

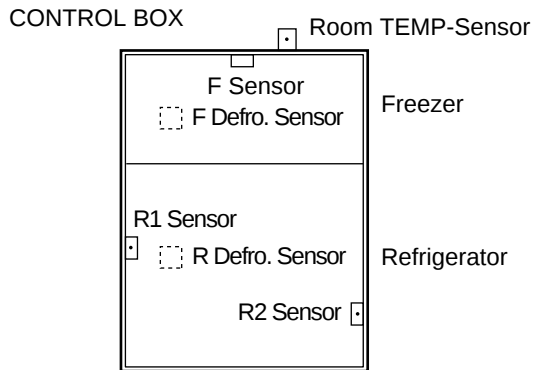
## 9. Failure diagnosis and repairment

### Main PCB check

- Turn the power off and on again for self diagnosis check.
- Refer to belows for error code table

® Error code table

| Item         | Display “LOW”    | “LOW.Mid” | “Mid”           | “Mid.HIGH” | “LOW”           |
|--------------|------------------|-----------|-----------------|------------|-----------------|
| Refrigerator | R1 sensor        | R2 sensor | R Defro. sensor | —          | Swing fan motor |
| Freezer      | Room Temp sensor | F sensor  | F Defro. sensor | —          | —               |



® Table for Vf and Rth according to temperature

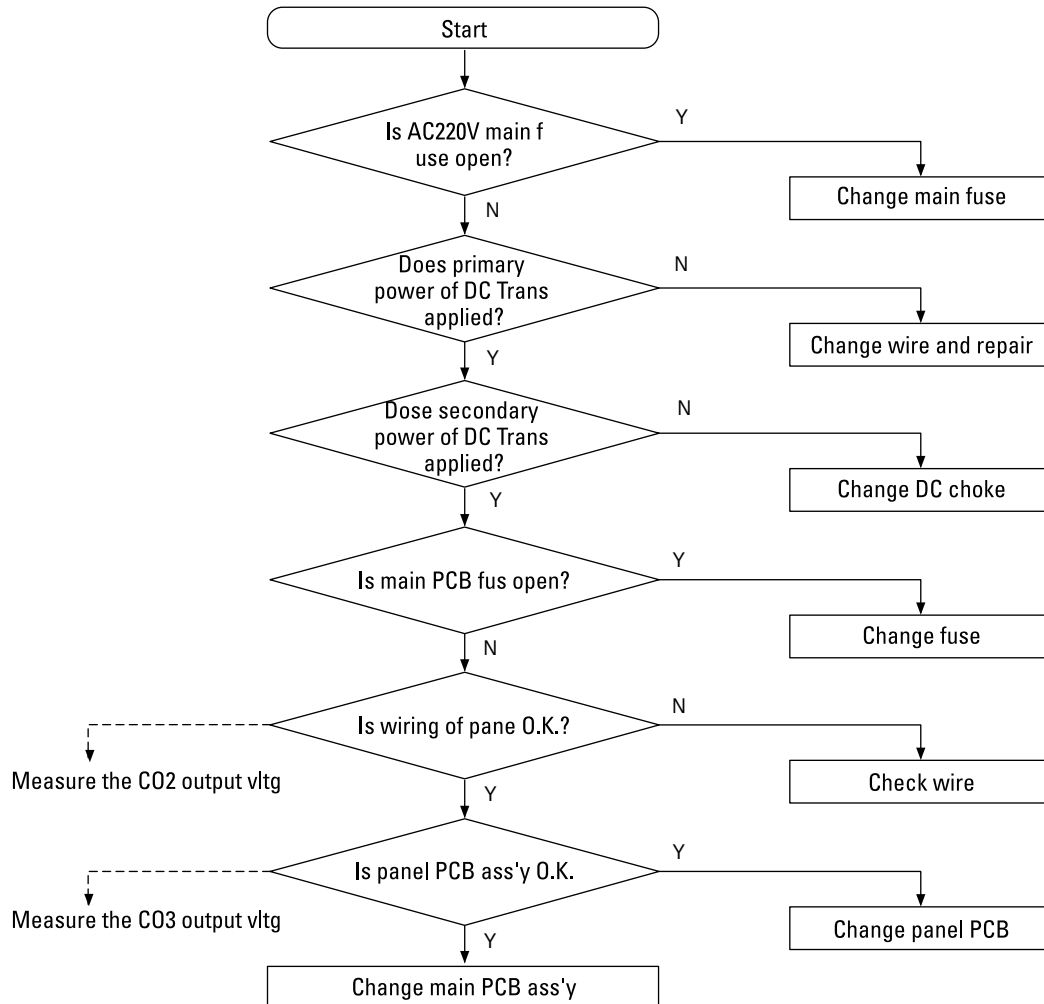
| T(°C) | R(ohm) | V(v)  | T(°C) | R(ohm) | V(v)  |
|-------|--------|-------|-------|--------|-------|
| -35   | 68648  | 4.364 | -18   | 28838  | 3.712 |
| -34   | 65011  | 4.333 | -17   | 27502  | 3.666 |
| -33   | 61595  | 4.301 | -16   | 26237  | 3.620 |
| -32   | 58384  | 4.268 | -15   | 25040  | 3.573 |
| -31   | 55366  | 4.235 | -14   | 23906  | 3.525 |
| -30   | 52526  | 4.200 | -13   | 22832  | 3.477 |
| -29   | 49854  | 4.164 | -12   | 21814  | 3.428 |
| -28   | 47337  | 4.127 | -11   | 20848  | 3.379 |
| -27   | 44967  | 4.090 | -10   | 19932  | 3.329 |
| -26   | 42733  | 4.051 | -9    | 19062  | 3.279 |
| -25   | 40626  | 4.012 | -8    | 18237  | 3.229 |
| -24   | 38640  | 3.972 | -7    | 17453  | 3.178 |
| -23   | 36765  | 3.930 | -6    | 16709  | 3.127 |
| -22   | 34995  | 3.888 | -5    | 16001  | 3.076 |
| -21   | 33323  | 3.845 | -4    | 15328  | 3.025 |
| -20   | 31743  | 3.802 | -3    | 14688  | 2.974 |
| -19   | 30250  | 3.757 | -2    | 14080  | 2.923 |

