

REFRIGERATION FOR ALL HOME APPLICATIONS
Turbo air

Commercial
Refrigerator & Freezer
Service Manual

Solid Door

Model No. : MSR-23NM
MSR-49NM
MSF-23NM
MSF-49NM

Glass Door

Model No. : MSR-23G-1
MSR-49G-2

TABLE OF CONTENTS

1. FEATURE CHART

- 1-1. FRONT VIEW(MSF-49NM)
- 1-2. SIDE VIEW(MSF-49NM)
- 1-3. FRONT VIEW(MSR-49G-2)
- 1-4. SIDE VIEW(MSR-49G-2)

2. WIRING DIAGRAM

- 2-1. REFRIGERATOR : MSR-23NM, MSR-49NM
MSR-23G-1, MSR-49G-2
- 2-2. FREEZER : MSF-23NM, MSF-49NM

3. PART DETAILS

- 3-1. TOP PANEL
- 3-2. COMPRESSOR COMPARTMENT
- 3-3. DOOR
- 3-4. COOLING COMPARTMENT

4. MAIN COMPONENTS

- 4-1. COMPRESSOR
- 4-2. POWER RELAY(COMP. RELAY)
- 4-3. CONDENSER DRYER
- 4-4. COMPRESSOR CAPACITOR
- 4-5. EVAPORATOR FAN MOTOR
- 4-6. CONDENSER FAN MOTOR
- 4-7. EVAPORATOR DEFROST HEATER
- 4-8. LAMP BULB
- 4-9. MAIN PCB
- 4-10. DISPLAY PCB
- 4-11. BALLAST

5. ELECTRONIC CONTROL INSTRUCTIONS

- 5-1. FREEZER CONTROL
 - 5-1-1. HOW TO USE THE DISPLAY PCB PANEL
 - 5-1-2. MANUAL DEFROST
 - 5-1-3. FUNCTION TABLE
 - 5-1-4. ERROR CODE TABLE
- 5-2. REFRIGERATOR CONTROL
 - 5-2-1. HOW TO USE THE DISPLAY PCB PANEL
 - 5-2-2. FUNCTION TABLE
 - 5-2-3. ERROR CODE TABLE

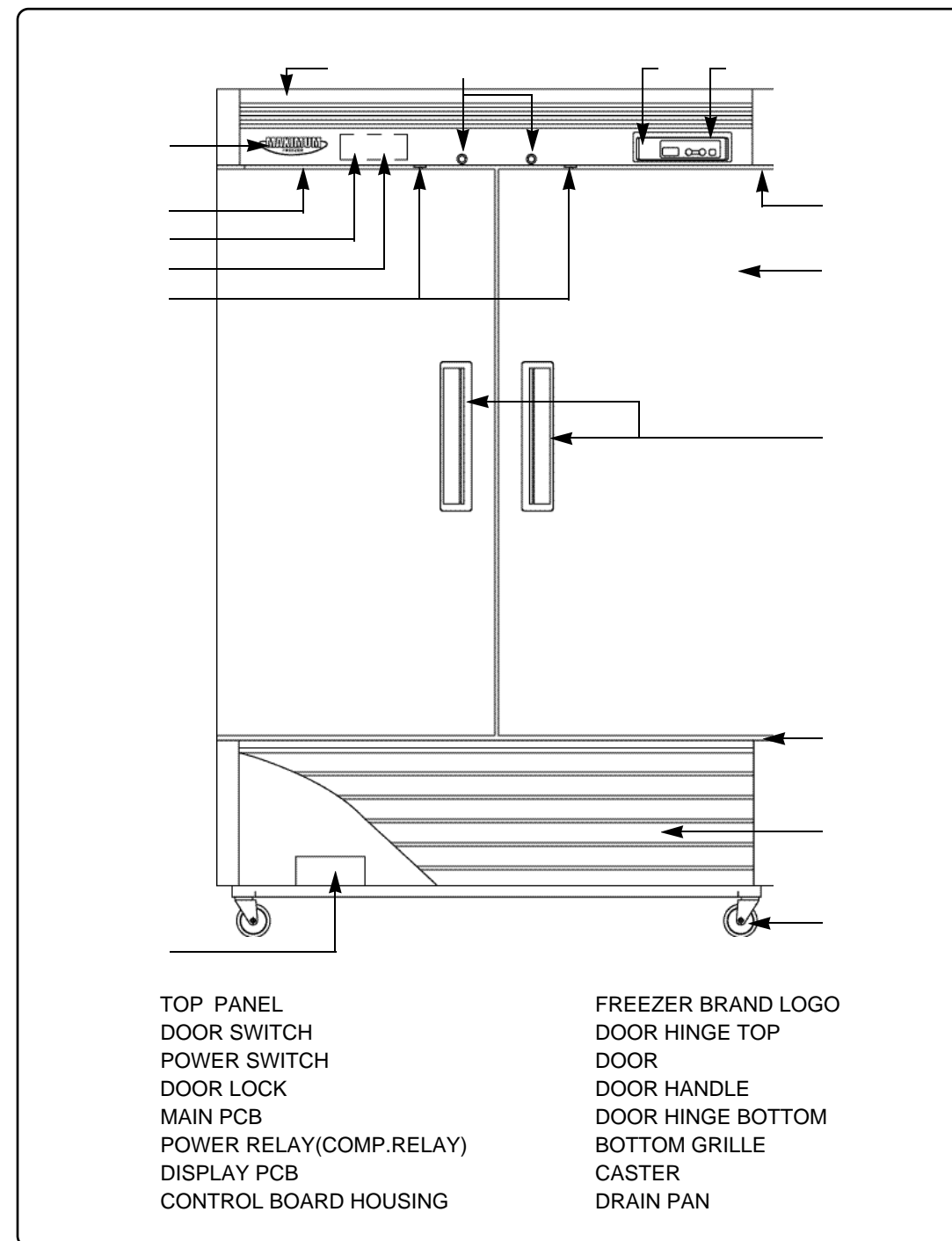
6. REPLACEMENT OF MAIN COMPONENTS

- 6-1. TOP PANEL PARTS
- 6-2. REPLACING DOOR
- 6-3. DOOR SPRING ADJUSTMENT
- 6-4. REVERSIBLE-DOOR ASSEMBLING METHOD
- 6-5. REFRIGERATION COMPARTMENT PARTS
- 6-6. CONDENSING UNIT
- 6-7. LIGHTING-PARTS

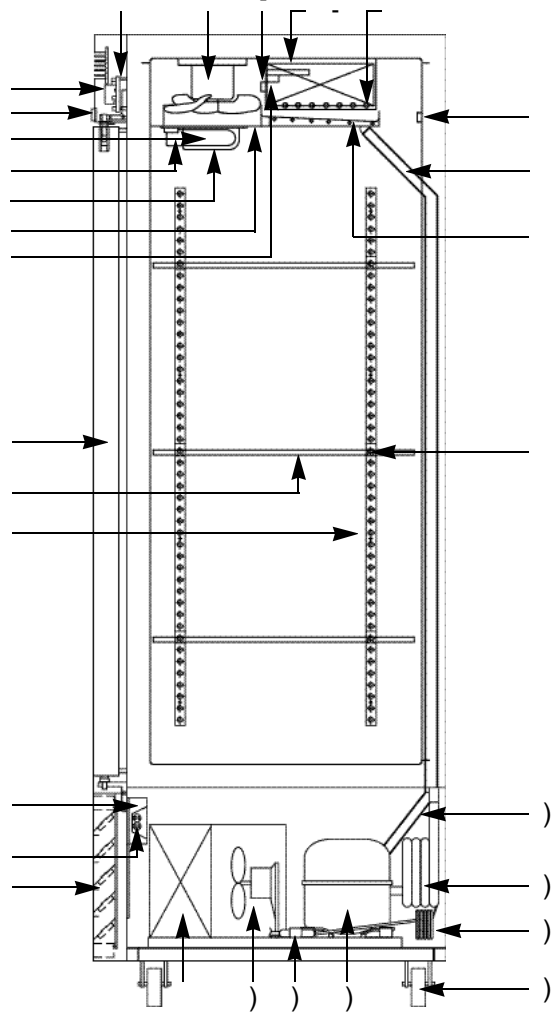
7. PART-LIST

1 FEATURE CHART

1-1. FRONT VIEW(MSF-49NM)

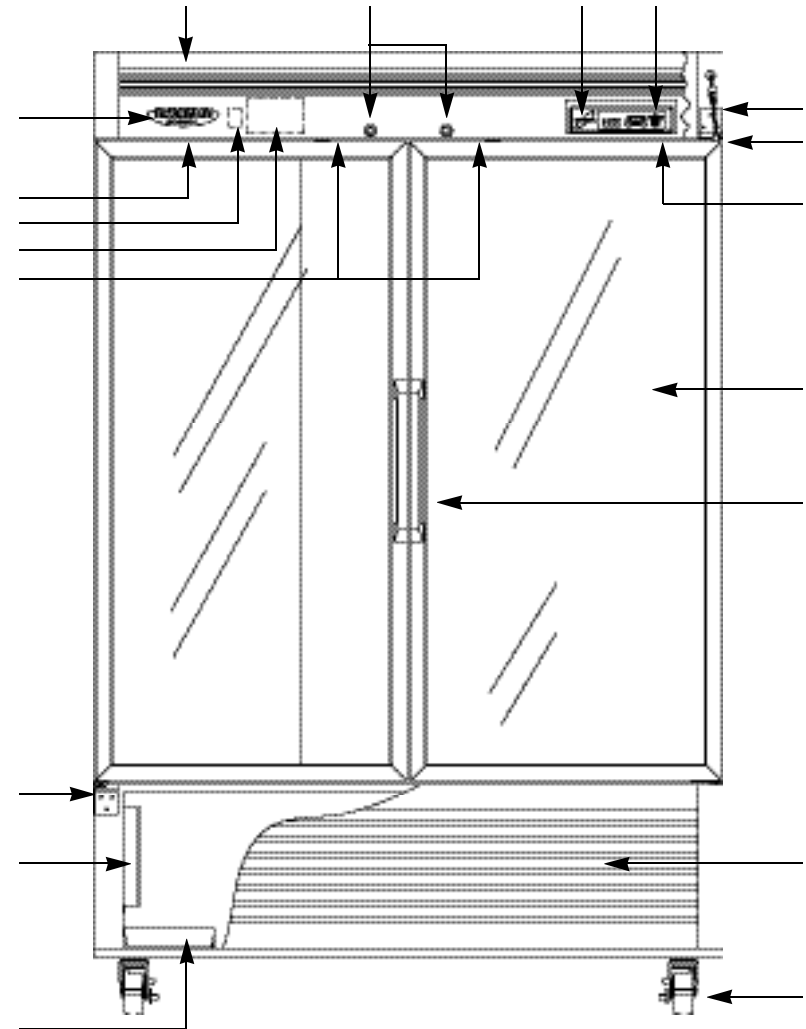


1-2. SIDE VIEW(MSR-49NM)

