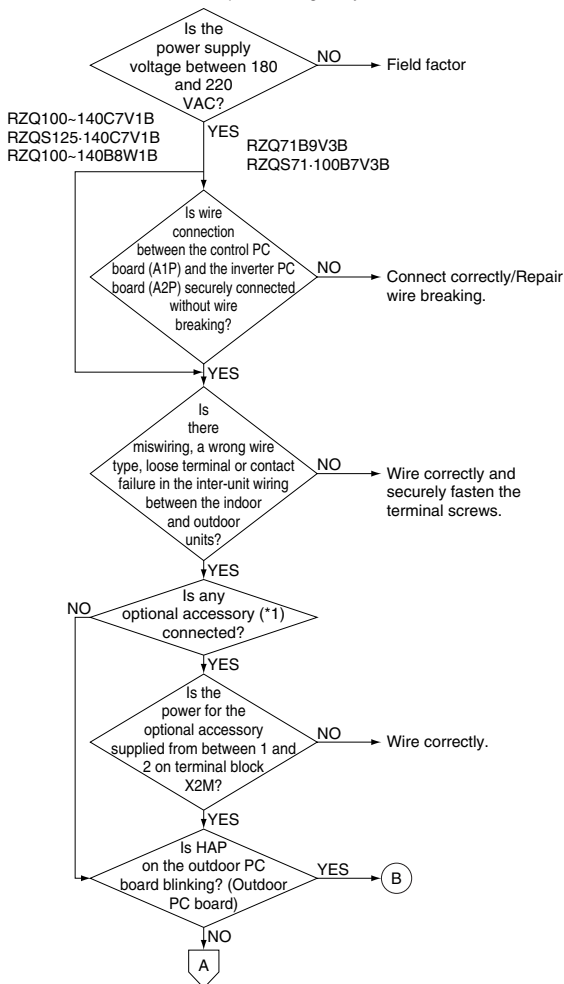
## Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring. If the LEDs on the indoor unit PC board are off, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.



**Caution**

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

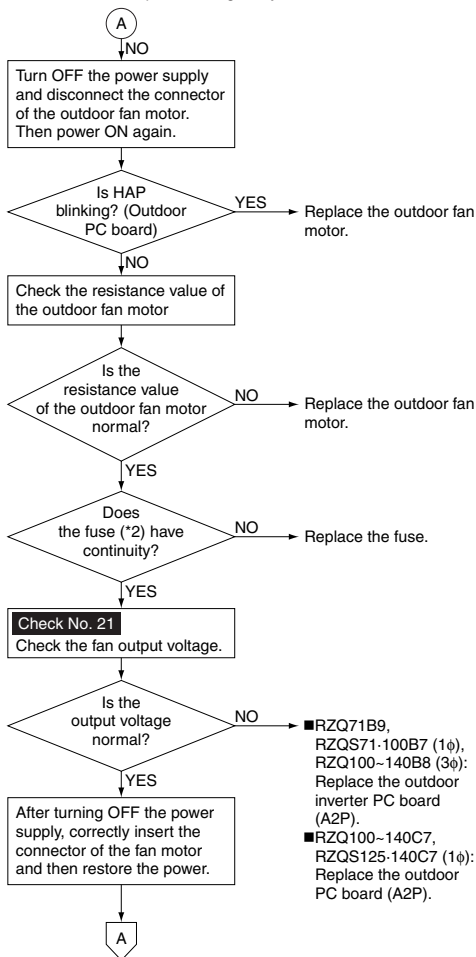


**U4**



**Caution**

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

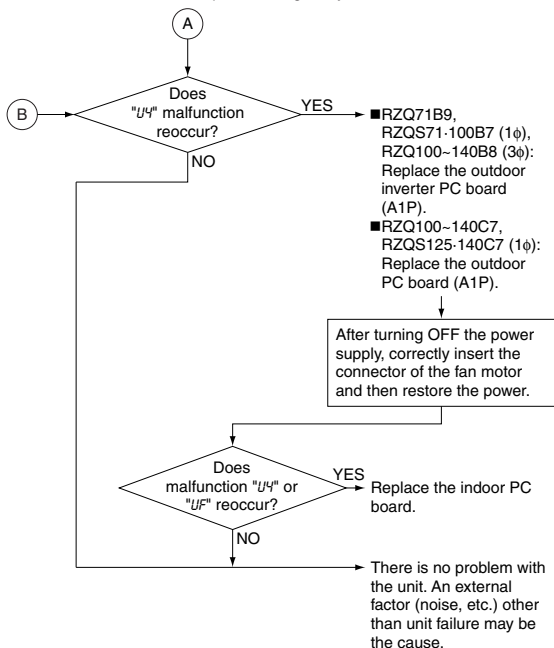


Refer to Check No. 21 on page 442.



**Caution**

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



**U4**

**Note**

\*1: Optional accessories refer to wire adapter, auto grill and other accessories.

- \*2: RZQ71B9V3B ⇒ No fuse
- RZQS71-100B7V3B ⇒ No fuse
- RZQ100~140C7V1B ⇒ F6U
- RZQ125-140C7V1B ⇒ F6U
- RZQ100~140B8W1B ⇒ F1U



Refer to Check No. 21 on page 442.

## **(53) Malfunction of Transmission (Between Indoor Unit and Remote Controller)**

### **Remote Controller Display**

*U5*

### **Applicable Models**

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G, RY-G,  
RY-FU, RY-KU, R-NU, Inverter (RZQ100-160P) and  
RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### **Method of Malfunction Detection**

Microcomputer checks if transmission between indoor unit and remote controller is normal.

### **Malfunction Decision Conditions**

When transmission is not carried out normally for a certain amount of time

### **Supposed Causes**

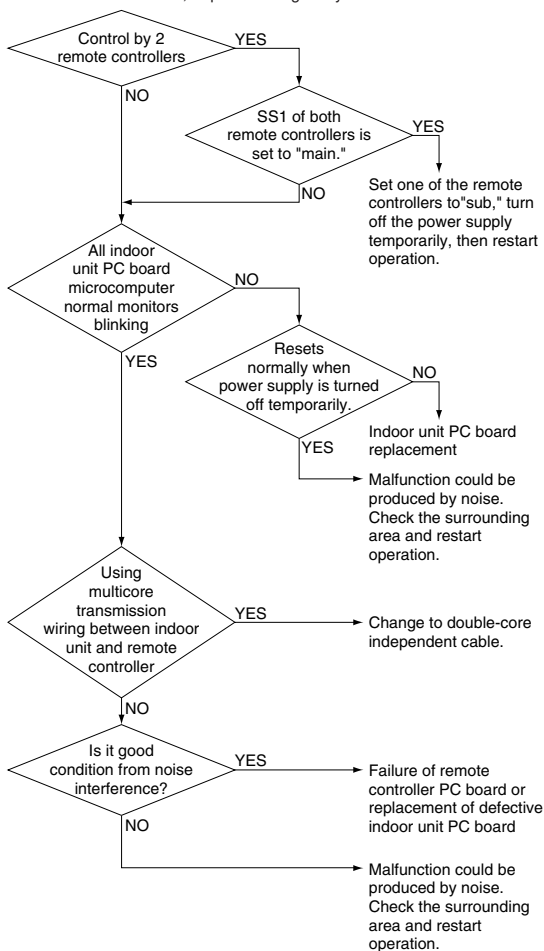
- Failure of remote controller
- Failure of indoor PC board
- Outside cause (noise, etc.)
- Connection of 2 master remote controllers (When using 2 remote controllers)

## Troubleshooting



**Caution**

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



**U5**

## **Remote Controller Display**

*U5*

### **Applicable Models**

RZQ-K and RZQ200, 250C Series

### **Method of Malfunction Detection**

Microcomputer checks if transmission between indoor unit and remote controller is normal.

### **Malfunction Decision Conditions**

When transmission is not carried out normally for a certain amount of time

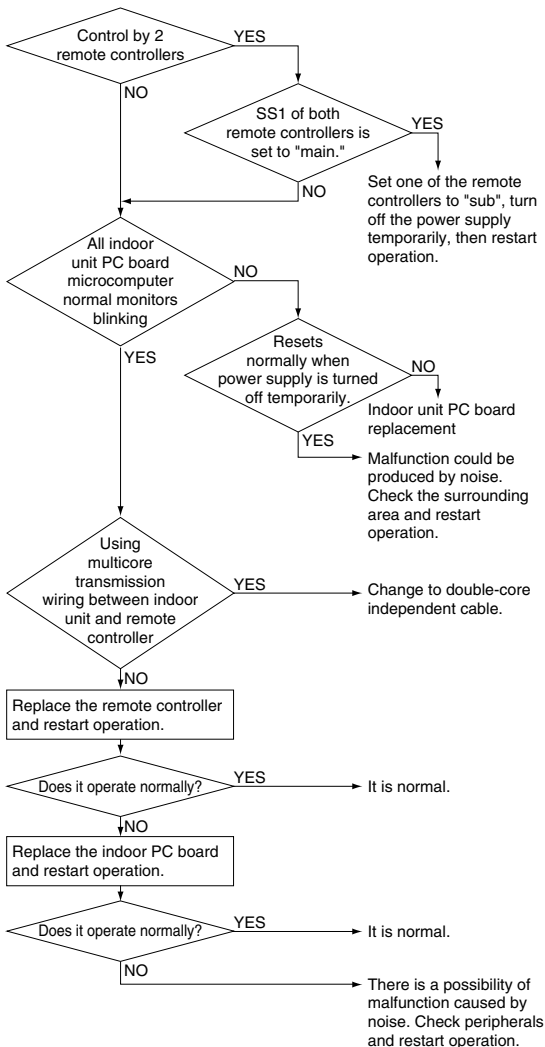
### **Supposed Causes**

- Failure of remote controller
- Failure of indoor PC board
- Outside cause (noise, etc.)
- Connection of 2 master remote controllers (When using 2 remote controllers)

## Troubleshooting



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



**U5**



## **(54) Transmission Error Between Main Remote Controller and Sub Remote Controller**

### **Remote Controller Display**

*U8*

### **Applicable Models**

RZP-D, RZ(Y)-L, R(Y)-LU, RY-KU, RY-F, RY-G and Inverter (RZQ100-160P) Series

### **Method of Malfunction Detection**

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

### **Malfunction Decision Conditions**

Normal transmission does not continue for specified period.

### **Supposed Causes**

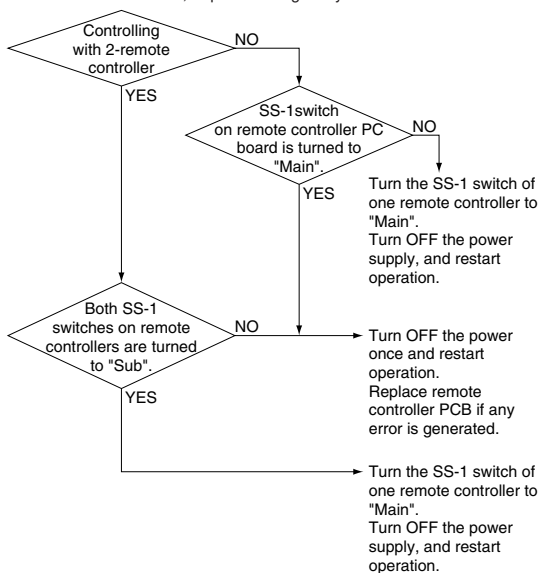
- Transmission error between Main remote controller and Sub remote controller
- Connection among "Sub" remote controllers
- Faulty remote controller PC board

## Troubleshooting



**Caution**

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



## Remote Controller Display

**U8**

### Applicable Models

RZQ-K, Inverter (RZQ71F • 90C • 100F), RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 and RZQ200, 250C Series

### Method of Malfunction Detection

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


### Malfunction Decision Conditions

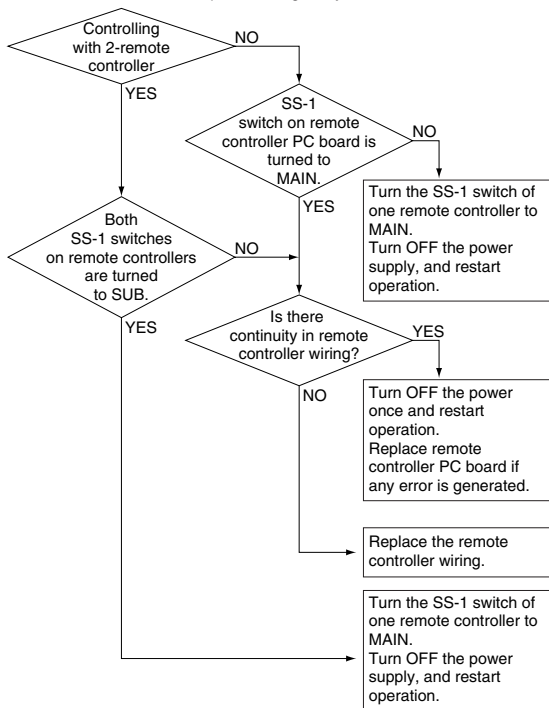
The error is generated when, in case of controlling with two remote controllers, the microprocessor detects that the transmission between the indoor unit and the remote controllers (MAIN and SUB) is not normal over a certain amount of time.

### Supposed Causes

- Transmission error between MAIN remote controller and SUB remote controller
- Connection among SUB remote controllers
- Malfunctioning remote controller PC board.

