

DAEWOO

# Service Manual

## Refrigerator

Model: FR-520NT



DAEWOO ELECTRONICS CO., LTD.

## SAFETY AND PRECAUTIONS

- 1) For starters, be sure to check any chances of the leakage of electricity.
- 2) You could handle a part in the vicinity of electricity after unplugging.
- 3) You should put on rubber gloves to prevent an electric shock on operation test.
- 4) Make sure the rated current, voltage, capacity before using an instrument.
- 5) Keep your wet hands away from the metal goods in the freezer compartment not to be frostbitten.
- 6) Be careful not to let water to permeate the electric part in the machine room.
- 7) With the door open during your repair, you might be hurt by that door.
- 8) You should give a tilt to the refrigerator for your safe after removing the breakable goods inside the refrigerator.
- 9) You'd better use gloves if you fix it up around the evaporator.

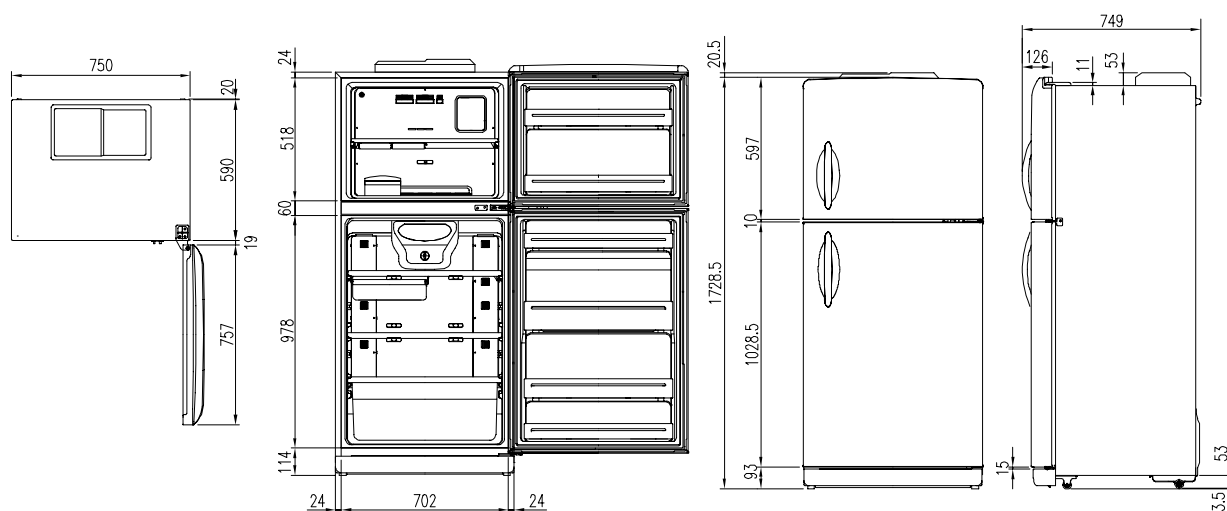
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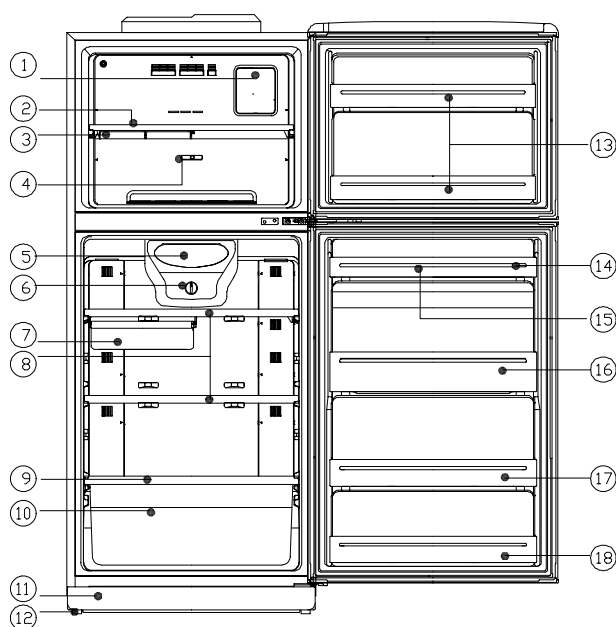
# EXTERNAL VIEWS

## 1. FR-520NT

### 1) EXTERNAL SIZE



### 2) NAME OF PARTS



- ① Freezer Compartment Lamp
- ② Shelf Freezer & Ice Tray
- ③ Case Icing
- ④ Temperature Controller ( Freezer Compartment )
- ⑤ Refrigerator Compartment Lamp
- ⑥ Temperature Controller ( Refrigerator Compartment )
- ⑦ Fresh Case
- ⑧ Shelf Refrigerator
- ⑨ Cover Vegetable
- ⑩ Case Vegetable
- ⑪ Front Grille
- ⑫ Adjustable Foot
- ⑬ Freezer Pocket
- ⑭ Egg Pocket
- ⑮ Egg Tray
- ⑯ Bottle Pocket
- ⑰ Multi Pocket
- ⑱ Multi Pocket

# SPECIFICATIONS

## 1. OUTLINE

| DIVISION                 |                 | CONTENTS               |  |
|--------------------------|-----------------|------------------------|--|
| MODEL NAME               |                 | FR-520NT               |  |
| USABLE CAPACITY          | FREEZER         | 122 ℓ                  |  |
|                          | REFRIGERATOR    | 318 ℓ                  |  |
|                          | TOTAL           | 440 ℓ                  |  |
| EXTERNAL DIMENSION       | WIDTH           | 757mm                  |  |
|                          | DEPTH           | 750mm                  |  |
|                          | HEIGHT          | 1749mm                 |  |
| REFRIGERANT              | R12             | 170g                   |  |
|                          | R134a           | 140g                   |  |
| COOLING & CONTROL SYSTEM | COOLING SYSTEM  | Fan Cooling System     |  |
|                          | DEFROST SYSTEM  | Fin Evaporator Forced  |  |
|                          | DEFORST CONTROL | Automatic Start & Stop |  |
| NET WEIGHT               |                 | 71Kg                   |  |

## 2. ELECTRIC PARTS

### 1) COMPRESSOR

| REFRIGERANT   | R12        |            |            |        |            |            |            |            |
|---------------|------------|------------|------------|--------|------------|------------|------------|------------|
| VOLTAGE(V/Hz) | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60     | 230/50     | 240/50     |
| COMP MODEL    | X          | BL27YE-3   | X          | X      | SL28YE-5   | PL23YG-4   | SL-28YE-5  | SL28YE-5   |
| PART CODE     | X          | 3952127A30 | X          | X      | 3954128A50 | 3956123G40 | 3954128A50 | 3954128A50 |
| STARING TYPE  | X          | CSR        | X          | X      | RSIR       | RSCR       | RSIR       | RSIR       |

| REFRIGERANT   | R134a      |            |            |        |            |        |            |            |
|---------------|------------|------------|------------|--------|------------|--------|------------|------------|
| VOLTAGE(V/Hz) | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60 | 230/50     | 240/50     |
| COMP MODEL    | X          | HBL25YG-3  | X          | X      | HPL27YG1-5 | X      | HPL27YG1-5 | HPL27YG1-5 |
| PART CODE     | X          | 3952125R30 | X          | X      | 3956127R51 | X      | 3956127R51 | 3956127R51 |
| STARING TYPE  | X          | CSR        | X          | X      | RSCR       | X      | RSCR       | RSCR       |

### 2) RELAY

| REFRIGERANT   |            | R12        |             |            |        |             |             |             |             |
|---------------|------------|------------|-------------|------------|--------|-------------|-------------|-------------|-------------|
| VOLTAGE(V/Hz) |            | 100/50, 60 | 110/60      | 115,120/60 | 127/60 | 220/50      | 220/60      | 230/50      | 240/50      |
| ASSY          | TYPE NAME  | X          | 444THBZZ-52 | X          | X      | 276THBYY-52 | 174THBYY-52 | 276THBYY-52 | 276THBYY-52 |
|               | PART CODE  | X          | 3018119300  | X          | X      | 3018119350  | 3018119200  | 3018119350  | 3018119350  |
| PTC           | RESISTANCE | X          | S068        | X          | X      | S220        | S330        | S220        | S220        |
|               | PART CODE  | X          |             | X          | X      |             |             |             |             |
| OVER LOAD     | PART NAME  | X          | 444THB      | X          | X      | 276THB      | 174THB      | 276THB      | 276THB      |

| REFRIGERANT   |            | R134a      |             |            |        |             |        |             |             |
|---------------|------------|------------|-------------|------------|--------|-------------|--------|-------------|-------------|
| VOLTAGE(V/Hz) |            | 100/50, 60 | 110/60      | 115,120/60 | 127/60 | 220/50      | 220/60 | 230/50      | 240/50      |
| ASSY          | TYPE NAME  | X          | 783NHBZZ-52 | X          | X      | 265NHBYY-52 | X      | 265NHBYY-52 | 265NHBYY-52 |
|               | PART CODE  | X          | 3018119380  | X          | X      | 3018119470  | X      | 3018119470  | 3018119470  |
| PTC           | RESISTANCE | X          | S220        | X          | X      | S330        | X      | S330        | S330        |
|               | PART CODE  | X          |             | X          | X      |             | X      |             |             |
| OVER LOAD     | PART NAME  | X          | 783NHB      | X          | X      | 265NHB      | X      | 265NHB      | 265NHB      |