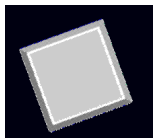


- | | | |
|-------------------------|-----------------------------|-----------------------|
| TOP PANEL | LAMP SHIELD | COMPRESSOR CAPACITOR |
| POWER RELAY | LAMP SOCKET | CONDENSOR COIL |
| MAIN PCB | EVAPORATOR DEFROST HEATER |) CONDENSOR FAN MOTOR |
| DOOR | EVAPORATOR DRAIN HOSE |) CONDENSOR DRYER |
| EVAPORATOR FAN MOTOR | EVAPORATOR DRAIN PAN HEATER |) COMPRESSOR |
| SENSOR | EVAPORATOR FAN MOTOR GUARD |) CAPILLARY TUBE |
| - FREEZER C SENSOR | SHELF |) SUCTION LINE |
| - DEFROST SENSOR | SHELF CLIPS |) DRAIN-HOSE |
| - REFRIGERATOR C SENSOR | SHELF STANDARD |) CASTER |
| - REFRIGERATOR T SENSOR | BOTTOM GRILLE | |
| LAMP BULB | COMPRESSOR CAPACITOR COVER | |

1-3. FRONT VIEW(MSR-49G-2)

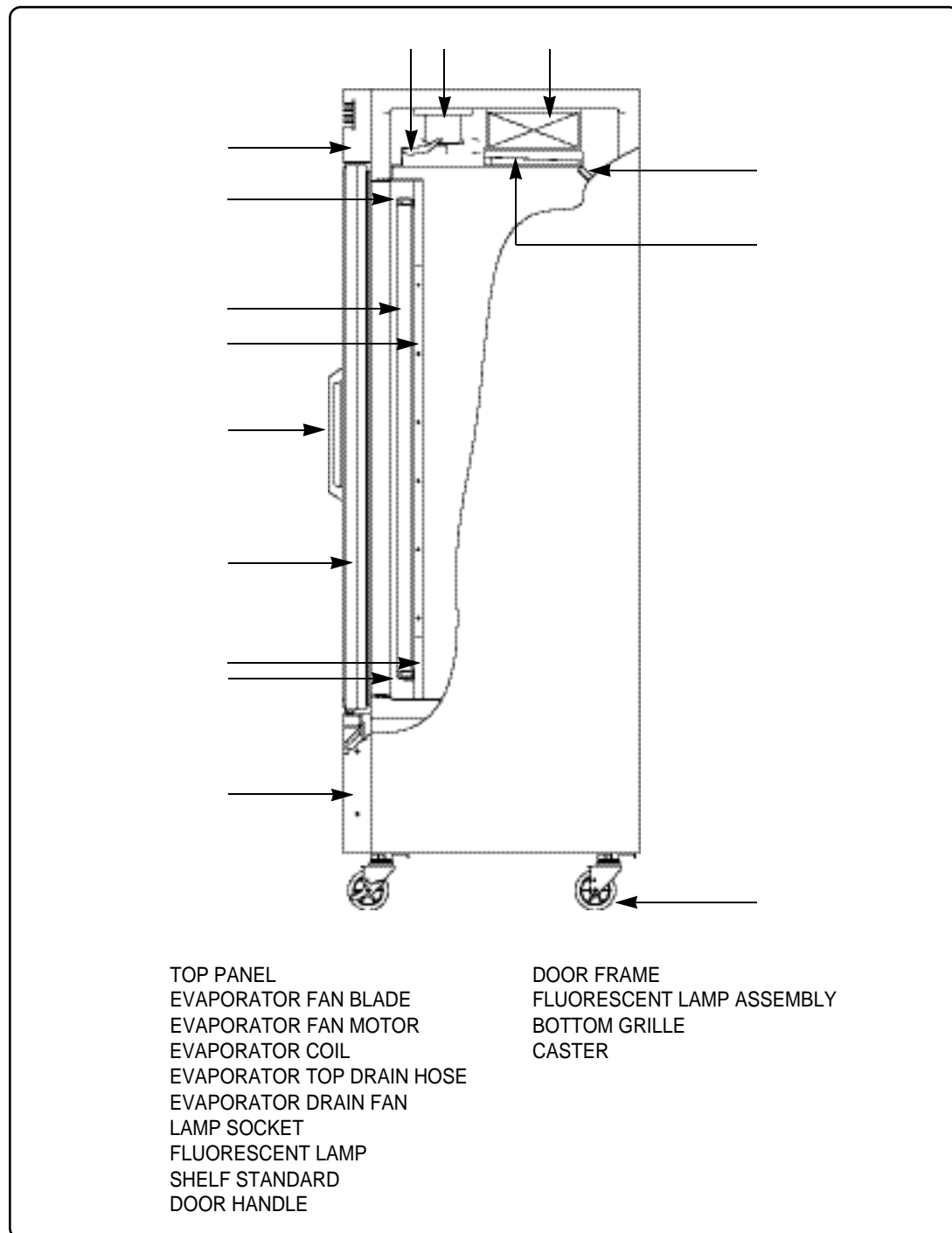


- | | |
|-------------------------|-------------------------|
| TOP PANEL | DOOR HINGE TOP |
| DOOR SWITCH | DOOR HINGE BOTTOM |
| POWER SWITCH | BALLAST |
| LAMP SWITCH | DRAIN PAN |
| MAIN PCB | CASTER |
| POWER RELAT(COMP RELAY) | BOTTOM GRILLE |
| DOOR LOCK | DOOR HANDLE |
| DISPLAY PCB | GLASS DOOR |
| CONTROL BOARD HOUSING | REFRIGERATOR BRAND LOGO |
| DOOR HEATER HARNESS | |



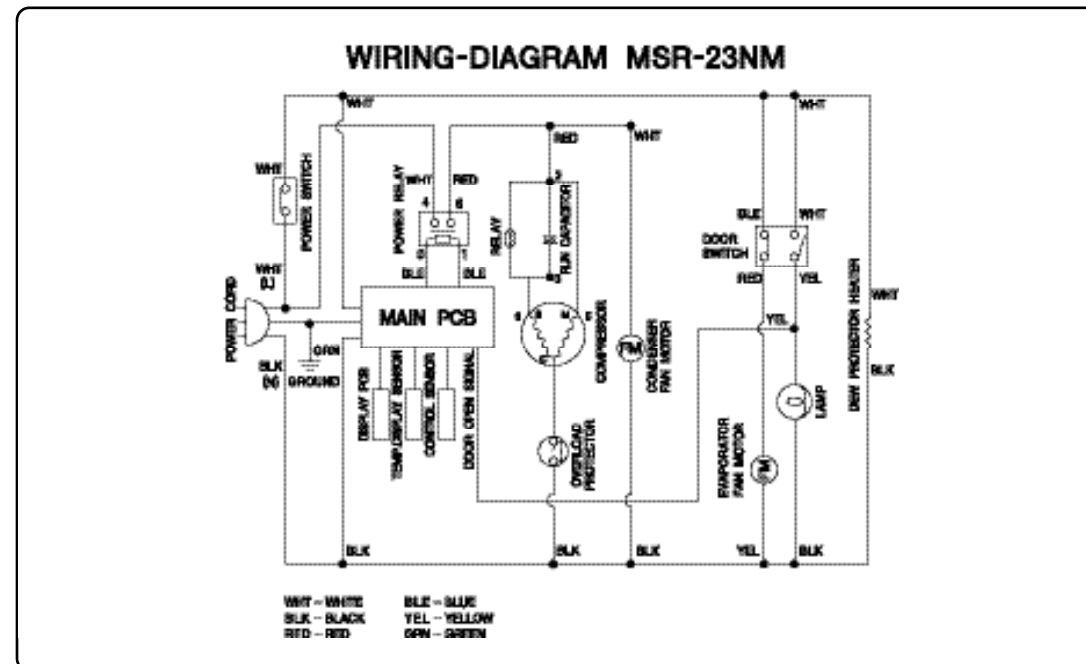
FEATURE CHART

1-4. SIDE VIEW(MSR-49G-2)

