

CAUTION!
PLEASE KEEP POWER
SWITCH ON BEFORE
OPERATING THIS EQUIPMENT

Commercial Refrigerator & Freezer Service Manual

Please read this manual completely before attempting to install or operate this equipment!

M3 Series **SOLID DOOR / GLASS DOOR**

| | |
|---------|---------|
| M3R24-1 | M3F24-1 |
| M3R47-2 | M3F47-2 |
| M3R72-3 | M3F72-3 |
| M3R24-2 | M3F24-2 |
| M3R47-4 | M3F47-4 |
| M3R72-6 | M3F72-6 |

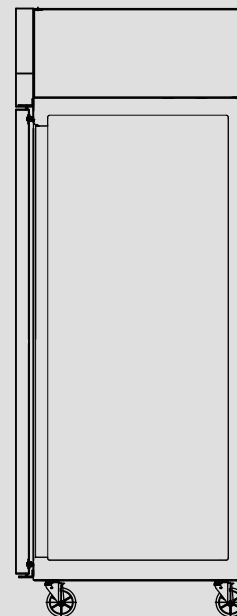
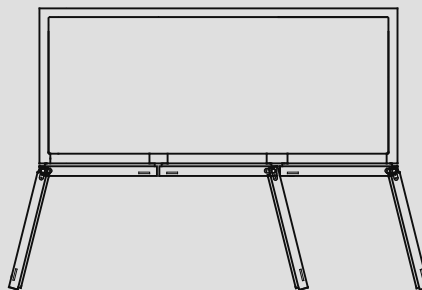
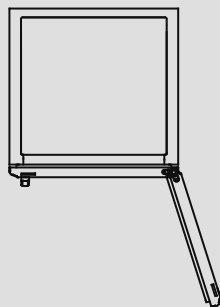


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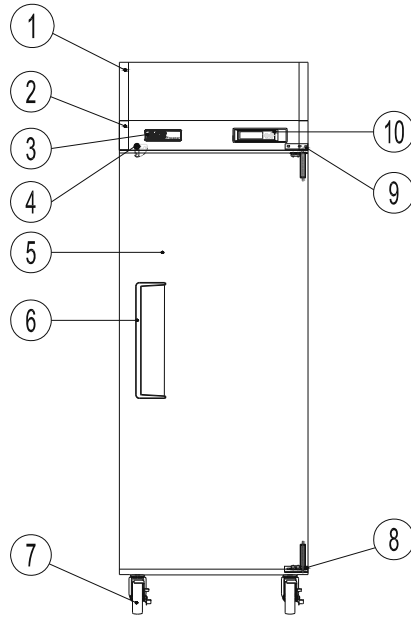
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- 7-2. REPLACE DOOR
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 - 7-3-2 . REPLACE T SENSOR AND D SENSOR
 - 7-3-3. REPLACE THE EVAPORATOR COIL AND F-SENSER
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- 7-5. CONDENSER UNIT
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1.FEATURE CHART

1-1.FRONT VIEW/PLAN VIEW (1DOOR)

MODEL: M3R24-1 M3F24-1

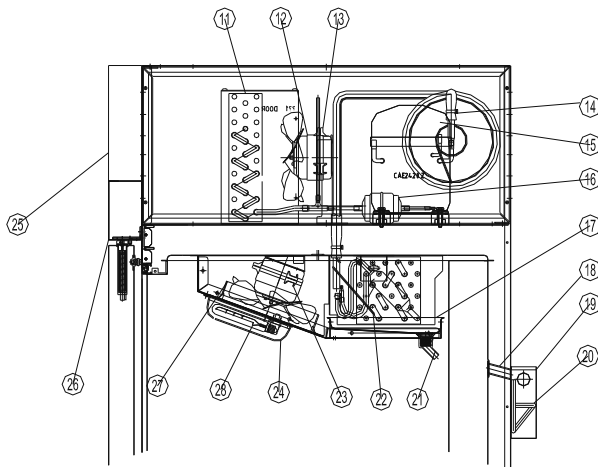
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 TOP HINGE
- 10 FRONT PCB CASE
- 11 CONDENSER
- 12 CONDENSER MOTOR
- 13 MOTOR BRACKET
- 14 SUCTION PIPE
- 15 COMPRESSOR

MODEL: M3R24-1 M3R24-2

PLAN VIEW

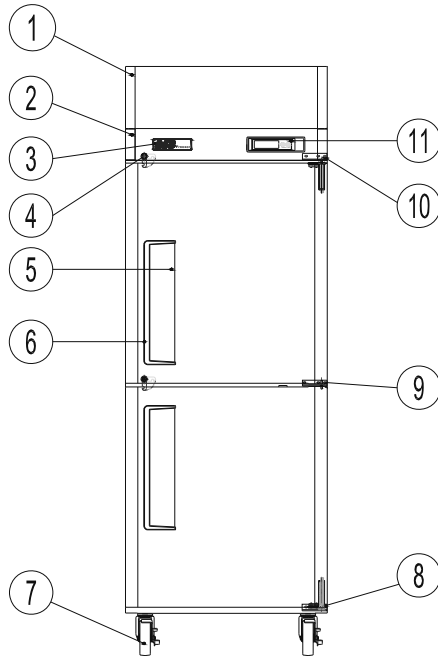


- 16 DRYER
- 17 DRAIN PAN
- 18 DRAIN GUIDE
- 19 DRAIN CASE
- 20 DRAIN PIPE
- 21 DRAIN CONNECTOR
- 22 EVAPORATOR
- 23 EVAPORATOR MOTOR
- 24 LAMP COVER
- 25 TOP GRILE T
- 26 TOP GRILE B
- 27 EVAPORATOR COVER
- 28 LAMP

FEATURE CHART

MODEL: M3R24-2 M3F24-2

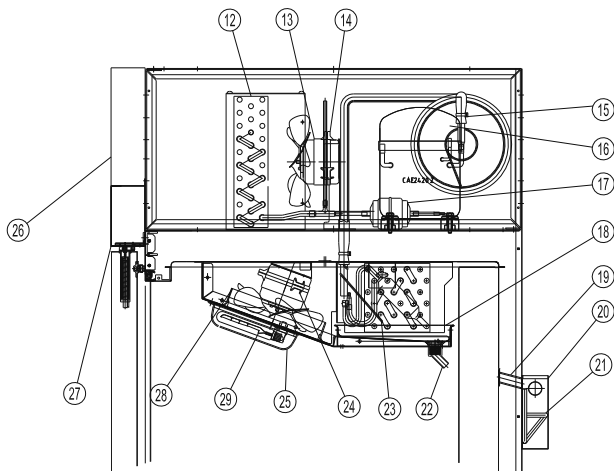
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 MIDDLE HINGE
- 10 TOP HINGE
- 11 FRONT PCB CASE
- 12 CONDENSER
- 13 CONDENSER MOTOR
- 14 MOTOR BRACKET
- 15 SUCTION PIPE
- 16 COMPRESSOR

MODEL: M3R24-1 M3R24-2

PLAN VIEW



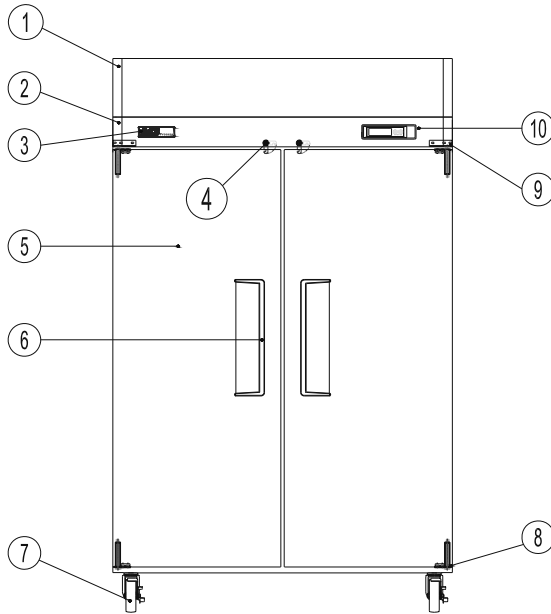
- 17 DRYER
- 18 DRAIN PAN
- 19 DRAIN GUIDE
- 20 DRAIN CASE
- 21 DRAIN PIPE
- 22 DRAIN CONNECTOR
- 23 EVAPORATOR
- 24EVAPORATOR MOTOR
- 25 LAMP COVER
- 26 TOP GRILE T
- 27TOP GRILE B
- 28EVAPORATOR COVER
- 29 LAMP

FEATURE CHAR

1-2.FRONT VIEW/PLAN VIEW (2DOOR)

MODEL: M3R47-2 M3F47-2

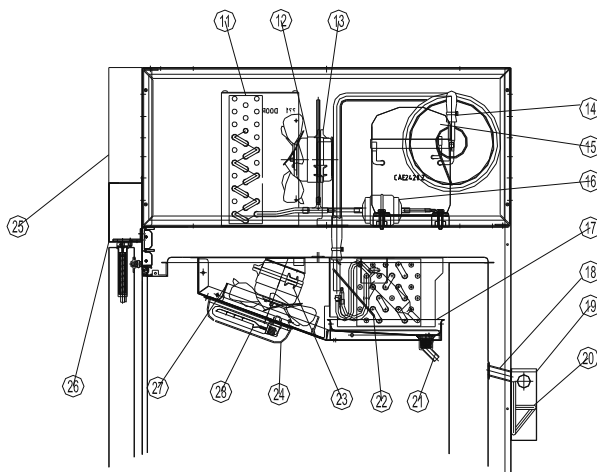
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 TOP HINGE
- 10 FRONT PCB CASE
- 11 CONDENSER
- 12 CONDENSER MOTOR
- 13 MOTOR BRACKET
- 14 SUCTION PIPE
- 15 COMPRESSOR

MODEL: M3R47-2 M3R47-4

PLAN VIEW

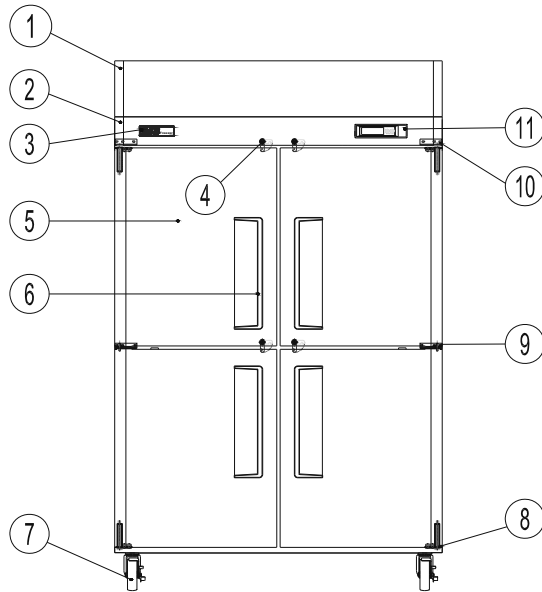


- 16 DRYER
- 17 DRAIN PAN
- 18 DRAIN GUIDE
- 19 DRAIN CASE
- 20 DRAIN PIPE
- 21 DRAIN CONNECTOR
- 22 EVAPORATOR
- 23 EVAPORATOR MOTOR
- 24 LAMP COVER
- 25 TOP GRILE T
- 26 TOP GRILE B
- 27 EVAPORATOR COVER
- 28 LAMP