## Troubleshooting

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



**U8**

## **(55) “U9” Malfunction of Transmission between Indoor and Outdoor Units in the Same System**

### **Remote Controller Display**

**U9**

### **Applicable Models**

Inverter (RZQ100-160P) and RZQ200, 250C Series

### **Supposed Causes**

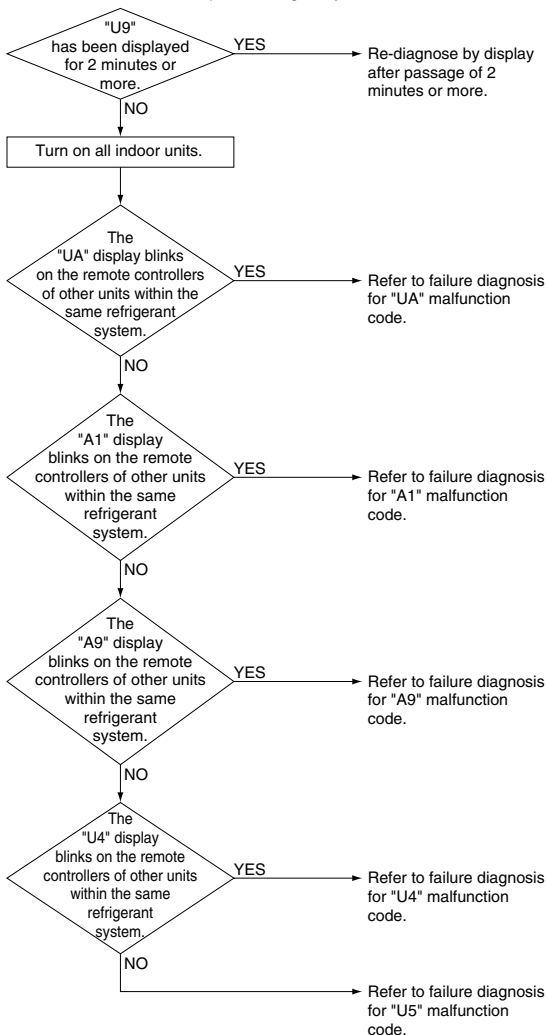
- Malfunction of transmission within or outside of other system
- Malfunction of electronic expansion valve in indoor unit of other system
- Defect of PC board of indoor unit in other system
- Improper connection of transmission wiring between indoor and outdoor unit

## Troubleshooting



**Caution**

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



**U9**

## **(56) Malfunction of Field Setting Switch**

### **Remote Controller Display**

*UR*

### **Applicable Models**

RZP-D Series

### **Malfunction Decision Conditions**

Incorrect field setting

The number of indoor units connected to this system is more than limited.

### **Supposed Causes**

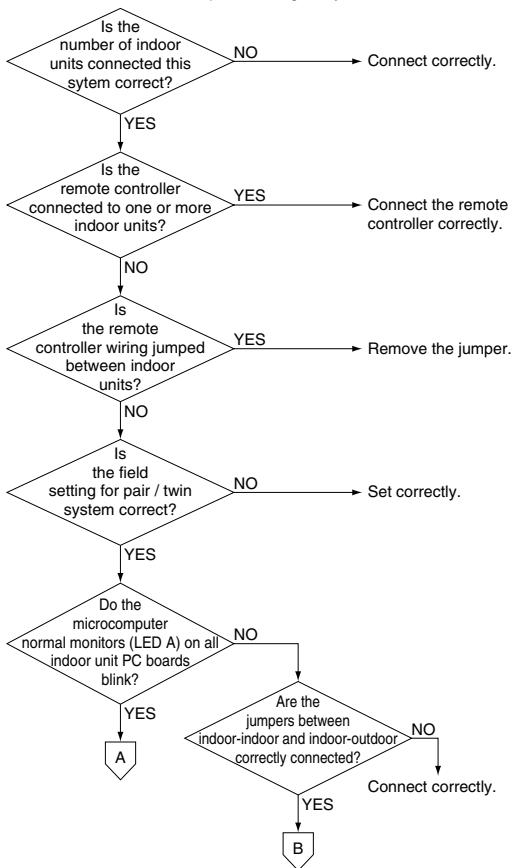
- Indoor-Outdoor, Indoor-Indoor transmission line
- Faulty remote controller wiring

## Troubleshooting



**Caution**

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



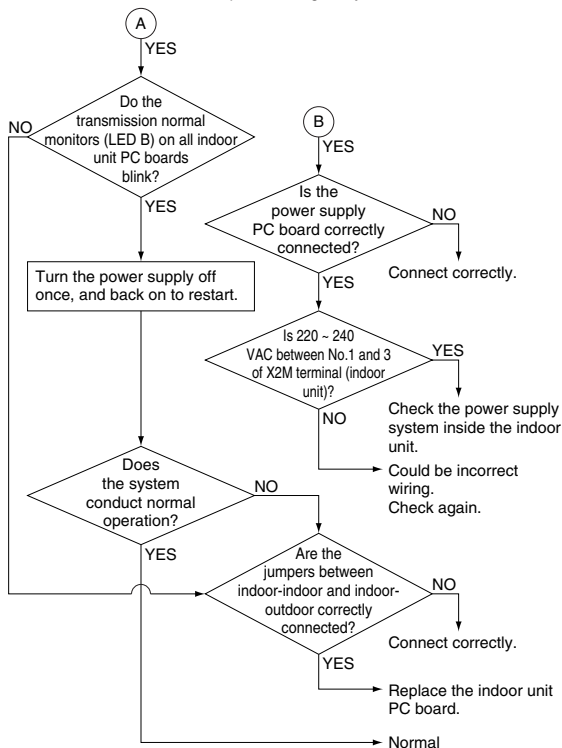
UA





**Caution**

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



## Remote Controller Display

*UR*

### Applicable Models

R(Y)-LU, RY-KU, RY-F, RY-G, Inverter (RZQ71F • 90C • 100F) and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Supposed Causes

- Failure of indoor or outdoor unit PC board
- Failure of power supply PC board
- Indoor-outdoor, indoor-indoor unit transmission wiring
- Failure of remote controller wiring

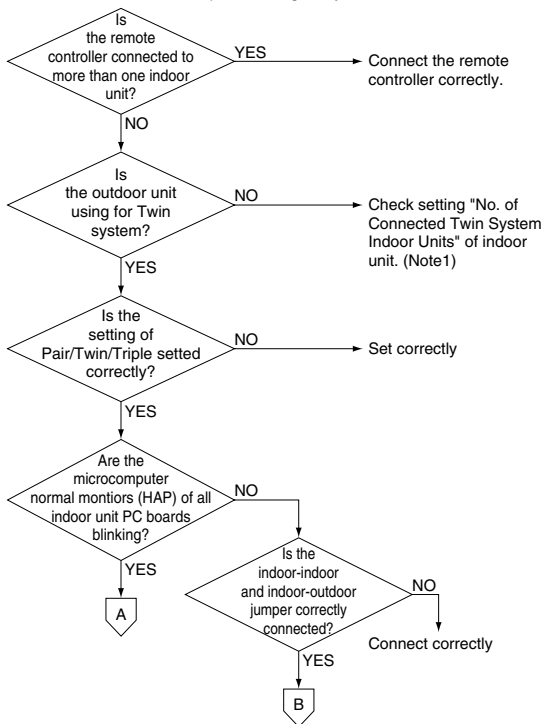
**UA**

## Troubleshooting



**Caution**

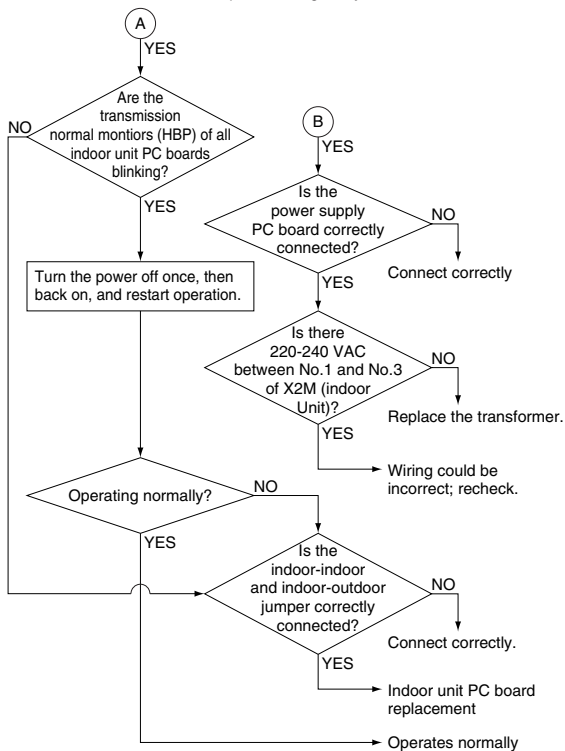
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.





**Caution**

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



**UA**



Refer to Check No. 22 on page 446.

## Remote Controller Display

*UR*

### Applicable Models

Inverter (RZQ100-160P) Series

### Supposed Causes

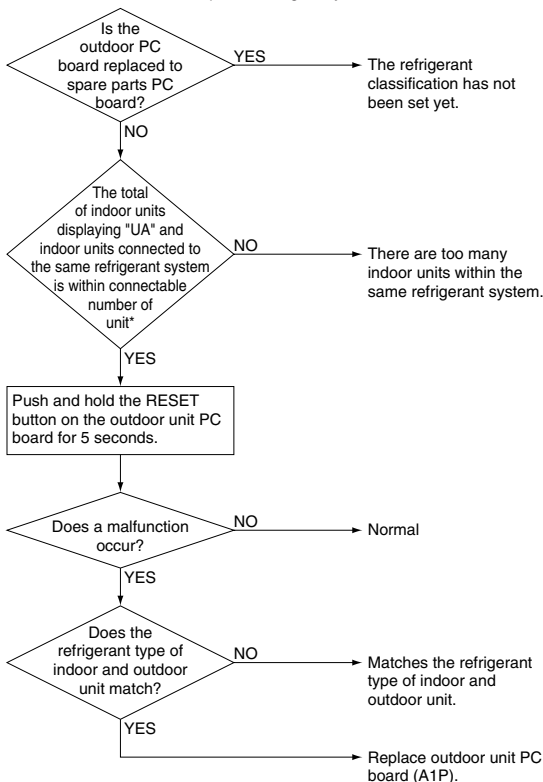
- Excess of connected indoor units
- Defect of outdoor unit PC board (A1P)
- Mismatching of the refrigerant type of indoor and outdoor unit.
- Setting of outdoor PC board was not conducted after replacing to spare parts PC board.

## Troubleshooting



**Caution**

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



- \* The number of indoor units that can be connected to a single outdoor unit system depends on the type of outdoor unit.

## Remote Controller Display

*UR*

### Applicable Models

RZQ-K Series

### Malfunction Decision Conditions

Incorrect field setting

The number of indoor units connected to this system is more than limited.

### Supposed Causes

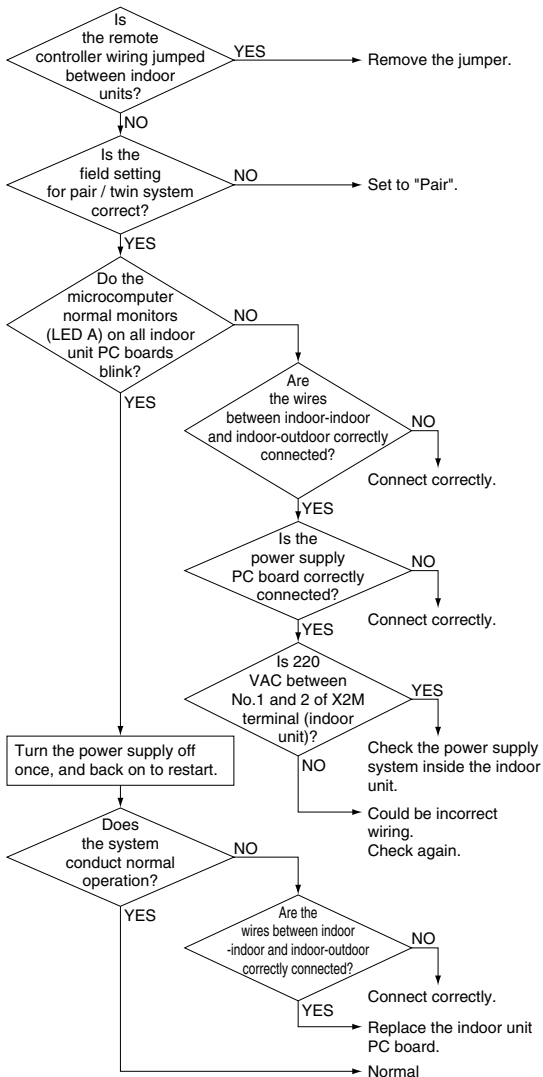
- Indoor-Outdoor, Indoor-Indoor transmission line
- Faulty remote controller wiring

## Troubleshooting



**Caution**

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



**UA**



## Remote Controller Display

*UR*

### Applicable Models

RZQ200, 250C Series

### Malfunction Decision Conditions

Incorrect field setting

The number of indoor units connected to this system is more than limited.

### Supposed Causes

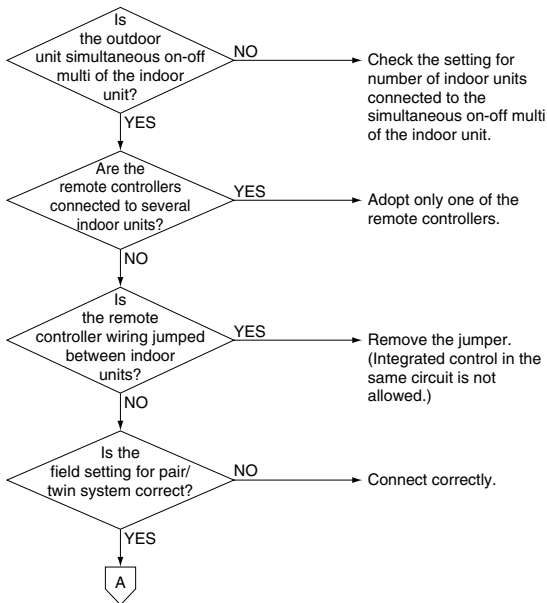
- Indoor-Outdoor, Indoor-Indoor transmission line
- Faulty remote controller wiring

## Troubleshooting



**Caution**

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

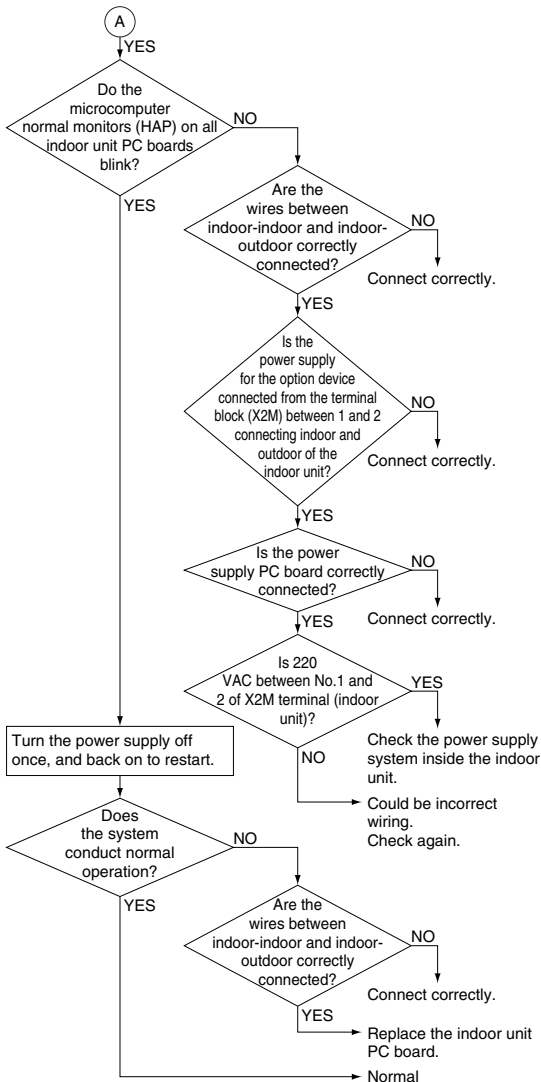


**UA**



**Caution**

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



## (57) Centralized Address Setting Error

### Remote Controller Display

UC

### Applicable Models

RZP-D, RZQ-K, Inverter Series

### Method of Malfunction Detection

Indoor unit microcomputer detects and judges the centralized address signal according to the transmission between indoor units.