## SPECIFICATIONS

### 3) STARTING CAPACITOR

| REFRIGERANT       | R12        |             |            |        |        |        |        |        |
|-------------------|------------|-------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz)     | 100/50, 60 | 110/60      | 115,120/60 | 127/60 | 220/50 | 220/60 | 230/50 | 240/50 |
| PART CODE         | X          | 401RD35050  | X          | X      | X      | X      | X      | X      |
| RATED VOLTAGE     | X          | 200V        | X          | X      | X      | X      | X      | X      |
| RATED CAPACITANCE | X          | 100 $\mu$ F | X          | X      | X      | X      | X      | X      |

| REFRIGERANT       | R134a      |             |            |        |        |        |        |        |
|-------------------|------------|-------------|------------|--------|--------|--------|--------|--------|
| VOLTAGE(V/Hz)     | 100/50, 60 | 110/60      | 115,120/60 | 127/60 | 220/50 | 220/60 | 230/50 | 240/50 |
| PART CODE         | X          | 401RD35050  | X          | X      | X      | X      | X      | X      |
| RATED VOLTAGE     | X          | 200V        | X          | X      | X      | X      | X      | X      |
| RATED CAPACITANCE | X          | 100 $\mu$ F | X          | X      | X      | X      | X      | X      |

### 4) RUNNING CAPACITOR

| REFRIGERANT       | R12        |            |            |        |        |            |        |        |
|-------------------|------------|------------|------------|--------|--------|------------|--------|--------|
| VOLTAGE(V/Hz)     | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50 | 220/60     | 230/50 | 240/50 |
| PART CODE         | X          | 400EL15130 | X          | X      | X      | 400EL15110 | X      | X      |
| RATED VOLTAGE     | X          | 230V       | X          | X      | X      | 350V       | X      | X      |
| RATED CAPACITANCE | X          | 10 $\mu$ F | X          | X      | X      | 5 $\mu$ F  | X      | X      |

| REFRIGERANT       | R134a      |            |            |        |            |        |            |            |
|-------------------|------------|------------|------------|--------|------------|--------|------------|------------|
| VOLTAGE(V/Hz)     | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60 | 230/50     | 240/50     |
| PART CODE         | X          | 3961800400 | X          | X      | 400EL15110 | X      | 400EL15110 | 400EL15110 |
| RATED VOLTAGE     | X          | 300V       | X          | X      | 350V       | X      | 350V       | 350V       |
| RATED CAPACITANCE | X          | 7 $\mu$ F  | X          | X      | 5 $\mu$ F  | X      | 5 $\mu$ F  | 5 $\mu$ F  |

### 5) F-FAN MOTOR

| REFRIGERANT   | R12, 134a   |            |            |        |            |                |            |            |
|---------------|-------------|------------|------------|--------|------------|----------------|------------|------------|
| VOLTAGE(V/Hz) | 100/50, 60  | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60         | 230/50     | 240/50     |
| TYPE NAME     | S6111BDF01  | S6111EDF01 | X          | X      | S6111WDF01 | IS-3211DWBFE-2 | S6111WDF01 | S6111WDF01 |
| PART CODE     | 30159008710 | 3015900740 | X          | X      | 3015900730 | 3015900700     | 3015900730 | 3015900730 |
| REVOLUTION    | 2200RPM     | 2200RPM    | X          | X      | 2200RPM    | 2200RPM        | 2200RPM    | 2200RPM    |

## 6) C-FAN MOTOR

| REFRIGERANT   | R12, 134a  |            |            |        |            |            |            |            |
|---------------|------------|------------|------------|--------|------------|------------|------------|------------|
| VOLTAGE(V/HZ) | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60     | 230/50     | 240/50     |
| TYPE NAME     | X          | S6111EEC02 | X          | X      | S6111WEC02 | S6111UEC01 | S6111WEC02 | S6111WEC02 |
| PART CODE     | X          | 3015905030 | X          | X      | 3015905020 | 3015900600 | 3015905020 | 3015905020 |
| REVOLUTION    | X          | 2400RPM    | X          | X      | 2400RPM    | 2400RPM    | 2400RPM    | 2400RPM    |

## 7) DEFROST HEATER

| REFRIGERANT   | R12, 134a  |            |            |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|
| VOLTAGE(V/HZ) | 100/50, 60 | 110/60     | 115,120/60 | 127/60     | 220/50     | 220/60     | 230/50     | 240/50     |
| SPEC(W)       | X          | 148W       | 148W       | 148W       | 148W       | 148W       | 148W       | 148W       |
| PART CODE     | X          | 3012803220 | 3012803220 | 3012803220 | 3012804600 | 3012804600 | 3012804600 | 3012804600 |

## 8) LAMP ASSEMBLY

| REFRIGERANT   | R12, 134a  |            |            |        |            |            |            |            |
|---------------|------------|------------|------------|--------|------------|------------|------------|------------|
| VOLTAGE(V/HZ) | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60     | 230/50     | 240/50     |
| SPEC(W)       | X          | 15W        | X          | X      | 15W        | 15W        | 15W        | 15W        |
| PART CODE     | X          | 3013600010 | X          | X      | 3013600080 | 3013600080 | 3013600080 | 3016800080 |

## 9) PCB TRANSFORMER

| REFRIGERANT   | R12, 134a  |            |            |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|
| VOLTAGE(V/HZ) | 100/50, 60 | 110/60     | 115,120/60 | 127/60     | 220/50     | 220/60     | 230/50     | 240/50     |
| TYPE NAME     | RT30       | RT30       | RT30       | RT30       | RT30       | RT30       | RT30       | RT30       |
| PART CODE     | 5EPK057770 | 5EPK057780 | 5EPK057780 | 5EPK057780 | 5EPK057790 | 5EPK048004 | 5EPK057810 | 5EPK057790 |

## 10) MAIN PCB ASSEMBLY

| REFRIGERANT   | R12, 134a  |            |            |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|
| VOLTAGE(V/HZ) | 100/50, 60 | 110/60     | 115,120/60 | 127/60     | 220/50     | 220/60     | 230/50     | 240/50     |
| TYPE NAME     | X          | RT30       | RT30       | RT30       | RT30       | RT30       | RT30       | RT30       |
| PART CODE     | X          | 3014381040 | 3014381040 | 3014381040 | 3014381020 | 3014381010 | 3014381030 | 3014381020 |

## SPECIFICATIONS

### 11) DRYER

| REFRIGERANT | R12        | R134a      |
|-------------|------------|------------|
| SPEC (g)    | 10g        | 15g        |
| PART CODE   | 3016801000 | 3016801010 |

### 12) FUSE (PCB)

| REFRIGERANT   | R12, 134a  |            |            |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|
| VOLTAGE(V/Hz) | 100/50, 60 | 110/60     | 115,120/60 | 127/60     | 220/50     | 220/60     | 230/50     | 240/50     |
| RATED CURRENT | X          | 250V/1.6A  | X          | 250V/1.6A  | 250V/1.6A  | 250V/1.6A  | 250V/1.6A  | 250V/1.6A  |
| PART CODE     | X          | 5F3GB1682R | X          | 5F3GB1682R | 5F3GB1682R | 5F3GB1682R | 5F3GB1682R | 5F3GB1682R |

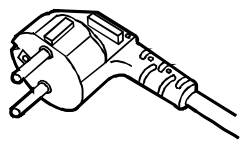
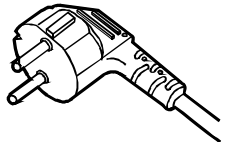
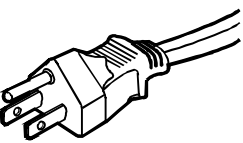
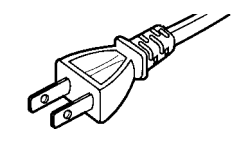
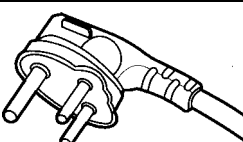
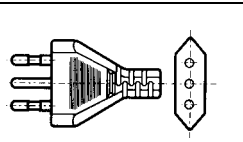
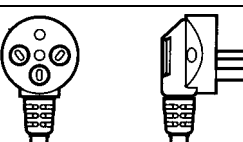
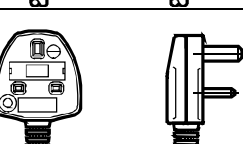
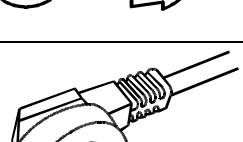
### 13) TEMPERATURE FUSE

| REFRIGERANT           | R12, 134a  |            |            |        |            |            |            |            |
|-----------------------|------------|------------|------------|--------|------------|------------|------------|------------|
| VOLTAGE(V/Hz)         | 100/50, 60 | 110/60     | 115,120/60 | 127/60 | 220/50     | 220/60     | 230/50     | 240/50     |
| OPERATING TEMPERATURE | X          | 77 °C      | X          | X      | 77 °C      | 77 °C      | 77 °C      | 77 °C      |
| PART CODE             | X          | 3017200400 | X          | X      | 3017200400 | 3017200400 | 3017200400 | 3017200400 |

### 14) DOOR S/W

| REFRIGERANT   | R12, 134a  |            |            |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|------------|------------|------------|
| VOLTAGE(V/Hz) | 100/50, 60 | 110/60     | 115,120/60 | 127/60     | 220/50     | 220/60     | 230/50     | 240/50     |
| PART CODE     | X          | 3018100010 | 3018100010 | 3018100010 | 3018100010 | 3018100010 | 3018100010 | 3018100010 |