FEATURE CHART

MODEL: M3R47-4 M3F47-4

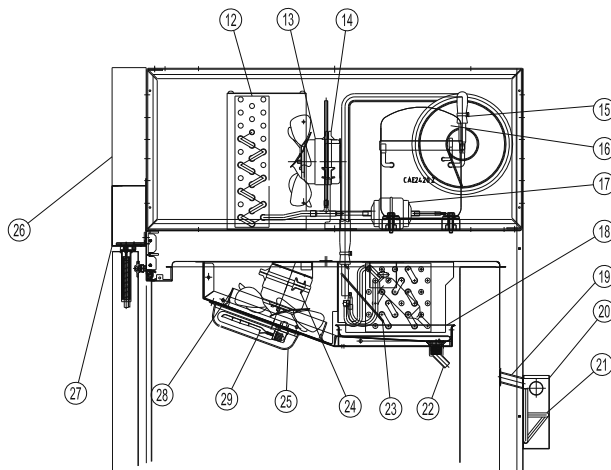
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 MIDDLE HINGE
- 10 TOP HINGE
- 11 FRONT PCB CASE
- 12 CONDENSER
- 13 CONDENSER MOTOR
- 14 MOTOR BRACKET
- 15 SUCTION PIPE
- 16 COMPRESSOR

MODEL: M3F47-2 M3F47-4

PLAN VIEW

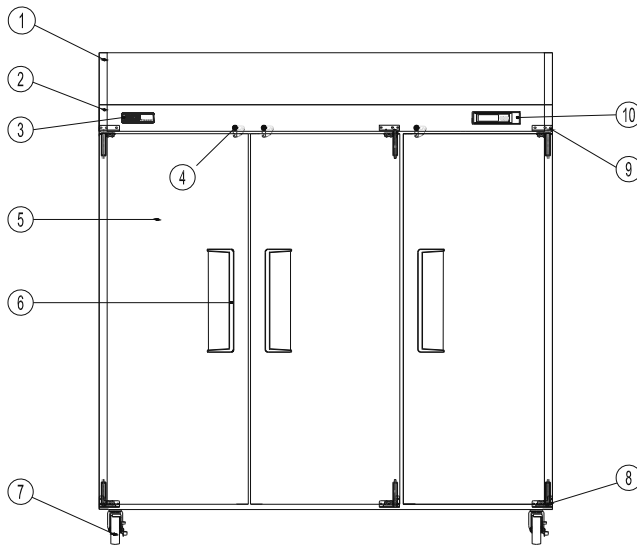


- 17 DRYER
- 18 DRAIN PAN
- 19 DRAIN GUIDE
- 20 DRAIN CASE
- 21 DRAIN PIPE
- 22 DRAIN CONNECTOR
- 23 EVAPORATOR
- 24 EVAPORATOR MOTOR
- 25 LAMP COVER
- 26 TOP GRILE T
- 27 TOP GRILE B
- 28 EVAPORATOR COVER
- 29 LAMP

1-3.FRONT VIEW/PLAN VIEW (3DOOR)

MODEL: M3R72-3 M3F72-3

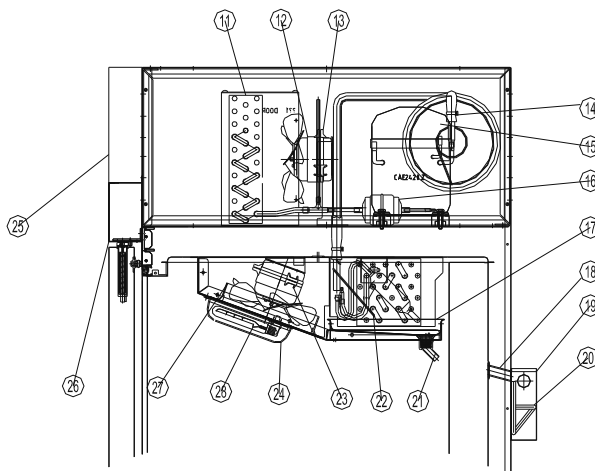
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 TOP HINGE
- 10 FRONT PCB CASE
- 11 CONDENSER
- 12 CONDENSER MOTOR
- 13 MOTOR BRACKET
- 14 SUCTION PIPE
- 15 COMPRESSOR

MODEL: M3R72-3 M3R72-6

PLAN VIEW

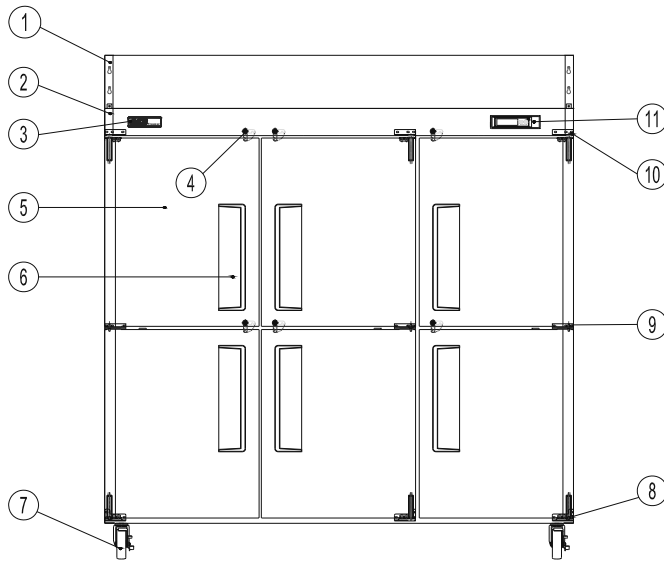


- 16 DRYER
- 17 DRAIN PAN
- 18 DRAIN GUIDE
- 19 DRAIN CASE
- 20 DRAIN PIPE
- 21 DRAIN CONNECTOR
- 22 EVAPORATOR
- 23 EVAPORATOR MOTOR
- 24 LAMP COVER
- 25 TOP GRILE T
- 26 TOP GRILE B
- 27 EVAPORATOR COVER
- 28 LAMP

FEATURE CHART

MODEL: M3R72-6 M3F72-6

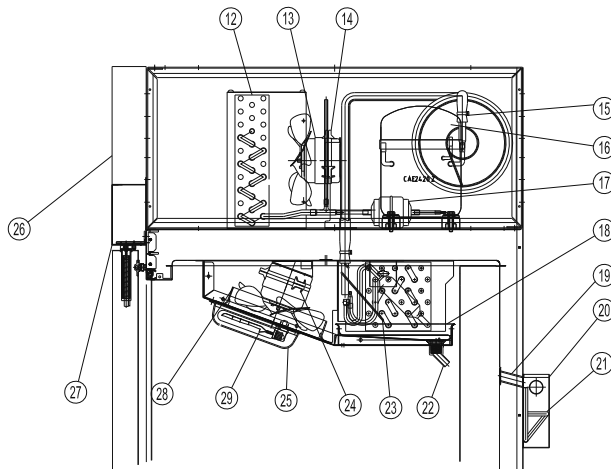
FRONT VIEW



- 1 TOP GRILLE(T)
- 2 TOP GRILLE(B)
- 3 MASCOT
- 4 KEY
- 5 ASS'Y DOOR
- 6 DOOR HANDLE
- 7 CASTER
- 8 BOTTOM HINGE
- 9 MIDDLE HINGE
- 10 TOP HINGE
- 11 FRONT PCB CASE

MODEL: M3F47-2 M3F47-4

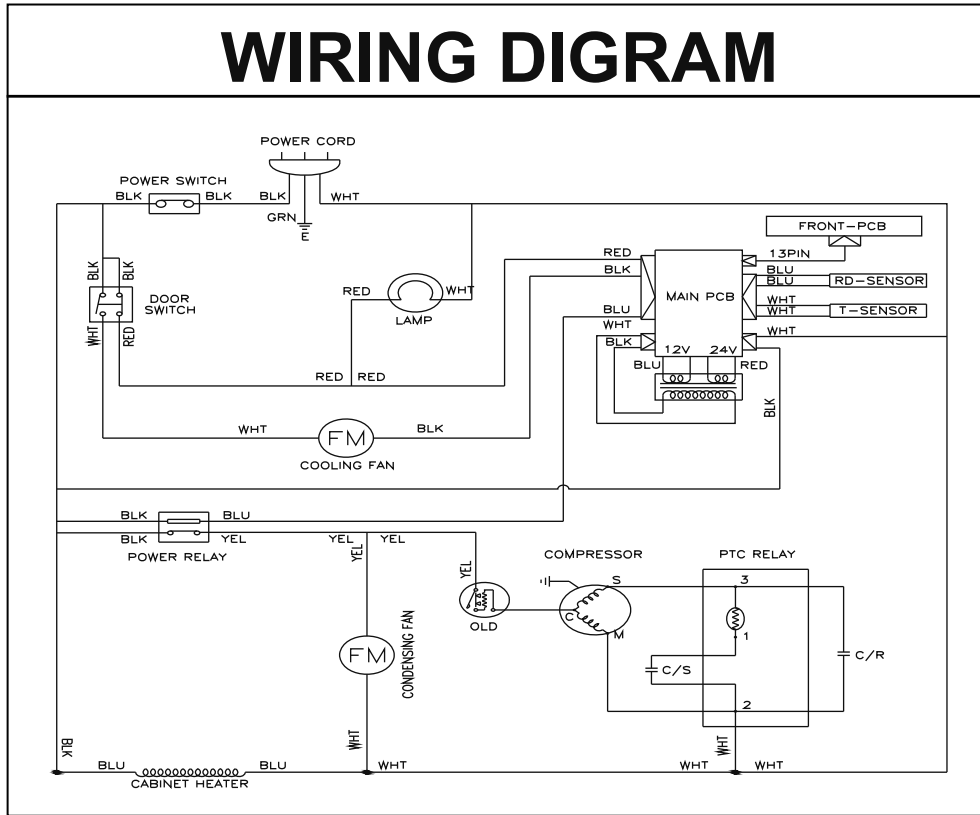
PLAN VIEW



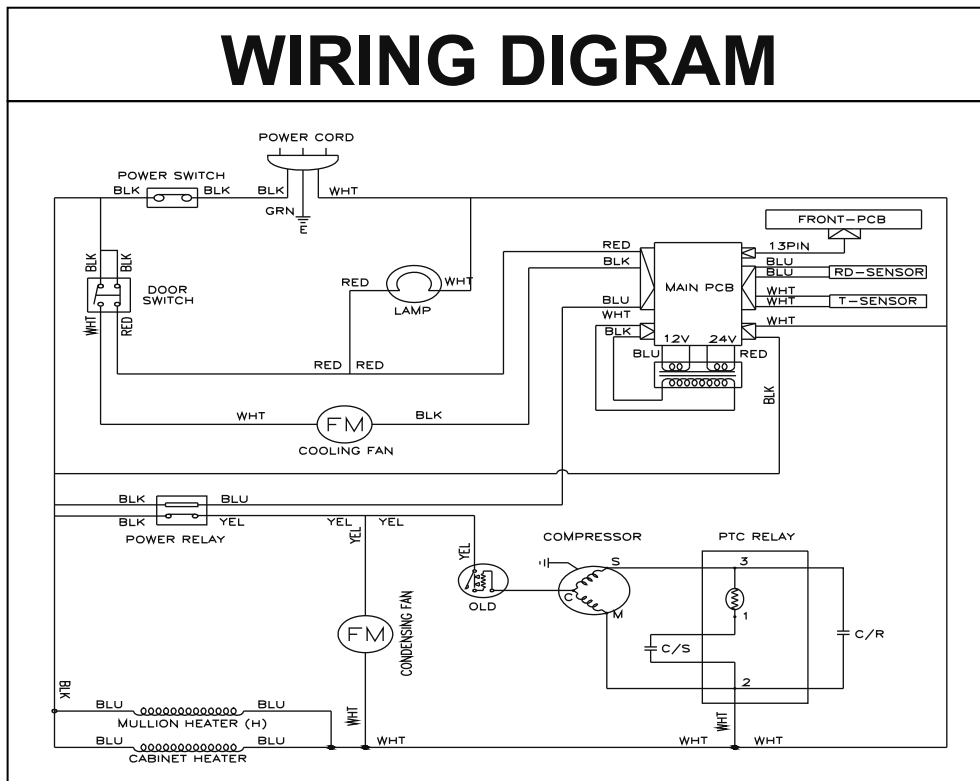
- 12 CONDENSER
- 13 CONDENSER MOTOR
- 14 MOTOR BRACKET
- 15 SUCTION PIPE
- 16 COMPRESSOR
- 17 DRYER
- 18 DRAIN PAN
- 19 DRAIN GUIDE
- 20 DRAIN CASE
- 21 DRAIN PIPE
- 22 DRAIN CONNECTOR
- 23 EVAPORATOR
- 24 EVAPORATOR MOTOR
- 25 LAMP COVER
- 26 TOP GRILE T
- 27 TOP GRILE B
- 28 EVAPORATOR COVER
- 29 LAMP