| T(°C) | R(ohm) | V(v)  | T(°C) | R(ohm) | V(v)  |
|-------|--------|-------|-------|--------|-------|
| -1    | 14051  | 2.872 | 16    | 6910   | 2.043 |
| 0     | 12949  | 2.821 | 17    | 6659   | 1.998 |
| 1     | 12424  | 2.770 | 18    | 6420   | 1.954 |
| 2     | 11924  | 2.719 | 19    | 6190   | 1.911 |
| 3     | 11447  | 2.668 | 20    | 5970   | 1.869 |
| 4     | 10993  | 2.618 | 21    | 5759   | 1.828 |
| 5     | 10559  | 2.567 | 22    | 5557   | 1.786 |
| 6     | 10146  | 2.518 | 23    | 5363   | 1.745 |
| 7     | 9752   | 2.468 | 24    | 5178   | 1.705 |
| 8     | 9375   | 2.419 | 25    | 5000   | 1.666 |
| 9     | 9016   | 2.370 | 26    | 4829   | 1.628 |
| 10    | 8673   | 2.322 | 27    | 4665   | 1.590 |
| 11    | 8345   | 2.274 | 28    | 4508   | 1.553 |
| 12    | 8032   | 2.227 | 29    | 4357   | 1.517 |
| 13    | 7732   | 2.180 | 30    | 4212   | 1.481 |
| 14    | 7446   | 2.134 |       |        |       |
| 15    | 7172   | 2.088 |       |        |       |