## 3. POWER CORD

| NO | SHAPE OF CODE                                                                       | PART CODE  | DESCRIPTION         | REMARK                                       |
|----|-------------------------------------------------------------------------------------|------------|---------------------|----------------------------------------------|
| 1  |    | 3011315000 | CP-2PIN             | FOR EUROPEAN COUNTRY                         |
| 2  |    | 401RA17200 | CP-2PIN             | FOR OTHER COUNTRY                            |
| 3  |    | 4006D17101 | KP-30               | FOR AMERICA                                  |
| 4  |    | 401PD17101 | KP-211              | FOR JAPAN & TAIWAN                           |
| 5  |  | 3011300801 | BP-3PIN             |                                              |
| 6  |  | 3011303010 | #267                | FOR CHILE                                    |
| 7  |  | 3011315310 |                     | FOR ISRAEL                                   |
| 8  |  | 3011303050 | BS-1363A            | FOR U.K, MIDDLE ASIA<br>SINGAPORE & MALAYSIA |
| 9  |  | 3011301200 | KP551/550           | FOR CHINA & AUSTRALIA                        |
| 10 |  | 3011301120 | FLAP TYPE<br>KP-551 | NEC in AUSTRALIA                             |

Upper power cord's part code is only for lead wire, without any kinds of terminal or housing

## SPECIFICATIONS

### 4. DOOR COLOR

#### 1) ASSEMBLY URETHAN FREEZER DOOR(FR-520NT)

##### ① NON-KEY TYPE

| REFRIGERANT | R12               |                          |            |                        | R134a             |                          |            |                        |
|-------------|-------------------|--------------------------|------------|------------------------|-------------------|--------------------------|------------|------------------------|
| COLOR TYPE  | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM |
| PART CODE   | X                 | 3010075100               | X          | X                      | X                 | 3010075110               | X          | X                      |

##### ② KEY TYPE

| REFRIGERANT | R12               |                          |            |                        | R134a             |                          |            |                        |
|-------------|-------------------|--------------------------|------------|------------------------|-------------------|--------------------------|------------|------------------------|
| COLOR TYPE  | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM |
| PART CODE   | X                 | 3010075100               | X          | X                      | X                 | 3010075110               | X          | X                      |

#### 2) ASSEMBLY URETHAN REFRIGERATOR DOOR

##### ① FR-520NT

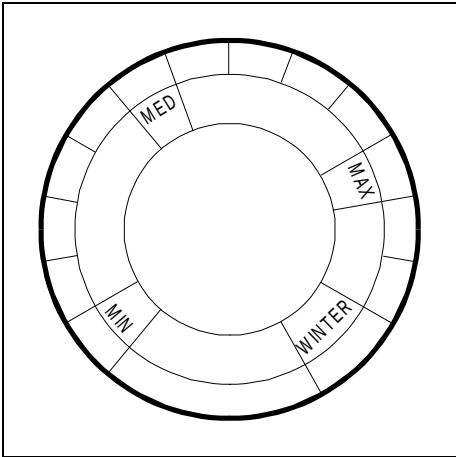
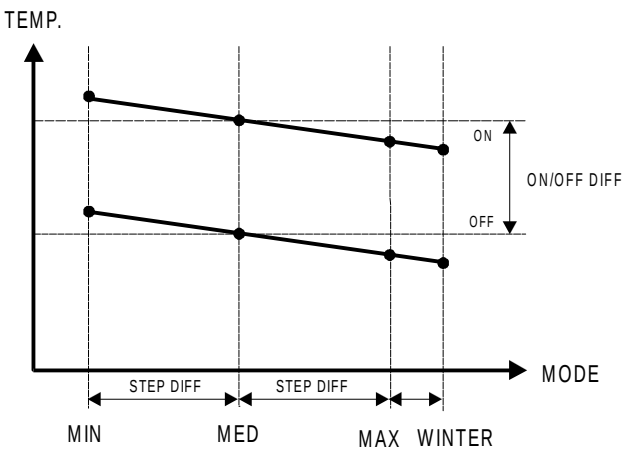
##### • NON-KEY TYPE

| REFRIGERANT | R12               |                          |            |                        | R134a             |                          |            |                        |
|-------------|-------------------|--------------------------|------------|------------------------|-------------------|--------------------------|------------|------------------------|
| COLOR TYPE  | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM |
| PART CODE   | X                 | 3010079100               | X          | X                      | X                 | 3010079140               | X          | X                      |

##### • KEY TYPE

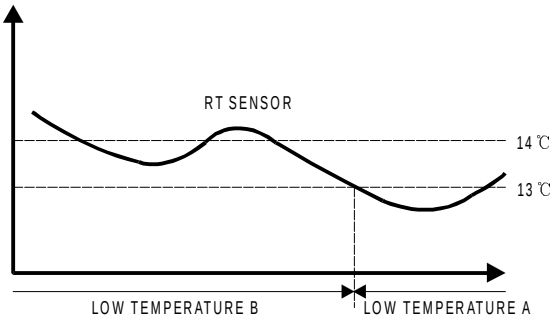
| REFRIGERANT | R12               |                          |            |                        | R134a             |                          |            |                        |
|-------------|-------------------|--------------------------|------------|------------------------|-------------------|--------------------------|------------|------------------------|
| COLOR TYPE  | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM | Dull lamina sheet | High-glossy Lamina sheet | Normal PCM | High-glossy Bright PCM |
| PART CODE   | X                 | 3010079150               | X          | X                      | X                 | 3010079160               | X          | X                      |

# OPERATION AND FUNCTIONS

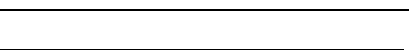
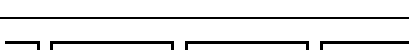
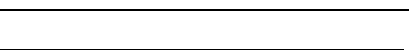
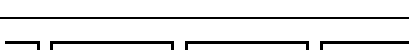
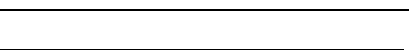
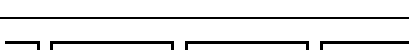
| NO | CONTROL FUNCTION       | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REMARK |
|----|------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1  | Temperature Regulation | COMP Fan        | <p>1. Temperature Regulation of Fresh Food Compartment</p> <ol style="list-style-type: none"> <li>1) Maximum angle clockwise : Temperature setting for WINTER</li> <li>2) Maximum angle counter-clockwise : Temperature setting for MIN</li> <li>3) Maximum rotation angle : <math>280 \pm 10^\circ</math></li> <li>4) Minimum Step Difference : <math>0.35^\circ \text{C} / 20^\circ</math></li> <li>5) Total Step Difference : <math>5^\circ \text{C}</math></li> </ol>  <p>2. Temperature Regulation of Freezer Compartment</p> <ol style="list-style-type: none"> <li>1) Temperature is regulated by moving the lever to the left and/or the right.</li> <li>2) Temperature has nothing to do with PCB control.</li> </ol> |        |
| 2  | Control of Temperature | COMP Fan        | <p>1. How to Control</p> <ol style="list-style-type: none"> <li>1) COMP is controlled by On/Off point of R-Sensor at each mode.</li> <li>2) Middle Off Point of Fresh Food Compartment : <math>3.5^\circ \text{C}</math></li> <li>3) On/Off Difference of Freezer Compartment : <math>1.0^\circ \text{C}</math></li> <li>4) Fan Delay : Fan is On/Off after 1 minute of Comp On/Off.</li> <li>5) Step Difference of Fresh Food Compartment</li> </ol> <p>MIN <math>\leftrightarrow</math> MED : <math>2^\circ \text{C}</math><br/> MED <math>\leftrightarrow</math> MAX : <math>2^\circ \text{C}</math><br/> MAX <math>\leftrightarrow</math> WINTER : <math>1^\circ \text{C}</math></p>                                      |        |

## OPERATION AND FUNCTIONS

| NO | CONTROL FUNCTION  | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REMARK |
|----|-------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 3  | Optional Function | Temperature     | <ol style="list-style-type: none"> <li>Option for Weak Refrigeration <ol style="list-style-type: none"> <li>SW1 On : Standrd On/Off applied</li> <li>SW1 Off : 1.5 °C lower than Standard On/Off</li> </ol> </li> <li>Option for Middle Off Point of Fresh Food Compartment <ol style="list-style-type: none"> <li>J01 (O), R01 (O), R02 (O) : 3 °C</li> <li>J01 (X), R01 (O), R02 (O) : 3.5 °C</li> <li>J01 (X), R01 (O), R02 (X) : 4.5 °C</li> </ol> </li> <li>Option for On/Off Difference of Fresh Food Compartment <ol style="list-style-type: none"> <li>J02 (O), J03 (O), R04 (O) : 0.5 °C</li> <li>J02 (X), J03 (O), R04 (O) : 3.5 °C</li> <li>J02 (X), J03 (O), R04 (X) : 4.5 °C</li> </ol> </li> <li>Option for Fan Delay <ol style="list-style-type: none"> <li>JP03 (O) : Fan On/Off after 1 minute of Comp On/Off</li> <li>JP03 (X) : Comp and Fan On/Off are linked(co-working).</li> </ol> </li> </ol>             |        |
| 4  | Defrosting Period | Defrosting Mode | <ol style="list-style-type: none"> <li>Determination of Defrosting Period <ol style="list-style-type: none"> <li>Total Run-time of Comp : 6, 8, 10 hours</li> <li>Run-ratio of Comp : over 80%</li> <li>Any Error : R1, D1, D2, C1</li> <li>Total Time : 60 hours</li> </ol> </li> <li>Explanation <ol style="list-style-type: none"> <li>Defrosting starts if any Error happes or the run-ratio of Comp is over 80%, when the total run-time of Comp is over 6 hours.</li> <li>Defrosting starts if the run-ratio of Comp is over 80 %, when the total run-time of Comp is over 8 hours.</li> <li>Defrosting starts unconditionally if the total run-time of Comp is 10 hours, in case that any condition of 1) and 2) is not satisfied.</li> <li>Defrosting starts immediately if total time(Comp On Time+Comp Off Time) is over 60 hours, in case that any condition of 1), 2) and 3) is not satisfied.</li> </ol> </li> </ol> |        |