UA

UC

### Malfunction Decision Conditions

When the microcomputer judges that the centralized address signal is duplicated

### Supposed Causes

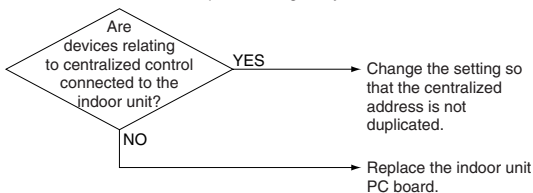
- Faulty centralized address setting
- Faulty indoor unit PC board

### Troubleshooting



**Caution**

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



## **(58) Malfunction of Transmission between Central Remote Controller and Indoor Unit**

### **Remote Controller Display**

*UE*

### **Applicable Models**

RZQ-K, Inverter (RZQ100-160P) and RZQ200, 250C Series

### **Method of Malfunction Detection**

Microcomputer checks if transmission between indoor unit and centralized remote controller is normal.

### **Malfunction Decision Conditions**

When transmission is not carried out normally for a certain amount of time

### **Supposed Causes**

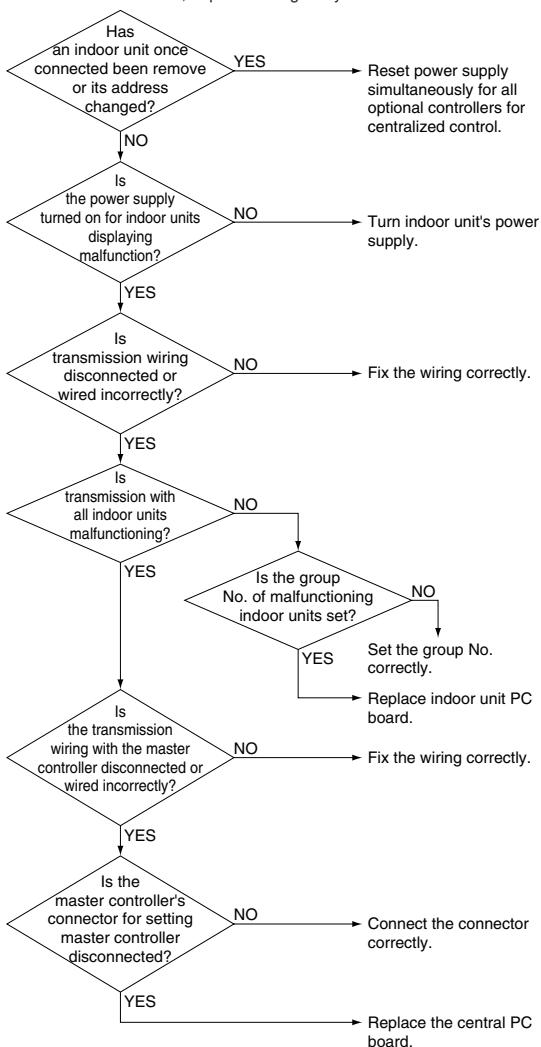
- Malfunction of transmission between optional controllers for centralized control and indoor unit
- Connector for setting master controller is disconnected.
- Failure of PC board for centralized remote controller
- Defect of indoor unit PC board

## Troubleshooting



**Caution**

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



**UE**

## **(59) Malfunction of Transmission (Between Indoor and Outdoor Unit)**

### **Remote Controller Display**

*UF*

### **Applicable Models**

RZP-D, R(Y)-LU and RY-KU, RY-F, RY-G Series

### **Method of Malfunction Detection**

Microcomputer checks if transmission between indoor and outdoor units is normal.

### **Malfunction Decision Conditions**

When transmission is not carried out normally for a certain amount of time

### **Supposed Causes**

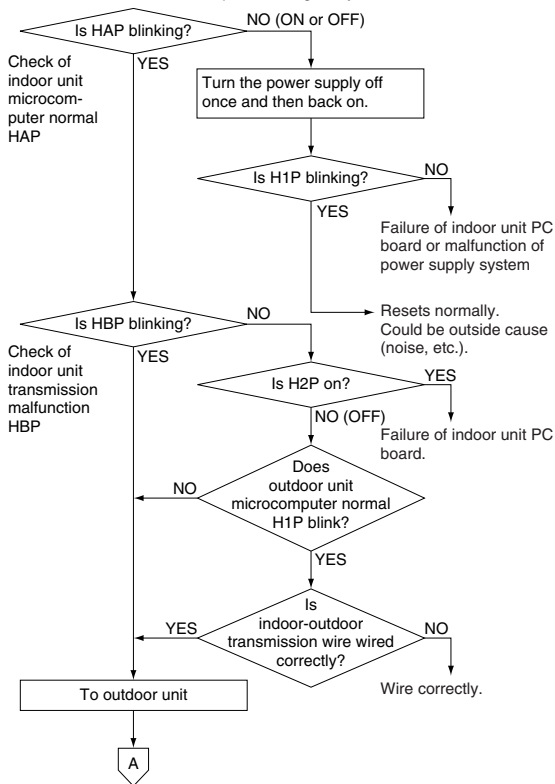
- Wiring indoor-outdoor transmission wire is incorrect.
- Failure of indoor unit PC board
- Failure of outdoor unit PC board
- Outside cause (noise, etc.)

## Troubleshooting1

Diagnosis of incorrect or broken/disconnected wiring  
 If the LEDs on the indoor unit PC board are off, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.



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



UF

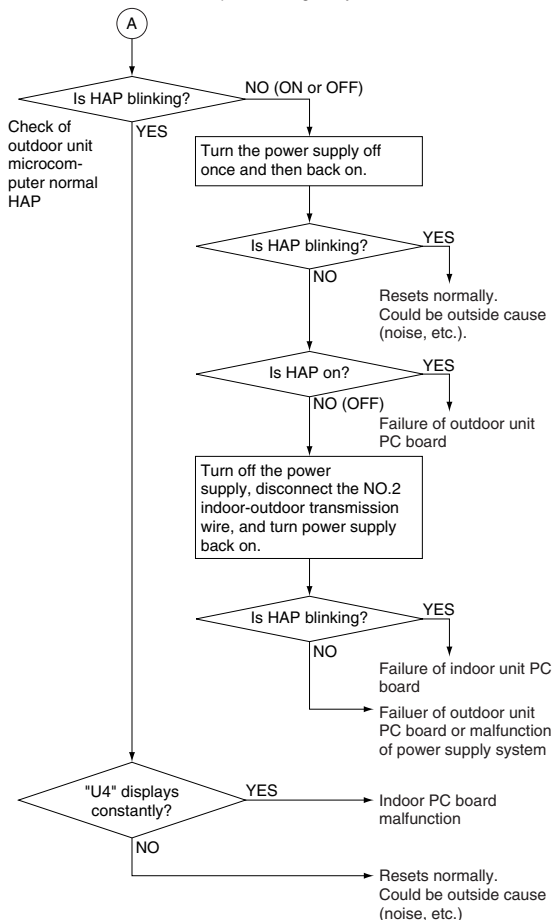


## Troubleshooting2



**Caution**

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



## Remote Controller Display

# UF

### Applicable Models

RY-G, RY-FU, RY-KU and R-NU Series

### Method of Malfunction Detection


Judgement by circuit of the PCB to detect mis-wiring.

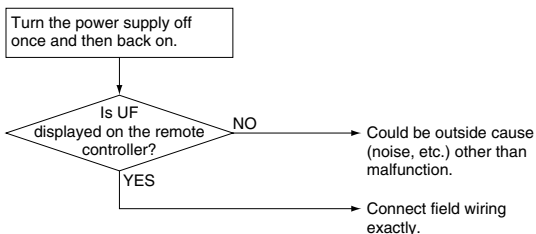
**UF**

### Supposed Causes

- Power supply wiring is broken or disconnected.
- Mis-connection of field wiring.

### Troubleshooting

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



## Remote Controller Display

**UF**

### Applicable Models

Inverter (RZQ100-160P) Series

### Method of Malfunction Detection

On check operation, the number of indoor units in terms of transmission is not corresponding to that of indoor units that have made changes in temperature.

### Malfunction Decision Conditions

The malfunction is determined as soon as the abnormality aforementioned is detected through checking the system for any erroneous connection of units on the check operation.

### Supposed Causes

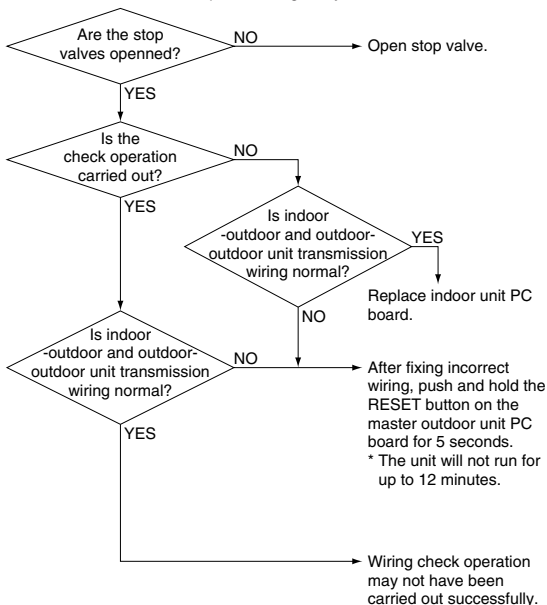
- Improper connection of transmission wiring between indoor-outdoor units and outdoor-outdoor units
- Failure to execute check operation
- Defect of indoor unit PC board
- Stop valve is left in closed

## Troubleshooting



**Caution**

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



**UF**



**Note:**

Wiring check operation may not be successful if carried out after the outdoor unit has been off for more than 12 hours, or if it is not carried out after running all connected indoor units in the fan mode for at least an hour.

## Remote Controller Display

# UF

### Applicable Models

RZQ-K Series

### Method of Malfunction Detection

Check transmission between the indoor and outdoor units with a microcomputer when the power is supplied. Detect by sensing the difference in temperature between the following items while the compressor is operated.

- ① Difference in detected temperature between the indoor heat exchanger thermistor (R2T) and the indoor suction thermistor (R1T)
- ② Difference between detected temperature of the indoor heat exchanger thermistor (R2T) and the evaporation temperature ( $T_e$ ) (condensation temperature ( $T_c$ ) in heating) detected by a pressure sensor

### Malfunction Decision Conditions

When wiring connecting the indoor and outdoor units is not proper.


When the following condition continues for 20 minutes while the compressor is operated.

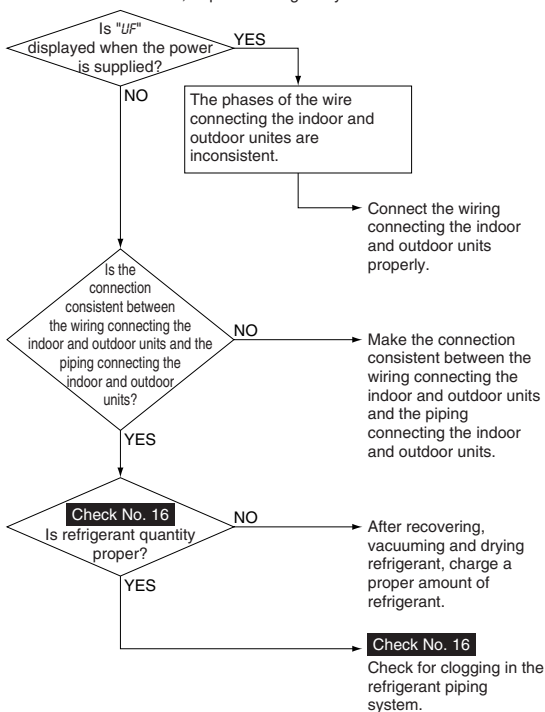
- ①  $R2T - R1T < 4^{\circ}\text{C}$   
and
- ②  $R2T - T_e$  ( $T_c$  when it is in heating)  $> 14^{\circ}\text{C}$  ( $24^{\circ}\text{C}$  when it is in heating)

### Supposed Causes

- Poor wiring connecting the indoor and outdoor units
- Inconsistent wiring and piping
- Inadequate refrigerant (gas shortage)
- Clogging in the refrigerant piping system

## Troubleshooting

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



**UF**



Refer to Check No. 16 on page 425.

## Remote Controller Display

**UF**

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 (RZQ(S)71~140)  
Series

### Error Generation

The error is generated when the microprocessor detects that the transmission between the indoor and the outdoor unit is not normal over a certain amount of time.

### Supposed Causes

- Wiring indoor-outdoor transmission wire is incorrect
- Malfunctioning indoor unit PC board
- Malfunctioning outdoor unit PC board
- Burning out fuse
- Faulty fan motor
- Outside cause (noise, etc.)