2. WIRING DIAGRAMS

2-1. M3R24-1

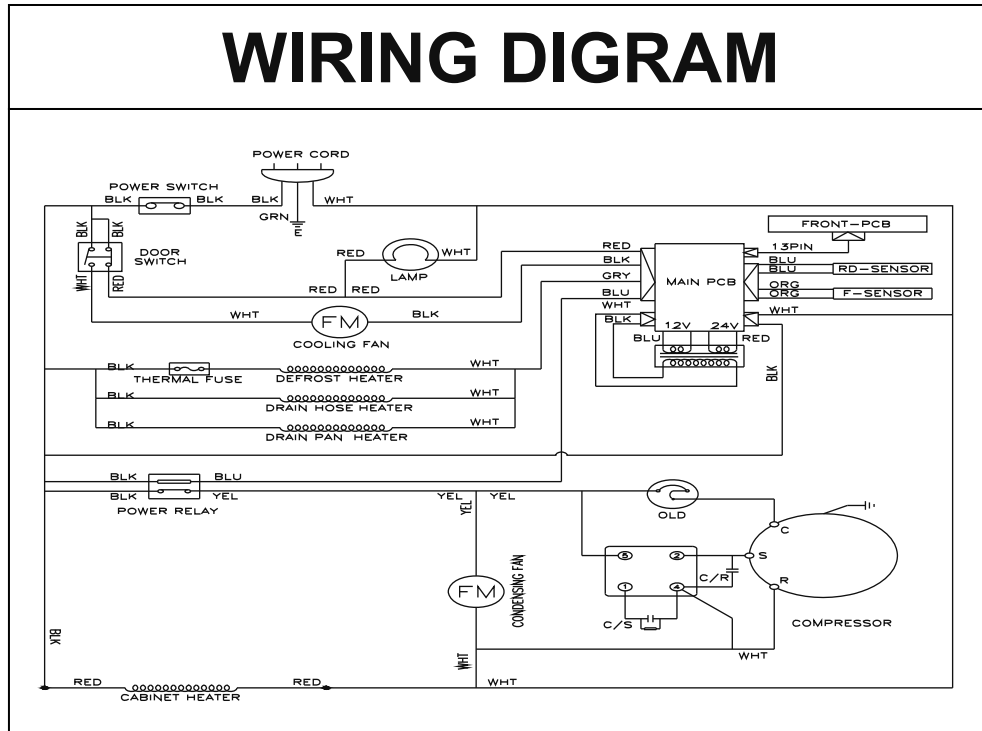


2-2. M3R24-2

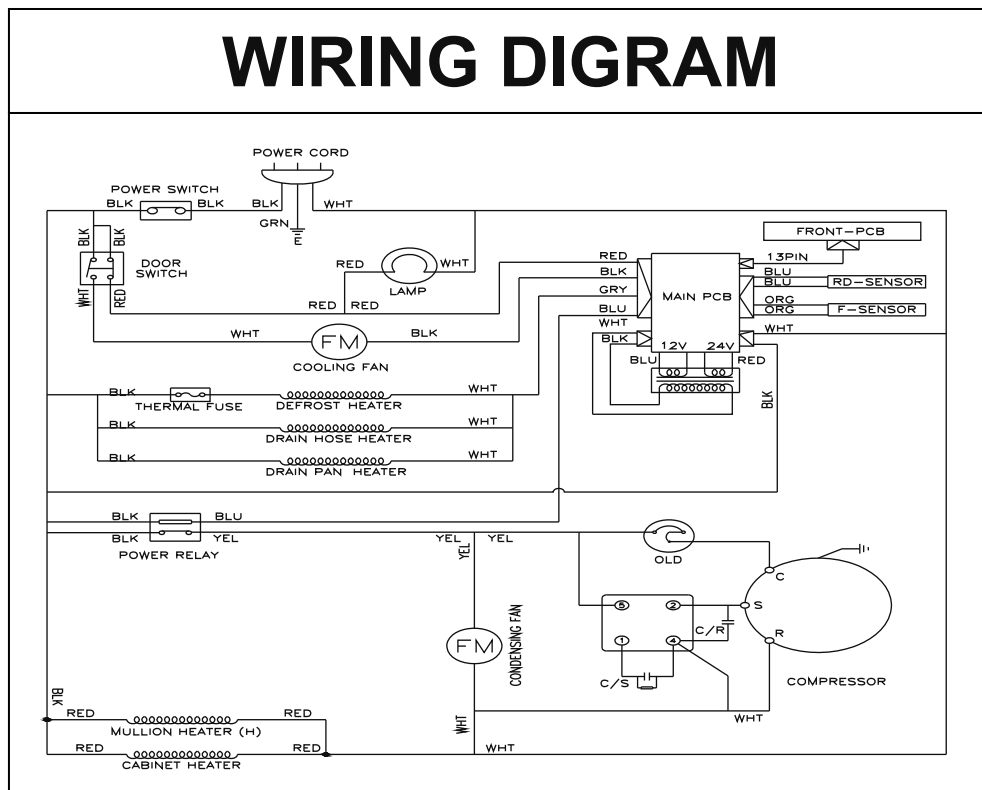


WIRINGDIAGRAMS

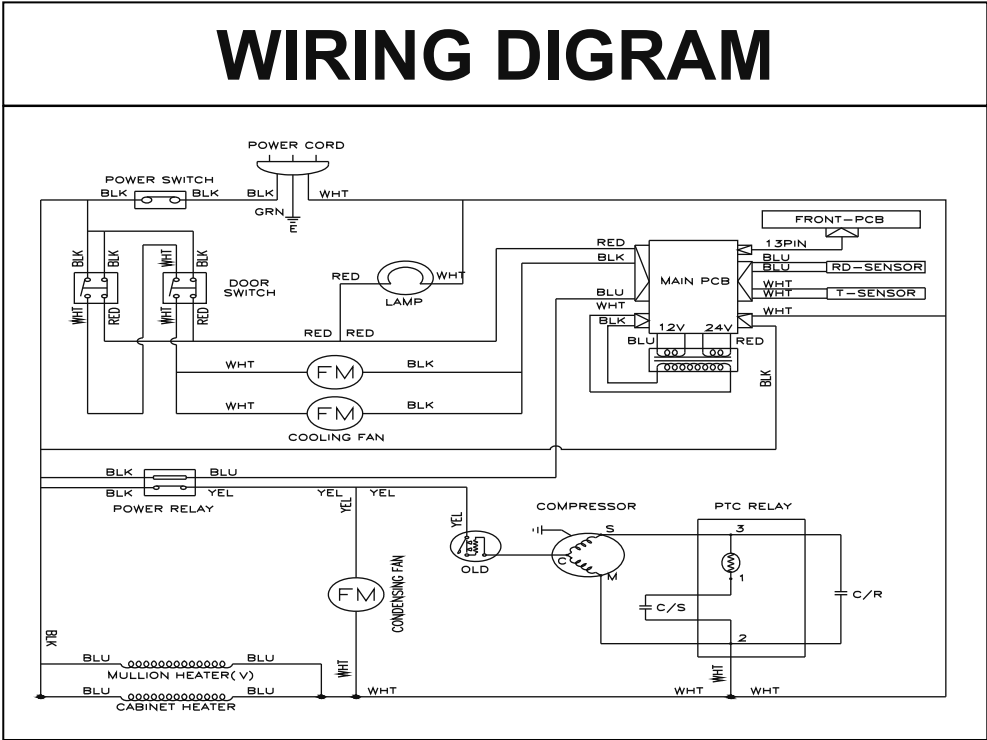
2-3. M3F24-1



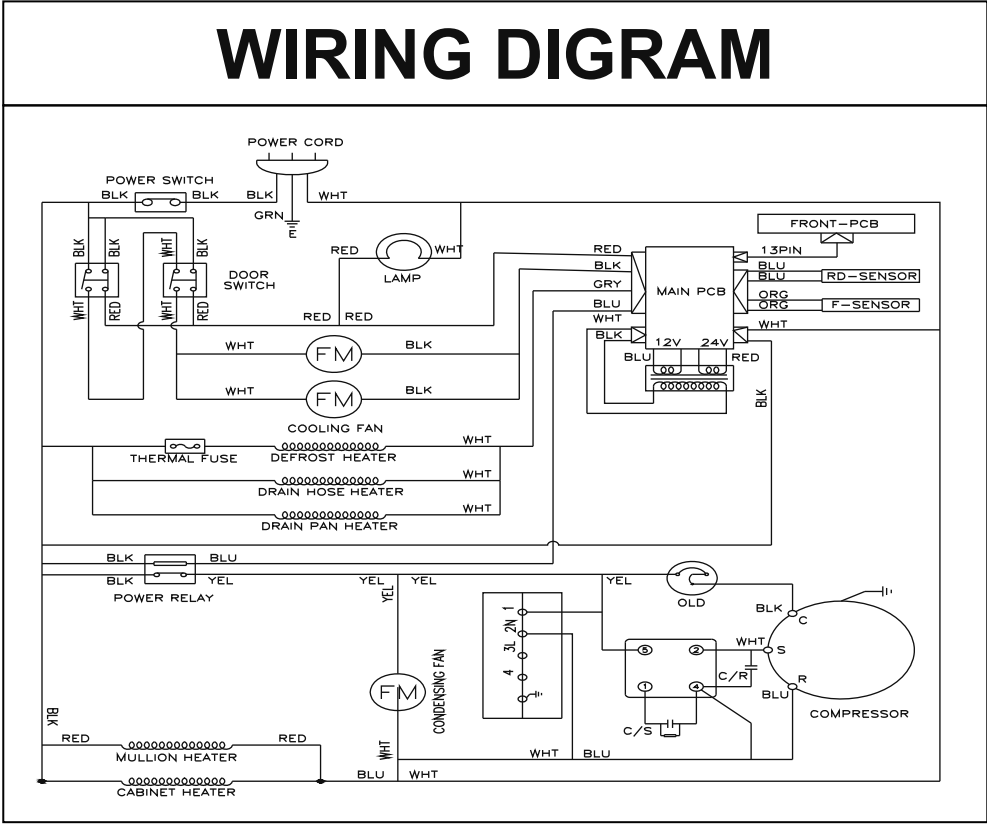
2-4. M3F24-2



2-5. M3R47-2/4