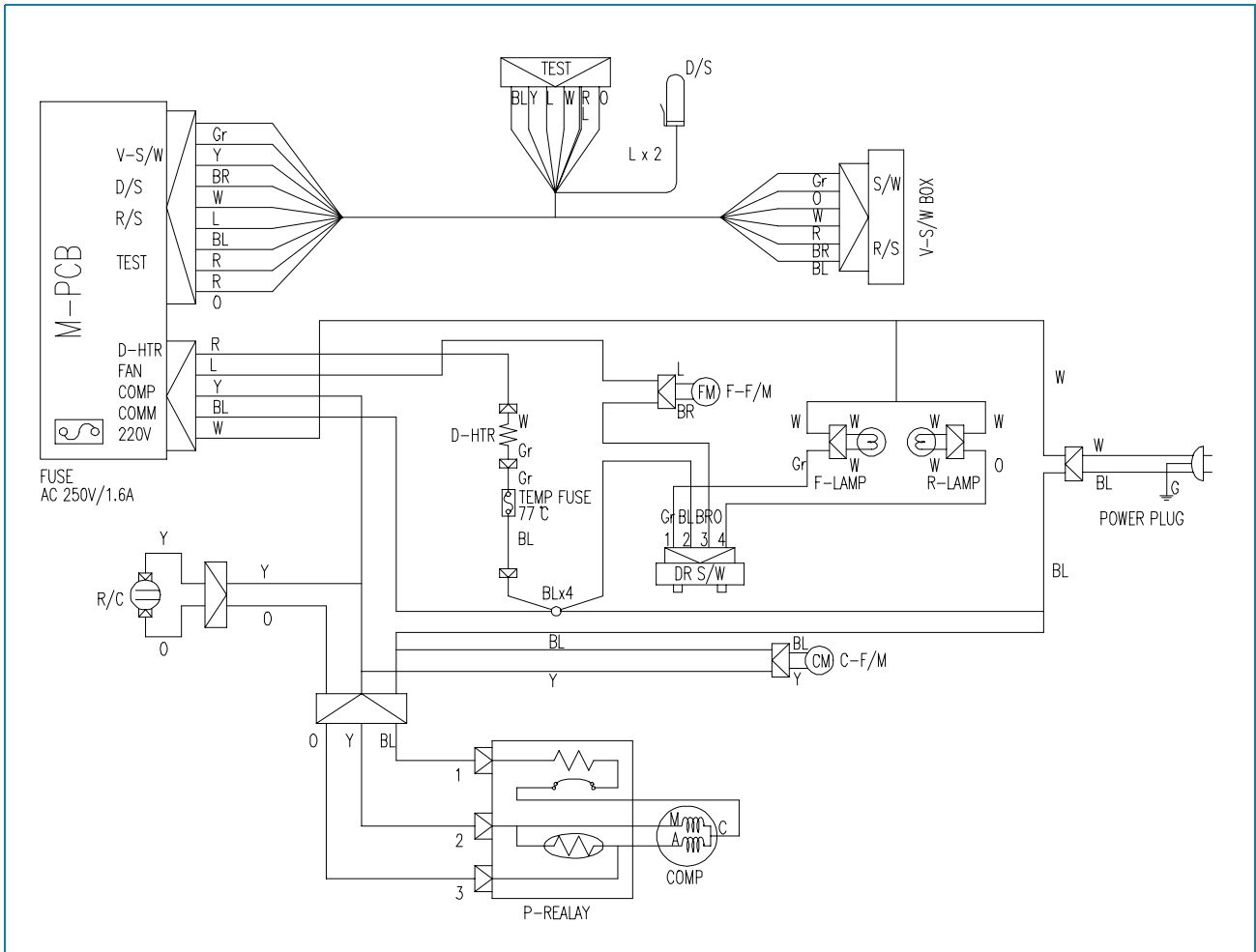
| NO | CONTROL FUNCTION                           | CONTROL OBJECTS         | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | REMARK |
|----|--------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 5  | Defrosting Mode                            | Comp<br>Fan<br>Heater   | <p>※ Normal Defrosting</p> <p>1. Starting by Defrosting Period</p> <p>2. How to Proceed</p> <p>1) Pre-Cool</p> <p>① Control Object : Comp On, Fan On, Heater Off</p> <p>② Proceeding Time : 25 minutes</p> <p>③ Terminating Condition : if R-Sensor temperature is below Middle-Off -1 °C</p> <p>2) Heater Defrosting</p> <p>① Control Object : Comp Off, Fan Off, Heater On</p> <p>② Limit Proceeding Time</p> <ul style="list-style-type: none"> <li>• 30 seconds : continious Heater-On regardless of D-Sensor temperature (right after the starting of Defrosting)</li> <li>• 30 minutes : D1 Error (D-Sensor Disconnection/Short-circuit)</li> <li>• 80 minutes : Normal control state</li> </ul> <p>③ Terminating Condition : Heater Off if D-Sensor temperature is over 10 °C</p> <p>④ D2 Error : when Heater returns by limit time (30 minutes or 80 minutes)</p> <p>3) Pause</p> <p>① Control Object : Comp Off, Fan Off, Heater Off</p> <p>② Proceeding Time : 4 minutes</p> <p>4) Fan Delay</p> <p>① Control Object : Unconditional Comp On, Fan Off, Heater Off"</p> <p>② Proceeding Time : 4 minutes<br/>( In case of the Option Mode for Comp-Fan Connection Working, Fan Delay is omitted.)</p> <p>PRE-COOL → HEATER DEFROSTING → PAUSE → FAN DELAY → NORMAL RUN</p> <p>※ Compulsory Defrosting of Heater in A/S(After Service)</p> <p>1. How to start ; the defrosting begins by pressing Defrosting Key 5 times.</p> <p>2. How to proceed</p> <p>1) Same as Normal Defrosting by omitting Pre-cool Mode</p> <p>2) Heater On unconditionally for the first 30 seconds regardless of D-Sensor temperature</p> |        |
| 6  | Action for Low Temperature of Compartments | R-Heater<br>Comp<br>Fan | <p>1. Conditions for Low Temperature</p> <p>1) Low Temperature A : RT-Sensor <math>\leq 13^{\circ}\text{C}</math></p> <p>2) Low Temperature B : <math>14^{\circ}\text{C} \leq \text{RT-Sensor} \leq 19^{\circ}\text{C}</math></p> <p>3) Sensing Difference of Low Temp. A, B : <math>1^{\circ}\text{C}</math></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |

| NO | CONTROL FUNCTION   | CONTROL OBJECTS   | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | REMARK |
|----|--------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|    |                    |                   | <p>2. How to control</p> <p>1) Conditions for Low Temp. A</p> <p>① R-Heater Off when Comp On</p> <p>② R-Heater On when Comp Off</p> <p>③ 20 seconds of preventing time for re-start of Comp</p> <p>④ R-Heater Off, if it is not the Low Temp. A or if it is RT-Sensor Disconnection/Short-circuit)</p> <p>2) Conditions for Low Temp. B</p> <p>① Middle On/Off Point <math>-1^{\circ}\text{C}</math> when Comp is running</p>                                                                                                                                                                                                                                                                                                         |        |
| 7  | Initial Defrosting | Defrosting Mode   | <p>1. If D-Sensor temperature <math>\leq 3.5^{\circ}\text{C}</math> in the initial power input, normal defrosting mode begins.</p> <p>2. It begins in the middle of the mode of Comp re-start prevention.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |        |
| 8  | Prevention of Comp | Comp              | <p>1. In order to protect Comp after Comp Off, it does not re-start for a certain time, though R-Sensor becomes On</p> <p>2. Re-start Prevention Time</p> <p>1) In case RT-Sensor temperature <math>\leq 13^{\circ}\text{C}</math> (Low Temp. A) : 20 minutes</p> <p>2) In case RT-Sensor temperature <math>\geq 14^{\circ}\text{C}</math> : 6minutes</p> <p>3) In case RT-Sensor disconnection/short-circuit : 6 minutes</p>                                                                                                                                                                                                                                                                                                         |        |
| 9  | Option Circuit     | Nothing Concerned | <p>1. Option for Weak Refrigeration</p> <p>1) Regulation of R-Sensor Off Point</p> <p>2) In case of Weak Refrigeration, take action as the followings.</p> <div style="text-align: center;"> </div> <p>① Resistance (R16) : Standard Resistance(31.4 kΩ) of R-Sensor in case of Normal Run</p> <p>② Resistance (R18) : Standard Resistance(21.5 kΩ) to make R-Sensor Off Point below <math>1.5^{\circ}\text{C}</math> in case of Weak Refrigeration</p> <p>③ SW1 : In A/S, R-Sensor Off Point decreases by <math>1.5^{\circ}\text{C}</math>, if SW1 is made Off.</p> <p style="margin-left: 40px;">R16 + SW1 = Middle Off Point</p> <p style="margin-left: 40px;">R16 + R18 = Middle Off Point - <math>1.5^{\circ}\text{C}</math></p> |        |