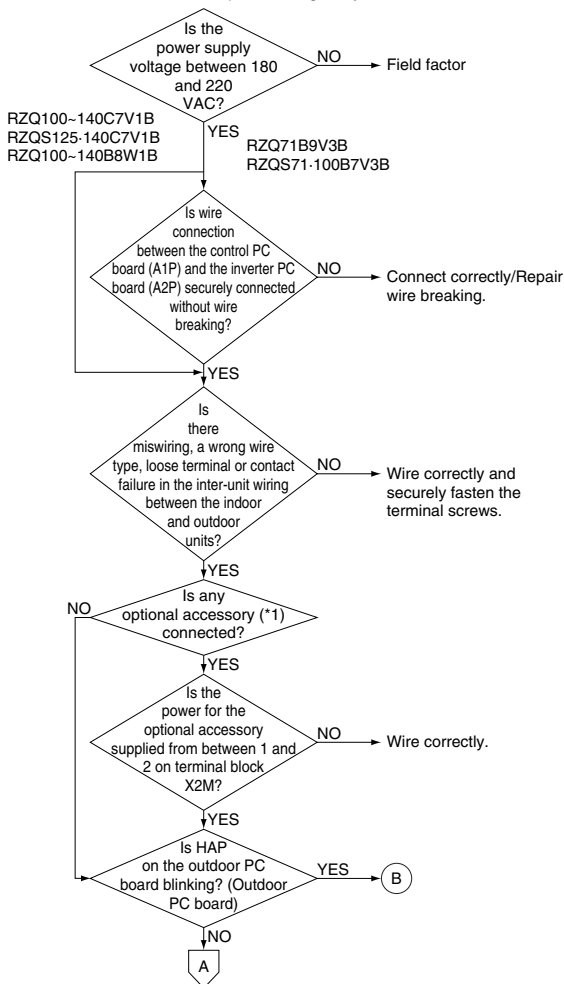
## Troubleshooting

Diagnosis of incorrect or broken/disconnected wiring. If the LEDs on the indoor unit PC board are off, it indicates that the transmission wiring between indoor and outdoor units may be incorrect or broken/disconnected.



**Caution**

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



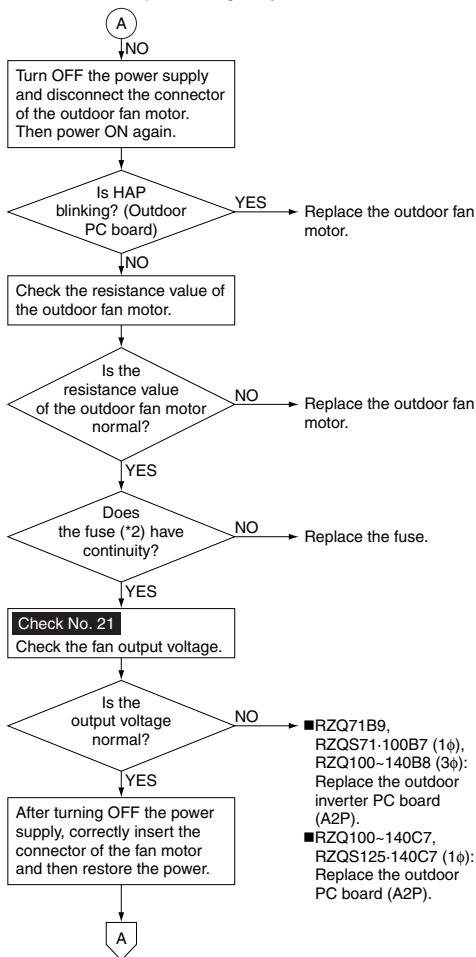
**UF**





**Caution**

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

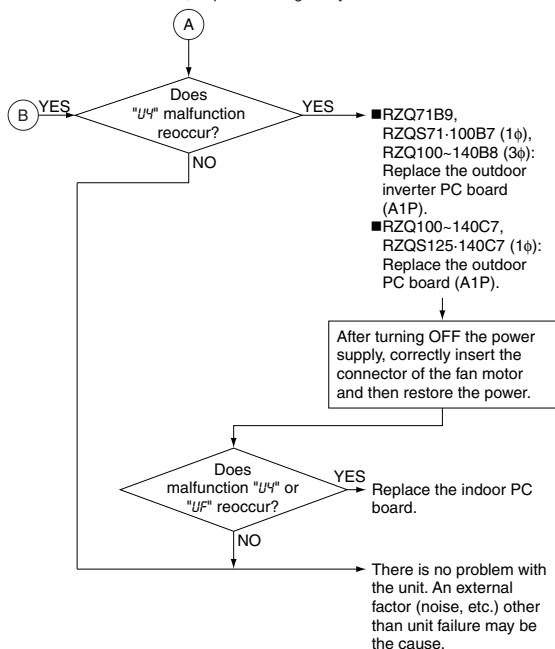


Refer to Check No. 21 on page 442.



**Caution**

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



**UF**



**Notes:**

- \*1: Optional accessories refer to wire adapter, auto grill and other accessories.
- \*2: RZQ71B9V3B ⇒ No fuse  
 RZQS71·100B7V3B ⇒ No fuse  
 RZQ100~140C7V1B ⇒ F6U  
 RZQ125·140C7V1B ⇒ F6U  
 RZQ100~140B8W1B ⇒ F1U

## Remote Controller Display

**UF**

### Applicable Models

RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 (RZQ(S)71~140)  
Series

### Method of Malfunction Detection

Check the transmission between the indoor and outdoor units with a microcomputer when the power turned ON. Detect by checking the following temperature differences during compressor operation.

- A: Difference in temperature detected by the indoor heat exchanger thermistor (R2T) and the indoor suction air thermistor (R1T)
- B: Difference in evaporation temperature ( $T_e$ ) (or condensation temperature ( $T_c$ ) during heating operation) detected by the indoor heat exchanger thermistor (R2T) and the compressor sensor

### Malfunction Decision Conditions

When the inter-unit wiring between the indoor and outdoor units is incorrect


When the following conditions continue for 20 minutes during compressor operation

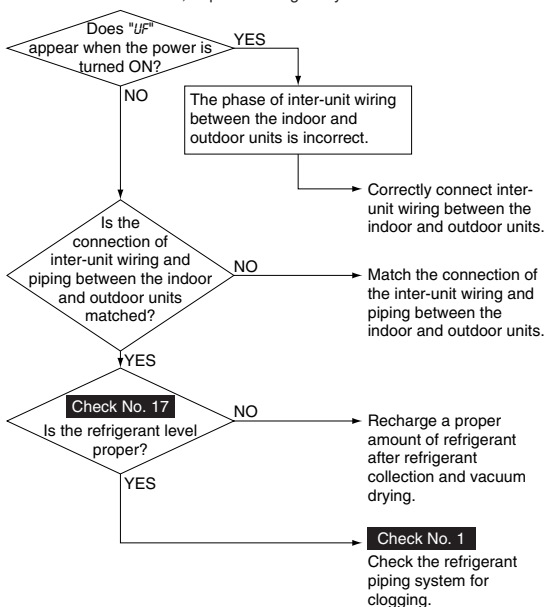
- A:  $R2T - R1T < 4^{\circ}\text{C}$ , and
- B:  $R2T - T_e$  (or  $T_c$  during heating operation)  $> 14^{\circ}\text{C}$  ( $24^{\circ}\text{C}$  during heating operation)

### Supposed Causes

- Faulty inter-unit wiring between the indoor and outdoor units
- Mismatching of wiring and piping
- Refrigerant shortage (out of gas)
- Clogged refrigerant piping system

## Troubleshooting

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



**UF**



Refer to Check No. 1, 17 on page 401, 433.

## Remote Controller Display

*UF*

### Applicable Models

RZQ200, 250C Series

### Method of Malfunction Detection

Check transmission between the indoor and outdoor units with a microcomputer when the power is supplied.

### Malfunction Decision Conditions

When wiring connecting the indoor and outdoor units is not proper.

### Supposed Causes

- Poor wiring connecting the indoor and outdoor units

### Troubleshooting



**Caution**

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

The phases of the wire connecting the indoor and outdoor unites are inconsistent.

Connect the wiring connecting the indoor and outdoor units properly.

## **(60) Malfunction of System, Refrigerant System Address Undefined**

### **Remote Controller Display**

*UH*

### **Applicable Models**

Inverter (RZQ100-160P) Series

### **Supposed Causes**

- Improper connection of transmission wiring between outdoor unit and outdoor unit outside control adaptor
- Defect of indoor unit PC board
- Defect of outdoor unit PC board (A1P)

**UF**

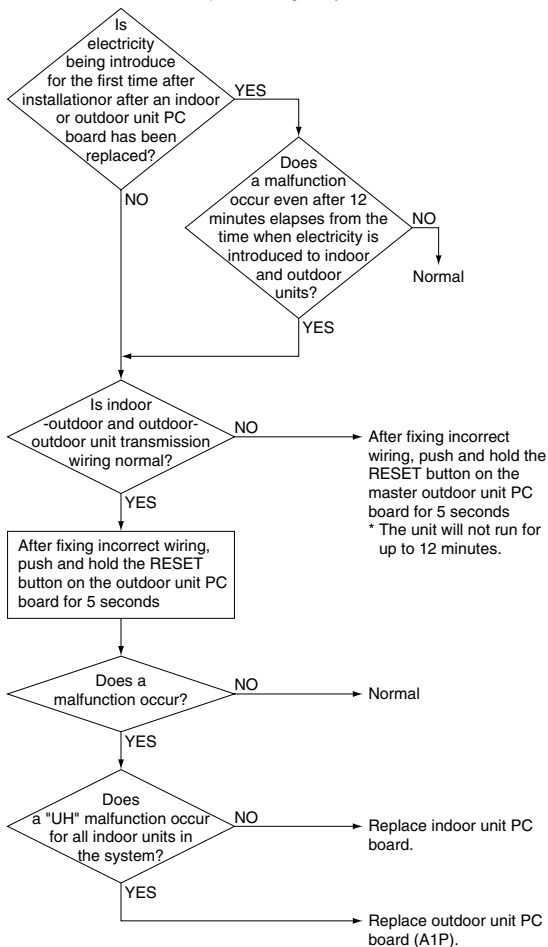
**UH**

## Troubleshooting



**Caution**

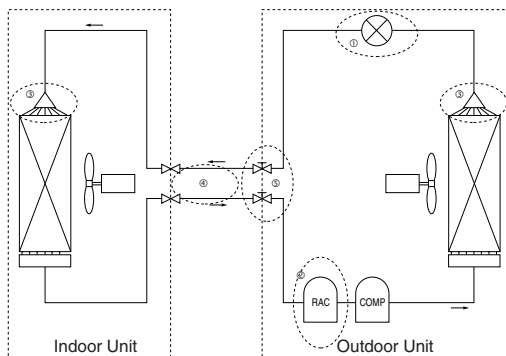
Be sure to turn off power switch before connect or disconnect connector, or parts damage may be occurred.



## Check No. 1

### Check for Clogged Points

Temperature differences must occur before or after the clogged points!



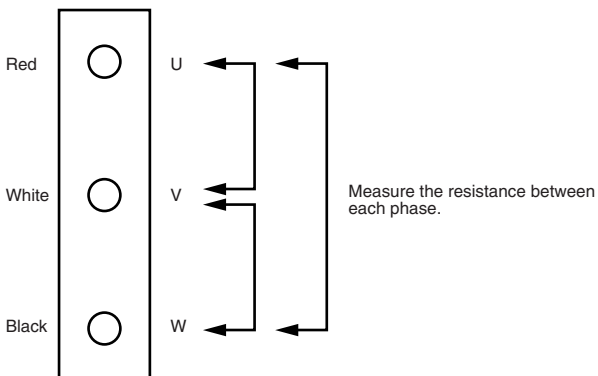
Check points	Check factor	Causes	Remedies
① Around expansion mechanism	Temperature difference	<ul style="list-style-type: none"> <li>· Dust</li> <li>· Choked moisture</li> <li>· Reduced effective pipe diameter due to adherent contamination, etc.</li> </ul>	Replace the expansion valve.
② Accumulator	Frosting	<ul style="list-style-type: none"> <li>· Choked moisture</li> </ul>	Blow a nitrogen gas, and then replace the refrigerant.
③ Distributor	Temperature difference	<ul style="list-style-type: none"> <li>· Dust</li> <li>· Choked moisture</li> <li>· Reduced effective pipe diameter due to adherent contamination, etc.</li> </ul>	Replace the heat exchanger or distributor.
④ Field piping	Temperature difference	<ul style="list-style-type: none"> <li>· Collapsed pipe</li> </ul>	Replace the pipe.
⑤ Stop valve	Temperature difference	<ul style="list-style-type: none"> <li>· The stop valve is not fully open.</li> </ul>	Open the stop valve fully.



**Check No. 2****Check for Fan Motor Connector (Power Supply Line)**

(1) Turn the power supply off.

With the relay connector disconnected, measure the resistance between UVW phases of the connector (3 cores) at the motor side, then make sure that the resistance between each phase is balanced and not short-circuited.



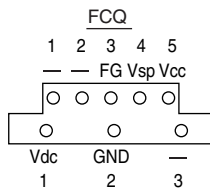
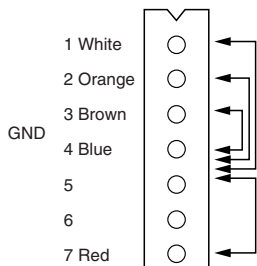
### Check No. 3

#### Check for Fan Motor Connector (Signal Line)

For R(Y)-LU and Inverter Series

(1) Turn the power supply off.

(2) With the fan motor connector disconnected, measure the resistance between each pin, then make sure that the resistance is more than the value mentioned in the following table.

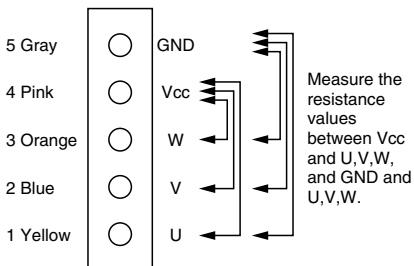


Measurement point	Judgment
1 - 4	1MΩ or more
2 - 4	100kΩ or more
3 - 4	100Ω or more
4 - 7	100kΩ or more

UF

For RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

- (1) Turn off the power supply.
- (2) Measure the resistance between Vcc and each phase of U,V,W, and GND and each phase at the motor side connectors (five-core wire) to check that the values are balanced within the range of  $\pm 20\%$ , while connector or relay connector is disconnected. Furthermore, to use a multiple meter for measurement, connect the probe of negative pole to Vcc and that of positive pole to GND.