### Check in advance

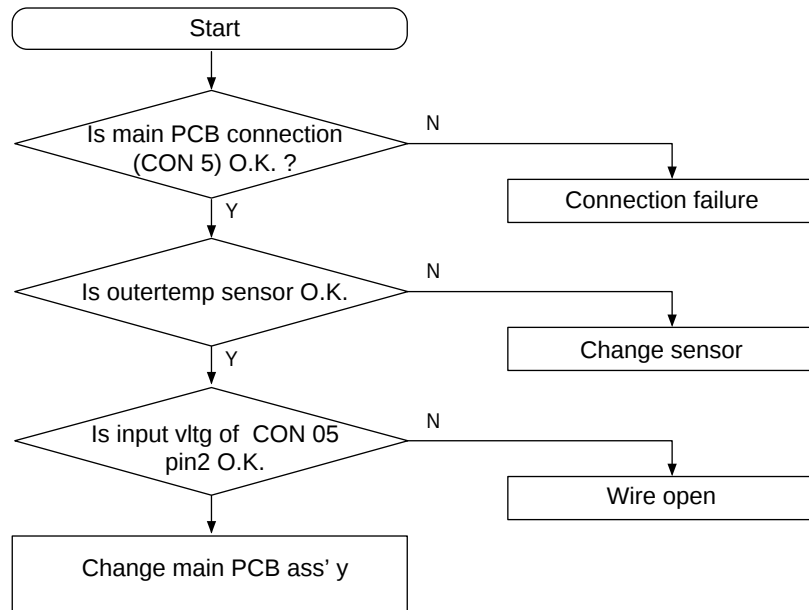
1. Check the power of consent and power code.
2. Check it based on the “References” on the next pages.