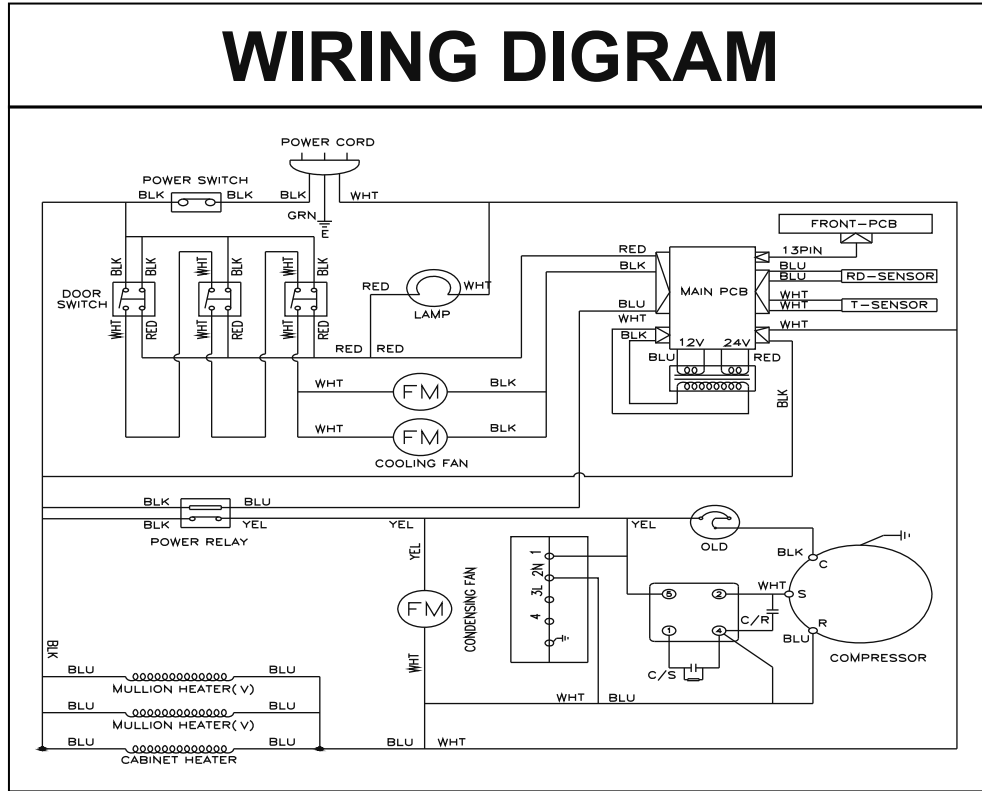


2-6. M3F47-2/4

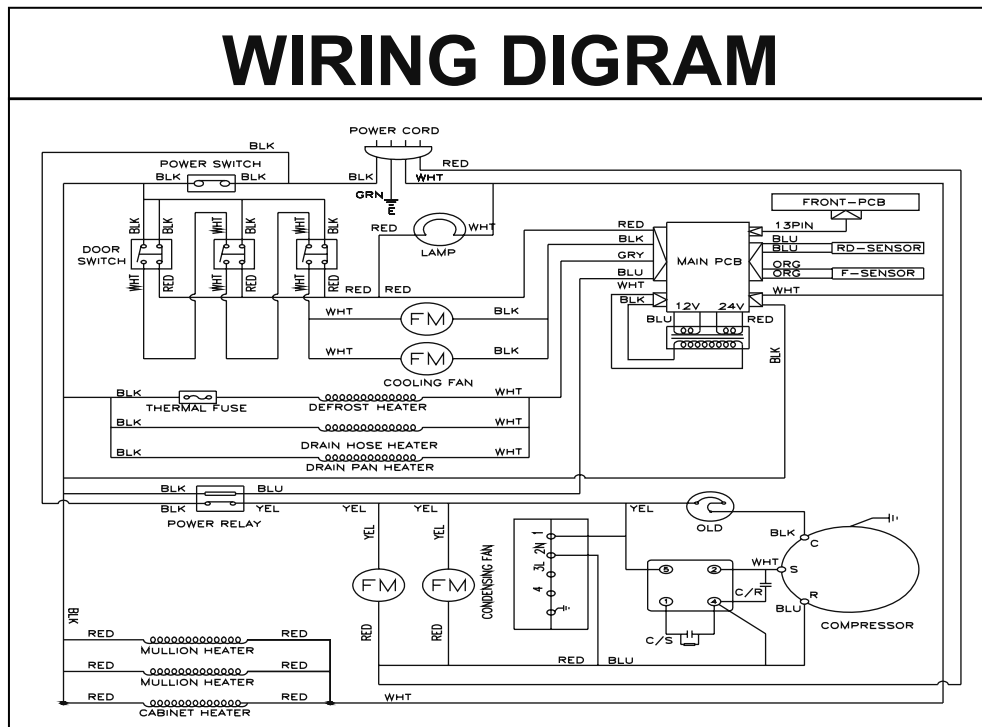


WIRINGDIAGRAMS

2-7. M3R72-3/6



2-8. M3F72-3/6

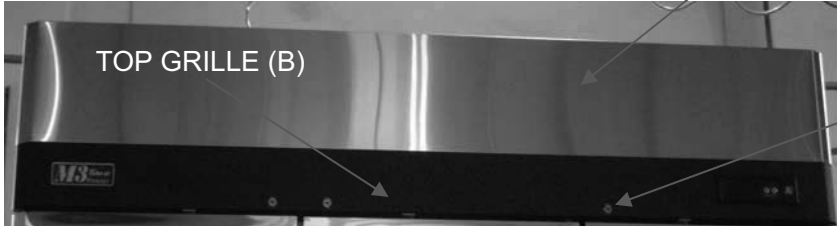


3.PART DETAIL

3-1.TOP GRILLE

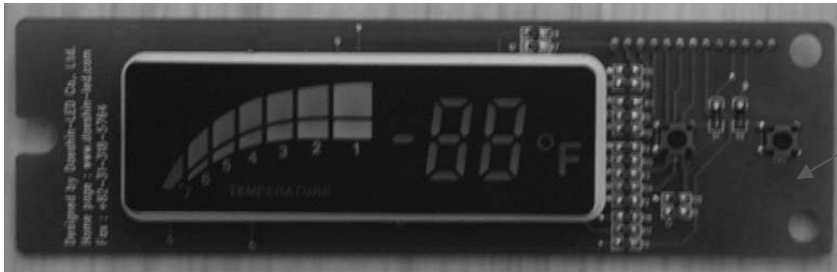
TOP GRILLE (T), TOP GRILLE (B)

TOP GRILLE (T)