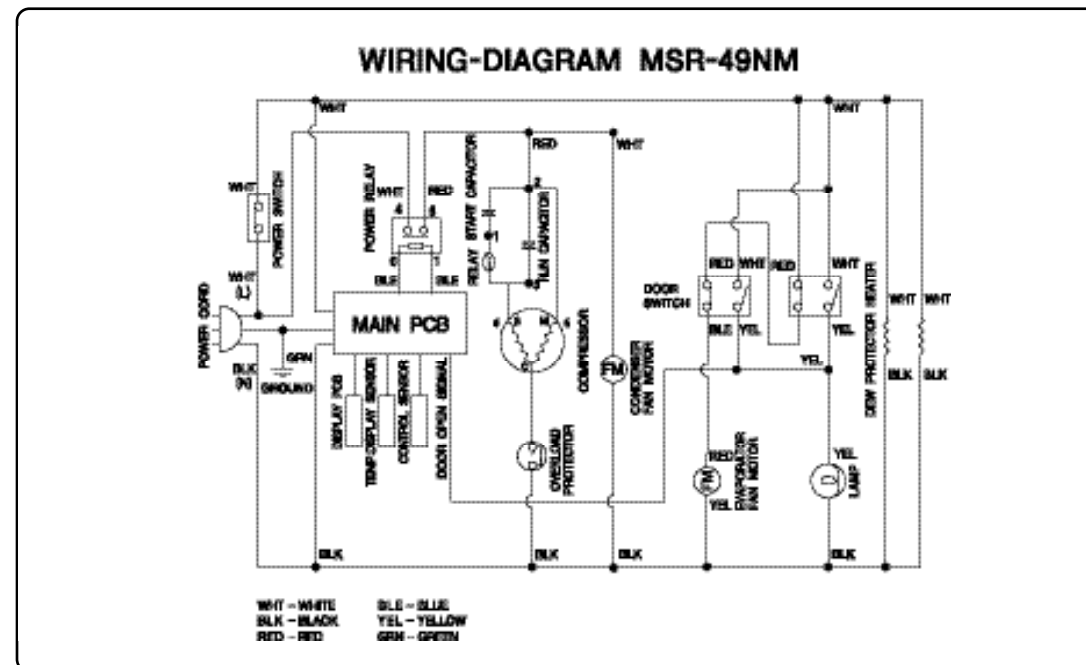


2 WIRING DIAGRAM

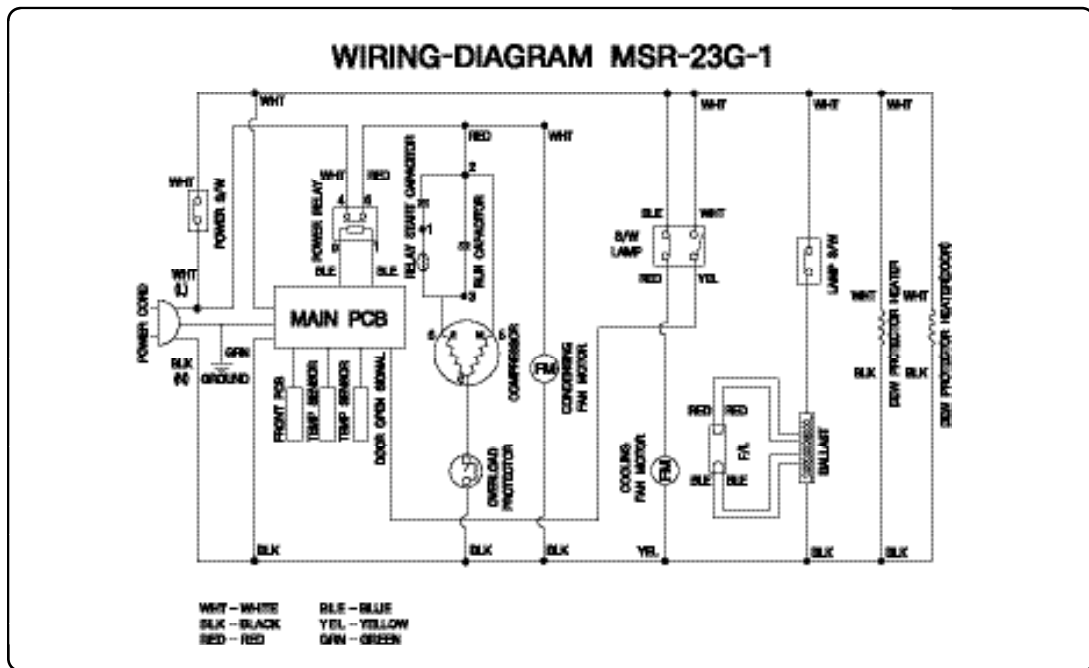
2-1. REFRIGERATOR
MSR-23NM



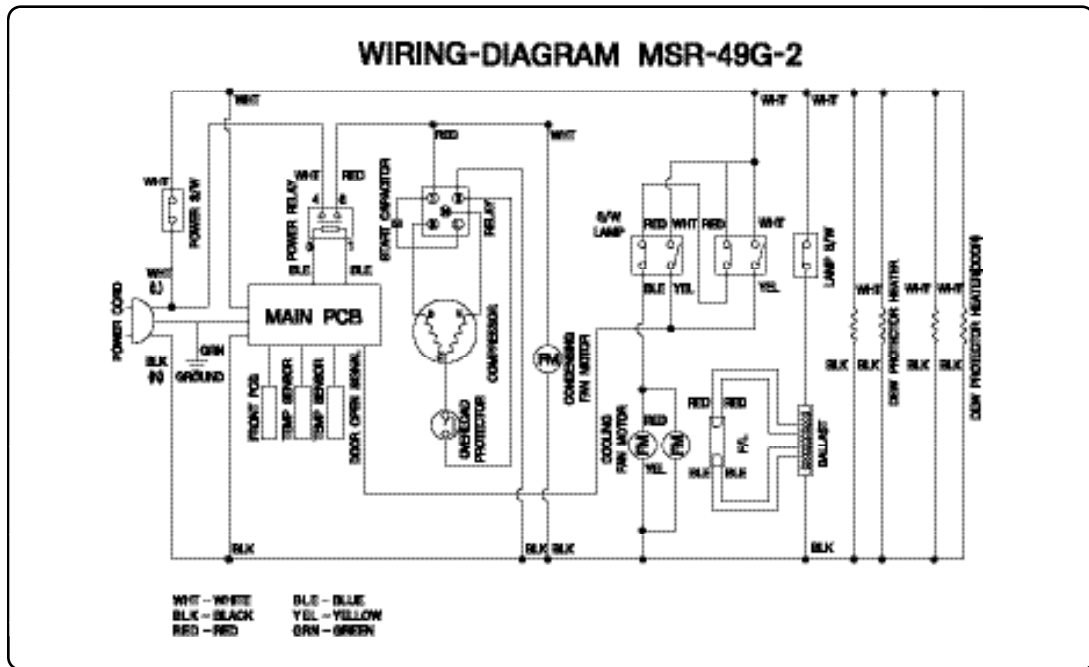
MSR-49NM



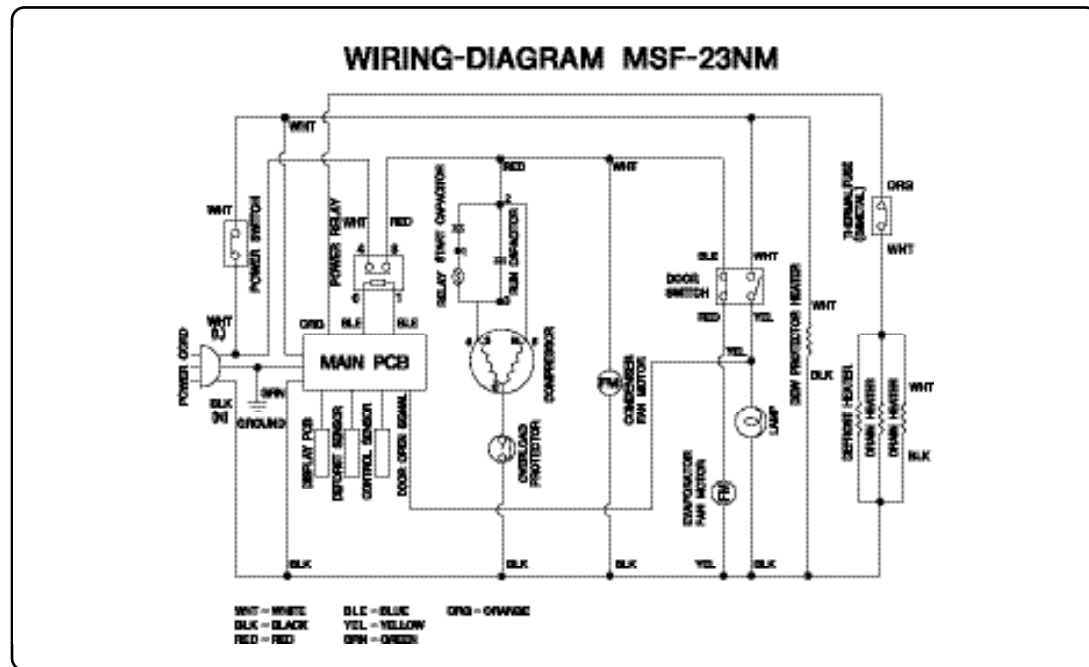
MSR-23G-1



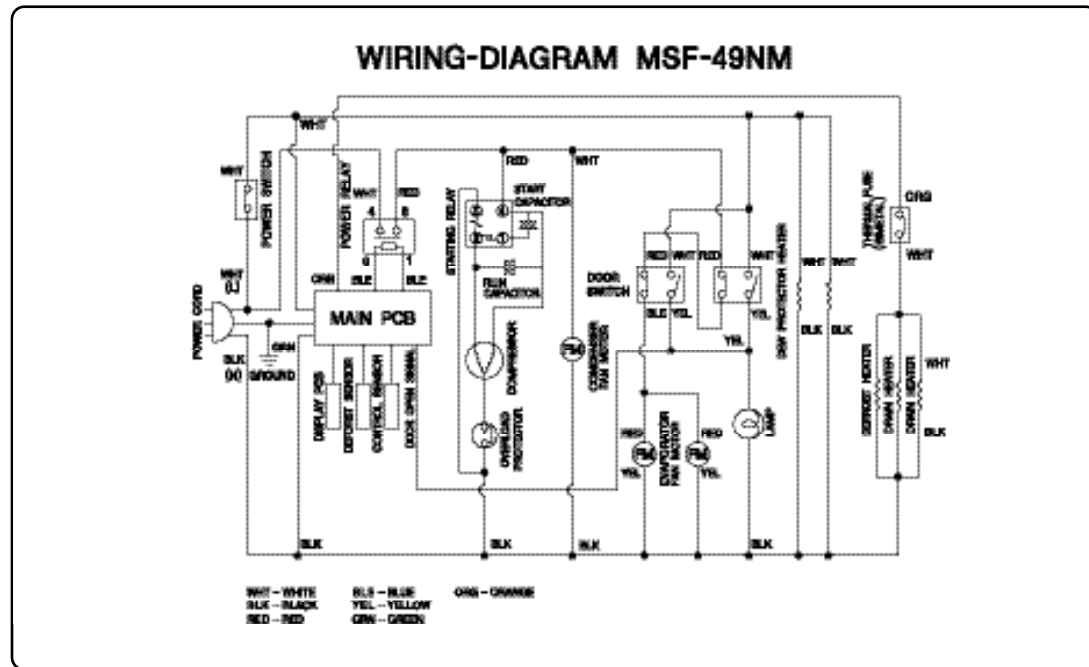
MSR-49G-2



2-2. FREEZER
MSF-23NM

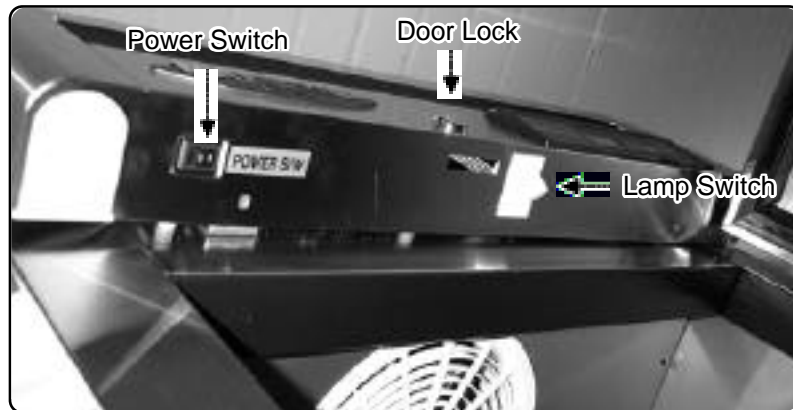


MSF-49NM

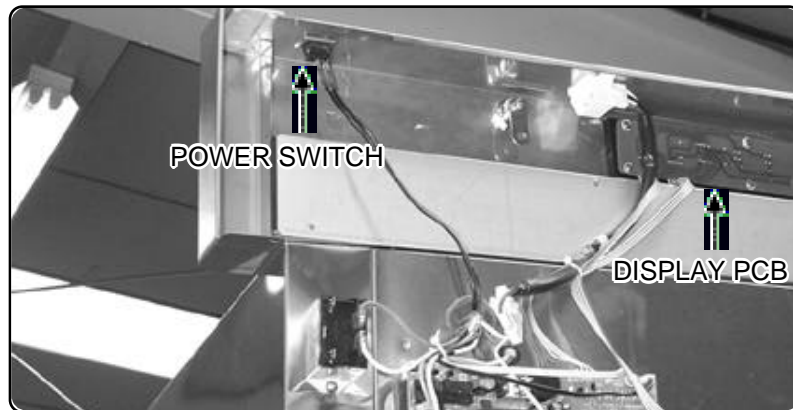


3 PART DETAILS

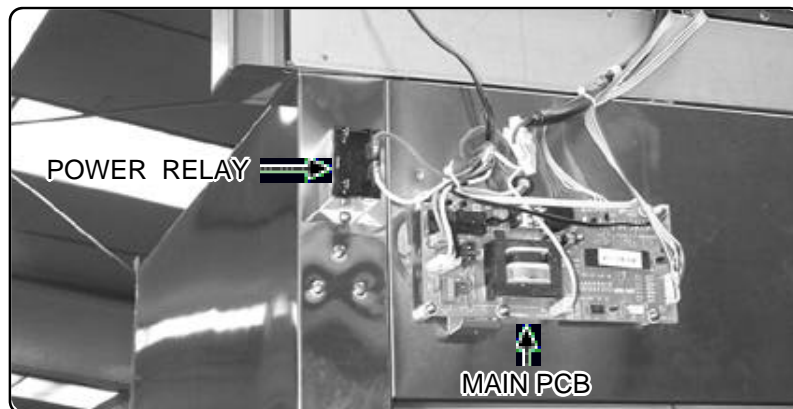
3-1. TOP PANEL



Display PCB



Main PCB



PART DETAILS

3-2. COMPRESSOR COMPARTMENT

Condensing Unit



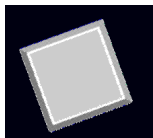
MSR-49NM



MSF-49NM



MSF-23NM, MSR-23NM



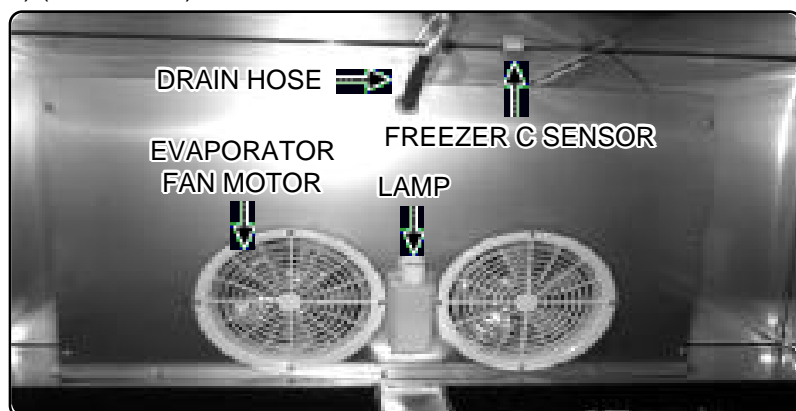
3-3. DOOR

Door Gasket

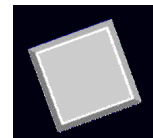
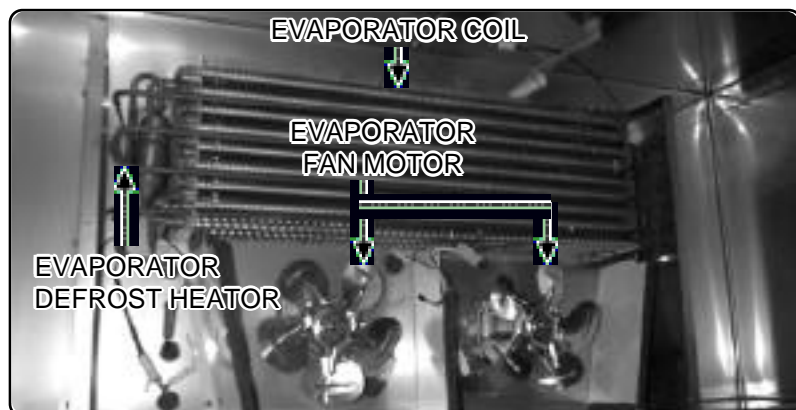


3-4. COOLING COMPARTMENT

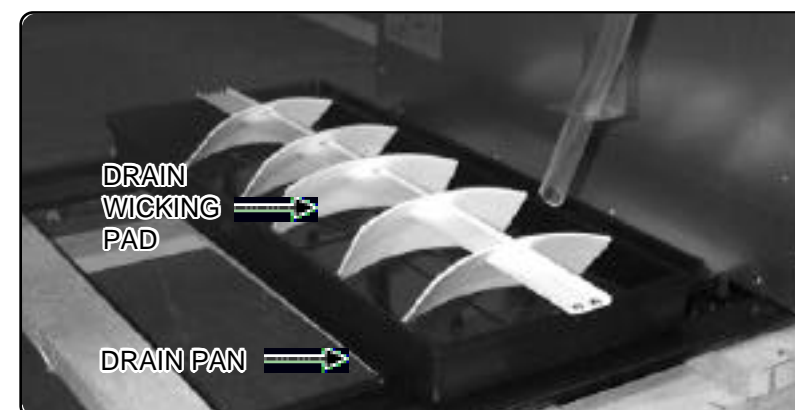
Evaporator Housing (Duct) (MSF-49NM)



Freezer Evaporator(MSF-49NM)



Drain Pan

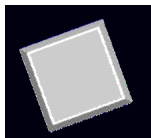


Condenser Fan Motor Assembly



Compressor Capacitor(Running & Starting Capacitor)



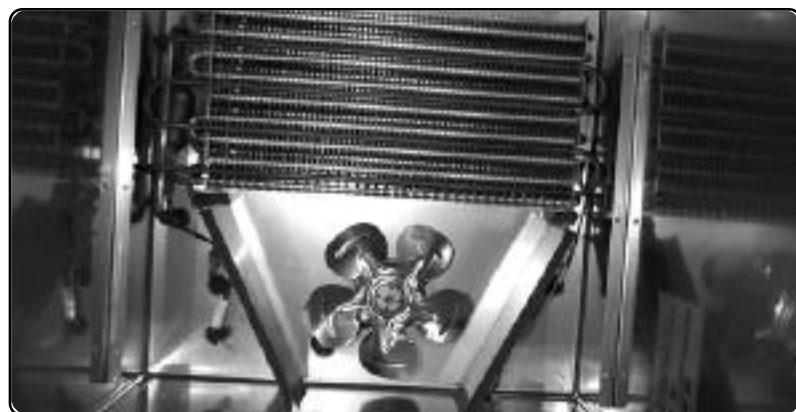


PART DETAILS

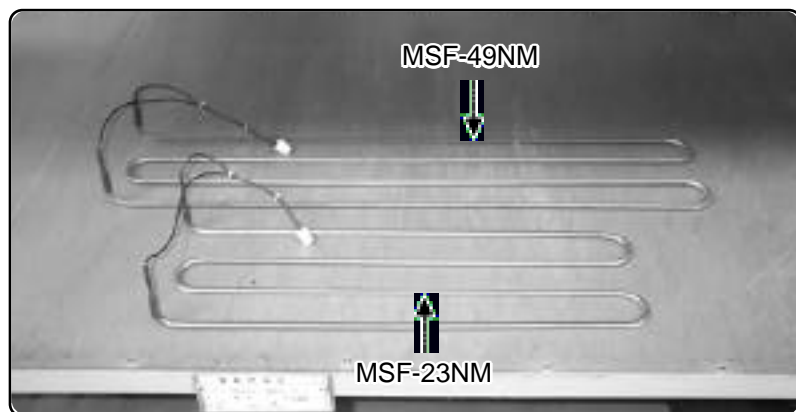
Evaporator Housing (Duct) (MSF-23NM, MSR-23NM Type)



Freezer Evaporator (MSF-23NM)



Evaporator Defrost Heater (MSF-49NM, MSF-23NM)



4 MAIN COMPONENTS

4-1. COMPRESSOR

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Refrigerant	R-134a			R-404a	R-134a	
Voltage	115 V / 60 Hz					
Comp. Model	SK182C-L2U	SK1A1C-L2W		AJA2425ZXA	SK1A1C-L2W	AKA4476YXA
Part code	R7439-010	R7439-110		R7439-030	R7439-110	R7439-150
Starting type	RSCR	CSR		-	CSR	-

4-2. COMP. RELAY

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Relay Model	G7L-1A-TUB					
Part code	R7253-040					

4-3. DRYER