## 9-1 No Input Power

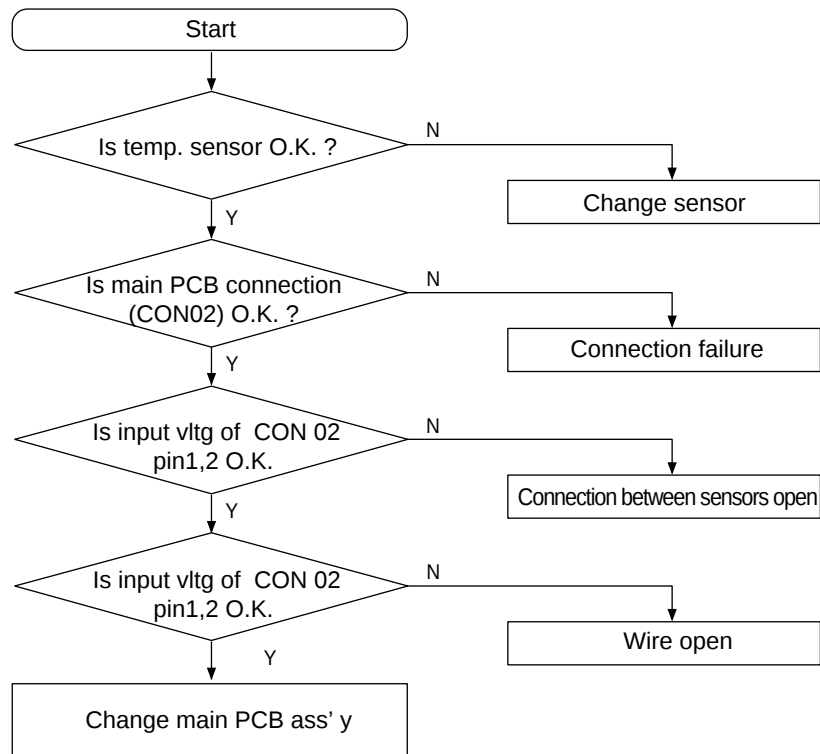


## 9-2 Self diagnosis failure

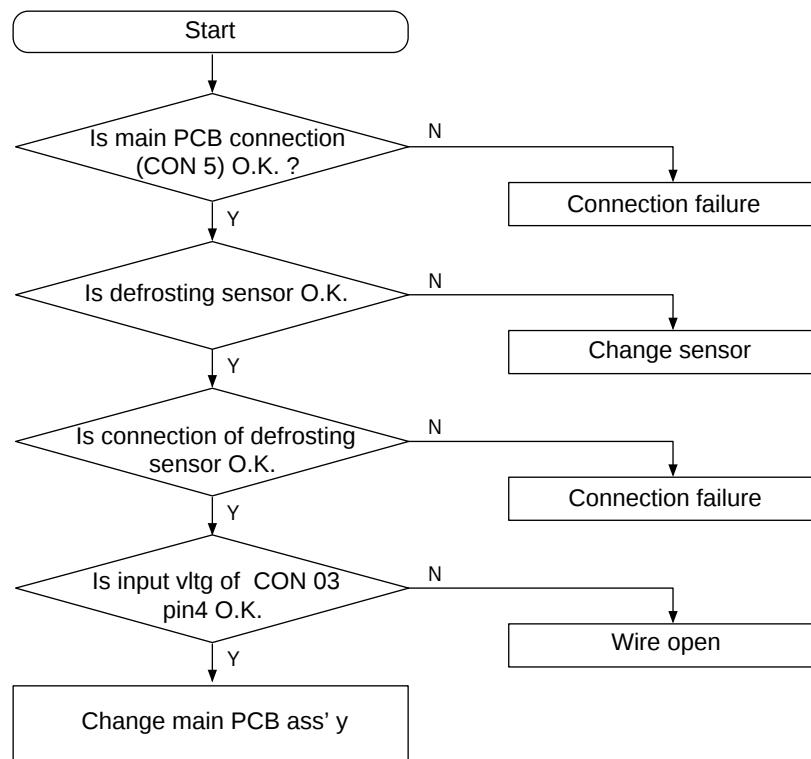
### 1) Outer temperature sensor failure



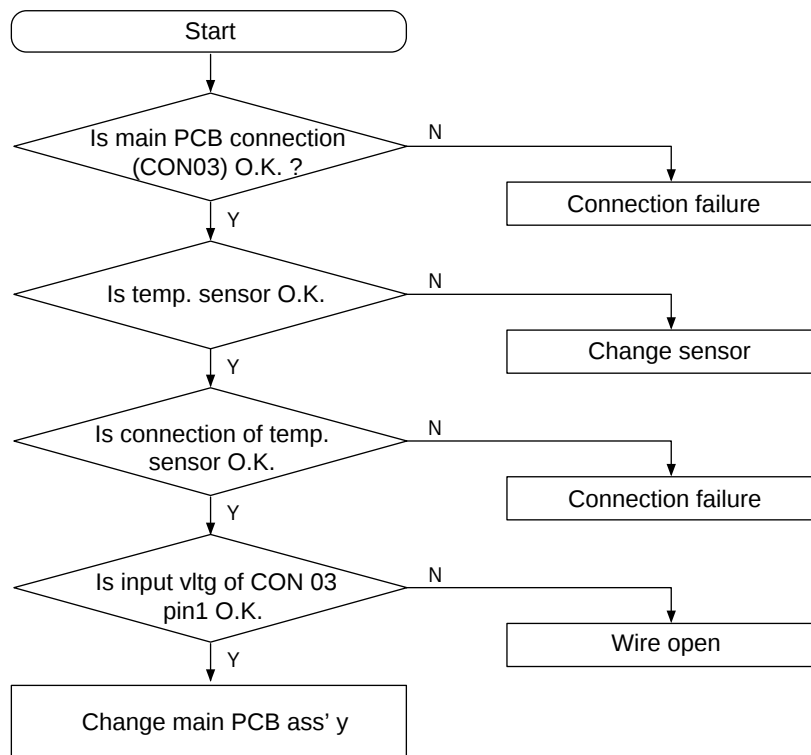
### 2) R1, R2, refrigerator temp. sensor failure