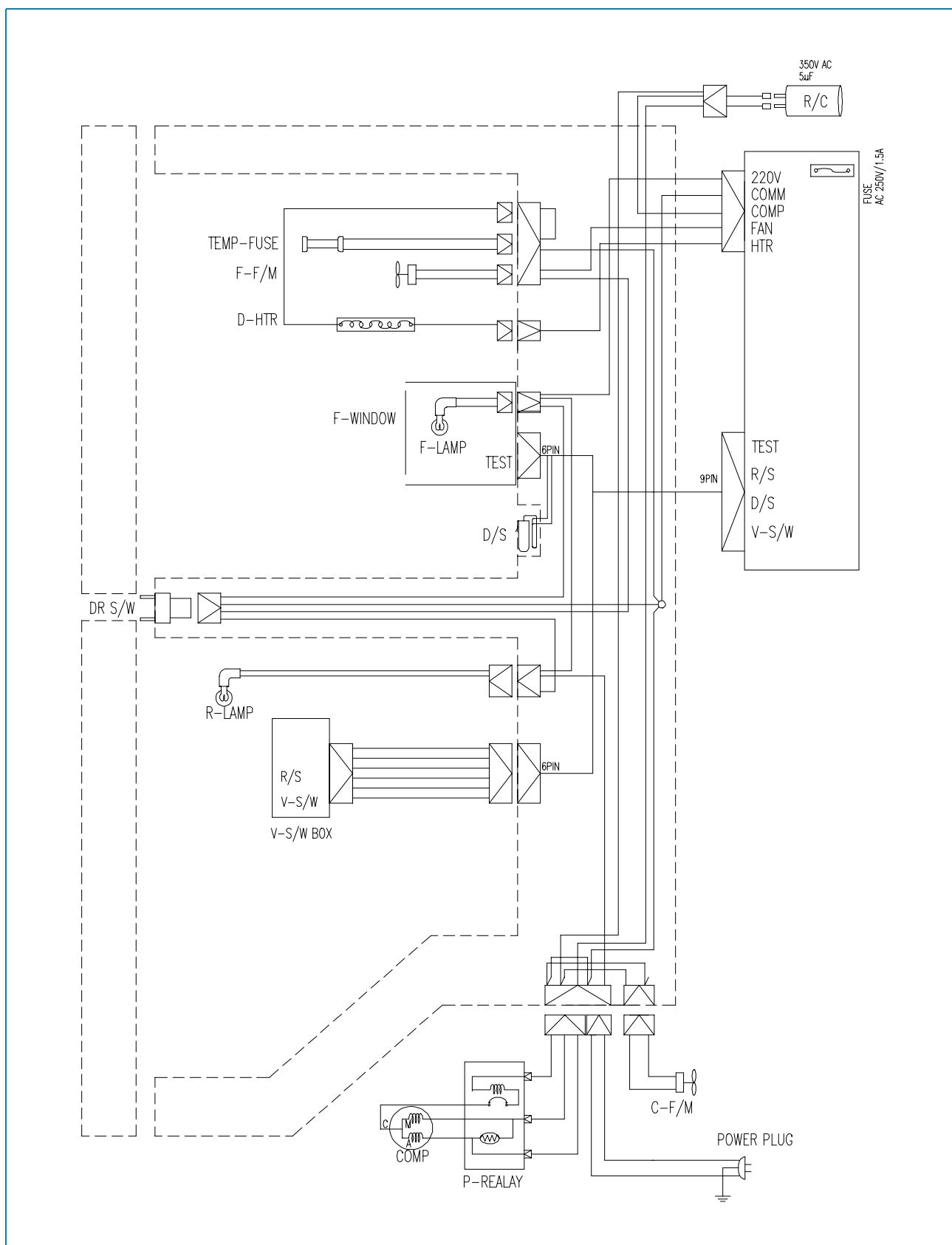
| NO                        | CONTROL FUNCTION                                                                   | CONTROL OBJECTS | CONTENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | REMARK       |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
|---------------------------|------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|----------|------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------|------|-------|------|---------|---------|------|------------------------|-------|------|-------|-------|-------|--|
| 10                        | Error Display and How to Control it                                                | LED             | <div>1. Priority of Error Display<br/>R1 &gt; D1 &gt; D2 &gt; C1 &gt; A/S Compulsary Defrosting</div> <div>2. Display Mode</div> <table><tr><th>Display Type</th><th>LED Output Mode</th></tr><tr><td>R1 ERROR</td><td></td></tr><tr><td>D1 ERROR</td><td></td></tr><tr><td>D2 ERROR</td><td></td></tr><tr><td>C1 ERROR</td><td></td></tr><tr><td>A/S Compulsary Defrosting</td><td></td></tr></table> <div>3. R1 Error</div> <div>1) Starting Condition : R-Sensor Disconnection/Short-circuit</div> <div>2) Display : Flickering once during LED Off</div> <div>3) How to control</div> <table><tr><th>RT-S</th><th>ERROR</th><th>~13℃</th><th>14℃~19℃</th><th>20℃~29℃</th><th>29℃~</th></tr><tr><td>Running Ratio (ON/OFF)</td><td>16/24</td><td>6/34</td><td>14/26</td><td>16/24</td><td>20/20</td></tr></table> <div>4) Ending Condition : ending automatically if R-Sensor is normal</div> <div>4. D1 Error</div> <div>1) Starting Condition : D-Sensor Disconnection/Short-circuit</div> <div>2) Display : Flickering twice during LED Off</div> <div>3) How to control : controlled by limit time of the return of defrosting(30 minutes)</div> <div>4) Ending Condition : ending automatically if D-Sensor is normal</div> <div>5. D2 Error</div> <div>1) Starting Condition : In Defrosting Mode, the return of Heater is done by limit time</div> <div>2) Display : Flickering 3 times during LED Off</div> <div>3) How to control : controlled by limit time of the return of defrosting</div> <div>① D1 Error : 30 minutes</div> <div>② Normal PCB Function (in case of Over Frosting/Heater Disconnection) : 80 seconds</div> <div>4) Ending Condition : ending automatically if Heater Off is done by D-Sensor temperature(10℃) at the next defrosting</div> <div>6. C1 Error</div> <div>1) Starting Condition : if Comp runs for 3 hours continuously when D-Sensor temperature is over -5℃</div> <div>2) Display : continuous On of LED</div> <div>3) How to control : nothing to control by Micom</div> <div>4) Ending Condition</div> <div>① ending automatically if Comp becomes Off by R-Sensor Off Point</div> <div>② in case of D1 Error</div> | Display Type | LED Output Mode | R1 ERROR |  | D1 ERROR |  | D2 ERROR |  | C1 ERROR |  | A/S Compulsary Defrosting |  | RT-S | ERROR | ~13℃ | 14℃~19℃ | 20℃~29℃ | 29℃~ | Running Ratio (ON/OFF) | 16/24 | 6/34 | 14/26 | 16/24 | 20/20 |  |
| Display Type              | LED Output Mode                                                                    |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| R1 ERROR                  |  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| D1 ERROR                  |  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| D2 ERROR                  |  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| C1 ERROR                  |  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| A/S Compulsary Defrosting |  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                 |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| RT-S                      | ERROR                                                                              | ~13℃            | 14℃~19℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20℃~29℃      | 29℃~            |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |
| Running Ratio (ON/OFF)    | 16/24                                                                              | 6/34            | 14/26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16/24        | 20/20           |          |                                                                                    |          |                                                                                    |          |                                                                                    |          |                                                                                    |                           |                                                                                    |      |       |      |         |         |      |                        |       |      |       |       |       |  |