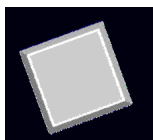
MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Refrigerant	R-134a			R-404a	R-134a	
Spec	36GR			36GR	36GR	
Part code	R2183-032			R2183-043	R2183-032	

4-4. CAPACITOR

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Running	250VAC 12uF	250VAC 12uF			250VAC 12uF	
Part code	R7543-030	R7543-110			R7543-110	
Starting		125VAC 125uF			125VAC 125uF	
Part code		R7543-100			R7543-100	

4-5. EVAPORATOR FAN MOTOR

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Motor Model	IS-4420DADY					
Part code	R7423-031					



4-6. CONDENSER FAN MOTOR

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Motor Model	SR-043					
Part code	R7423-020					

4-7. DEFROST HEATER

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Spec			445 W	600 W		
Part code			R7303-400	R7303-410		

4-8. LAMP

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Spec	25 W				FLUORESCENT 32W/865RS	
Part code	R7494-010				R7494-150	

4-9. MAIN PCB

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Part code	R7103-260		R7103-250		R7103-260	

4-10. DISPLAY PCB

MODEL	MSR-23NM	MSR-49NM	MSF-23NM	MSF-49NM	MSR-23G-1	MSR-49G-2
Voltage	115 V / 60 Hz					
Part code	R7113-190					

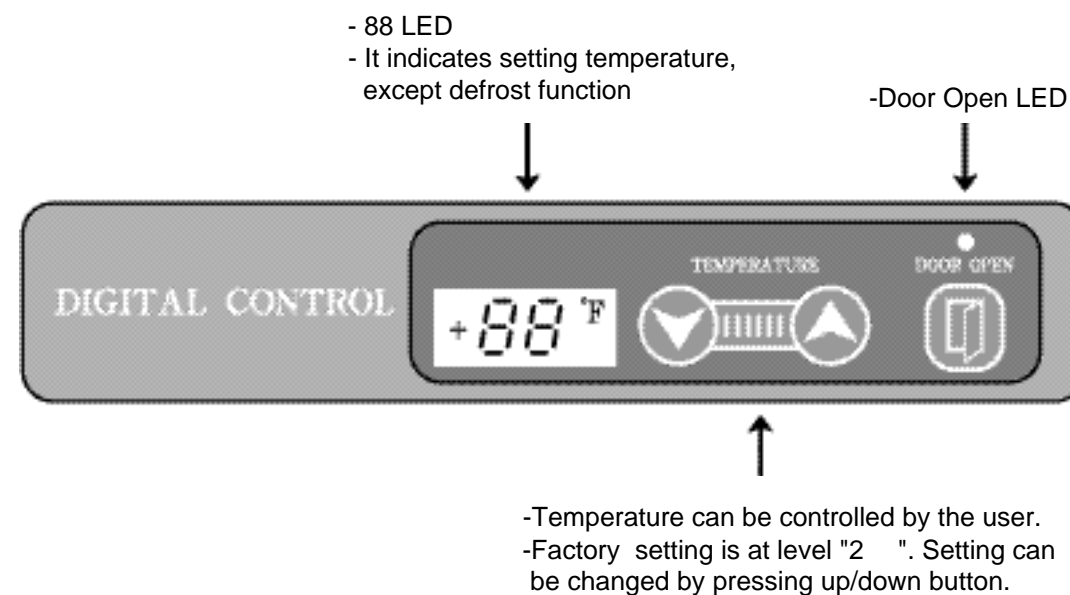
4-11. BALLAST

MODEL	MSR-23G-1			MSR-49G-2		
Voltage	120V / 60Hz					
Spce	32W					
Part code	R7553-011					

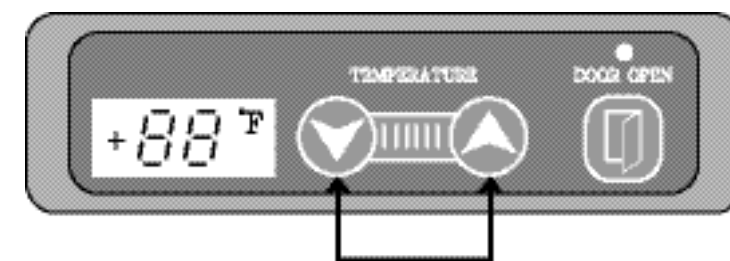


5-1. FREEZER CONTROL

5-1-1. How to use the display PCB panel





5-1-2. Manual Defrost Function



Press temperature setting UP/DOWN key for 2 seconds at the same time, manual defrost mode will start.
If you press UP/DOWN key for 2 seconds again on defrosting manual defrost will be cancelled and it will revert to normal mode after 10 minutes of pause (Display panel indicates "DF" for pause period)