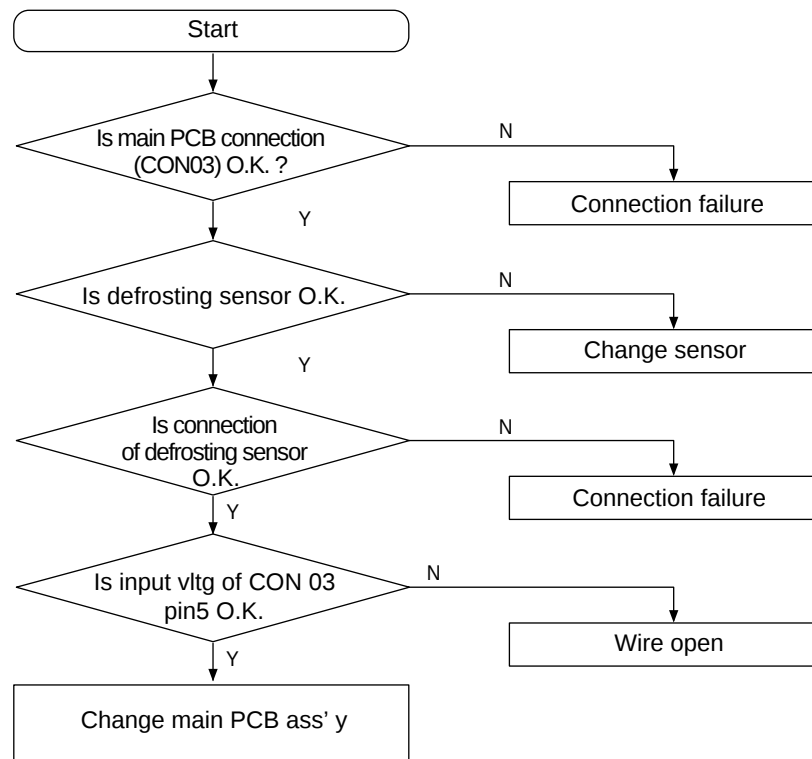
### 3) Refrigerator' s defrosting sensor failure