## Check No. 4

### Thermistor Resistance / Temperature Characteristics

Outdoor unit for fin thermistor

R1T

(kΩ)

T°C	0.0
-10	—
-8	—
-6	88.0
-4	79.1
-2	71.1
0	64.1
2	57.8
4	52.3
6	47.3
8	42.9
10	38.9
12	35.3
14	32.1
16	29.2
18	26.6
20	24.3
22	22.2
24	20.3
26	18.5
28	17.0
30	15.6
32	14.2
34	13.1
36	12.0
38	11.1
40	10.3
42	9.5
44	8.8

T°C	0.0
46	8.2
48	7.6
50	7.0
52	6.7
54	6.0
56	5.5
58	5.2
60	4.79
62	4.46
64	4.15
66	3.87
68	3.61
70	3.37
72	3.15
74	2.94
76	2.75
78	2.51
80	2.41
82	2.26
84	2.12
86	1.99
88	1.87
90	1.76
92	1.65
94	1.55
96	1.46
98	1.38

UH

**Except Inverter and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series**

Indoor unit	For air suction	R1T
	For liquid pipe	R2T
	For gas pipe	R3T
Outdoor unit	For outdoor air	R1T
	For suction pipe 1	R3T
	For heat exchanger	R4T
	For suction pipe 2	R5T
	For Subcooling heat exchanger outlet	R6T
	For Liquid pipe	R7T

**For Inverter Series**

Indoor unit	R1T, R2T, R3T
Outdoor unit	R1T, R2T, R4T, R5T

**For RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series**

Indoor unit	Suction Air Coil
Outdoor unit	Ambient, Pipe without discharge

(kΩ)

T°C	0.0	0.5
-20	197.81	192.08
-19	186.53	181.16
-18	175.97	170.94
-17	166.07	161.36
-16	156.80	152.38
-15	148.10	143.96
-14	139.94	136.05
-13	132.28	128.63
-12	125.09	121.66
-11	118.34	115.12
-10	111.99	108.96
-9	106.03	103.18
-8	100.41	97.73
-7	95.14	92.61
-6	90.17	87.79
-5	85.49	83.25
-4	81.08	78.97
-3	76.93	74.94
-2	73.01	71.14
-1	69.32	67.56
0	65.84	64.17

T°C	0.0	0.5
0	65.84	64.17
1	62.54	60.96
2	59.43	57.94
3	56.49	55.08
4	53.71	52.38
5	51.09	49.83
6	48.61	47.42
7	46.26	45.14
8	44.05	42.98
9	41.95	40.94
10	39.96	39.01
11	38.08	37.18
12	36.30	35.45
13	34.62	33.81
14	33.02	32.25
15	31.50	30.77
16	30.06	29.37
17	28.70	28.05
18	27.41	26.78
19	26.18	25.59
20	25.01	24.45

(k $\Omega$ )

T°C	0.0	0.5
20	25.01	24.45
21	23.91	23.37
22	22.85	22.35
23	21.85	21.37
24	20.90	20.45
25	20.00	19.56
26	19.14	18.73
27	18.32	17.93
28	17.54	17.17
29	16.80	16.45
30	16.10	15.76
31	15.43	15.10
32	14.79	14.48
33	14.18	13.88
34	13.59	13.31
35	13.04	12.77
36	12.51	12.25
37	12.01	11.76
38	11.52	11.29
39	11.06	10.84
40	10.63	10.41
41	10.21	10.00
42	9.81	9.61
43	9.42	9.24
44	9.06	8.88
45	8.71	8.54
46	8.37	8.21
47	8.05	7.90
48	7.75	7.60
49	7.46	7.31
50	7.18	7.04

T°C	0.0	0.5
50	7.18	7.04
51	6.91	6.78
52	6.65	6.53
53	6.41	6.53
54	6.65	6.53
55	6.41	6.53
56	6.18	6.06
57	5.95	5.84
58	5.74	5.43
59	5.14	5.05
60	4.96	4.87
61	4.79	4.70
62	4.62	4.54
63	4.46	4.38
64	4.30	4.23
65	4.16	4.08
66	4.01	3.94
67	3.88	3.81
68	3.75	3.68
69	3.62	3.56
70	3.50	3.44
71	3.38	3.32
72	3.27	3.21
73	3.16	3.11
74	3.06	3.01
75	2.96	2.91
76	2.86	2.82
77	2.77	2.72
78	2.68	2.64
79	2.60	2.55
80	2.51	2.47

## Outdoor Unit Thermistors for Discharge Pipe (R2T)

(kΩ)

T°C	0.0	0.5	T°C	0.0	0.5	T°C	0.0	0.5
0	640.44	624.65	50	72.32	70.96	100	13.35	13.15
1	609.31	594.43	51	69.64	68.34	101	12.95	12.76
2	579.96	565.78	52	67.06	65.82	102	12.57	12.38
3	552.00	538.63	53	64.60	63.41	103	12.20	12.01
4	525.63	512.97	54	62.24	61.09	104	11.84	11.66
5	500.66	488.67	55	59.97	58.87	105	11.49	11.32
6	477.01	465.65	56	57.80	56.75	106	11.15	10.99
7	454.60	443.84	57	55.72	54.70	107	10.83	10.67
8	433.37	423.17	58	53.72	52.84	108	10.52	10.36
9	413.24	403.57	59	51.98	50.96	109	10.21	10.06
10	394.16	384.98	60	49.96	49.06	110	9.92	9.78
11	376.05	367.35	61	48.19	47.33	111	9.64	9.50
12	358.88	350.62	62	46.49	45.67	112	9.36	9.23
13	342.58	334.74	63	44.86	44.07	113	9.10	8.97
14	327.10	319.66	64	43.30	42.54	114	8.84	8.71
15	312.41	305.33	65	41.79	41.06	115	8.59	8.47
16	298.45	291.73	66	40.35	39.65	116	8.35	8.23
17	285.18	278.80	67	38.96	38.29	117	8.12	8.01
18	272.58	266.51	68	37.63	36.98	118	7.89	7.78
19	260.60	254.72	69	36.34	35.72	119	7.68	7.57
20	249.00	243.61	70	35.11	34.51	120	7.47	7.36
21	238.36	233.14	71	33.92	33.35	121	7.26	7.16
22	228.05	223.08	72	32.78	32.23	122	7.06	6.97
23	218.24	213.51	73	31.69	31.15	123	6.87	6.78
24	208.90	204.39	74	30.63	30.12	124	6.69	6.59
25	200.00	195.71	75	29.61	29.12	125	6.51	6.42
26	191.53	187.44	76	28.64	28.16	126	6.33	6.25
27	183.46	179.57	77	27.69	27.24	127	6.16	6.08
28	175.77	172.06	78	26.79	26.35	128	6.00	5.92
29	168.44	164.90	79	25.91	25.49	129	5.84	5.76
30	161.45	158.08	80	25.07	24.66	130	5.69	5.61
31	154.79	151.57	81	24.26	23.87	131	5.54	5.46
32	148.43	145.37	82	23.48	23.10	132	5.39	5.32
33	142.37	139.44	83	22.73	22.36	133	5.25	5.18
34	136.59	133.79	84	22.01	21.65	134	5.12	5.05
35	131.06	128.39	85	21.31	20.97	135	4.98	4.92
36	125.79	123.24	86	20.63	20.31	136	4.86	4.79
37	120.76	118.32	87	19.98	19.67	137	4.73	4.67
38	115.95	113.62	88	19.36	19.05	138	4.61	4.55
39	111.35	109.13	89	18.75	18.46	139	4.49	4.44
40	106.96	104.84	90	18.17	17.89	140	4.38	4.32
41	102.76	100.73	91	17.61	17.34	141	4.27	4.22
42	98.75	96.81	92	17.07	16.80	142	4.16	4.11
43	94.92	93.06	93	16.54	16.29	143	4.06	4.01
44	91.25	89.47	94	16.04	15.79	144	3.96	3.91
45	87.74	86.04	95	15.55	15.31	145	3.86	3.81
46	84.38	82.75	96	15.08	14.85	146	3.76	3.72
47	81.16	79.61	97	14.62	14.40	147	3.67	3.62
48	78.09	76.60	98	14.18	13.97	148	3.58	3.54
49	75.14	73.71	99	13.76	13.55	149	3.49	3.45
50	72.32	70.96	100	13.35	13.15	150	3.41	3.37

## Check No. 5

### Check for Thermistors

Disconnect the thermistor connector from PC board, then measure the resistance by using a tester.

Thermistor temperature and resistance measurement

Unit : k $\Omega$

Temperature °C	A	B
-6.0	90.8	88.0
-4.0	81.7	79.1
-2.0	73.5	71.1
0.0	66.3	64.1
2.0	59.8	57.8
4.0	54.1	52.3
6.0	48.9	47.3
8.0	44.3	42.9
10.0	40.2	38.9
12.0	36.5	35.3
14.0	33.2	32.1
16.0	30.2	29.2
18.0	27.5	26.6
20.0	25.1	24.3
22.0	23.0	22.2
24.0	21.0	20.3
26.0	19.2	18.5

Temperature °C	A	B
28.0	17.6	17.0
30.0	16.2	15.6
32.0	14.8	4.2
34.0	13.6	13.1
36.0	12.5	12.0
38.0	11.5	11.1
40.0	10.6	10.3
42.0	9.8	9.5
44.0	9.1	8.8
46.0	8.4	8.2
48.0	7.8	7.6
50.0	7.2	7.0
52.0	6.9	6.7
54.0	6.2	6.0
56.0	5.7	5.5
58.0	5.3	5.2
Application	<ul style="list-style-type: none"> <li>● Heat exchanger (Indoor/ Outdoor units)</li> <li>● Suction air</li> <li>● Remote controller</li> <li>● Air</li> <li>● Outdoor air</li> <li>● Suction pipe</li> </ul>	<ul style="list-style-type: none"> <li>● Radiator fin</li> </ul>



Temperature (°C)	Discharge Pipe Sensor (kΩ)
-6.0	1120.0
-4.0	1002.5
-2.0	898.6
0.0	806.5
2.0	724.8
4.0	652.2
6.0	587.6
8.0	530.1
10.0	478.8
12.0	432.9
14.0	392.0
16.0	355.3
18.0	322.4
20.0	292.9
22.0	266.3
24.0	242.5
26.0	221.0
28.0	201.6
30.0	184.1
32.0	168.3
34.0	154.0
36.0	141.0
38.0	129.3
40.0	118.7
42.0	109.0
44.0	100.2
46.0	92.2
48.0	84.9
50.0	78.3
52.0	72.2

Temperature (°C)	Discharge Pipe Sensor (kΩ)
54.0	66.7
56.0	61.6
58.0	57.0
60.0	52.8
62.0	48.9
64.0	45.3
66.0	42.0
68.0	39.0
70.0	36.3
72.0	33.7
74.0	31.4
76.0	29.2
78.0	27.2
80.0	25.4
82.0	23.7
92.0	16.9
94.0	15.8
96.0	14.8
98.0	13.9
100.0	13.1
102.0	12.3
104.0	11.5
106.0	10.8
108.0	10.2
110.0	9.6
112.0	9.0
114.0	8.5
116.0	8.0
118.0	7.6
120.0	7.1

Temperature (°C)	Discharge Pipe Sensor (kΩ)
122.0	6.7
124.0	6.4
126.0	6.0
128.0	5.7
130.0	5.4
132.0	5.4
134.0	4.8
136.0	4.6
138.0	4.3
140.0	4.1
142.0	3.9
144.0	3.7
146.0	3.5
148.0	3.3
150.0	3.2
152.0	3.0
154.0	2.9
156.0	2.7
158.0	2.6
160.0	2.5
162.0	2.3
164.0	2.5
166.0	2.1
168.0	2.0
170.0	1.9
172.0	1.9
174.0	1.8
176.0	1.7
178.0	1.6
180.0	1.5

## Check No. 6

### If the high pressure is abnormally high

#### Conception

Abnormally high pressure level is mostly caused by the condenser side.

The following contents are provided by service engineer based on their field checks.

Further, the number is listed in the order of degree of influence.

#### a In cooling operation

##### Check items (Possible causes)

##### Judgment

- |   |   |
|---|---|
| 1.Does the outdoor unit fan run normally?   | 1.Visual inspection   |
| 2.Is the outdoor unit heat exchanger clogged?   | 2.Visual inspection   |
| 3.Is there clogging before or after the EV (capillary)?                                 | 3.Check if there is a temperature difference before and after EV (capillary).<br>Check if the main valve unit of EV operates (by noise, vibration). |
| 4.Is the check valve clogged?<br>* RZP71-140D models only                               | 4.Check if there is a temperature difference before and after check valve.<br>→If YES, the check valve is caught.                                   |
| 5.Is the HPS normal?  | 5.Check continuity by using a tester.   |
| 6.Is the outdoor unit installed under such conditions that short circuit easily occurs? | 6.Visual inspection   |
| 7.Is the piping length 5 meters or less?  | 7.Visual inspection   |
| 8.Does air enter the refrigerant system?  | 8.Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.   |
| 9.Is the refrigerant overcharged?   | 9.Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.   |



**a. In heating operation**

**Check items (Possible causes)**

**Judgment**

- 1.Does the indoor unit fan run normally?
- 2.Is the indoor unit heat exchanger clogged?
- 3.Is the indoor unit installed under such conditions that short circuit easily occurs?
- 4.Is there clogging before or after the EV (capillary)?
- 5.Is the check valve clogged?  
→ RZP71~140D models only
- 6.Is the HPS normal?
- 7.Is the piping length 5 meters or less?
- 8.Does air enter the refrigerant system?
- 9.Is the refrigerant overcharged?