5-1-3. FUNCTION TABLE

No	Function	Controlled Part	Description																																	
1	Initial Operation		1. 88 LED displays inside temperature 2. Begin to run immediately on the higher than 50 and begin to run after 5 minutes pause on the lower than 50 .																																	
2	Temperature Control	Compressor LED	1. The temperature can be changed by pushing up/down buttons. 2. 88 LED displays inside temperature 3. Buzzer buzzes 1time whenever a button is pressed 4. Compressor automatically turns on and off by C-sensor (Except error mode) 5. Comp. on/off temperature () <table border="1"> <tr> <td>Setting</td> <td>5.0</td> <td>3.0</td> <td>1.0</td> <td>-1.0</td> <td>-2.0</td> </tr> <tr> <td>Comp On</td> <td>5.3</td> <td>3.5</td> <td>0.8</td> <td>-1.3</td> <td>-1.8</td> </tr> <tr> <td>Comp OFF</td> <td>-2.5</td> <td>-4.7</td> <td>-7.4</td> <td>-9.4</td> <td>-10.6</td> </tr> </table> <hr/> <table border="1"> <tr> <td>Setting</td> <td>-3.0</td> <td>-5.0</td> <td>-7.0</td> <td>-9.0</td> </tr> <tr> <td>Comp On</td> <td>-3.1</td> <td>-4.9</td> <td>-5.8</td> <td>-7.6</td> </tr> <tr> <td>Comp OFF</td> <td>-11.2</td> <td>-13.0</td> <td>-13.9</td> <td>-15.7</td> </tr> </table>	Setting	5.0	3.0	1.0	-1.0	-2.0	Comp On	5.3	3.5	0.8	-1.3	-1.8	Comp OFF	-2.5	-4.7	-7.4	-9.4	-10.6	Setting	-3.0	-5.0	-7.0	-9.0	Comp On	-3.1	-4.9	-5.8	-7.6	Comp OFF	-11.2	-13.0	-13.9	-15.7
Setting	5.0	3.0	1.0	-1.0	-2.0																															
Comp On	5.3	3.5	0.8	-1.3	-1.8																															
Comp OFF	-2.5	-4.7	-7.4	-9.4	-10.6																															
Setting	-3.0	-5.0	-7.0	-9.0																																
Comp On	-3.1	-4.9	-5.8	-7.6																																
Comp OFF	-11.2	-13.0	-13.9	-15.7																																
3	Defrost Function	Heater Compressor	1. Defrost Cycle : It can be set 8Hr or 6Hr by OPTION JUMPER (JP3)  2. The condition of DEFROST operation -It runs regularly according to the defrost cycle with adding up the plug in time. -When the defrost starting time comes, COMPRESSOR must be turned off and the defrost operation cycle begins to run according to the conditions as the below 1 and 2 after checking the temperature by DEFROST SENSOR. Condition 1(In case the temperature checked by DEFROST SENSOR is low than 23); Defrost Heater (Max. 40Min. running) runs by that time DEFROST-SENSOR sensor 53 and COMPRESSOR runs after 10minutes pauses.																																	

No	Function	Controlled Part	Description																				
4	MAIN PCB	FREEZER / REFRIGERATOR DEFROST TIME	1. It can be set as below according to the connection of JUMPER (J1,J2,J3)in the main PCB.  <table border="1"> <thead> <tr> <th>JUMPER NO.</th> <th>JUMPER FUNCTION</th> <th>CONNECTION</th> <th>DISCONNECTI-ON</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td>JP1</td> <td>Unit of the Temperature</td> <td>Indicated to Temperature</td> <td>Indicated to Temperature</td> <td></td> </tr> <tr> <td>JP2</td> <td>Mode of the control to Refrigerator / Freezer</td> <td>The controller of Freezer</td> <td>The controller of Refrigerator</td> <td></td> </tr> <tr> <td>JP3</td> <td>Control of Defrost cycle</td> <td>8 Hr</td> <td>6 Hr</td> <td>Applied to the Freezer model only.</td> </tr> </tbody> </table>	JUMPER NO.	JUMPER FUNCTION	CONNECTION	DISCONNECTI-ON	REMARKS	JP1	Unit of the Temperature	Indicated to Temperature	Indicated to Temperature		JP2	Mode of the control to Refrigerator / Freezer	The controller of Freezer	The controller of Refrigerator		JP3	Control of Defrost cycle	8 Hr	6 Hr	Applied to the Freezer model only.
JUMPER NO.	JUMPER FUNCTION	CONNECTION	DISCONNECTI-ON	REMARKS																			
JP1	Unit of the Temperature	Indicated to Temperature	Indicated to Temperature																				
JP2	Mode of the control to Refrigerator / Freezer	The controller of Freezer	The controller of Refrigerator																				
JP3	Control of Defrost cycle	8 Hr	6 Hr	Applied to the Freezer model only.																			

ERROR CODE (FREEZER)

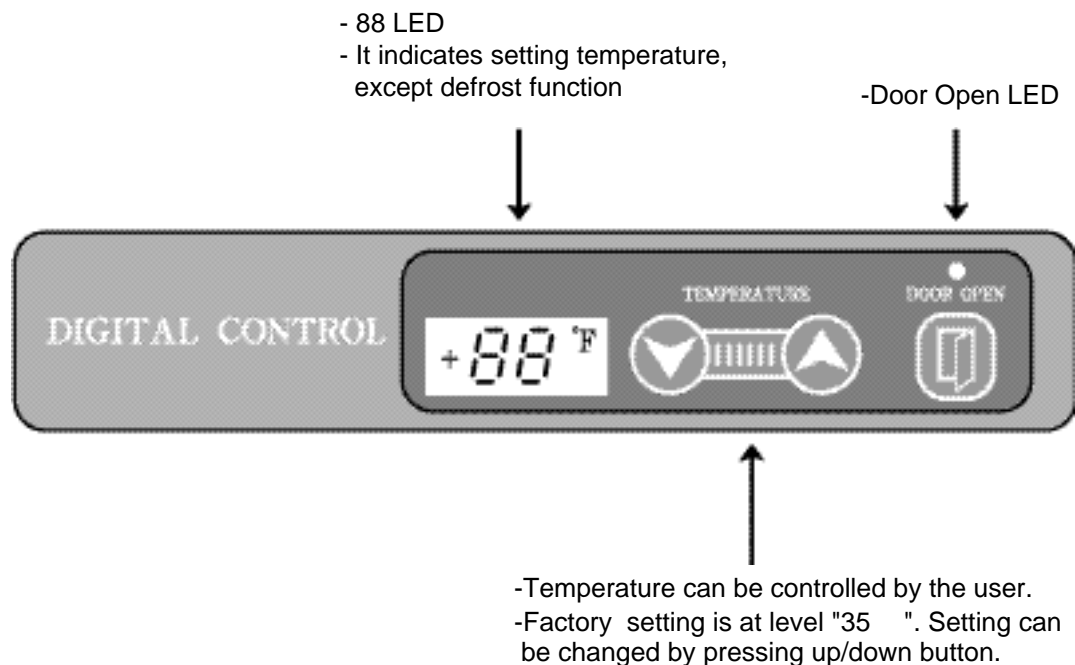
Code	Content	Perception Method	Refrigeration state
	D-sensor	- short circuit	- Normal operation
		- wire disconnection	- Defrost Heater ON : 20 MINUTES
cS	C-sensor	- short circuit	- Time control Comp ON : 10 MINUTES Comp OFF : 6 MINUTES
cO		- wire disconnection	
cS	C-sensor	- short circuit	
cO	D-sensor	- wire disconnection	

SENSOR DESCRIPTION

Sensor	Model	Role	Wire Color
D-sensor	Freezer	Detect Eva coil's temp. to terminate defrosting	WHT
C-sensor	Freezer	Detect inside air temp. to operate comp and to indicate the inside temp. on the display PCB	BLK
	Refrigerator	Detect Eva coil's temp. to operate comp	BLK
T-sensor	Refrigerator	Detect inside air temp. to indicate the inside temp on the display PCB	WHT

5-2. REFRIGERATOR CONTROL

5-2-1. HOW TO USE THE DISPLAY PCB PANEL



5-2-2. FUNCTION TABLE

No	Function	Controlled Part	Description																																	
1	Initial Operation		<ol style="list-style-type: none"> 88 LED displays inside temperature Begin to run immediately on the higher than 41 and begin to run after 5 minutes pause on the lower than 41 . 																																	
2	Temperature Control	Compressor LED	<ol style="list-style-type: none"> The temperature can be changed by pushing up/down buttons. 88 LED displays inside temperature Buzzer buzzes 1time whenever a button is pressed Compressor automatically turns on and off by C-sensor (Except error mode) Comp. on/off temperature () <table border="1"> <tr> <td>Setting</td> <td>39</td> <td>38</td> <td>37</td> <td>36</td> <td>35</td> </tr> <tr> <td>Comp On</td> <td>39.0</td> <td>39.0</td> <td>39.0</td> <td>39.0</td> <td>39.0</td> </tr> <tr> <td>Comp OFF</td> <td>30.2</td> <td>28.4</td> <td>27.5</td> <td>27.0</td> <td>25.0</td> </tr> </table> <hr/> <table border="1"> <tr> <td>Setting</td> <td>34</td> <td>32</td> <td>30</td> <td>28</td> </tr> <tr> <td>Comp On</td> <td>39.0</td> <td>39.0</td> <td>39.0</td> <td>39.0</td> </tr> <tr> <td>Comp OFF</td> <td>23.0</td> <td>21.2</td> <td>19.0</td> <td>17.6</td> </tr> </table>	Setting	39	38	37	36	35	Comp On	39.0	39.0	39.0	39.0	39.0	Comp OFF	30.2	28.4	27.5	27.0	25.0	Setting	34	32	30	28	Comp On	39.0	39.0	39.0	39.0	Comp OFF	23.0	21.2	19.0	17.6
Setting	39	38	37	36	35																															
Comp On	39.0	39.0	39.0	39.0	39.0																															
Comp OFF	30.2	28.4	27.5	27.0	25.0																															
Setting	34	32	30	28																																
Comp On	39.0	39.0	39.0	39.0																																
Comp OFF	23.0	21.2	19.0	17.6																																

ERROR CODE

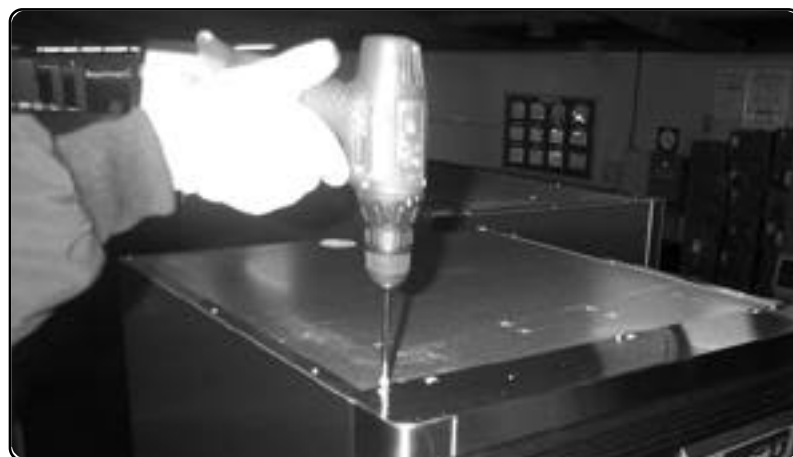
Code	Content	Perception Method	Refrigeration state
¬S	T-sensor	- short circuit	- Normal operation
¬O		- wire disconnection	
	C-sensor	- short circuit	- Time control Comp ON : 10 MINUTES Comp OFF : 20 MINUTES
		- wire disconnection	
¬S	C-sensor	- short circuit	
¬O	T-sensor	- wire disconnection	