### 4) F1, Freezer temp. sensor failure



## 5) Freezer' s defrosting sensor failure

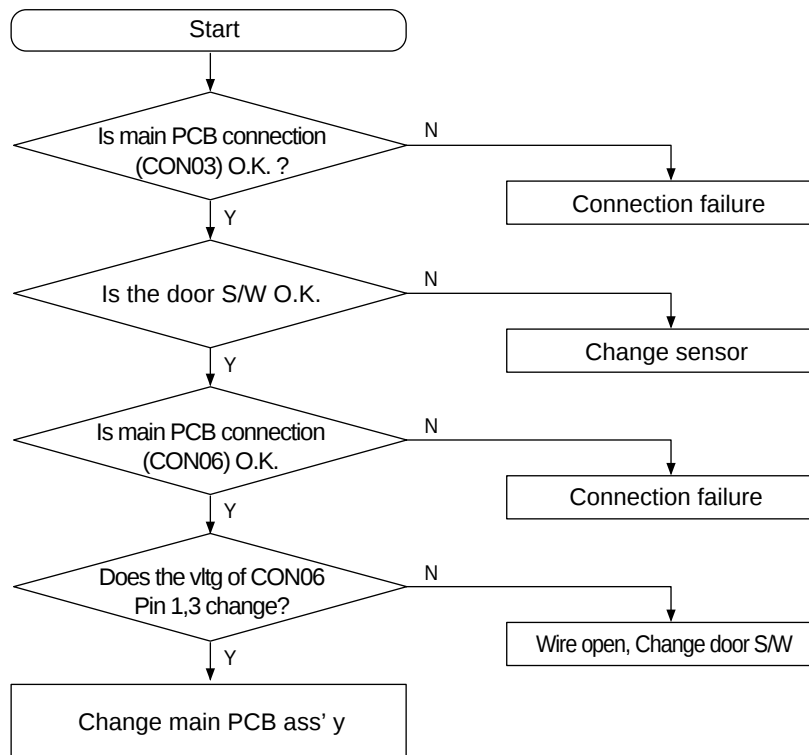


## 9-3 In case of continuous alarming

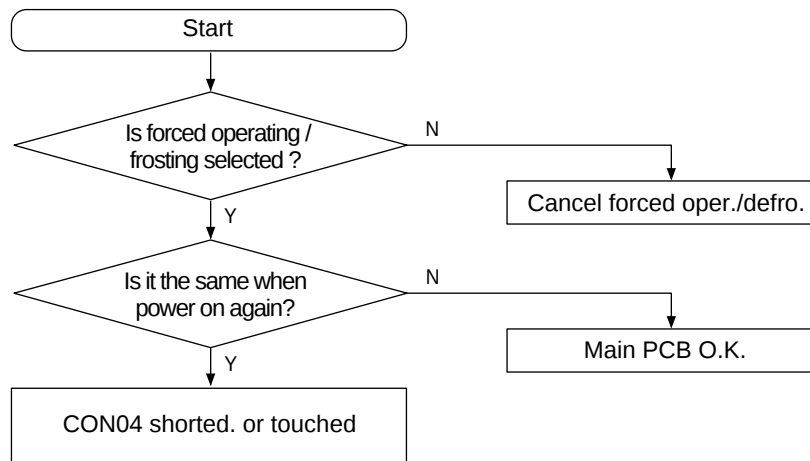
### references

- F/R door open alarms for ten seconds after 2 minutes later. If door opens continuously, door open alarms for ten seconds with one minute cycle. ( ten times of “Ding-Dong”)
- If there is moisture in door S/W, it is shorted and alarms due to the MICOM’s misjudgement. In this case the inside lamps of freezer and refrigerator turns off so the lamp do not turns on though you open the door.
- If the door S/W is rusted, the signal of door open do not reach to MICOM and no alarms and lamps turned off continuously.