DOOR LOCK

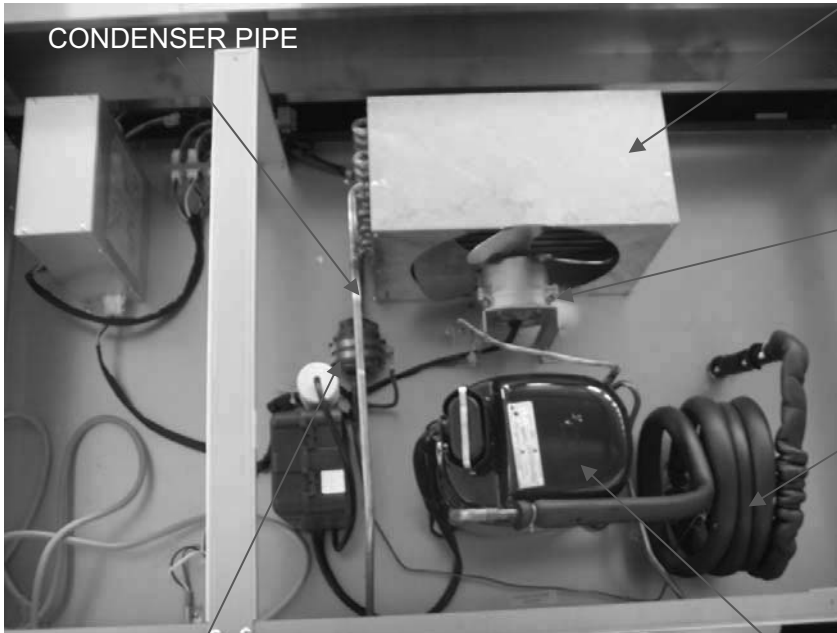
DISPLAY P.C.B



DISPLAY P.C.B

3-2.Refrigeration Compartment

Cycle Assembly



CONDENSER COIL

CONDENSER PIPE

CONDENSER FAN
MOTOR ASSEMBLY

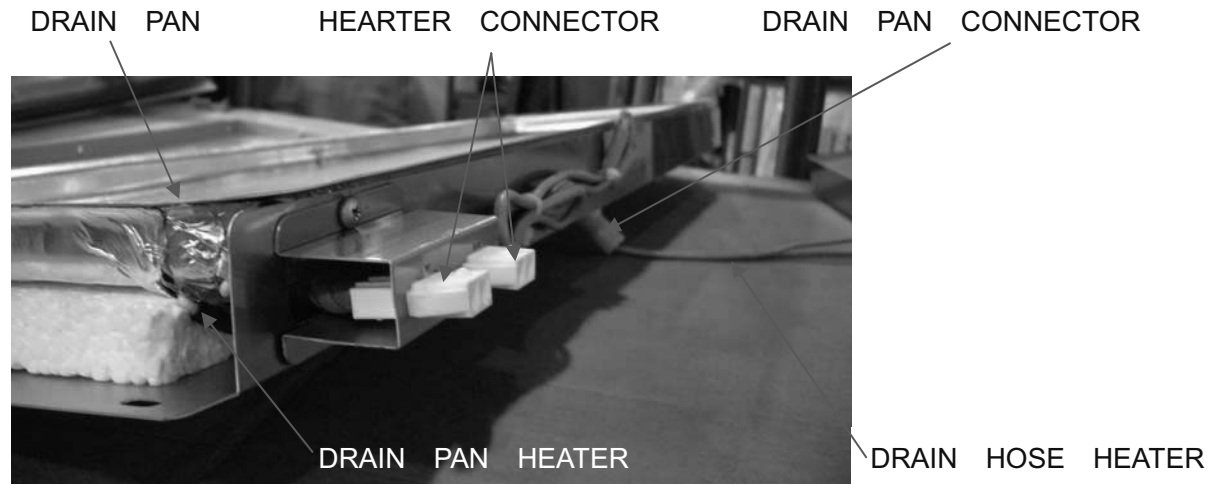
SUCTION PIPE

CONDENSER DRYER

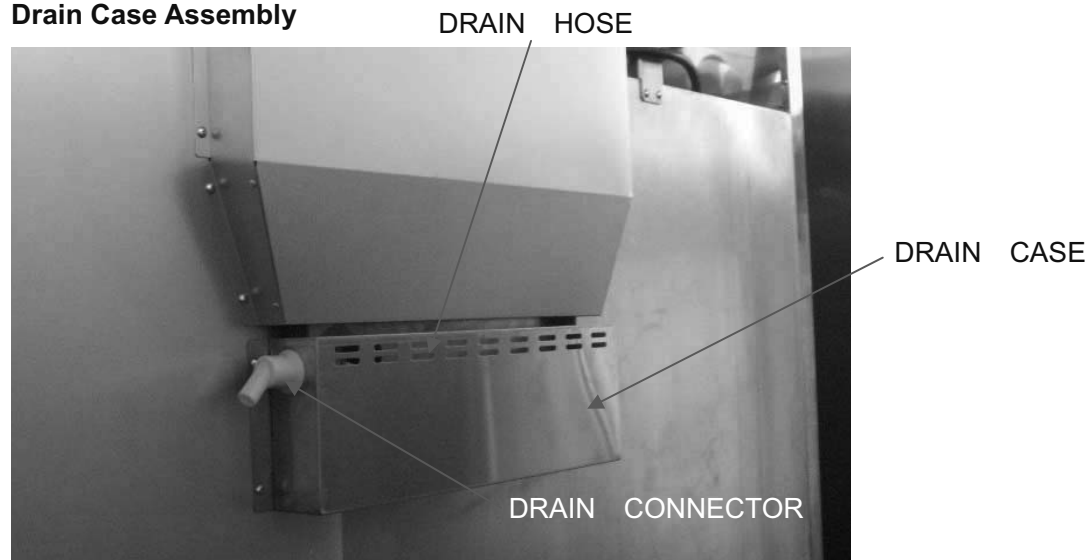
COMPRESSOR

PART DETAIL

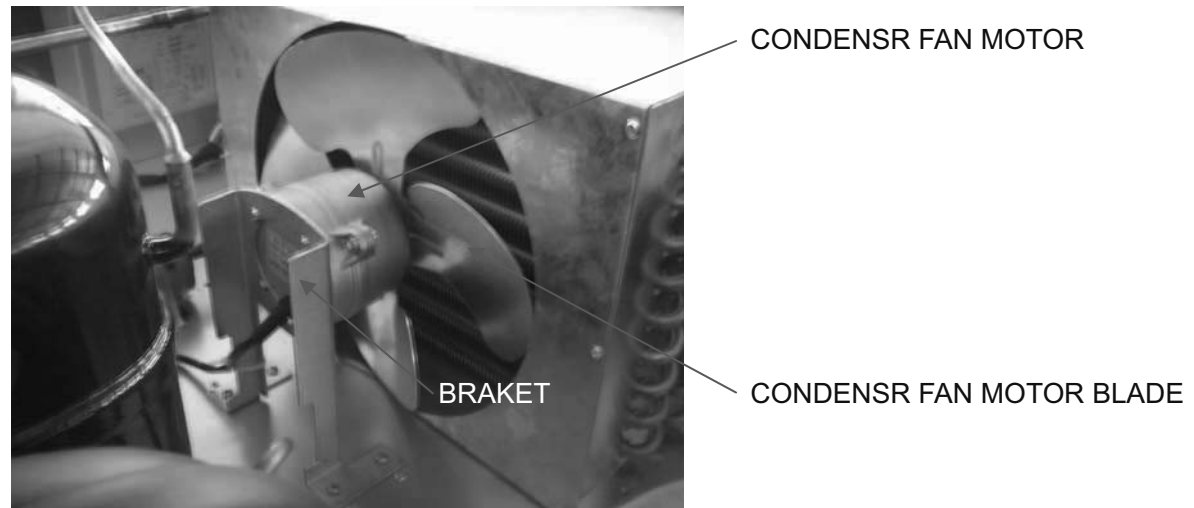
Drain Pan Assembly



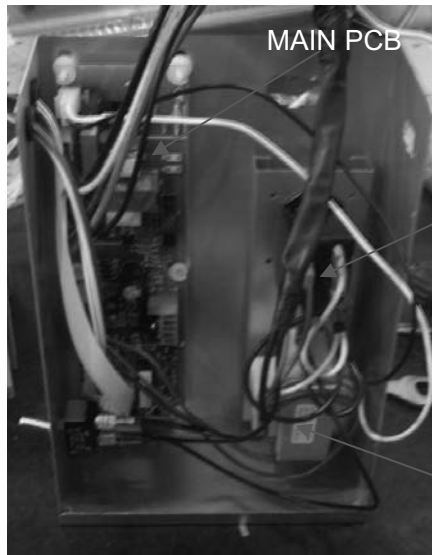
Drain Case Assembly



Condenser Fan Motor Assembly



3-3.CONTROL BOX



MAIN PCB

POWER RELAY

TRANSFORMER

**3-4.Door
Gesket**



FRAME DOOR

DOOR GASKET

3-5.Cooling Compartment

Freezer Duct & Refrigerator Duct (M3R72-3/6,M3F72-3/6,M3R47-2/4,M3F47-2/4)



DUCT(B)



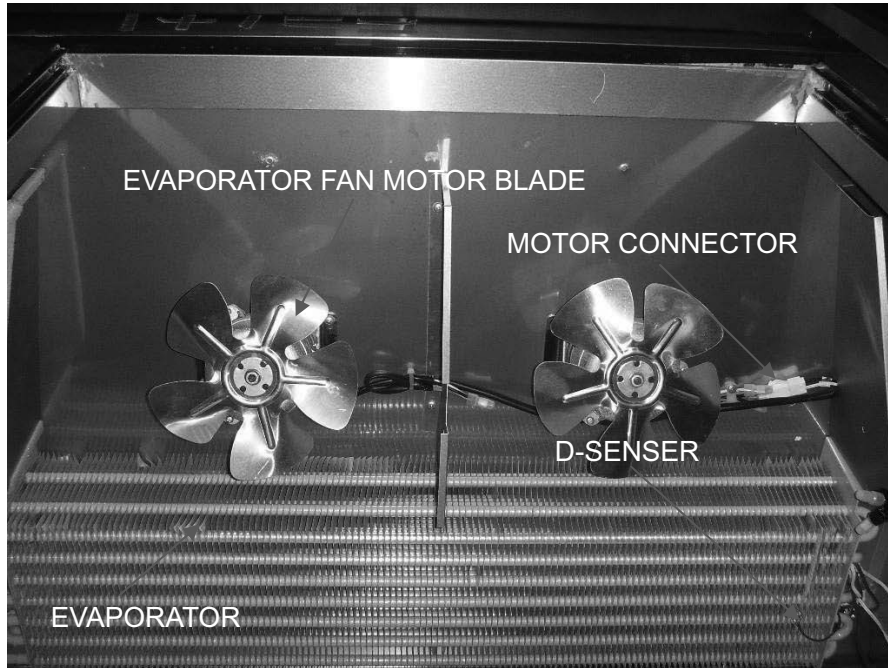
DUCT(A)

LAMP ASSEMBLY

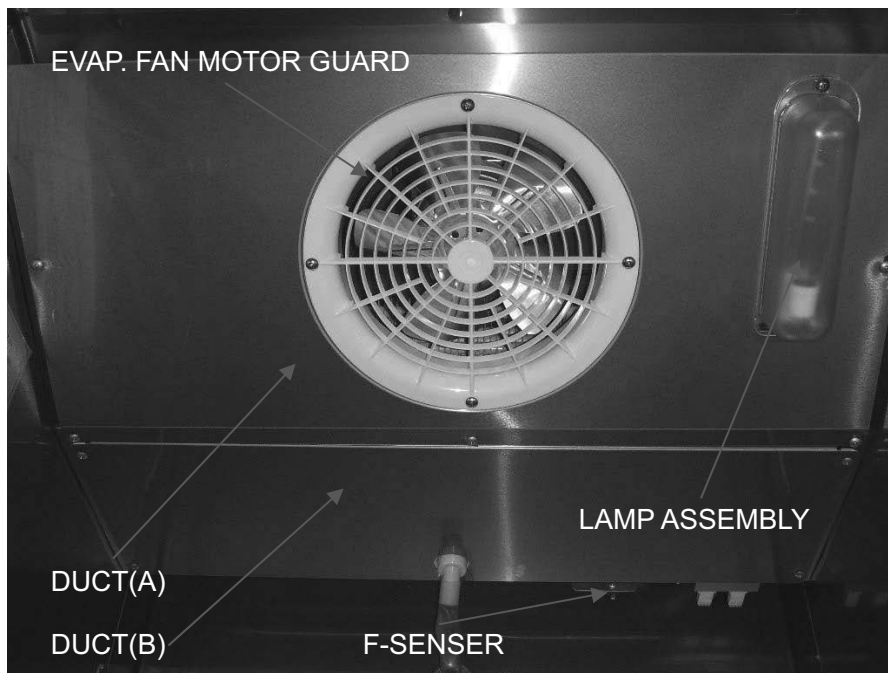
EVAP. FAN MOTOR GUARD

PART DETAIL

Freezer EVAP.,Fan(M3R47-2/4,M3F47-2/4)



Freezer Duct & Refrigerator Duct (M3R24-1/2,M3F24-1/2)



Freezer EVAP.,Fan(M3R24-1/2,M3F24-1/2)



MAIN COMPONENTS

4-1.COMPRESSOR

| | | | | | | |
|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Refrigerant | R-134a | R-404a | R-134a | R-404a | R-134a | R-404a |
| Voltage | 115V | 115V | 115V | 115V | 115V | 115V/208-230V |
| Comp. model | HBL27YE-1 | CAJ 2420Z | SK1A1C-L2W | CAJ2432Z | CAJ4476Y | CAJ2446Z |
| Part code | G2F5700100 | G2F5700100 | P2R5700100 | P2R5700100 | P5F5700100 | P8R5700100 |
| Starting Type | CSR | CSR | CSR | CSR | CSR | CSR |

4-2.COMPRESSOR RELAY

| | | | | | | |
|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 25A,120V(GEN) | | | | | |
| Relay Model | UZ-2A-BT110 | | | | | |

4-3.CONDENSER DRYER

| | | | | | | |
|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Refrigerant | R-134a | R-404a | R-134a | R-404a | R-134a | R-404a |
| Spec. | C-052-5 | C-052-5 | C-052-5 | C-052-5 | C-052-5 | C-052-5 |
| Part code | P994100100 | | | | | |

4-4.CAPACITOR

| | | | | | | |
|-----------|--------------------|--------------------|--------------------|--------------------------------------|--------------------|--------------------------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | | | | | | |
| Running | 230V/10 μ F | | 250V/12 μ F | 400V A 450V B 500V C / 30 μ F | | 400V A 450V B 500V C / 30 μ F |
| Part code | | | | | | |
| Starting | 200V/100 μ F | 160V/51 μ F | 125V/125 μ F | 160V/51 μ F | 160V/250 μ F | 160V/250 μ F |
| Part code | | | | | | |

4-5.EVA FAN MOTOR

| | | | | | | |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3R47-2 M3R47-4 | M3F24-1 M3F24-2 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 115V/ 60Hz | | | | | |
| Motor Model. | IS-4420DWSN-2A | | | | | |
| Part code | G8F6600100 | | | | | |

MAIN COMPONENTS

4-6.CONDENSOR FAN MOTOR

| | | | | | | |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 115V/ 60Hz | | | | | |
| Motor Model. | IS-4420DWSN-2A | | | | | |
| Part code | G8F6600100 | | | | | |

4-7.EVA DEFROST HEATER

| | | | | | | |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | X | 115V | X | 115V | X | 115V |
| Spec.. | X | 445W | X | 600W | X | 900W |
| Part code | X | P2F5300300 | X | P5F5300200 | X | P8F5300500 |

4-8.LAMP BULB

| | | | | | | |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 115V | | | | | |
| Spec.. | 40W | | | | | |
| Part code | P996300100 | | | | | |

4-9.TRANSFORMER

| | | | | | | |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 115V, 60Hz | | | | | |
| Spec.. | DWS-115U | | | | | |
| Part code | | | | | | |

4-10.MAIN PCB

| | | | | | | |
|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Model | M3R24-1 M3R24-2 | M3F24-1 M3F24-2 | M3R47-2 M3R47-4 | M3F47-2 M3F47-4 | M3R72-3 M3R72-6 | M3F72-3 M3F72-6 |
| Voltage | 12V/24V | | | | | |
| Spec.. | | | | | | |
| Part code | | | | | | |