6 REPLACEMENT OF MAIN COMPONENTS

6-1. TOP PANEL PARTS

- MAIN PCB
- LOCK ASSEMBLY or POWER SWITCH
- DOOR SWITCH

A. Untie the screws located on top grille panel.

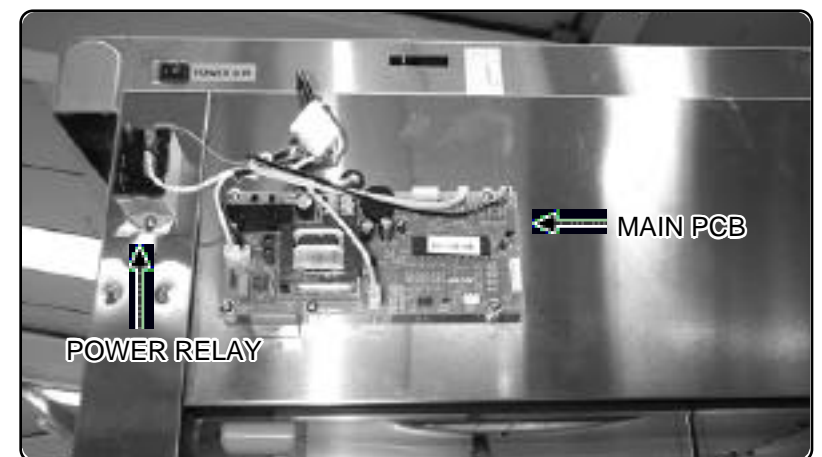


REPLACEMENT OF MAIN COMPONENTS

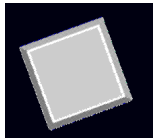
- B. Untie the screws located on bottom of top panel.
caution : When unscrewing, hold the top panel.
Panel may fall & cause injury.



- C. Place the top panel on top of the cabinet.
D. You can replace POWER-RELAY and MAIN PCB

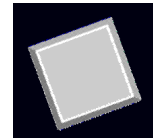
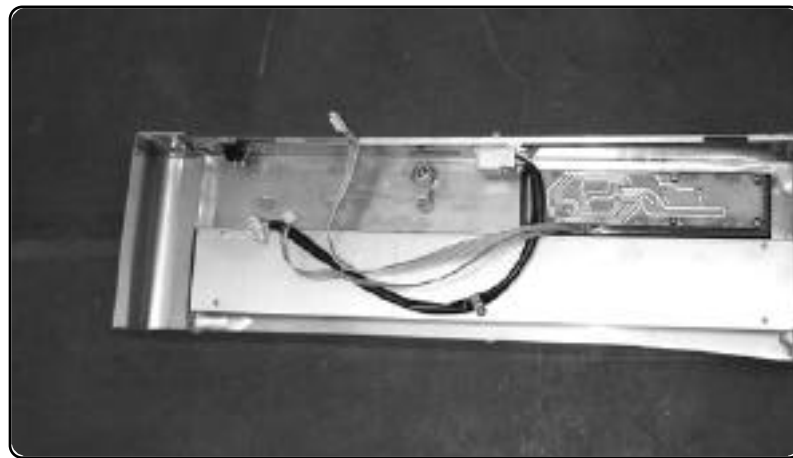


MSF-23NM



E. Pull out the harness located back of top panel.

You can separate top panel out of the unit.
You can replace power switch, lamp switch and display PCB.



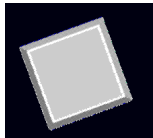
6-2 REPLACING DOOR

- A. Disassemble top panel as described section 6-1 A,B
- B. Remove bottom grille by unscrewing the four screws located on each side of bottom grille.

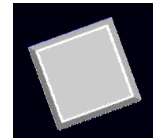
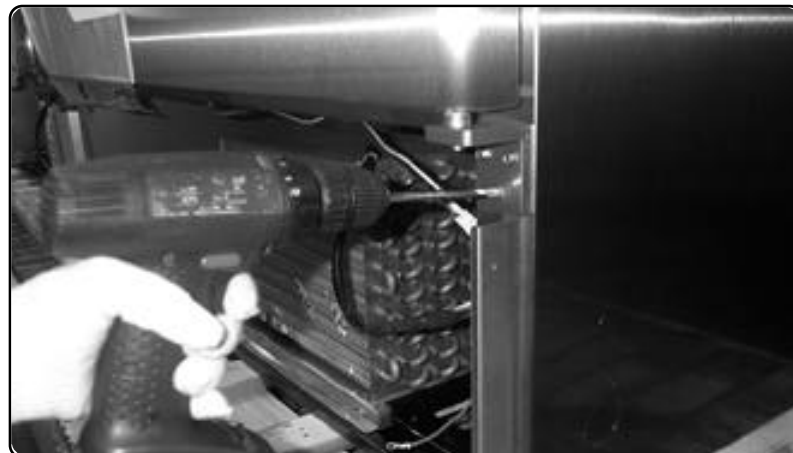


- C. Open the capacitor cover.
Disconnect the Mullion Heater



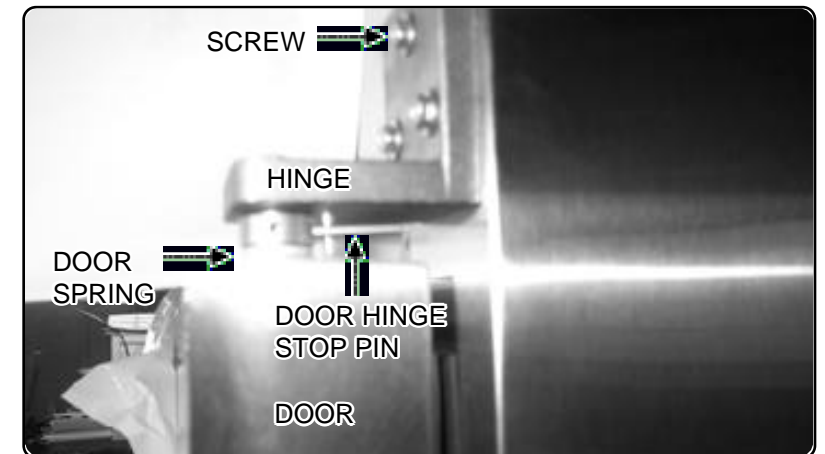


D. Untie the hinge.



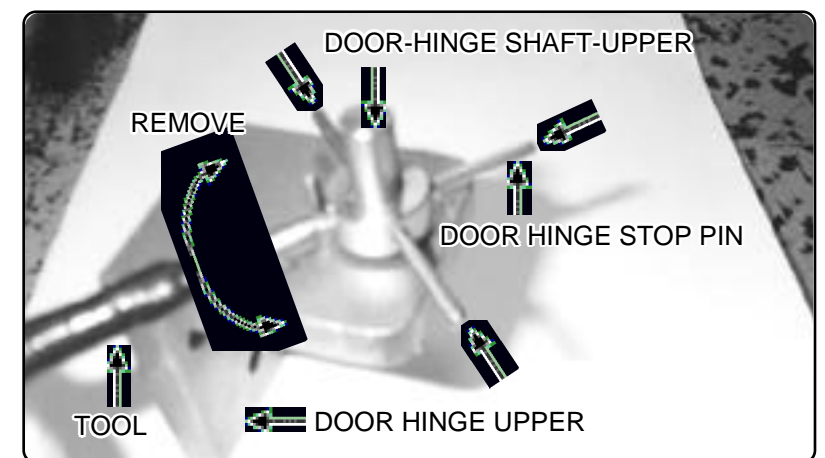
6-3 DOOR SPRING ADJUSTMENT

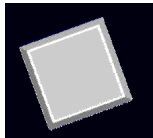
A. Detailed structure of DOOR-HINGE



B. Coordinated principle of DOOR TENSION

After putting Tool for revolving DOOR-HINGE STOP-PIN HOLE, Insert DOOR-HINGE STOP-PIN into the hole after revolving up to the requested TENSION.

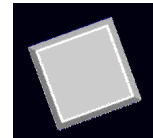
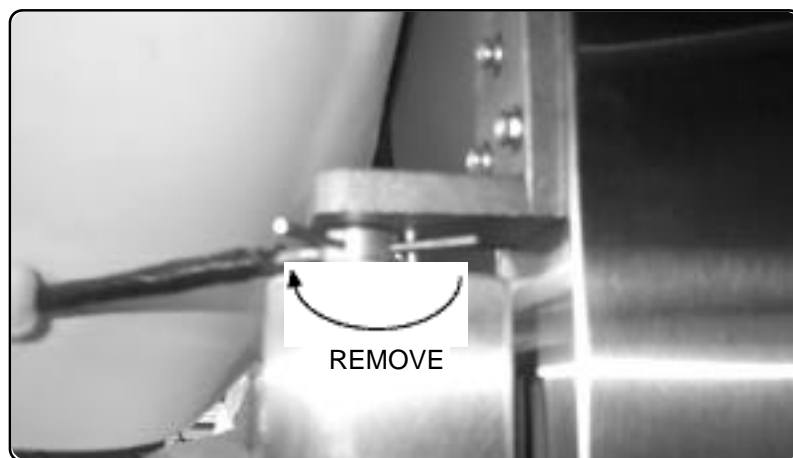




C. Remove the door hinge stop pin



B. Place the door hinge stop pin and adjust the strength of the door spring.



6-4. REVERSIBLE-DOOR ASSEMBLING METHOD

APPLIED MODEL : MSF-23NM, MSR-23NM

1. Taking apart TOP GRILL and GRILL ASSEMBLY

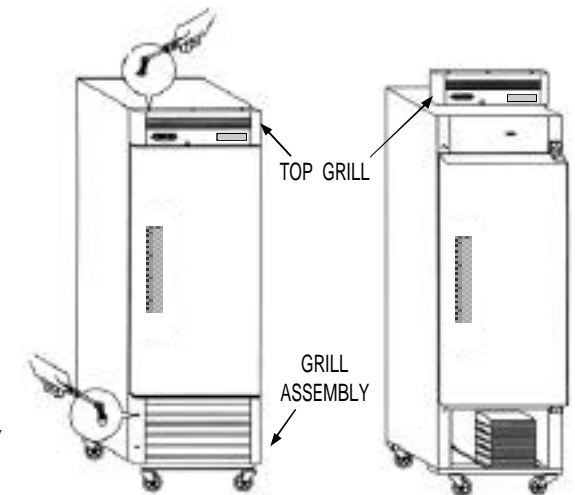
1) Take apart TOP GRILL

after eliminating screw connected
Upper or downward located
in the PICTURE (A)

2) Take apart GRILL

after eliminating the screw connected
Left and right side located
in the PLCTURE (A)

Attention : Heed not to damage Electricity
wire and not to fall top-grill
from the upper.
Also be careful the sharp
edges during working.