# DIAGRAM

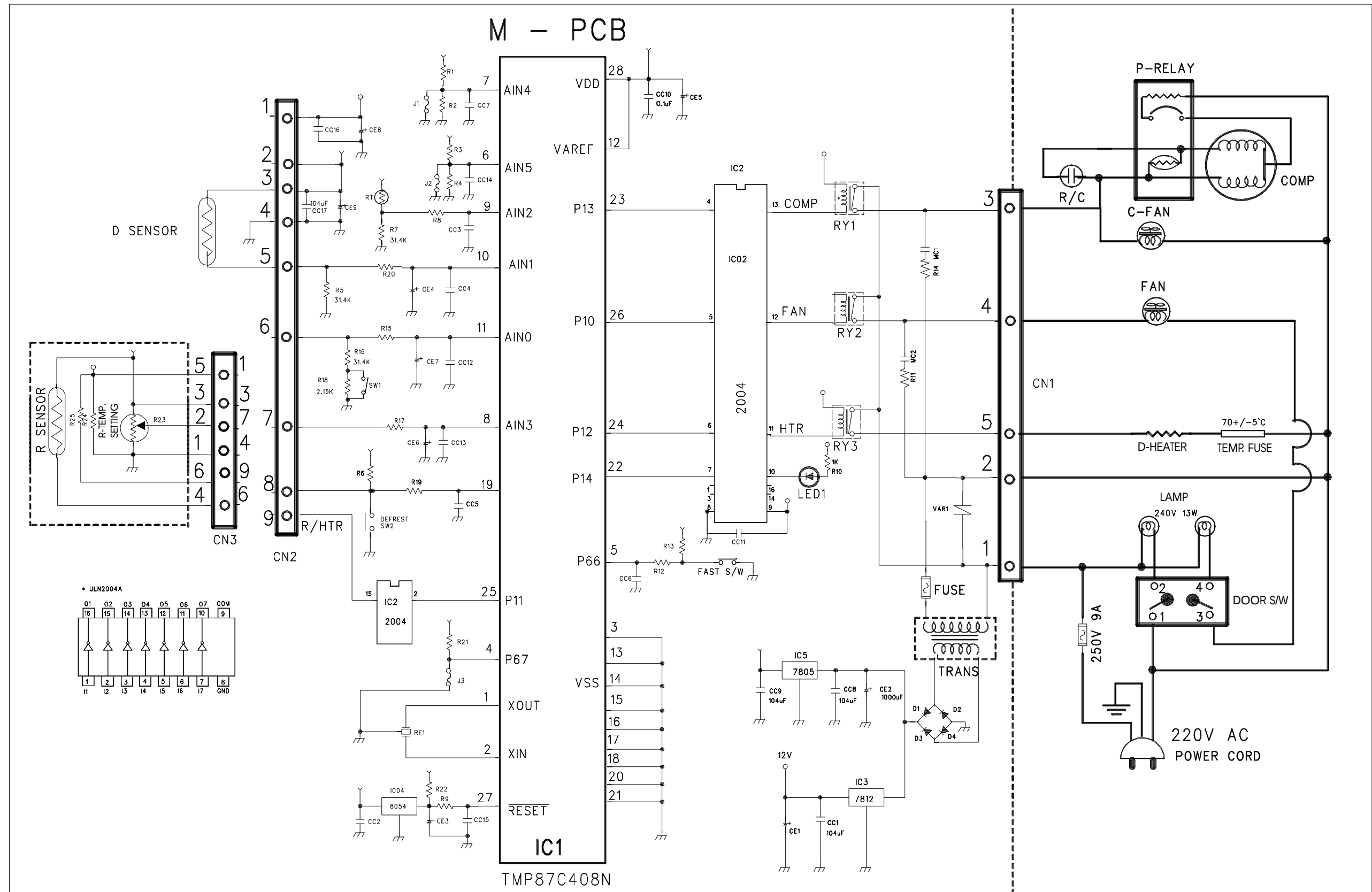
## 1. WIRING DIAGRAM



## 2. PARTICAL WIRING DIAGRAM



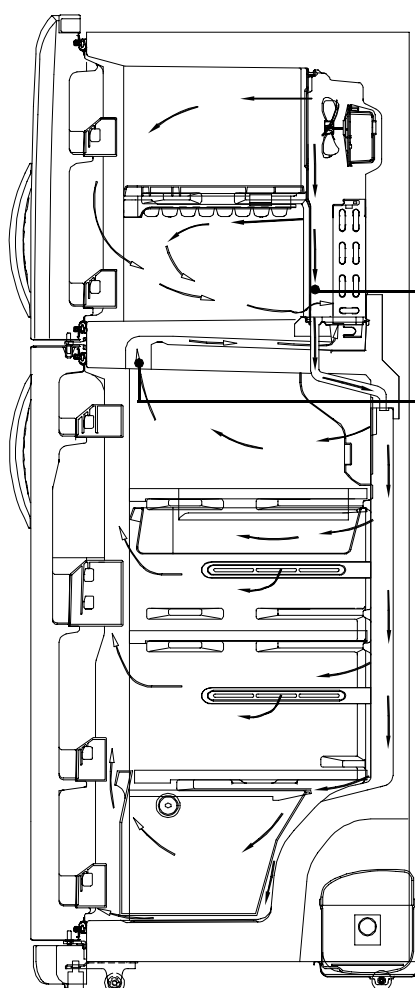
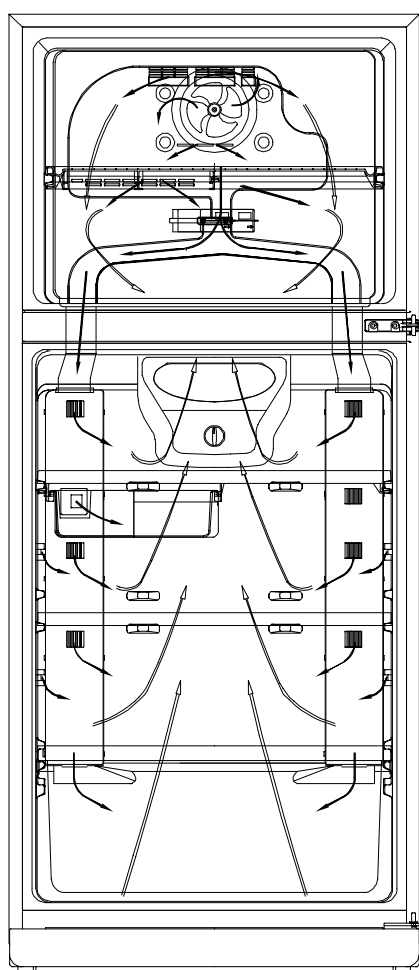
### 3. CIRCUIT DIAGRAM



#### 4. AIR FLOW DIAGRAM

##### Frezer

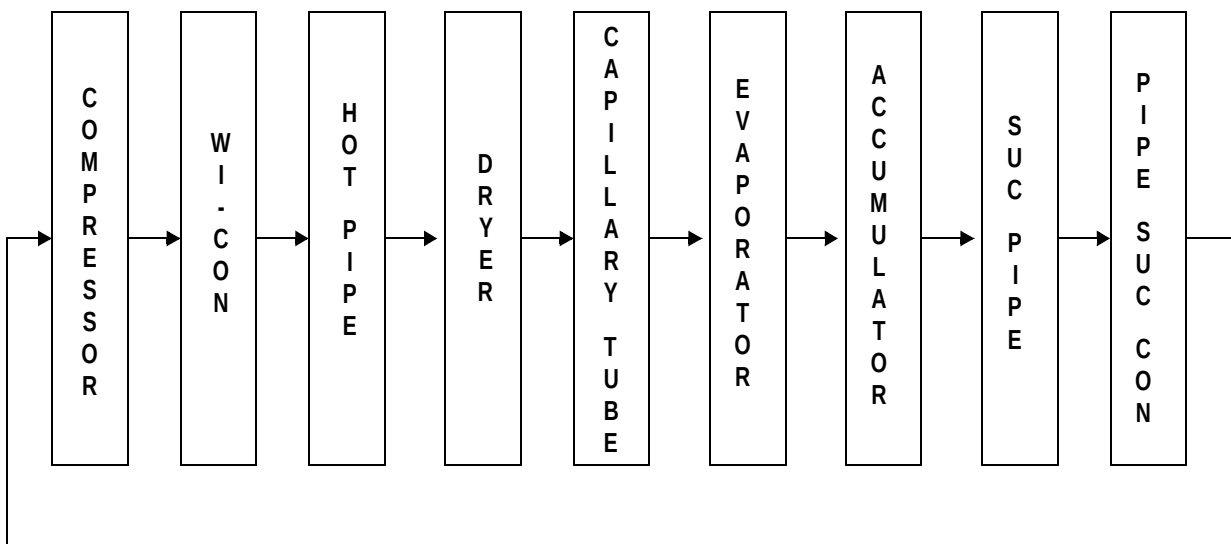
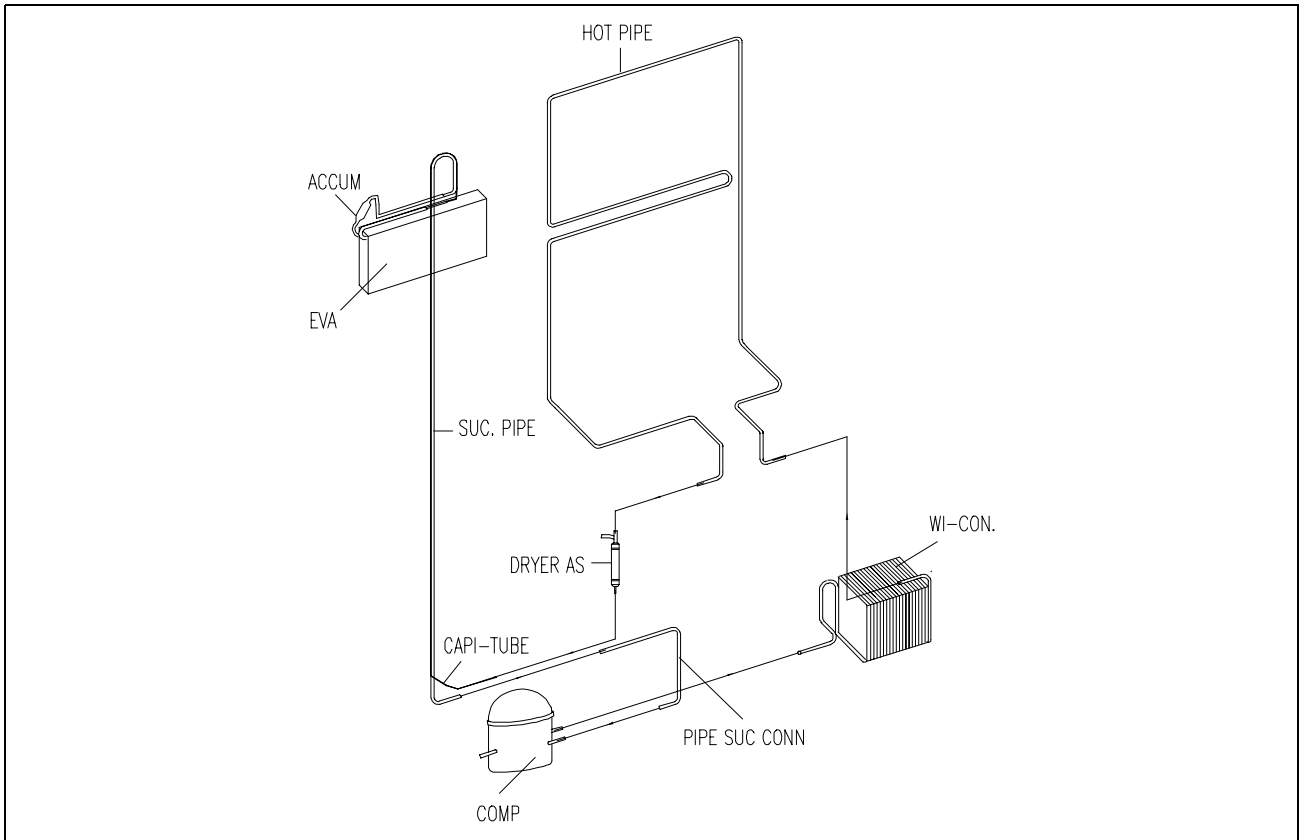
Please don't put bottles  
such as beer, beverage etc.  
It might be broken because of freezing.