### 1) In case of “Ding-Dong” alarming



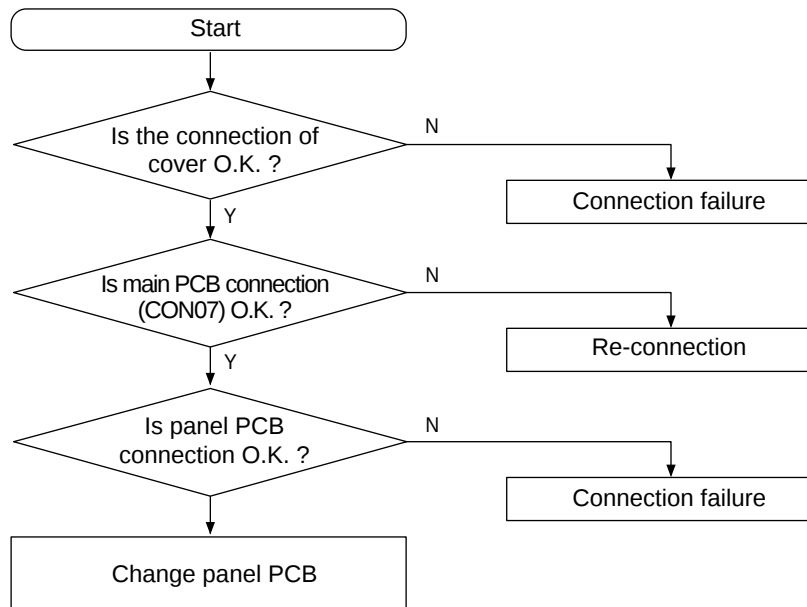
## 2) In case of “Beep-Beep” alarming



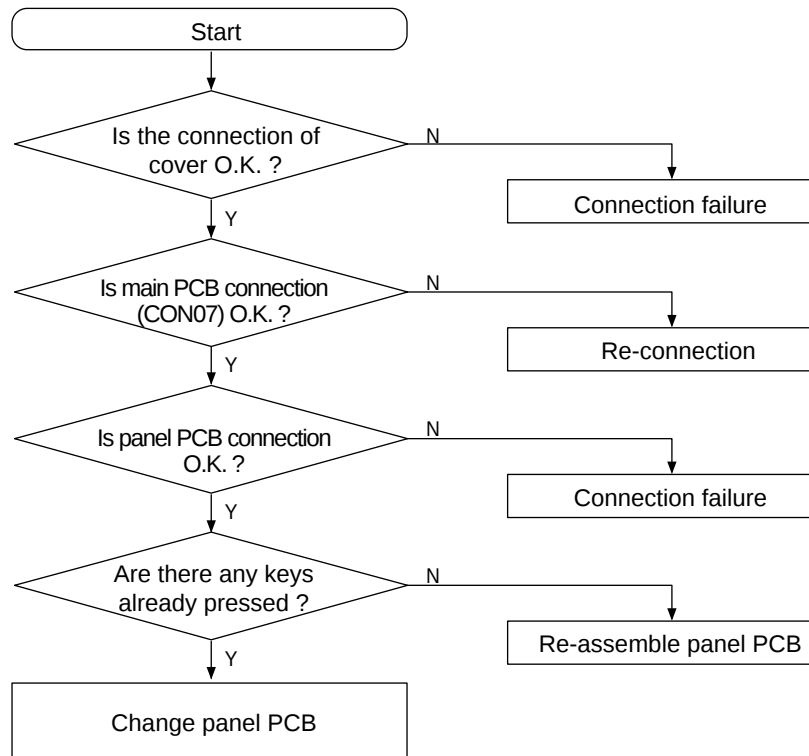
### references

- There is no “beep-beep” alarming except the forced defrost or sensing trouble during self diagnosis.
- If self diagnosis sensed trouble, it is displayed on the panel PCB, so easy to check. If not, the forced defrost or forced operation is selected the notch status are “High”-“Mid.High” at that time.