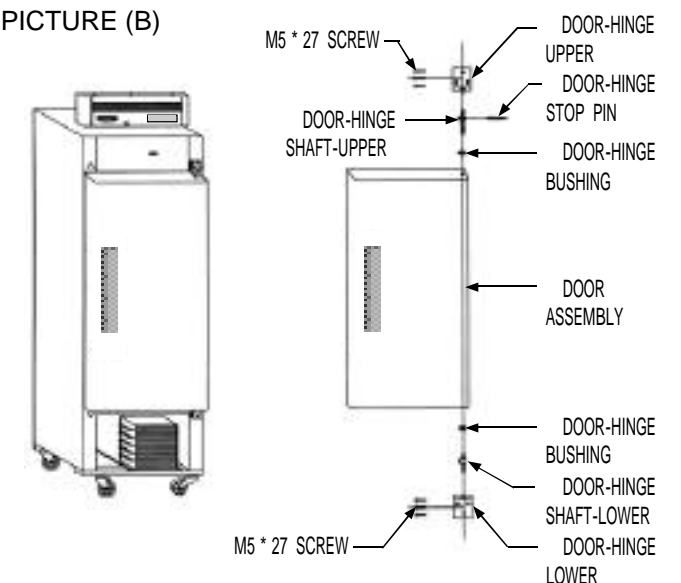


PICTURE A

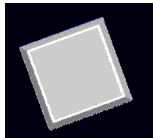
2. Taking apart of DOOR-ASSEMBLY

1) Take apart ~ in order at the PICTURE (B)

Attention : Heed the elasticity
when eliminating the
PIN and the weight
during taking apart
DOOR ASSEMBLY.

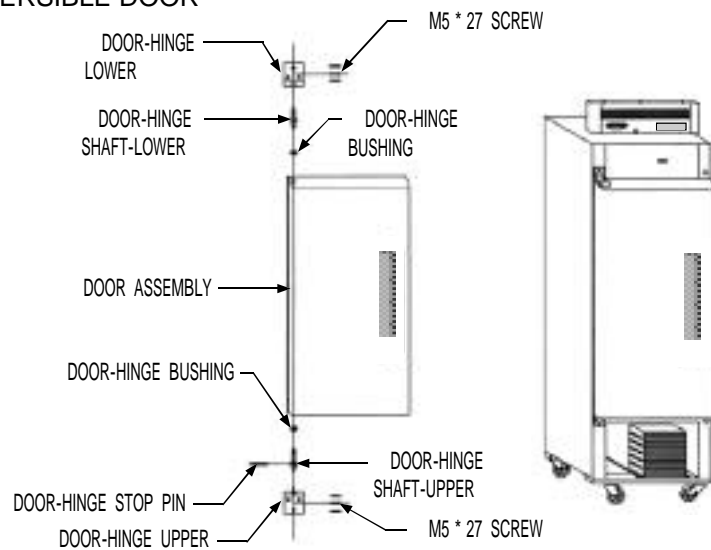


PICTURE B



3. Assembling method of REVERSIBLE DOOR

- 1) After reversing 180 degree DOOR ASSEMBLY of , have the HANDLE be the requested side.
- 2) Assemble as the following order



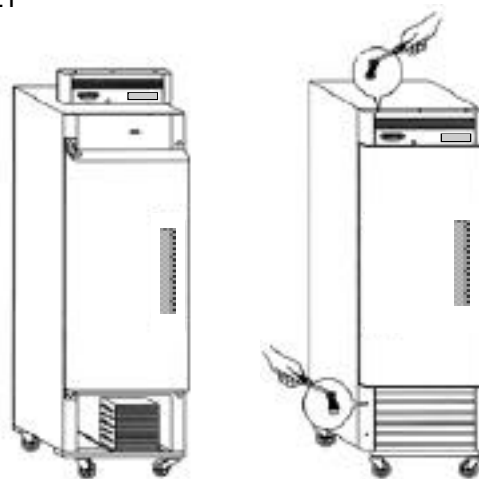
PICTURE C

- After assembling , assemble
- Insert into
- After inserting , fix
- Insert reversly for suitable spring elasticity

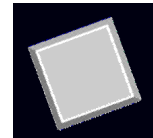
Attention : When screw connected, should well be connected to maintain sufficient sustain

4. Assembling TOP GRILL and GRILL ASSEMBLY

- 1) Connect the screw at the location on the top and bottom of the top grill
- 2) Connect the screw at the location on the left and right side of the grill assembly.



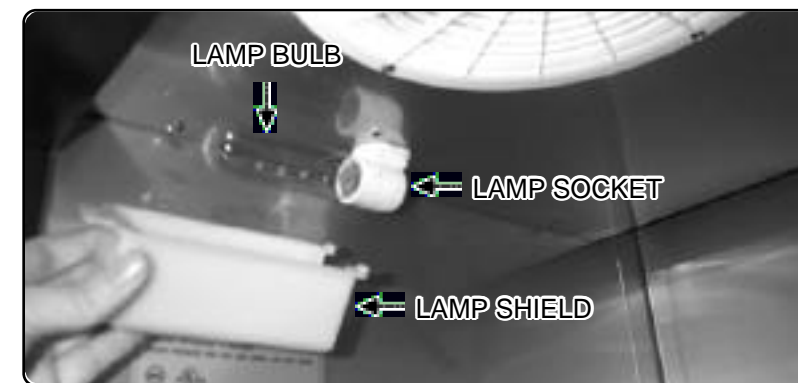
PICTURE D



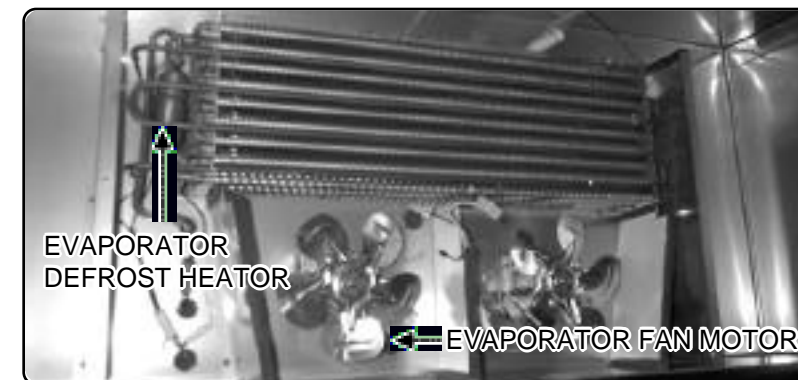
6-5. REFRIGERATION COMPARTMENT'S PARTS

- LAMP BULB, LAMP SHIELD
- EVAPORATOR FAN MOTOR
- D-SENSOR, C-SENSOR, T-SENSOR
- EVAPORATOR COIL
- EVAPORATOR DEFROST HEATER

A. Disassemble lamp shield

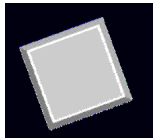


B. Disassemble duct



C. Pull out the lamp

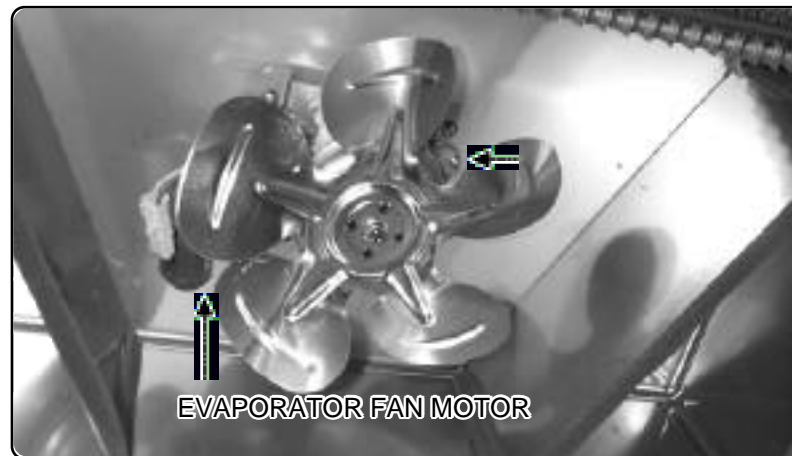




D. Replacing evaporator fan motor

D-1. Disconnect the fan motor's harness.

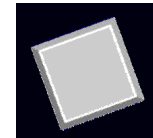
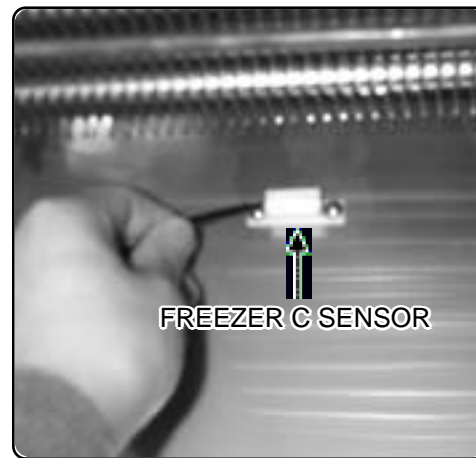
D-2. Untie the four screws which located on bottom of fan motor



E. Replacing sensor

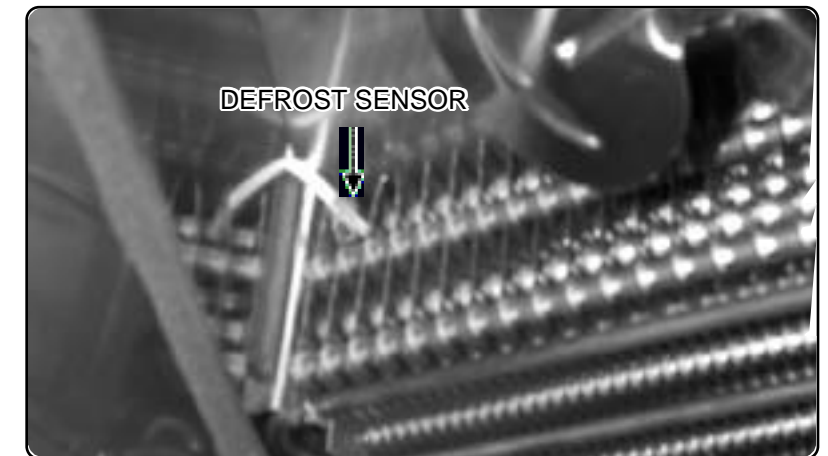
E-1. FREEZER C-sensor of

Untie as illustrated below and pull-out the FREEZER C-sensor from the cover.