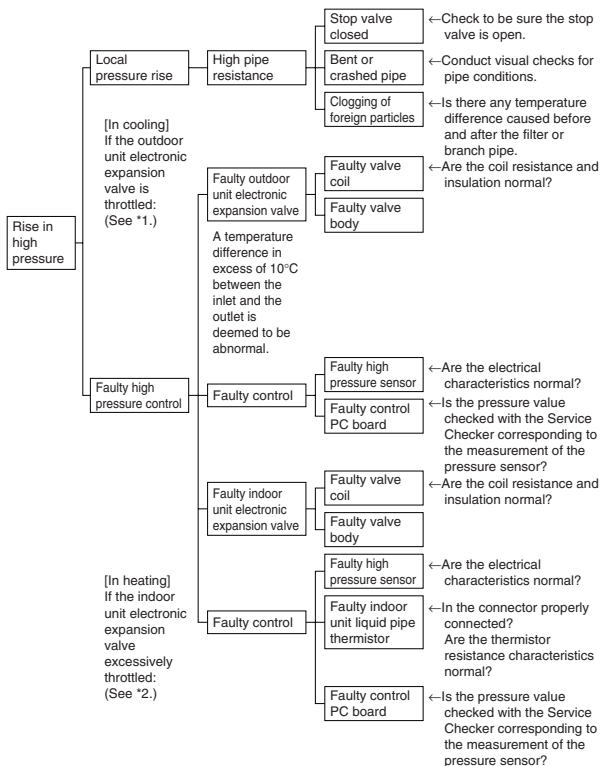


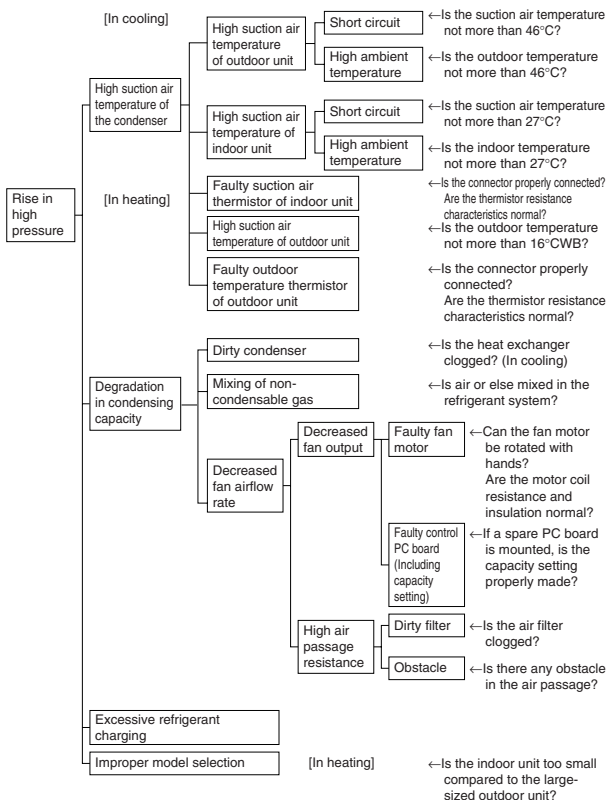
- 1.Visual inspection
- 2.Visual inspection
- 3.Visual inspection
- 4.Check if there is a temperature difference before and after EV (capillary).  
Check if the main valve unit of EV operates (by noise, vibration).
- 5.Check if there is a temperature difference before and after check valve.  
→If YES, the check valve is caught.
- 6.Check continuity using a tester.
- 7.Visual inspection
- 8.Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.
- 9.Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

## Check No. 7

### Check for causes of rise in high pressure

Referring to the Fault Tree Analysis (FTA) shown below, probe the faulty points.





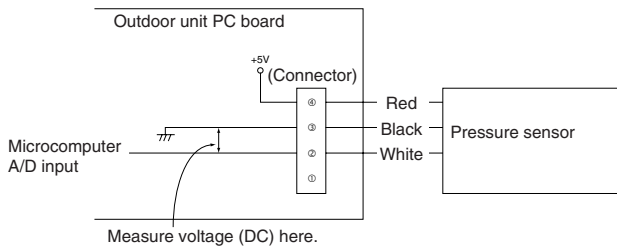
\*1: In cooling, it is normal if the outdoor unit electronic expansion valve (EV1) is fully open.

\*2: In heating, the indoor unit electronic expansion valve is used for “subcooled degree control”.

## Check No. 8

### Voltage Measuring Method

Measure the voltage (DC) between pins 2 and 3 of the connector.



Refer to Check No. 9 on page 416.

## Check No. 9 Pressure Sensor

$$P_H = 1.38V - 0.69$$

$$P_L = 0.57V - 0.28$$

$P_H$  : High pressure (MPa)

$V_L$  : Low pressure (MPa)

$V$  : Voltage (V)

$P_H$  : Detected Pressure [High Side] MPa

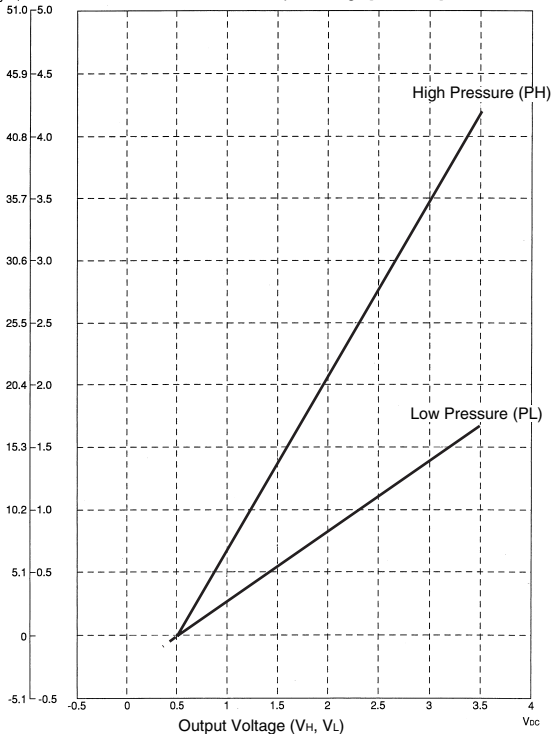
$P_L$  : Detected Pressure [Low Side] MPa

$V_H$  : Output Voltage [High Side] VDC

$V_L$  : Output Voltage [Low Side] VDC

Detected Pressure

$P_H, P_L$   
(kg/cm<sup>2</sup>) MPa



## Check No. 10

### Evaluation of Abnormal Low Pressure

Abnormally low pressure level is mostly caused by the evaporator side. The following contents are provided based on field checking of service engineer. Further, the number is listed in the order of degree of influence.

#### In cooling operation

Check items (Possible causes)	Judgment
Does the outdoor unit fan run normally?	Visual inspection
Is the indoor unit filter clogged?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged? *Heat pump model only	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the LPS normal?	Check continuity using a tester.
Is the indoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is the refrigerant gas short?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.



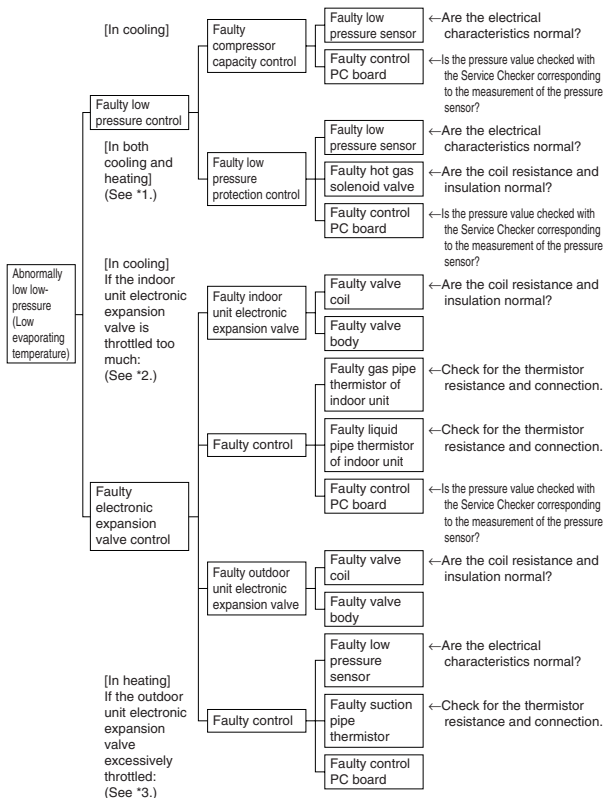
## In heating operation

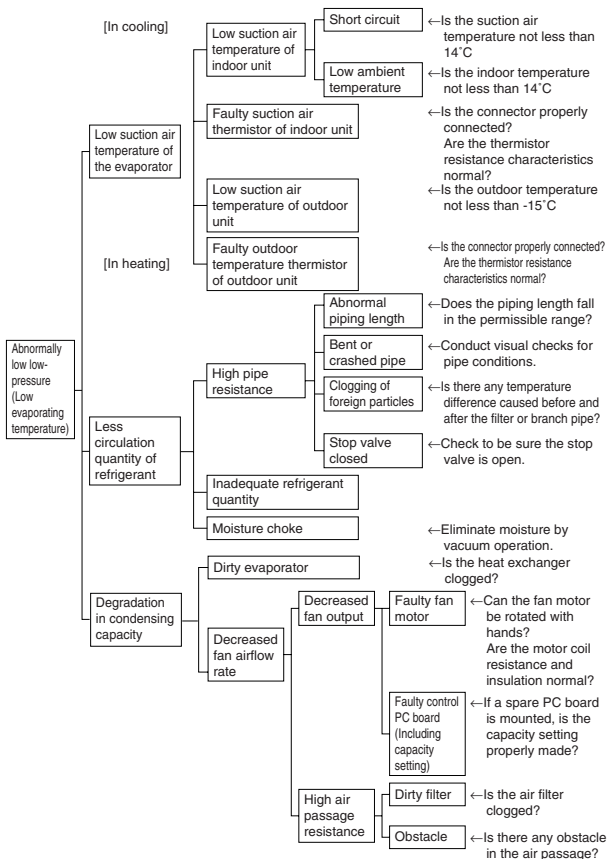
Check items (Possible causes)	Judgment
Does the outdoor unit fan run normally?	Visual inspection
Is the outdoor unit heat exchanger clogged?	Visual inspection
Is the outdoor unit installed under such conditions that short circuit easily occurs?	Visual inspection
Is there clogging before or after the EV (capillary)?	Check if there is a temperature difference before and after EV (capillary). Check if the main valve unit of EV operates (by noise, vibration).
Is the check valve clogged?	Check if there is a temperature difference before and after check valve. → If YES, the check valve is caught.
Is the LPS normal?	Check continuity using a tester.
Is the refrigerant gas short?	Conduct refrigerant collection and vacuum drying, and then add proper amount refrigerant.

## Check No. 11

### Check for causes of drop in low pressure

Referring to the Fault Tree Analysis (FTA) shown below, probe the faulty points.





- \*1: The “low pressure protection control” includes low pressure protection control and hot gas bypass control.
- \*2: In cooling, the indoor unit electronic expansion valve is used for “superheated degree control”.
- \*3: In heating, the outdoor unit electronic expansion valve (EV1) is used for “superheated degree control of outdoor unit heat exchanger”.

## Check No. 12

- Coil check method for the moving part of the electronic expansion valve

Disconnect the electronic expansion valve from the PC board and check the continuity between the connector pins.

(Normal)

Pin No.	1. White	2. Yellow	3. Orange	4. Blue	5. Red	6. Brown
1. White		×	⊙	×	○	×
2. Yellow			×	⊙	×	○
3. Orange				×	○	×
4. Blue					×	○
5. Red						×
6. Brown						

⊙ : Continuity Approx. 300Ω

○ : Continuity Approx. 150Ω

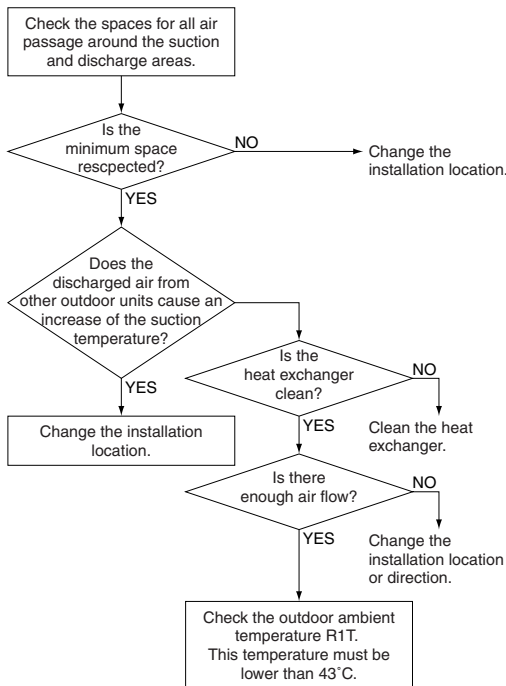
× : No continuity

## Check No. 13

### Outdoor Unit: Checking the Installation Condition

#### Checking

To check the installation condition, proceed as follows:

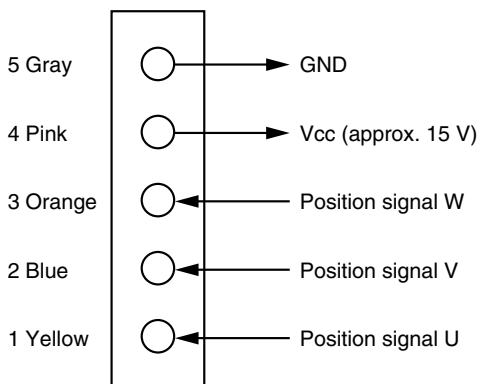


## Check No. 14

### Check on pulse input of position signal of fan inverter PC board

- (1) Disconnect the connector X2A while power supply OFF and operation OFF.
- (2) Is the voltage between pins No. 4 and 5 on X2A approx. 15 V after power supply is turned on?
- (3) Connect the connector X2A while power supply OFF and operation OFF.
- (4) Check below conditions when the fan motor is rotated one turn manually under the condition of operation OFF after power supply is turned ON.  
Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 1 and 5 on X2A?  
Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 2 and 5 on X2A?  
Are the pulse (approx. 0 V and 5 V) generated 4 times between No. 3 and 5 on X2A?

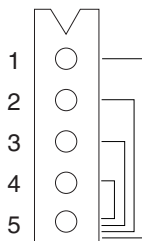
The condition (2) dose not appear → Faulty PC board  
→ Replacing the PC board  
The conditions (4) do not appear → Faulty hall IC →  
Replacing fan motor of outdoor unit



## Check No. 15

For RZP-D Series

\* Measure the resistance between each pin of connector and make sure that the resistance ranges between 40 and 50Ω.