## 3) In case of no panel PCB display



#### 4) In case of the panel PCB key selection is impossible



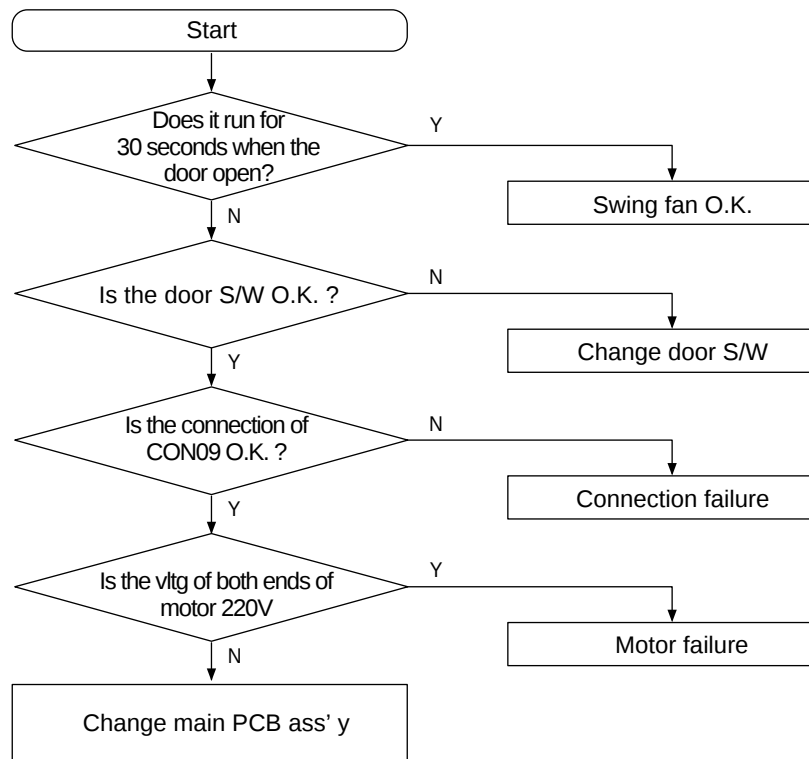
### 9-4 In case of fan do not run

#### references

‘Be sure to check cooling fan under forced operation.’

1. F-fan, R-fan and Comp cooling fan are off when Comp is off.
2. Though the Comp is on, the R-fan is not always on because the fan is off when the temperature was reached to the set point.
3. There is delaying time to run the fan after door open (Comp on state) . The delay time varies from ten seconds to one minute. (Forced operation included)

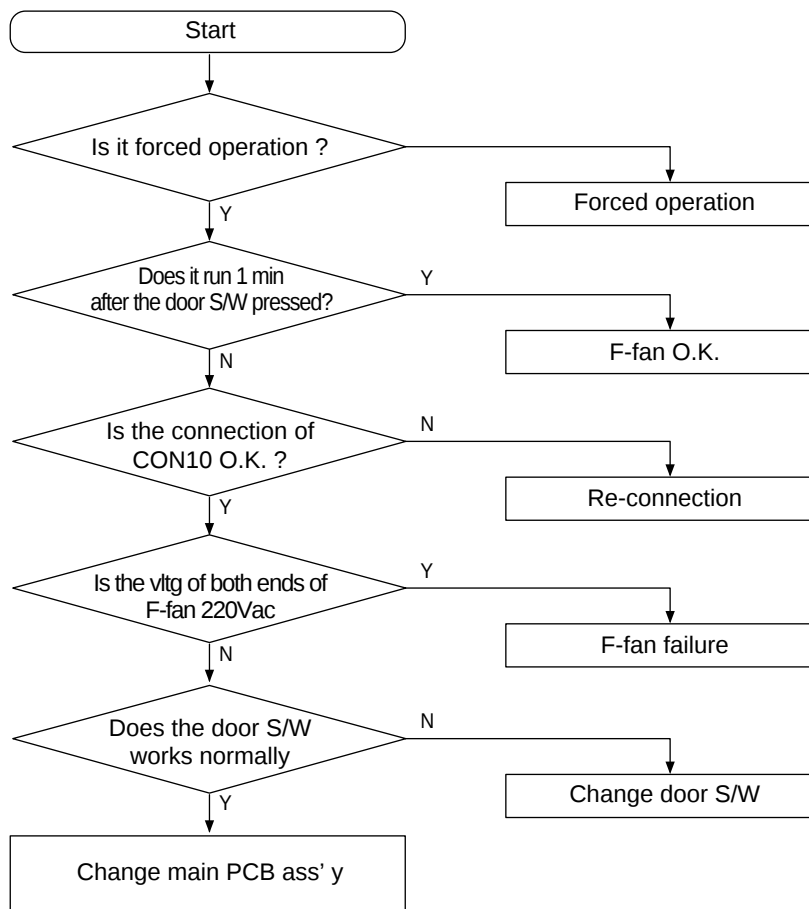
## 9-5 In case of swing fan in the refrigerator doesn't run.



### references

1. Swing fan doesn't run at the off state of R-fan. ( door closed)
2. Swing fan runs for 30 seconds when the door is open but from then it doesn't work as the door opened continuously. It's just runs for 30 seconds from the time the door is opened.

## 1) In case of F-fan doesn't run



## 2) In case of R-fan doesn't trun