5. ELECTRONIC CONTROLLER INSTRUCTION

5-1.FREEZER CONTROLLER

HOW TO USE THE PANEL

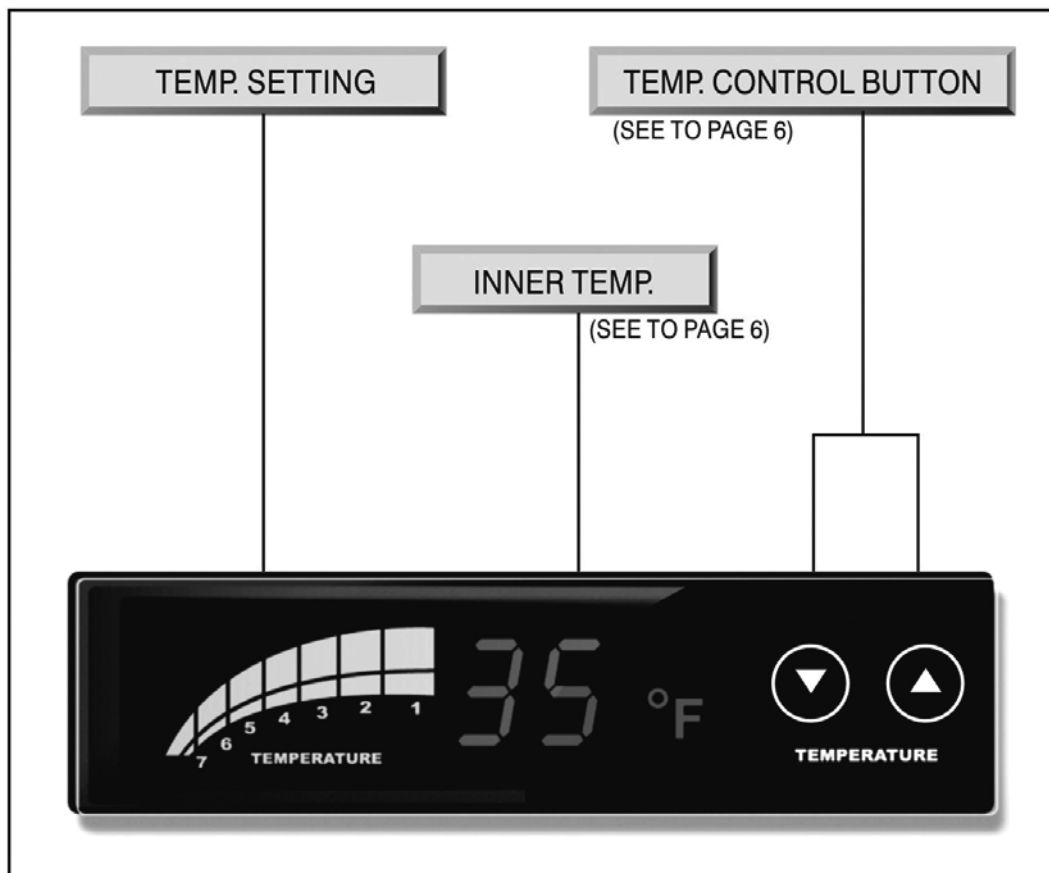
BASIC OPERATION

M3R24-1 , M3R24-2
M3R47-2 , M3R47-4
M3R72-3 , M3R72-6

REFRIGERATORS

1. Plug in and turn on the power switch located on the control box .
The Display panel will be lighted and make a beep sound. The compressor will begin to run.
2. The default temperature setting is No. "4" .
3. The compressor is automatically cycled by the electronic controller (PCB, RD-Sensor).
4. The Defrost cycle is automatically controlled by the PCB.
5. Set level toward "1" for higher temperature and toward "7" for lower temperature.
6. The interior light is activated by the rocker switch at the bottom of the grille when the door is opened.
7. Evaporator fan motor(s) will run after all doors are completely closed.

DISPLAY PANEL OF REFRIGERATOR



ELECTRONIC CONTROLLER INSTRUCTION

UP/DOWN BUTTON (Temperature control button)

1. By pushing the up/down button, you can set the inside temperature level from '1' to '7'.
2. If you want lower temperature, push the Down button to be lighted higher level numbers.

INNER TEMPERATURE DISPLAY

1. It displays the inside temperature.
2. Display range is 14°F to 69°F(-10°C ~ +20°C).
3. When the inside temperature is lower than 14°F, the panel will display 'LO'.

LO

and, higher than 69°F, the panel will display 'HI'.

HI

FAN RUNNING

1. Evaporator fan motor is activated when the door (both doors for M3R47-2、M3R47-4, all three doors for M3R72-3、M3R72-6) is closed.

ELECTRONIC CONTROLLER INSTRUCTION

5-2.FREEZER CONTROLLER

HOW TO USE THE PANEL

BASIC OPERATION

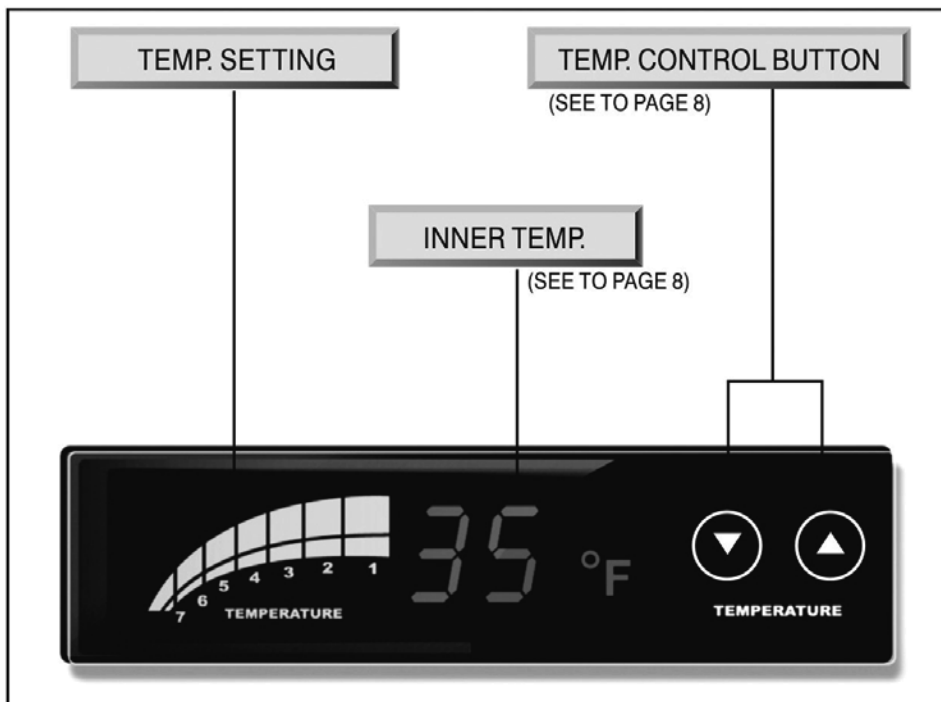
M3F24-1 , M3F24-2
M3F47-2 , M3F47-4
M3F72-3 , M3F72-6

FREEZERS

1. Plug in and turn on the power switch located on the bottom of the top grille right side.
The Display panel will be lighted and make a beep sound. The compressor will begin to run.
2. The default temperature setting is No. "4".
3. The compressor is automatically cycled by the electronic controller (PCB, F-Sensor).
4. The Defrost cycle is automatically controlled by the RD-sensor, and the PCB.
5. Set level toward "1" for higher temperatures and toward "7" for lower temperatures.
6. The interior light is activated by the rocker switch at the bottom of the grille when the door is opened.
7. Evaporator fan motor(s) will run after all doors are completely closed.
8. Good Air Flow in freezer unit is critical.

Be careful to load product so that it neither presses against the back wall, nor reaches within four inches from the evaporator compartment.

DISPLAY PANEL OF FREEZER



ELECTRONIC

MANUAL DEFROST

1. Press the down (▼) button 5 times while pressing up (▲) button, the Defrost will start.
2. During the Manual Defrost mode, the Up/Down button for the temp, control can not make the compressor cycle ON or OFF.

UP/DOWN BUTTON (Temperature control button)

1. By pushing the up/down button, you can set the inside temperature level from '1' to '7'.
2. If you want lower temperatures, push the Down button to be lighted higher level numbers.

DEFROST

1. The electronic defrost controller is set at the factory to provide a defrost cycle every 6 hours (4 times per a day).
2. If it is necessary to change the intervals of defrost due to unusual operating conditions, it can be accomplished by adjusting the switch which is located on the inside of the top grille.
3. The panel displays "dF" during the defrost cycle.

INNER TEMPERATURE DISPLAY

1. It displays inside temperature.
2. Display range is -50°F to 50°F (-45°C ~ +10°C).
3. When inside temperature is lower than -50°F, the panel will display 'LO'.

LO

and, higher than +50°F, the panel will show 'HI'.

HI

FAN RUNNING

1. Evaporator fan motor is activated when the door (both doors for M3F47-2, M3F47-4, all three doors for M3F72-3, M3F72-6) is closed.

6.PARTS LIST FOR M3

| Part name | Code | Material | Description | Model | | | | | | | | | | | | Remark |
|--------------------------|----------------------|----------|-------------|-------|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|--------|
| | | | | R24 | F24 | R24-2 | F24-2 | R47 | F47 | R47-4 | F47-4 | R72 | F72 | R72-6 | F72-6 | |
| Cabinet | | | | | | | | | | | | | | | | |
| LINER FRAME COVER (L)(R) | P8R3100300 | PVC-H | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| LINER FRAME COVER (T)(U) | P8R3100200 | PVC-H | | | | | | | | | | 2 | 2 | 2 | 2 | |
| LINER FRAME COVER (T)(U) | P5R3100300 | PVC-H | | | | | | 2 | 2 | 2 | 2 | | | | | |
| LINER FRAME COVER (T)(U) | P2R3100500 | PVC-H | | 2 | 2 | 2 | 2 | | | | | | | | | |
| Control box | | | | | | | | | | | | | | | | |
| PANNEL FRONT PCB | G8F3200300 | ABS | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| HARNESS PCB | G2F5100500 | | | | | | | | 1 | | 1 | | | | | |
| HARNESS PCB | G5F5100101 | | | 1 | | 1 | | 1 | | 1 | | | 1 | | | |
| HARNESS PCB | G8R5100201 | | | | | | | | | | | 1 | | 1 | | |
| HARNESS PCB | G8F5100901 | | | | 1 | | 1 | | | | | | | | | |
| HARNESS SENSOR | G8F51003.....p0 0 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| MAIN PCB (F) | G8F5400100 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
| MAIN PCB (R) | P8R5400100 | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | |
| MAIN PCB FIXTURE | G8F9200300 | NYLON | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| POWER RELAY | P995900100 | | | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | | 1 | | |
| POWER SWITCH | P995200400 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Door | | | | | | | | | | | | | | | | |
| ASS'Y DOOR (L) | G8F0500200 | | | | | | | 1 | 1 | | | 1 | 1 | | | |
| ASS'Y DOOR (M) | G8F0500300 | | | | | | | | | | | 1 | 1 | | | |
| ASS'Y DOOR (R) | G8F0500100 | | | | | | | 1 | 1 | | | 1 | 1 | | | |
| ASS'Y DOOR (R) | G2F0500100 | | | 1 | 1 | | | | | | | | | | | |
| ASS'Y DOOR (T)(L) | G8F0500400 | | | | | | | | 1 | 1 | | | 1 | 1 | | |
| ASS'Y DOOR (T)(M) | G2F0500200 | | | | | 1 | 1 | | | | | | | | | |
| ASS'Y DOOR (T)(R) | G8F0500500 | | | | | | | | 1 | 1 | | | 1 | 1 | | |
| ASS'Y DOOR (T)(R) | G2F0500300 | | | | | 1 | 1 | | | | | | | | | |
| ASS'Y DOOR (U)(L) | G8F0500600 | | | | | | | | 1 | 1 | | | 1 | 1 | | |
| ASS'Y DOOR (U)(M) | G8F0500700 | | | | | | | | | | | | 1 | 1 | | |
| ASS'Y DOOR (U)(R) | G2F0500300 | | | | | 1 | 1 | | | | | | | | | |
| ASS'Y DOOR (U)(R) | G8F0500900 | | | | | | | | 1 | 1 | | | 1 | 1 | | |
| DOOR GASKET | P8F3300100 | PVC-S | | | | | | | 1 | 1 | | | 1 | 1 | | |
| DOOR GASKET | P8F3300200 | PVC-S | | | | | | 1 | 1 | | | 1 | 1 | | | |
| DOOR GASKET | P2R3300100 | PVC-S | | | | 1 | 1 | | | | | | | | | |
| DOOR GASKET | P2R3300200 | PVC-S | | 1 | 1 | | | | | | | | | | | |
| DOOR HANDLE | P993200700 | | | 1 | 1 | 2 | 2 | 2 | 2 | 4 | 4 | 3 | 3 | 6 | 6 | |
| PIVOT CASE FIXTURE B/K | P8F2200800 | GI | | 4 | 4 | 4 | 4 | 8 | 8 | 6 | 6 | 12 | 12 | 4 | 4 | |
| PIVOT MIDDLE | P8F2900300 | ZNDC | | 2 | 2 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 2 | 2 | |
| KEY | P998200100 | | | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 1 | 1 | |