Measurement point
1—5
2—5
3—5
4—5

For R(Y)-LU Series



Measuring pins
2(YLW) - 5(BRN)
4(BLU) - 5(BRN)
1(WHT) - 6(RED)
3(ORG) - 6(RED)

For Inverter Series



Measuring points
1 - 6
2 - 6
3 - 6
4 - 6

## Check No. 16

### Check for Inadequate Refrigerant

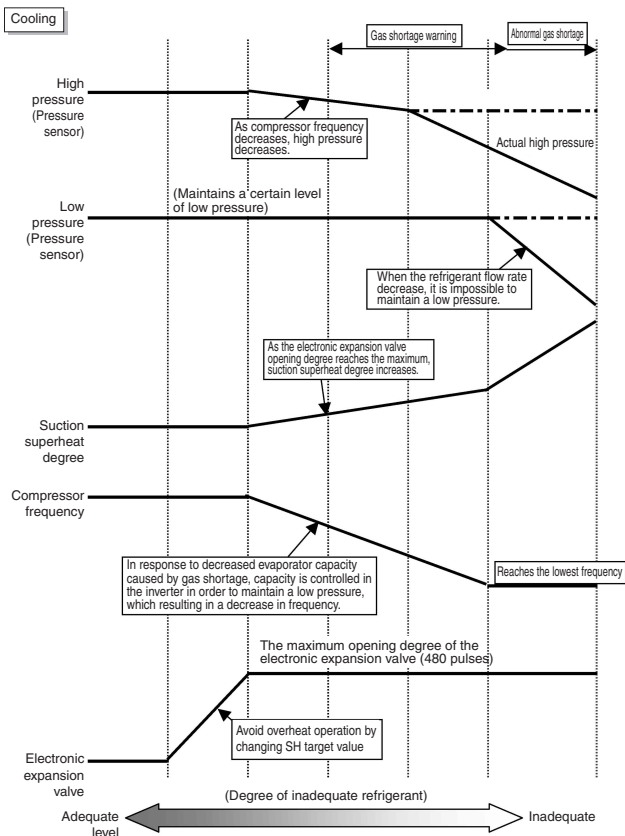
As criteria for judging whether refrigerant is inadequate or not, refer to the following operating conditions.

<Diagnosis of inadequate refrigerant>

#### In cooling operation

- (1) As suction superheat degree increases due to gas shortage, the electronic expansion valve tends to open (opens fully) in order to avoid overheat operation.
- (2) In response to decreased evaporator capacity caused by gas shortage, capacity is controlled in the inverter in order to maintain low pressure, which results in a decrease in frequency.
- (3) Because of (1) and (2) above, the compressor frequency decreases despite a large difference (large load) between temperature set by the remote controller and indoor suction temperature, resulting that cooling capacity becomes unavailable.
- (4) If gas shortage worsens, the electronic expansion valve remains fully open and suction superheat degree further increases. In addition, because the compressor frequency drops to the level of the lowest frequency (52 Hz) and the refrigerant flow rate decrease, low pressure cannot be maintained.

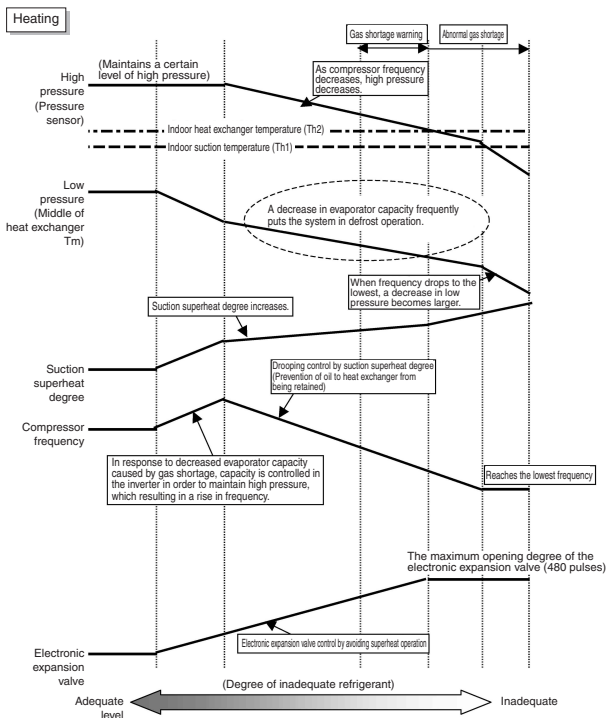




<Diagnosis of inadequate refrigerant>

In heating operation

- (1) As suction superheat degree increases due to gas shortage, the electronic expansion valve tends to open (opens fully) to avoid overheat operation.
- (2) As suction superheat degree increases due to gas shortage, compressor frequency decreases because suction superheat degree is controlled in order to prevent oil to the outdoor heat exchanger from being retained.
- (3) Because of (1) and (2) above, evaporator capacity and compressor frequency decrease despite a large difference (large load) between temperature set by the remote controller and indoor suction temperature, resulting that high pressure cannot be maintained and heating capacity becomes unavailable. Also a decrease in evaporator capacity frequently puts the system in defrost operation.
- (4) If gas shortage worsens, high pressure becomes smaller than saturated pressure equivalent to indoor heat exchanger temperature (or indoor suction temperature).



For RZQ-K and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

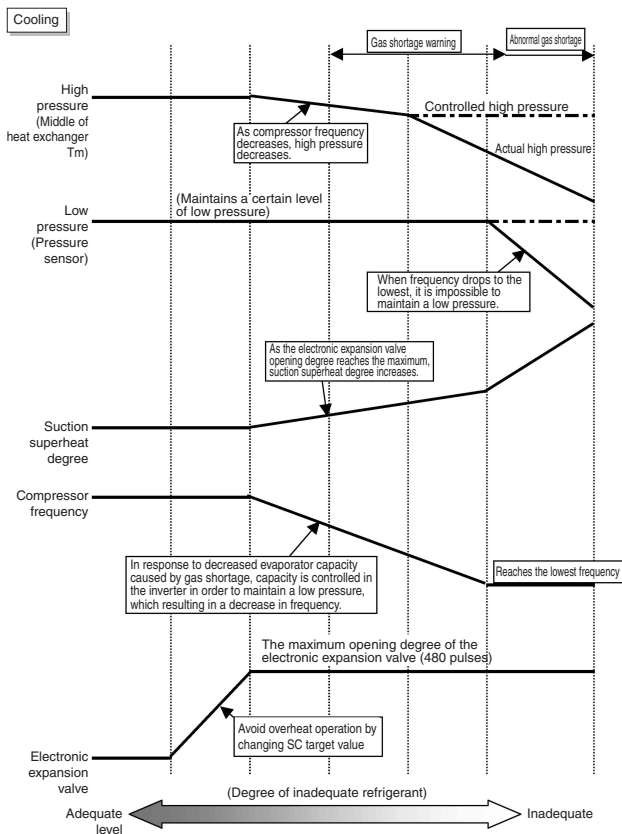
### **Check for inadequate refrigerant**

As criteria for judging whether refrigerant is inadequate or not, refer to the following operating conditions.

<Diagnosis of inadequate refrigerant>

#### In cooling operation

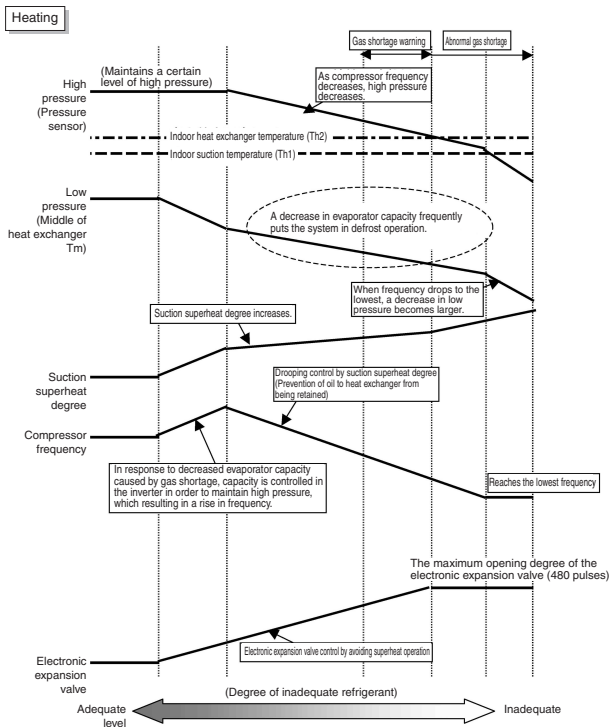
- (1) As suction superheat degree increases due to gas shortage, the electronic expansion valve tends to open (opens fully) in order to avoid overheat operation.
- (2) In response to decreased evaporator capacity caused by gas shortage, capacity is controlled in the inverter in order to maintain low pressure, which results in a decrease in frequency.
- (3) Because of (1) and (2) above, the compressor frequency decreases despite a large difference (large load) between temperature set by the remote controller and indoor suction temperature, resulting that cooling capacity becomes unavailable.
- (4) If gas shortage worsens, the electronic expansion valve remains fully open and suction superheat degree further increases. In addition, as compressor frequency drops to the level of the lowest frequency (41 Hz), low pressure cannot be maintained.



<Diagnosis of inadequate refrigerant>

In heating operation

- (1) As suction superheat degree increases due to gas shortage, the electronic expansion valve tends to open (opens fully) to avoid overheat operation.
- (2) As suction superheat degree increases due to gas shortage, compressor frequency decreases because suction superheat degree is controlled in order to prevent oil to the outdoor heat exchanger from being retained.
- (3) Because of (1) and (2) above, evaporator capacity and compressor frequency decrease despite a large difference (large load) between temperature set by the remote controller and indoor suction temperature, resulting that high pressure cannot be maintained and heating capacity becomes unavailable. Also a decrease in evaporator capacity frequently puts the system in defrost operation.
- (4) If gas shortage worsens, high pressure becomes smaller than saturated pressure equivalent to indoor heat exchanger temperature (or indoor suction temperature).



## Check No. 17

### Check for Excessive Refrigerant Charging

As criteria for judging whether refrigerant is excessively charged or not, refer to the following operating conditions.

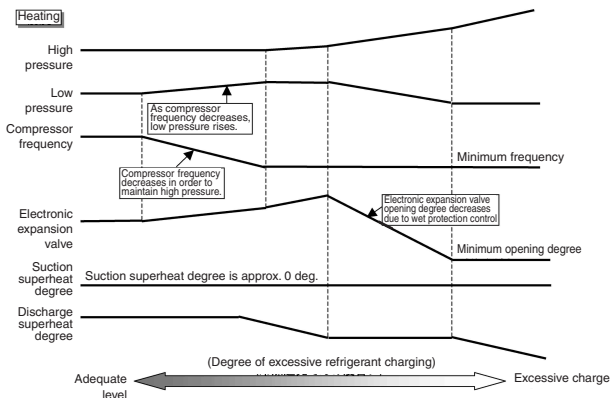
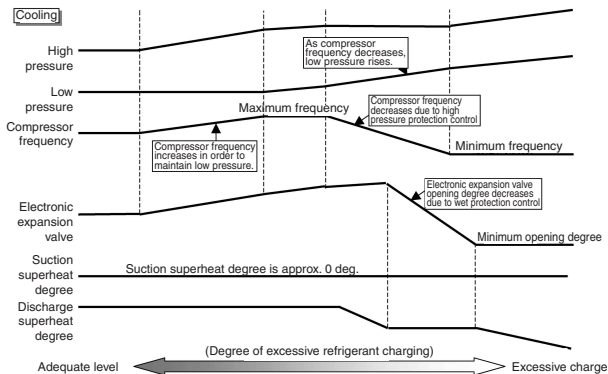
<Diagnosis of excessive refrigerant charging>

In cooling operation

- (1) Because high pressure rises due to excessive charging, overload control is carried out and capacity tends to run short.
- (2) Considering pressure load, compressor discharge pipe temperature is low.
- (3) Subcooled degree of condensate liquid becomes large. Therefore, temperature of blown air passing through subcooled part decreases in heating operation.



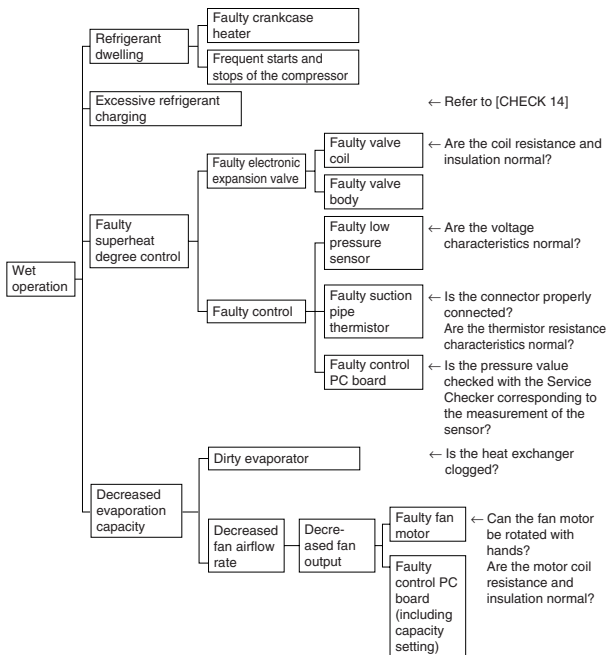
# Procedure of Self-Diagnosis by Remote Controller



## Check No. 18

### Check for Factors Causing Wet Operation

Referring to the Fault Tree Analysis (FTA) shown below, identify the faulty points.



- \*: Reference values for superheat degree to be used in the judgment of wet operation ① Suction pipe superheat degree: 4°C or more ② Discharge pipe superheat degree: 5°C or less (The values above must be used only for reference purposes. Even it is operated within the range above, operation may be normal in other conditions.)

## Check No. 19

### Method of Checking the Inverter's Power Transistors and Diode Modules

#### Checking failures in power semiconductors mounted on inverter PC board (A3P)

Check the power semiconductors mounted on the inverter PC board by the use of a multiple tester.

#### <Items to be prepared>

- Multiple tester :Prepare the analog type of multiple tester.  
For the digital type of multiple tester, those with diode check function are available for the checking.