##### Multiple outlet of cooling air

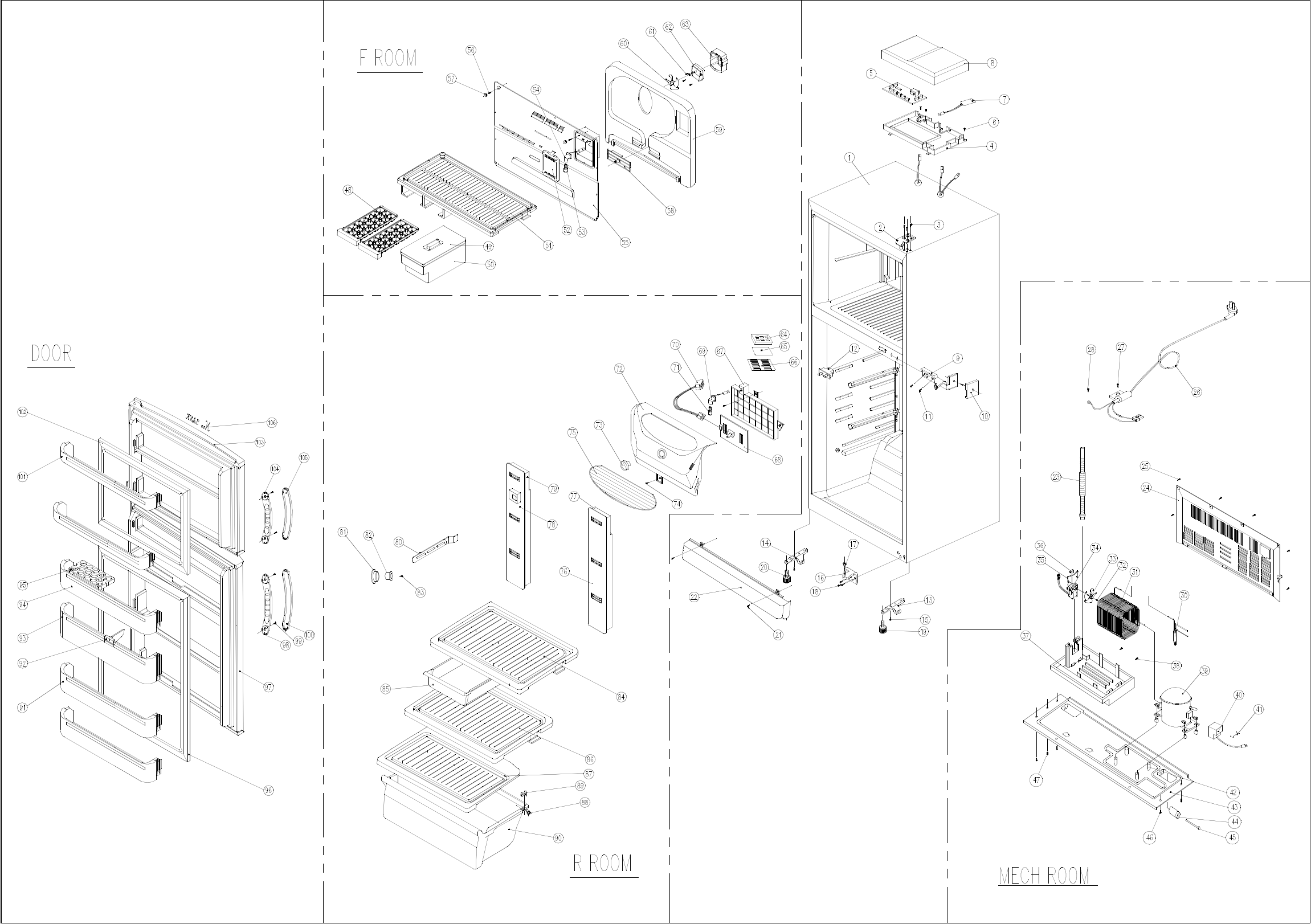
Please don't put in vegetable etc.  
which contain moisture.  
It might be frozen because of low temperatuer.

## 5. REFRIGRANT CYCLE DIAGRAM



# EXPLODED VIEW AND PARTS LIST

## 1. TOTAL EXPLODED VIEW



## 2. TOTAL PARTS LIST

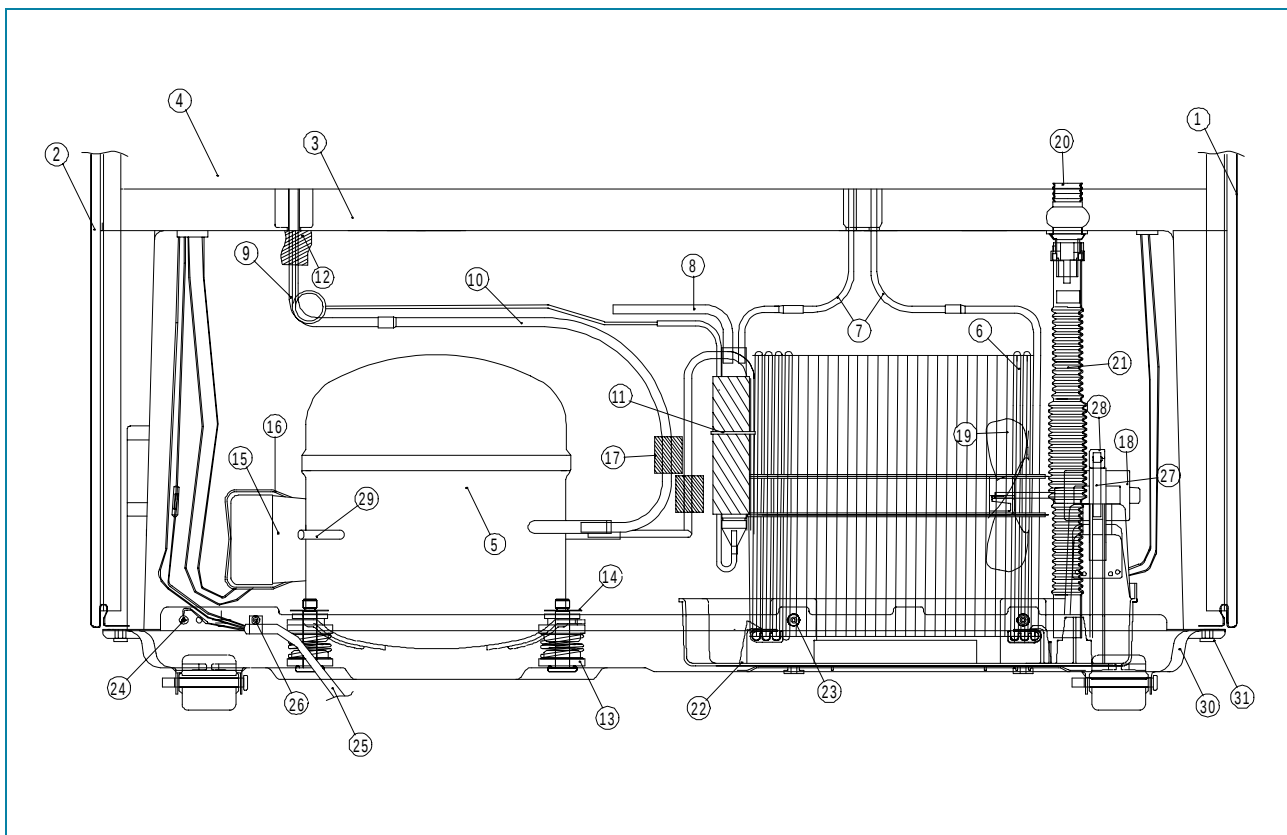
| NO | PART CODE  | PART NAME        | PART DESCRIPTION  | QUANTITY | REMARK      |
|----|------------|------------------|-------------------|----------|-------------|
| 1  | 3010074800 | ASSY CAB URT     | FR-520NT          | 1        |             |
| 2  | 3012910100 | HINGE *T         |                   | 1        |             |
| 3  | 3016001230 | SPECIAL BOLT T/U | 6X22 SWCH22A(WH)  | 3        |             |
| 4  | 3010511700 | BOX M/PCB        |                   | 1        |             |
| 5  |            | PCB MAIN AS      |                   | 1        | REFER TO #7 |
| 6  | 7112401211 | SCREW TAPPING    | MFZN, T1 TRS 4X12 | 3        |             |
| 7  |            | CAPACITOR        |                   | 1        | REFER TO #6 |
| 8  | 3011425300 | COVER M/PCB BOX  |                   | 1        |             |
| 9  | 3012905501 | HINGE *M         |                   | 1        |             |
| 10 | 3011424700 | COVER *M HI      |                   | 1        |             |
| 11 | 3016001220 | SPECIAL BOLT M   | 6X20 SWCH22A(WH)  | 3        |             |
| 12 | 3018100030 | SWITCH DR        |                   | 1        |             |
| 13 | 3012103000 | FOOT *F *R AS    |                   | 1        |             |
| 14 | 3012102900 | FOOT *F *L AS    |                   | 1        |             |
| 15 | 3016000700 | SPECIAL SCREW    | M6X15             | 2        |             |
| 16 | 3012906410 | HINGE *U AS      |                   | 1        |             |
| 17 | 3016005300 | SPECIAL WASR     |                   | 1        |             |
| 18 | 3016001230 | SPECIAL BOLT T/U | 6X22 SWCH22A(WH)  | 3        |             |
| 19 | 3012101500 | FOOT ADJ AS      |                   | 1        |             |
| 20 | 3012102500 | FOOT ADJ *L AS   |                   | 1        |             |
| 21 | 7112401211 | SCREW TAPPING    | MFZN, T1 TRS 4X12 | 2        |             |
| 22 | 3011439900 | COVER CAB BRKT   |                   | 1        |             |
| 23 | 3013202700 | HOSE DRN B       |                   | 1        |             |
| 24 | 3012401400 | GRILLE           |                   | 1        |             |
| 25 | 7112401211 | SCREW TAPPING    | MFZN, T1 TRS 4X12 | 6        |             |
| 26 |            | CORD POWER AS    |                   | 1        | REFER TO #9 |
| 27 | 7112401211 | SCREW TAPPING    | MFZN, T1 TRS 4X12 | 1        |             |
| 28 | 7001400865 | SCREW MACHINE    | PAN 4X8 BSNI      | 1        |             |
| 29 | 3011302900 | FUSE GLASS TUBE  |                   | 1        |             |
| 30 |            | DRYER AS         |                   | 1        | REFER TO #8 |
| 31 | 3014423900 | PIPE WICON AS    |                   | 1        |             |
| 32 | 3011200500 | CLAMP FAN        |                   | 1        |             |
| 33 | 3011800400 | FAN              |                   | 1        |             |
| 34 |            | MOTOR C          |                   | 1        | REFER TO #7 |
| 35 | 3012004400 | FIXTURE C MOTR   |                   | 1        |             |
| 36 | 3010102100 | ABSORBER C MOTR  |                   | 1        |             |
| 37 | 3011118000 | CASE VAPORI      |                   | 1        |             |