PARTS LIST FOR M3

| Part name | Code | Material | Description | Model | | | | | | | | | | | | Remark | |
|-------------------------|-------------|----------|-------------|-------|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-----|--------|----------------------|
| | | | | R24 | F24 | R24-2 | F24-2 | R47 | F47 | R47-4 | F47-4 | R72 | F72 | R72-6 | F72 | | |
| vap housing | | | | | | | | | | | | | | | | | |
| DRAIN GUIDE | G2F2700100 | AL | | 1 | 1 | 1 | 1 | | | | | | | | | | Same As Super Deluxe |
| DRAIN GUIDE | G5F2700100 | AL | | | | | | 1 | 1 | 1 | 1 | | | | | | Same As Super Deluxe |
| DRAIN GUIDE | G8F2700100 | AL | | | | | | | | | | | 1 | 1 | 1 | 1 | Same As Super Deluxe |
| DRAIN GUIDE PAD | G2F7300100 | F-BS | | 1 | 1 | 1 | 1 | | | | | | | | | | |
| DRAIN GUIDE PAD | G5F7300100 | F-BS | | | | | | 1 | 1 | 1 | 1 | | | | | | |
| DRAIN GUIDE PAD | G8F7300100 | F-BS | | | | | | | | | | | 1 | 1 | 1 | 1 | |
| DRAIN GUIDE PAD(LOW) | G8F7300200 | | | | | | | | | | | | 1 | | 1 | | |
| DEFROST HEATER | P2F5300300 | | 115V445W | | 1 | | 1 | | | | | | | | | | Same As Super Deluxe |
| DEFROST HEATER | P5F5300200 | | 115V600W | | | | | | 1 | | 1 | | | | | | Same As Super Deluxe |
| DEFROST HEATER | P8F5300500 | | 115V900W | | | | | | | | | | | 1 | | 1 | Same As Super Deluxe |
| DRAIN HOSE | G8 F3000100 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Same As Super Deluxe |
| DRAIN HOSE HEATER | G8F5300400 | PVC | 115V10W | | 1 | | 1 | | 1 | | 1 | | | 1 | | 1 | Same As Super Deluxe |
| DRAIN PAN HEATER | G2F5300200 | PVC | 115V61.2W | | 1 | | 1 | | | | | | | | | | Same As Super Deluxe |
| DRAIN PAN HEATER | G5F5300200 | PVC | 115V90W | | | | | | 1 | | 1 | | | | | | Same As Super Deluxe |
| DRAIN PAN HEATER | G8F5300500 | PVC | 115V111.1W | | | | | | | | | | | 1 | | 1 | Same As Super Deluxe |
| F SENSOR | G8F5100800 | | | | 1 | | 1 | | 1 | | 1 | | | 1 | | 1 | |
| FAN BLADE | G8F2700500 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Same As Super Deluxe |
| FAN BLADE | P8F2700300 | | | 1 | | 1 | | 1 | | 1 | | | | 2 | | 2 | Same As Super Deluxe |
| FAN BLADE | P8F2700400 | | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | Same As Super Deluxe |
| MOTOR | G8F6600100 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | Same As Super Deluxe |
| MOTOR | G8F6600200 | | | | | | | | | | | | | 2 | | 2 | Same As Super Deluxe |
| TSENSOR | G8R5100400 | | | 1 | | 1 | | 1 | | 1 | | | 1 | | 1 | | |
| THERMAL FUSE | G8F5300600 | | | | 1 | | 1 | | 1 | | 1 | | | 1 | | 1 | Same As Super Deluxe |
| MULLION FRAME (V) | G8F3100100 | PVC | | | | | | 2 | 2 | | | | 4 | 4 | | | |
| MULLION FRAME (V) | G8F3101000 | PVC | | | | | | | | 2 | 2 | | | | | 4 | |
| MULLION FRAME COVER (V) | G8F3100400 | PVC | | | | | | 2 | 2 | | | | 4 | 4 | | | |
| MULLION HEATER (VER) | P8F5300201 | PVC | L=3060 | | | | | | 1 | | | | | 2 | | | |
| MULLION HEATER (VER) | P8R5300201 | PVC | L=3060 | | | | | 1 | | | | | 2 | | | | |
| SHELF STANDARD | P8F2700100 | AL | | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | | Same As Super Deluxe |
| LAMP | P996300100 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| LAMP COVER | G8F3200200 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| LAMP SOCKET | P996400100 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| SENSOR GUARD | P992000300 | AL | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Same As Super Deluxe |
| SHELF | G2F1800101 | | | 3 | 3 | 3 | 3 | | | | | | | | | | |
| SHELF | G8F1800101 | | | | | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| SHELF (M) | G8F1800201 | | | | | | | | | | | | 3 | 3 | 3 | 3 | |

PARTS LIST FOR M3

| Part name | Code | Material | Description | Model | | | | | | | | | | | | Remark |
|--------------------------|------------|-----------|-------------|-------|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|----------------------|
| | | | | R24 | F24 | R24-2 | F24-2 | R47 | F47 | R47-4 | F47-4 | R72 | F72 | R72-6 | F72-6 | |
| SHELF CLIP | P993200800 | | | 16 | 16 | 16 | 16 | 32 | 32 | 32 | 32 | 48 | 48 | 48 | 48 | Same As Super Deluxe |
| CABINET HEATER | P2F5300101 | PVC | L=4800 | | 1 | | 1 | | | | | | | | | Same As Super Deluxe |
| CABINET HEATER | P2R5300101 | PVC | L=5970 | 1 | | 1 | | | | | | | | | | Same As Super Deluxe |
| CABINET HEATER | P5F5300101 | PVC | L=7290 | | | | | 1 | | 1 | | | | | | Same As Super Deluxe |
| CABINET HEATER | P5R5300101 | PVC | L=4800 | | | | | 1 | | 1 | | | | | | Same As Super Deluxe |
| CABINET HEATER | P8F5300100 | PVC | L=5970 | | | | | | | | | 1 | | | 1 | Same As Super Deluxe |
| CABINET HEATER | P8R5300100 | PVC | L=7290 | | | | | | | | | 1 | | 1 | | Same As Super Deluxe |
| DOOR HANDLE | G993200101 | ALDC | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | Same As Super Deluxe |
| DOOR SWITCH | P995200100 | | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | Same As Super Deluxe |
| HINGE SPRING (L) | P998400102 | SUS304 | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | |
| HINGE SPRING (R) | P998400202 | SUS304 | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | |
| MASCOT | G8F7400300 | | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | |
| MASCOT | G8R7400300 | | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | |
| MIDDLE HINGE (L) | P992900601 | SUS304 | | | | | | | | 1 | 1 | | | 1 | 1 | |
| MIDDLE HINGE (R) | P992900501 | SUS304 | | | | 1 | 1 | | | 1 | 1 | | | 2 | 2 | |
| MULLION FRAME (H) | G2F1200101 | PVC | | | | 2 | 2 | | | | | | | | | |
| MULLION FRAME (H) | G8F1200302 | PVC | | | | | | | | 4 | 4 | | | 6 | 6 | |
| MULLION FRAME COVER | G2F3100100 | PVC | | | | 2 | 2 | | | | | | | | | |
| MULLION FRAME COVER | G8F3100500 | PVC | | | | | | | | 2 | 2 | | | 2 | 2 | |
| MULLION FRAME COVER | G8F3100600 | PVC | | | | | | | | 2 | 2 | | | 2 | 2 | |
| MULLION FRAME COVER | G8F3100700 | PVC | | | | | | | | 2 | 2 | | | 4 | 4 | |
| MULLION FRAME COVER | G8F3100800 | PVC | | | | | | | | 2 | 2 | | | 4 | 4 | |
| MULLION FRAME COVER | G8F3100900 | PVC | | | | | | | | | | | | 2 | 2 | |
| MULLION HEATER (VER) | P8F5300201 | PVC | | | | | | 1 | | | | 2 | | | | |
| MULLION HEATER (VER) | P8R5300201 | PVC | | | | | | 1 | | | | 2 | | | | |
| TOP GRILLE (T) FIXTURE | P998300200 | STS43 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| TOP HINGE (L) | P992900204 | STS304 | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| TOP HINGE (R) | P992900104 | STS304 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | |
| TRANS FORMER | P996000100 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Same As Super Deluxe |
| TOP GRILLE (T3) | G8F1600100 | SUS304-#4 | | | | | | | | | | 1 | 1 | 1 | 1 | |
| TOP GRILLE(B) BACK COVER | G8F1600201 | GI | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| TOP GRILLE(T2) | G5F1600100 | SUS304-#4 | | | | | | 1 | 1 | 1 | 1 | | | | | |
| TOP GRILLE(T1) | G2F1600100 | SUS304-#4 | | 1 | 1 | 1 | 1 | | | | | | | | | |
| TOP GRILLE (B) | G2F1100101 | GI | BLACK | 1 | 1 | 1 | 1 | | | | | | | | | |
| HARNESS GRILLE DOOR S/W | G2F5100401 | | | 1 | 1 | 1 | 1 | | | | | | | | | |
| TOP GRILLE (B) | G5F1100101 | GI | BLACK | | | | | 1 | 1 | 1 | 1 | | | | | |

PARTS LIST FOR M3

| Part name | Code | Material | Description | Model | | | | | | | | | | | | Remark |
|-----------------|------------|----------|--------------|-------|-----|-------|-------|-----|-----|-------|-------|-----|-----|-------|-------|----------------------|
| | | | | R24 | F24 | R24-2 | F24-2 | R47 | F47 | R47-4 | F47-4 | R72 | F72 | R72-6 | F72-6 | |
| TOP HINGE SPACE | P8F2600100 | ABS | | 2 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 6 | 6 | 12 | 12 | |
| DRAIN HOSE CAP | P8F9900101 | RUBBER | BLACK | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| COMPRESSOR | G2F5700100 | | (CAJ 2420Z) | | 1 | | 1 | | | | | | | | | Same As Super Deluxe |
| COMPRESSOR | G2R5700100 | | (HBL 27YE-1) | 1 | | 1 | | | | | | | | | | Same As Super Deluxe |
| COMPRESSOR | P2F5700100 | | (CAJ 2432Z) | | | | | | 1 | | 1 | | | | | Same As Super Deluxe |
| COMPRESSOR | P2R5700100 | | (SK1A1C-L2W) | | | | | 1 | | 1 | | | | | | Same As Super Deluxe |
| COMPRESSOR | P5F5700100 | | (CAJ 2446Z) | | | | | | | | | | 1 | | 1 | Same As Super Deluxe |
| COMPRESSOR | P8R5700100 | | (CAJ 4476Y) | | | | | | | | | 1 | | 1 | | Same As Super Deluxe |

7.REPLACEMENT OF MAIN COMPONENTS

7-1. TOP GRILLE PART

A. Unscrew the screw located on both side of top grille (t) with the top grille (t) fixture.



B. Hold up the top grille (T)



C. Unscrew the screw located on both side of top grille (B).



REPLACEMENT OF MAIN COMPONENTS

D. Unscrew the screw located on the cabinet top cover.



E. Pull out the harness display pcb and harness grille door s/w located on back of top grille (B).



You can replace the door switch, mascot, key, front pcb and front pcb case, etc.