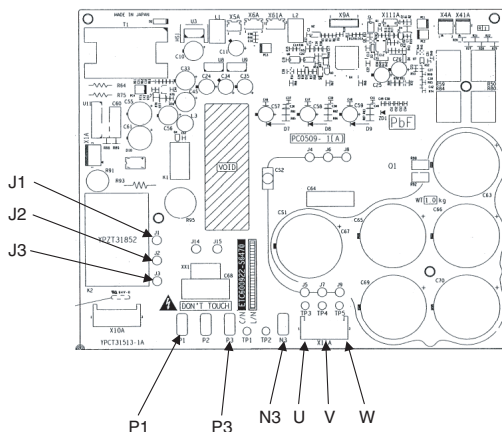
#### <Test points>

- Turn OFF the power supply. Then, after a lapse of 10 minutes or more, make measurement of resistance.

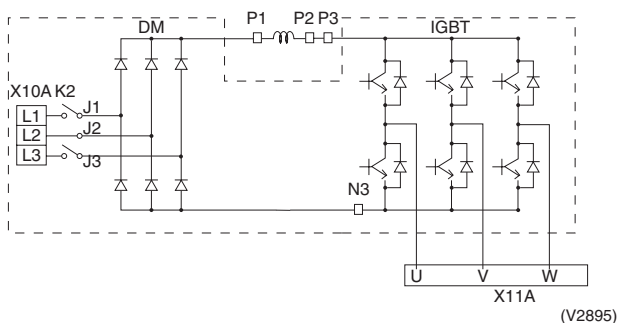
#### <Preparation>

- To make measurement, disconnect all connectors and terminals.

### Inverter PC board



## Electronic circuit



■ According to the checking aforementioned, it is probed that the malfunction results from the faulty inverter. The following section describes supposed causes of the faulty inverter.

- Faulty compressor (ground leakage)
- Faulty fan motor (ground leakage)
- Entry of conductive foreign particles
- Abnormal voltage (e.g. overvoltage, surge (thunder), or unbalanced voltage)

In order to replace the faulty inverter, be sure to check for the points aforementioned.

## Check No. 20

For RZP-D, Inverter and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

### Check for Power Transistor

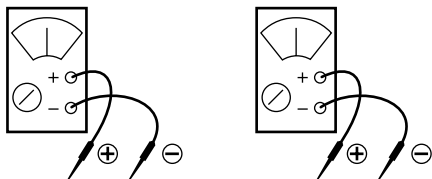
Judgment according to the continuity check by using an analog tester:

- (1) Do not touch the charged area (high voltage) for 10 minutes after turning the power supply off.
- (2) If you must touch such an area, make sure that the power supply voltage of power transistor is 50 V or less.
- (3) Disconnect the connector of the outdoor unit fan motor.

When the outdoor unit fan is rotating against a strong wind, the condenser is charged and electric shock may result. Therefore, disconnect the connector from the outdoor unit fan motor after confirming that the outdoor unit fan has stopped.

- (4) Before measuring the continuity, disconnect the connection between compressor and power transistor.
- (5) Measure the continuity in the following procedure.  
[Judgment] Normal if the continuity check results in the following.

### Power transistor (on inverter PC board)



### For RZP-D Series

P — U Continuity	}*	U — P	∞
P — V Continuity		V — P	∞
P — W Continuity		W — P	∞
U — P	∞	P — U Continuity	}*
V — P	∞	P — V Continuity	
W — P	∞	P — W Continuity	

### For Inverter and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series

C+ — U Continuity	}*	C- — U	∞
C+ — V Continuity		C- — V	∞
C+ — W Continuity		C- — W	∞
U — C+	∞	U — C-	Continuity
V — C+	∞	V — C-	Continuity
W — C+	∞	W — C-	Continuity

- \* If there is continuity, the resistance should be the same as each phase.
- \* If a digital tester is used for the measurement of continuity, ∞ and continuity may be reversed.

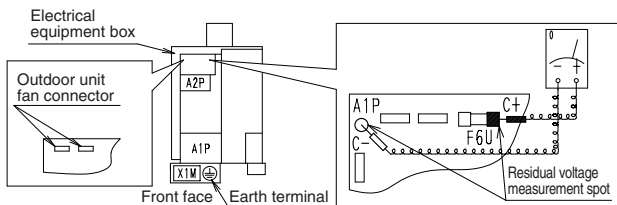
### For RZQ-K Series

#### Check for Power Transistor

Judgment is made through cable check with an analog tester.

- (1) Do not touch the energized part (high voltage part) for at least 10 minutes after the power is turned OFF.
- (2) Be sure to touch the earth terminal with a hand to release static electricity from the body (to prevent PC board from being damaged).

- (3) Also with a tester, take measurements at the following spots and confirm that residual electric charge of the power transistor is DC 50V or less.



- (4) After checking the residual electric charge, remove the connector of the outdoor unit fan motor. When the outdoor unit fan is rotated by strong headwind, remove the connector of the outdoor unit fan motor after confirming that the outdoor unit fan has stopped because electrical energy is stored in the capacitor and there may be a risk of electric shock.
- (5) Remove the wire connecting the power transistor and the compressor. Remove it from the compressor terminal side. During this work, be careful not to deform Faston terminal at the end of the connecting wire.

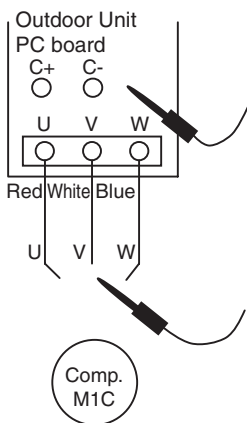
(6) Using an analog tester, measure resistance and fill in the blanks in the following table.

In case of unbalanced resistance for one of the three phases in each table (when the resistance value is equal to five times or more than the other resistance values), the power transistor is broken.

In normal cases, each phase shows a similar resistance value.

Tester		Resistance
(+)	(-)	$\Omega$
C+	U	
C+	V	
C+	W	
U	C+	$\infty$
V	C+	$\infty$
W	C+	$\infty$

Tester		Resistance
(+)	(-)	$\Omega$
C-	U	$\infty$
C-	V	$\infty$
C-	W	$\infty$
U	C-	
V	C-	
W	C-	





## Check No. 21

### Outdoor Unit: Fan Speed Pulse

#### 1. Fan Motor Pulse Check

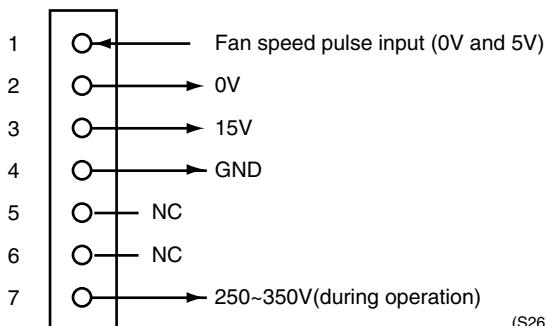
- (1) Disconnect the connector X206A with the power supply OFF and Operation OFF.
- (2) Is the voltage between pins 4 and 3 of X206A about 15 VDC after turning the power supply on?
- (3) Is the voltage between pins 4 and 1 of X206A about 5 VDC?
- (4) Connect the connector X206A with the power supply OFF and Operation OFF.
- (5) When making one turn of the upper fan motor by hand after turning the power supply on, is a pulse (0 and 5 V) generated 4 times between pins 4 and 1 of X206A? (Measure at the contact terminal on the harness side with the connector connected.)

(2): NO → Faulty PC board → Replace the PC board.

(3): NO → Faulty PC board → Replace the PC board.

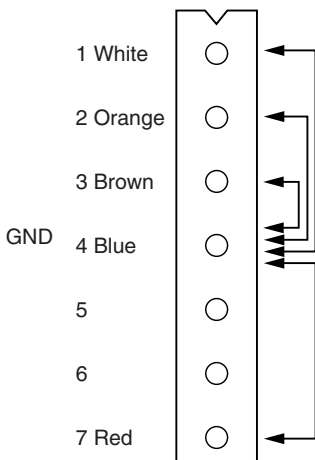
(5): NO → Faulty hall IC → Replace the DC fan motor.

(2) (3) (5): YES → Replace the PC board.



## 2. Fan Motor Resistance Check

- (1) Turn the power supply off.
- (2) With the fan motor connector disconnected, measure the resistance between each pin, then make sure that the resistance is more than the value mentioned in the following table.



Measurement point	Judgment
FG - GND	1M $\Omega$ or more
Vsp - GND	100k $\Omega$ or more
Vcc - GND	100 $\Omega$ or more
Vdc - GND	100k $\Omega$ or more

For RZP-D and RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7  
(RZQ(S)71~140) Series

**For 1 Fan & 2 Fan models**

- (1) Disconnect the connector A\* with the power supply OFF and Operation OFF.
- (2) Is the voltage between pins 4 and 3 of A\* about 15 VDC after turning the power supply on?
- (3) Is the voltage between pins 4 and 1 of A\* about 5 VDC?
- (4) Connect the connector A\* with the power supply OFF and Operation OFF.
- (5) When making one turn of the upper fan motor by hand after turning the power supply on, is a pulse (0 and 5 V) generated 4 times between pins 4 and 1 of A\*? (Measure at the contact terminal on the harness side with the connector connected.)

**For 2 Fan models**

- (6) Disconnect the connector B\* with the power supply OFF and Operation OFF.
- (7) Is the voltage between pins 4 and 3 of B\* about 15 VDC after turning the power supply on?
- (8) Is the voltage between pins 4 and 1 of B\* about 5 VDC?
- (9) Connect the connector B\* with the power supply OFF and Operation OFF.
- (10) When making one turn of the lower fan motor by hand after turning the power supply on, is a pulse (0 and 5 V) generated 4 times between pins 4 and 1 of B\*?

---

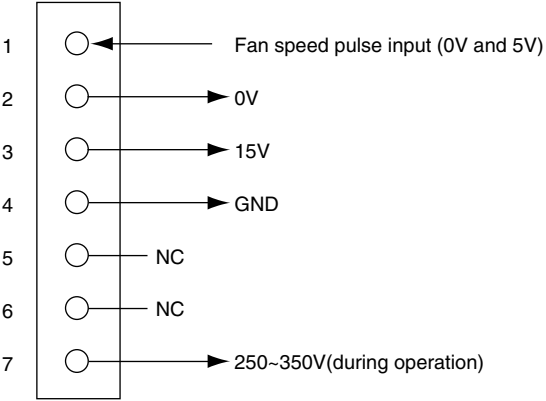
(2) (7): NO → Faulty PC board → Replace the PC board.

(3) (8): NO → Faulty PC board → Replace the PC board.

(5)(10): NO → Faulty hall IC → Replace the DC fan motor.

(2) (3) (5) (7) (8) (10): YES → Replace the PC board.

---



**Note**

	RZQ71B9V3B, RZQS71-100B7V3B	RZQ100~140C7V1B, RZQS125-140C7V1B, RZQ100~140B8W1B
A*	206 A	106 A

	RZP-D Series	RZQ-B, RZQS-B7, RZQ-C7, RZQS-C7 Series
B*	X207A	X107A

## Check No. 22

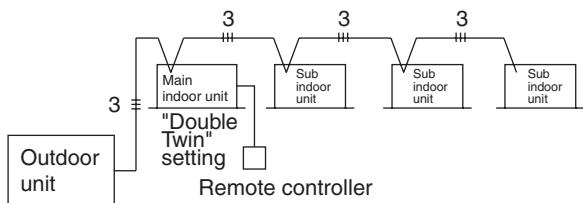
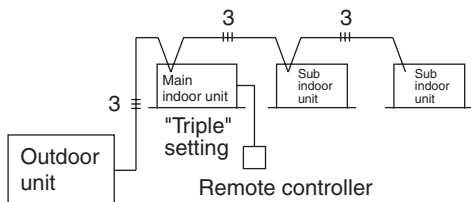
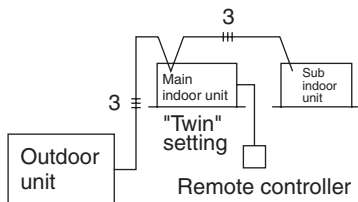
### Detailed Explanation of Setting Modes No. of Connected Twin System Indoor Units

If using as twin system, switch the second code No. according to the number of units connected as given in the table below. The second code No. is factory set to "01" (No. of connected units = 1).

### Setting Table

Mode No.	First Code No.	Second Code No.	Setting
11(21)	0	01	Pair (1)
		02	Twin (2)
		03	Triple (3)

## Example



(S1385)



### Note:

1. If set incorrectly, a connection mistake malfunction (remote controller display UA) will result. (3 minutes after turning the power ON is required for detection.)
2. If different models are used in combination, designate the unit that is equipped with the most functions as the main unit.

## Check No. 23

### Checking the Thermistors

#### Thermistors

If the cause of the problem is related to the thermistors, then the thermistors should be checked prior to changing the PC board.

#### Overview of thermistors

The table below contains an overview of the thermistors:

Thermistor		Description
Indoor		R1T Suction air thermistor
		R2T Heat exchanger thermistor
Outdoor	RZQ71B9V3B RZQS71·100B7V3B RZQ100~140B8W1B	R1T Ambient air thermistor
		R2T Heat exchanger thermistor
		R3T Discharge pipe thermistor
		R4T Suction pipe thermistor
		R5T Power module fin thermistor
	RZQ100~140C7V1B RZQS125·140C7V1B	R1T Ambient air thermistor
		R2T Discharge pipe thermistor
		R3T Suction pipe thermistor
		R4T Heat exchanger thermistor
		R5T Intermediate heat exchanger thermistor
		R6T Liquid pipe thermistor
		R10T Power module fin thermistor

#### Checking

To check the thermistors, proceed as follows:

Step	Action
1	Disconnect the thermistor from the PC board.
2	Read the temperature and the resistor value.
3	Check if the measured values correspond with the values in the table on the next pages.



The air conditioners manufactured by Daikin Industries have received **ISO 9001** certification for quality assurance.

Certificate Number. JM-0107  
JGA-0495  
JGA-1452



All Daikin Industries locations and subsidiaries in Japan have received environmental management system standard **ISO 14001** certification.

**Daikin Industries, Ltd.**  
Domestic Group  
Certificate Number, EC99J2044

**About ISO 14001**

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

**DAIKIN INDUSTRIES, LTD.**

Head Office:  
Umeda Center Bldg., 4-12, Nakazaki-Nishi  
2-chome, Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:  
JR Shinagawa East Bldg., 18-1, Konan  
2-chome, Minato-ku, Tokyo, 108-0075 Japan  
<http://www.daikin.com/global/>

© All rights reserved