## EXPLODED VIEW AND PARTS LIST

| NO | PART CODE  | PART NAME          | PART DESCRIPTION  | QUANTITY | REMARK      |
|----|------------|--------------------|-------------------|----------|-------------|
| 38 | 7112401211 | SCREW TAPPING      | MFZN, T1 TRS 4X12 | 2        |             |
| 39 |            | COMPRESSOR         |                   | 1        | REFER TO #5 |
| 40 |            | SWITCH P RELAY AS  |                   | 1        | REFER TO #5 |
| 41 | 3012610000 | CLAMP BAND RELAY   |                   | 1        |             |
| 42 | 4010G01123 | SPECIAL BOLT       |                   | 1        |             |
| 43 | 3010314900 | BASE COMP          |                   | 1        |             |
| 44 | 3016500000 | CASTER *B          |                   | 2        |             |
| 45 | 3014902900 | SHAFT CASTR *B     |                   | 2        |             |
| 46 | 3016003300 | SPECIAL BOLT       | T2 M6.5X20        | 4        |             |
| 47 | 3016003400 | SPECIAL BOLT       | T1 M5.0X14        | 1        |             |
| 48 | 3011110200 | CASE ICING         |                   | 2        |             |
| 49 | 3011439800 | COVER ICE BOX      |                   | 1        |             |
| 50 | 3010513000 | BOX ICE            |                   | 1        |             |
| 51 | 3017807500 | SHELF F            |                   | 1        |             |
| 52 | 3015504200 | WINDOW F           |                   | 1        |             |
| 53 | 3013600030 | LAMP AS            | 240V/15W (E14)    | 1        |             |
| 54 | 3017903400 | SOCKET F LAMP AS   |                   | 1        |             |
| 55 | 3018902700 | LOUVER F           |                   | 1        |             |
| 56 | 7112401811 | SCREW TAPPING      | MFZN, T1 TRS 4X18 | 2        |             |
| 57 | 3010924600 | CAP F LUVR         |                   | 1        |             |
| 58 | 3013402100 | KNOB F CONTL       |                   | 1        |             |
| 59 | 3013331700 | INSU F LUVR        |                   | 1        |             |
| 60 | 3011800400 | FAN                |                   | 1        |             |
| 61 | 3012007300 | FIXTURE MOTR B     |                   | 1        |             |
| 62 | 3012004001 | FIXTURE MOTR       |                   | 1        |             |
| 63 | 7112401611 | SCREW TAPPING      | MFZN, T1 TRS 4X16 | 3        |             |
| 64 | 3018700100 | DEODRANT AU RETURN |                   | 1        |             |
| 65 | 3018700700 | DEODRANT SHEET     |                   | 1        |             |
| 66 | 3011102501 | CASE DEO A         |                   | 1        |             |
| 67 | 3010512900 | BOX V/SW PCB       |                   | 1        |             |
| 68 | 3014305400 | PCB V/SW AS        |                   | 1        |             |
| 69 | 3017903300 | SOCKET R LAMP AS   |                   | 1        |             |
| 70 | 3013600030 | LAMP AS            | 240V/15W (E14)    | 1        |             |
| 71 | 3012720600 | HARNESS V/SW AS    |                   | 1        |             |
| 72 | 3011439600 | COVER PCB V/SW BOX |                   | 1        |             |
| 73 | 3013402000 | KNOB CONTL         |                   | 1        |             |
| 74 | 7112401211 | SCREW TAPPING      | MFZN, T1 TRS 4X12 | 1        |             |
| 75 | 3015504000 | WINDOW R           |                   | 1        |             |
| 76 | 3018906400 | LOUVER R *S *R     | FR-520NT          | 1        |             |

| NO  | PART CODE  | PART NAME            | PART DESCRIPTION                | QUANTITY | REMARK       |
|-----|------------|----------------------|---------------------------------|----------|--------------|
| 77  | 3013331200 | INSU R *S *R         | FR-520NT                        | 1        |              |
| 78  | 3018906300 | LOUVER R *S *L       | FR-520NT                        | 1        |              |
| 79  | 3013331100 | INSU R *S *L         | FR-520NT                        | 1        |              |
| 80  | 3011439500 | COVER CUBIC/D        |                                 | 4        |              |
| 81  | 3014700600 | ROLLER V/CASE FIXR   |                                 | 2        |              |
| 82  | 3015303600 | SUPPORTER V/CASE ROL |                                 | 2        |              |
| 83  | 7112402011 | SCREW TAPPING        | MFZN, T1 TRS 4X20               | 2        |              |
| 84  | 3017802300 | SHELF R *T           |                                 | 1        |              |
| 85  | 3011117800 | CASE CHILLED         |                                 | 1        |              |
| 86  | 3017805100 | SHELF R *U           |                                 | 1        |              |
| 87  | 3011439700 | COVER V/CASE         |                                 | 1        |              |
| 88  | 3014700500 | ROLLER V/CASE        |                                 | 2        |              |
| 89  | 3011432800 | COVER ROLL A         |                                 | 2        |              |
| 90  | 3011117700 | CASE VEGETB          |                                 | 1        |              |
| 91  | 3019011000 | POCKET MULT          | GPPS, FR-520NT(3)               | 1        |              |
| 92  | 3012505700 | GUIDE JUMBO POCKT    |                                 | 1        |              |
| 93  | 3019010900 | POCKET JUMBO         |                                 | 1        |              |
| 94  | 3019008900 | POCKET EGG           |                                 | 2        |              |
| 94  | 3019008900 | POCKET EGG           |                                 | 1        |              |
| 95  | 3011117600 | CASE EGG             |                                 | 2        |              |
| 96  | 3012304400 | GASKET R DR AS       | FR-520NT                        | 1        |              |
| 97  |            | ASSY R DR            |                                 | 1        | REFER TO #10 |
| 98  | 3012610600 | HANDLE R             |                                 | 1        |              |
| 99  | 7051501611 | SCREW MACHINE        | MFZN, PAN 5X16 SW<br>FRB-5460CT | 4        |              |
| 100 | 3011608400 | DECO R HNDL          |                                 | 1        |              |
| 101 | 3019011100 | POCKET F             |                                 | 2        |              |
| 102 | 3012301400 | GASKET F DR AS       |                                 | 1        |              |
| 103 |            | ASSY F DR            |                                 | 1        | REFER TO #10 |
| 104 | 3012610500 | HANDLE F             |                                 | 1        |              |
| 105 | 3011608300 | DECO F HNDL          |                                 | 1        |              |
| 106 | 3014516740 | PLATE TANK EBLM AS   |                                 | 1        |              |

## 3. MACHINE ROOM EXPLODED VIEW AND PARTS LIST



| NO | PART NAME       | NO | PART NAME          | NO | PART NAME        |
|----|-----------------|----|--------------------|----|------------------|
| 1  | PLATE CAB *L    | 11 | CABLE TIE          | 21 | HOSE DRN B       |
| 2  | PLATE CAB *R    | 12 | ABSORBER PIPE      | 22 | CASE VAPORI      |
| 3  | BASE CAB        | 13 | ABSORBER COMP AS   | 23 | SCREW TAPPING    |
| 4  | COVER CAB       | 14 | WASHER SPECIAL     | 24 | SCREW MACHINE    |
| 5  | COMPRESSOR      | 15 | WSWITEC P-RELAY AS | 25 | CORD POWER AS    |
| 6  | PIPE WI-CON AS  | 16 | BAND RELAY         | 26 | SCREW TAPPING    |
| 7  | PIPE HOT        | 17 | ABSORBER PIPE A    | 27 | FIXTURE C MOTOR  |
| 8  | DRYER AS        | 18 | MOTOR C            | 28 | ABSORBER C MOTOR |
| 9  | PIPE SUCTION AS | 19 | FAN                | 29 | PIPE SERVICE     |
| 10 | PIPE SUC CONN   | 20 | HOSE DRN A         | 30 | BASE COMP AS     |