REPLACEMENT OF MAIN COMPONENTS

7-2. REPLACE DOOR

7-2-1. REPLACE DOOR (M3R24-1,M3F24-1,M3R47-2,M3F47-2,M3R72-3,M3F72-3)

A. Disassemble top grille (T) and top grille (B) as described section 7-1.

B. Unscrew pivot stopper.



C. Unscrew the top hinge (R).



D. Lift the door (R) and pull it out.



REPLACEMENT OF MAIN COMPONENTS

- E. Replace the door with the new one. (you should assemble pivot middle, hinge spring etc before this process.)**
- F. Screw the top hinge (L) and pivot stopper. (this process is opposite to disassemble them.)**



- G. Do just like above instructions in replacing the door (L).**

7-2-2. REPLACE DOOR (M3R24-2,M3F24-2,M3R47-4,M3F47-4,M3R72-6,M3F72-6)

- A. Disassemble top grille (t) and top grille (b) as described section 7-1.**
- B. Unscrew pivot stopper. (both top and bottom side)**



- C. Unscrew the top hinge (L).**

REPLACEMENT OF MAIN COMPONENTS



D. Lift the door (T) (L) and pull it out.

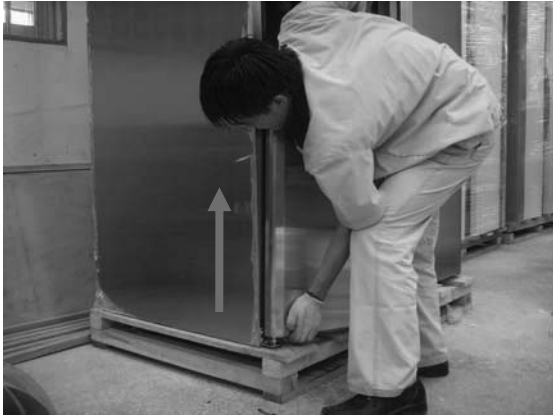


E. Unscrew the middle hinge (L).



F. Lift the door (U) (L) and pull it out.

REPLACEMENT OF MAIN COMPONENTS



Then you can replace new doors and assemble them, those processes are opposite to disassemble them.

G. Do just like above instructions in replacing the door (T)(R) and the door (U)(R).

REPLACEMENT OF MAIN COMPONENTS

7-3. REFRIGERATION COMPARTMENT'S PART

- Duct and Lamp
- T-sensor and D-sensor
- Evaporator coil and F-sensor
- Defrost heater (freezer only)
- Evaporator fan motor and fan blade

7-3-1. REPLACE DUCT AND LAMP

A. Disassemble the Duct.

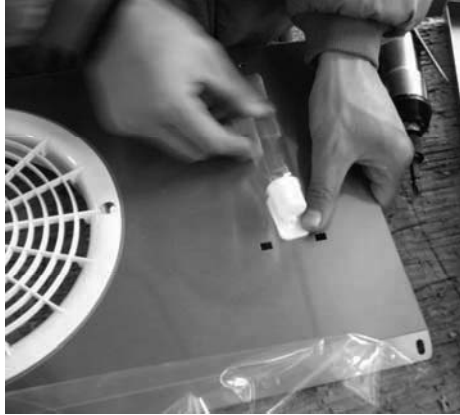


B. Unscrew the screws of lamp cover.



C. Pull out the lamp socket and lamp

REPLACEMENT OF MAIN COMPONENTS



You can replace the lamp now.

7-3-2. REPLACE T SENSOR AND D SENSOR (T-SENSOR IS WHITE COLOR, F-SENSOR IS ORANGE AND D-SENSOR IS BLUE)

A. Disassemble the Duct as in 7-3-1

B. Disconnect the connector and pull out the D-sensor from the evap. replace the new one.



(D-SENSOR IS BLUE)

C. Take off the T-sensor from the evap. replace the new one.



(T-SENSOR IS WHITE COLOR)

REPLACEMENT OF MAIN COMPONENTS

7-3-3. REPLACE THE EVAPORATOR COIL AND F-SENSOR

A. Welding off the connection suction pipe(A) and (B).



B. Unscrew the screw located on back side of evap. housing.

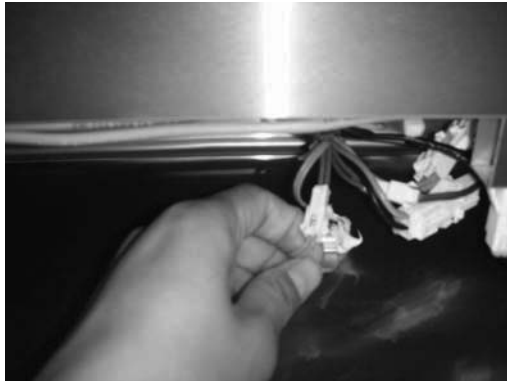


C. Take off the evaporator.



REPLACEMENT OF MAIN COMPONENTS

D. Disconnect the connector and Unscrew the screws located on sensor cover and pull out the F-sensor from the evap.sensor guide, replace the new one.



7-3-4. REPLACE THE DEFROST HEATER (FREEZER ONLY)

A. After lift the evaporator up, disconnect the connectors with harness defrost heater and disassemble the defrost fixture spring and split the hooks of the evap..



B. Replace the new defrost heater and fix it with heater fix spring. Connect the connectors.

***NOTE**

Why is always 115 voltage detected between connectors of the evaporator defrost heater in the main harness?

The SNUBBER (located Main PCB) holds two AC power lines simultaneously.

The SNUBBER prevents Main PCB malfunction from sparks occurred by other electrical component's ON/OFF. (SNUBBER =Spark killer)

Because of the SNUBBER, 115 voltage is always detected, but electrical current in this case is very little (small Amps.).So, this electrical current is not enough to operate the evaporator defrost heater.

REPLACEMENT OF MAIN COMPONENTS

How to measure the Amps. of the evaporator defrost heater

Disconnect the connectors of the evaporator defrost heater.

Then , prepare the additional Power Source(115V/60Hz) and the Amp. Meter.

Connect the connectors of the evaporator defrost heater to the additional power source and read amp. Value from the Amp. Meter.

7-3-5. REPLACE THE EVAPORATOR FAN MOTOR AND FAN BLADE

A. After lift the evaporator up, unscrew the screw which used in fixing motor fixture.



B. Disconnect the connectors of harness motor.



Then you can replace the evaporator fan motor and fan blade.

REPLACEMENT OF MAIN COMPONENTS

7-4. CONTROL BOX PART

- Power relay
- Transformer
- Main PCB

A. Disassemble top grille (t) as described section 7-1 A B.

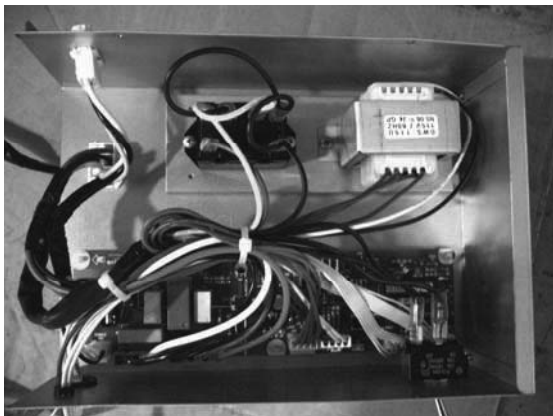
B. Pull out all connectors connected with control box.



C. Unscrew the screws located on front of evap-housing.



E. Pull out the harness main.

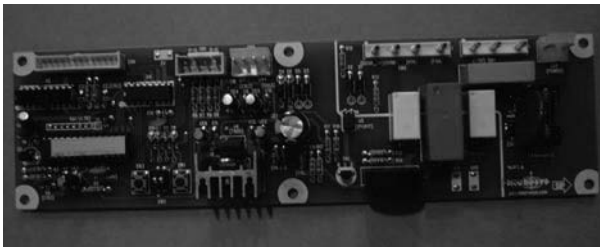


REPLACEMENT OF MAIN COMPONENTS

F. Unscrew the screws used in fixing power relay and trans former.



G. Disconnect the main PCB fixture.



Then you can replace the power relay, trans former and main pcb.

REPLACEMENT OF MAIN COMPONENTS

7-5. CONDENSER UNIT

- Compressor
- Condenser fan motor
- Dryer filter
- Pressure switch



The comp. Base is located on both side on the top of the cabinet by screw, and you can replace the Compressor ,Condenser coil Condenser fan motor, ETC. on it.

REPLACEMENT OF MAIN COMPONENTS

7-6. REPLACE THE CABINET HEATER AND MULLION HEATER

- A. Disassemble the liner frame cover with the and edge of ‘—’type screwdriver.(left/right/top/bottom side)**



- B. Disconnect the cabinet heater and pull it out.**

You can replace the cabinet heater with the new one.



- C. Assemble the liner frame cover.(left/right/top/bottom side)**



REPLACEMENT OF MAIN COMPONENTS

D. Disassemble the mullion frame cover(v) with the and edge of ‘—’type screwdriver.



E. Unscrew the screw located on both side of the mullion.

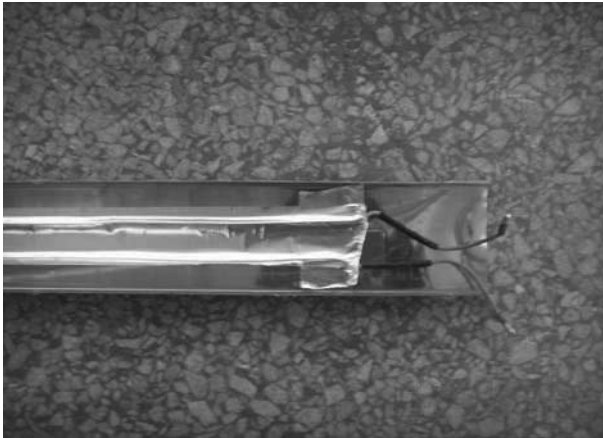


F. Take apart the mullion out cover(v) from the mullion, then disconnect the harness mullion heater.



REPLACEMENT OF MAIN COMPONENTS

G. Change the old mullion heater(v) and install the new one with the gap between wires 1.2 inch.

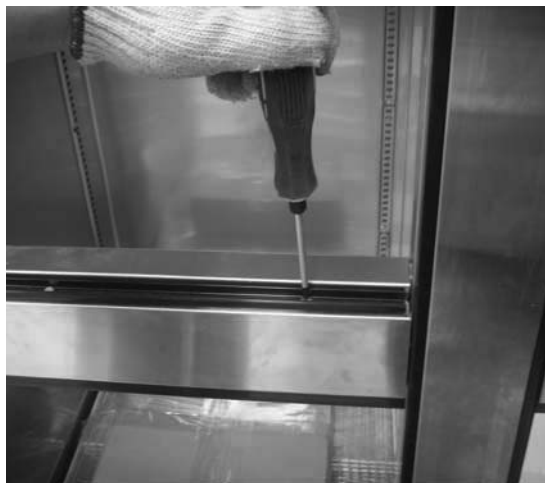


H. Insert the mullion out cover(v) into the original position, then screw it on both side of the mullion.(this process is opposite to disassemble the mullion out cover(v))

J. Assemble the mullion frame cover(v).(this process is as alike as assembling the liner frame cover)

K. Do just like above instructions in replacing mullion heater(h).

(PRO-26-2R,PRO-26-2F,PRO-50-4R,PRO-50-4F,PRO-77-6R,PRO-77-6F only, but before replacing mullion heater(h), doors should be disassembled.)



REPLACEMENT OF MAIN COMPONENTS