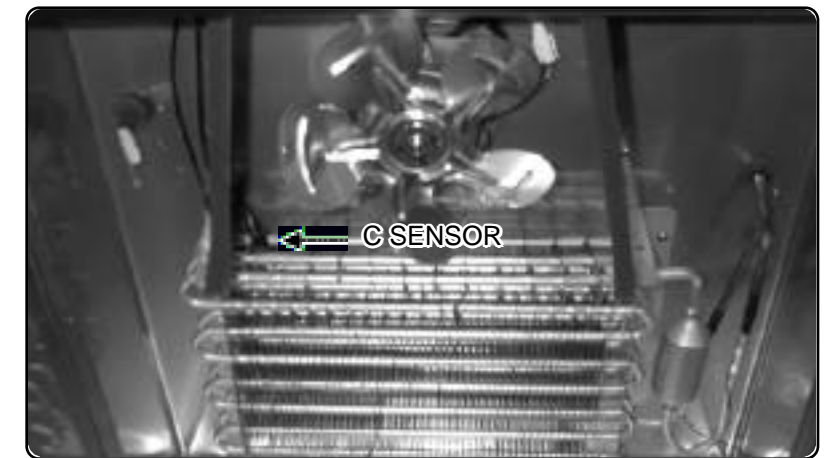


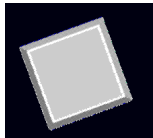
E-2. DEFROST-sensor of Freezer

Disassemble the DEFROST-sensor from the evaporator

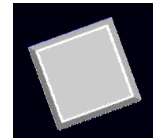
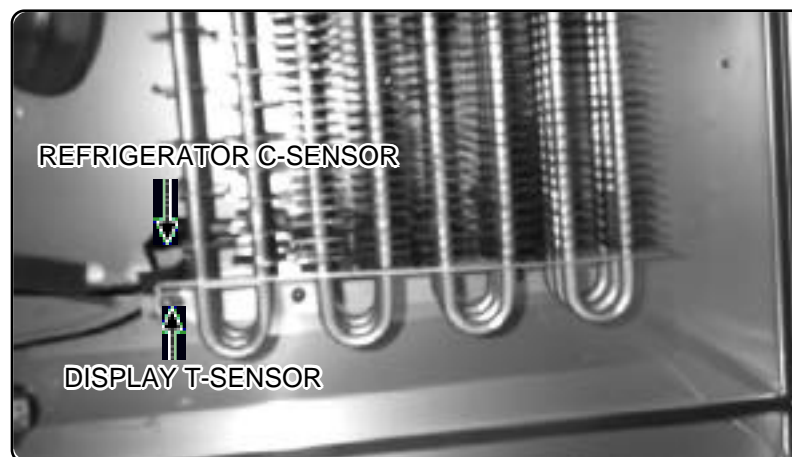
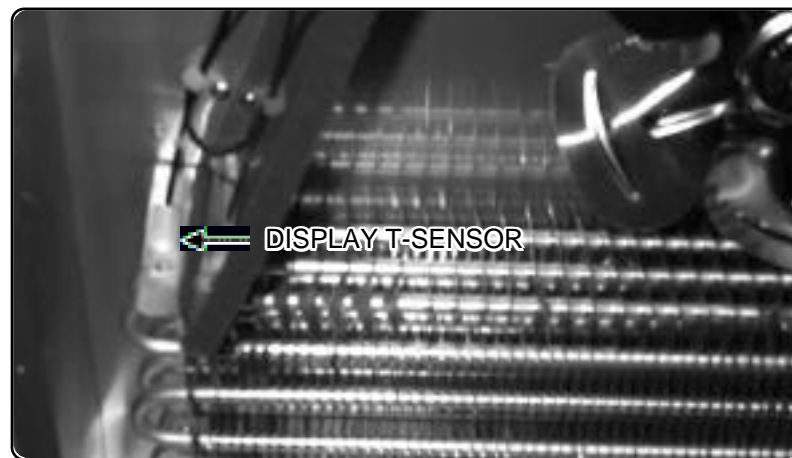


E-3. C-sensor of Refrigerator





E-4. T-Sensor (Temperature Display Sensor) of Refrigerator



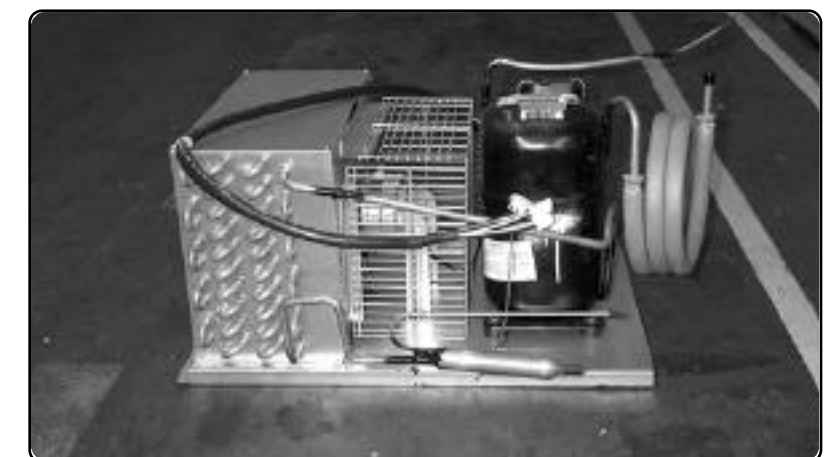
6-6. CONDENSING UNIT

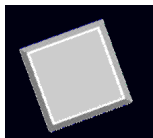
- Condensing units : Compressor, Condenser Fan Motor, Condenser Coil, Condenser Dryer.
- Others : Power-cord, Drain pan

A. Untie two screws as below.



B. Pull-out the condensing unit (MSF-49 NM)





6-7. LIGHTING-PARTS

A. MSR-23G-1



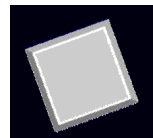
1. Untie three screws securing the Lamp Reflection.



2. Separate the Lamp Reflection



3. Separate the Lamp out of the Lamp socket and replace it.



B. MSR-49G-2



1. Separate the Shelves



2. Separate the Lamp Socket

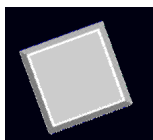


3. Take out the Doors and separate the Lamp from the Lamp Holder.



4. Separate the Lamp shield End Cap





REPLACEMENT OF MAIN COMPONENTS

C. BALLAST

1. Untie four screws securing the sign frame End separate Sign Frame End.
2. Separate connector of the ballast

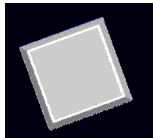


3. Untie two screws for separating the Ballast.



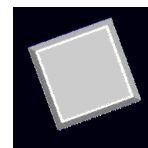
7 PART-LIST

Part name	Code	Description	Solid				Glass	
			R23	R49	F23	F49	R23	R49
CASTER								
CASTER	R3323-010	SPCC 4"	2	2	2	2	2	2
CASTER BRAKE	R3323-020	SPCC 4"	2	2	2	2	2	2
COMPRESSOR								
COMPRESSOR	R7439-030	AJA2425ZXA				1		
COMPRESSOR	R7439-110	SK1A1C-L2W		1	1		1	
COMPRESSOR	R7439-010	SK182C-L2U	1					
COMPRESSOR	R7439-150	AKA4476YXA						1
COMPRESSOR RUN CAPACITOR	R7543-110	250VAC 12UF		1	1			
COMPRESSOR START CAPACITOR	R7543-100	125VAC 125UF		1	1			
COMPRESSOR RUN CAPACITOR	R7543-030	250VAC 12UF	1					
COMPRESSOR RELAY HARNESS	R7373-770	AWG18			1			
COMPRESSOR RELAY HARNESS	R7373-780	AWG18	1					
COMPRESSOR RELAY HARNESS	R7373-790	AWG18				1		
COMPRESSOR RELAY HARNESS	R7373-800	AWG18		1				
COMPRESSOR RELAY HARNESS	R7283-070	AWG18						1
COMPRESSOR RELAY HARNESS	R7283-080	AWG18					1	
POWER-CORD	R7363-060	3000MM	1	1	1	1	1	1
CONDENSER								
CONDENSER COIL	R2272-012					1		
CONDENSER COIL	R2202-030	4.76 13340		1				
CONDENSER COIL	R2202-031	4.76 18960	1		1		1	
CONDENSER COIL	R2273-021							1
CONDENSER DRYER	R2183-032	25.4 169 0.635	1	1	1		1	1
CONDENSER DRYER	R2183-043	25.4 130 0.635				1		
CONDENSER FAN								
CONDENSER FAN MOTOR	R7423-020	SE-043 9W CCW 1550RPM	1	1	1	1	1	1
CONDENSER FAN MOTOR BLADE	R3729-020	AL3004H14 9" CCW T1.0	1	1	1	1	1	1
CONDENSER FAN MOTOR BRACKET	R3313-260	SBHG1-0 T2.0 164	1	1	1	1	1	1
DRAIN								
DRAIN PAN	R3743-060	ABS BLK	1		1		1	
DRAIN PAN	R3742-070	ABS BLK		1		1		1
DRAIN WICKING BAR	R3853-230	PP WHT T2.0 40 569	1		1		1	
DRAIN WICKING BAR	R3853-240	PP WHT T2.0 40 657		1		1		1
DRAIN WICKING PADS	R1154-101	PP T2.5 99 103	1		1		1	
DRAIN WICKING PADS	R1154-020	PP T2.5 83 180		1		1		1



PART-LIST

Part name	Code	Description	Solid				Glass	
			R23	R49	F23	F49	R23	R49
EVAPORATOR								
EVAPORATOR COIL	R2263-044	CU+AL				1		1
EVAPORATOR COIL	R2263-034	CU+AL		1				
EVAPORATOR COIL	R8613-342	CU+AL			1		1	
EVAPORATOR COIL	R8613-353	CU+AL	1					
EVAPORATOR DEFROST HEATER	R7303-410	SUS304 C 8 600 W 22.0				1		
EVAPORATOR DEFROST HEATER	R7303-400	SUS304 C 8 445 W 29.7			1			
EVAPORATOR DRAIN PAN HEATER	R7303-180	PVC 105 90W 147				1		
EVAPORATOR DRAIN PAN HEATER	R7303-170	PVC 105 90W 147			1			
SENSOR BRACKET	R3314-190	P.P, WHT	1	1	1	1	1	1
EVAPORATOR THERMAL FUSE (BIMETAL)	R7253-050	80 ±4 G4A00			1	1		
EVAPORATOR FAN MOTOR	R7423-031	IS-4420 1650 ±150RPM	1	1	1	2	1	2
EVAPORATOR FAN MOTOR BLADE	R3729-010	8" C.C.W	1	1	1	2	1	2
EVAPORATOR FAN MOTOR BRACKET	R3204-360	STS-304 T1.0 120 90	1	1	1	2	1	2
FREEZER SENSOR	R7213-081	YELLOW			1	1		
DEFROST SENSOR	R7213-101	WHITE			1	1		
REFRIGERATOR SENSOR	R7213-091	BLACK	1	1			1	1
DISPLAY SENSOR	R7213-111	WHITE	1	1			1	1
TOP PANEL								
TOP PANEL ASSEMBLY	R8182-130			1		1		
TOP PANEL ASSEMBLY	R8182-120		1		1			
TOP PANEL ASSEMBLY	R8182-120							1
TOP PANEL ASSEMBLY	R8182-130						1	
FREEZER BRAND LOGO	R5133-150				1	1		
REFRIGERATOR BRAND LOGO	R5133-140		1	1			1	1
FREEZER MAIN PCB	R7103-250				1	1		
REFRIGERATOR MAIN PCB	R7103-260		1	1			1	1
CONTROL BOARD HOUSING	R7113-190		1	1	1	1	1	1
DISPLAY PCB	R7113-190	20 220 T1.5	1	1	1	1	1	1
DISPLAY PCB FILM	R4113-370	PC-SHEET	1	1	1	1	1	1
SUPPORTER PCB	R3084-010	NYLON66	6	6	6	6	6	6
POWER RELAY	R7253-040	OMRON G7L-1A-TUB	1	1	1	1	2	2
DOOR SWITCH	R7203-020	125V 1.5A	1	2	1	2	1	2
DOOR SWITCH HARNESS	R7373-423	AWG18		1		1		
DOOR SWITCH HARNESS	R7373-433	AWG18	1		1			
DOOR LOCK	R3739-010		1	2	1	2	1	2



PART-LIST

Part name	Code	Description	Solid				Glass	
			R23	R49	F23	F49	R23	R49
BOTTOM GRILLE								
BOTTOM GRILLE ASSEMBLY	R8182-080		1		1		1	
BOTTOM GRILLE ASSEMBLY	R8182-092			1		1		1
SHELF								
SHELF CLIP	R3313-151		12	24	12	24	12	24
SHELF	R3233-072		3		3			
SHELF	R3233-063			6		6		
SHELF (GLASS)	R3233-180						3	
SHELF L (GLASS)	R3233-160							3
SHELF R (GLASS)	R3233-170							3
SHELF STANDARD	R3373-121		4	8	4	8	4	8
DOOR								
DOOR ASSEMBLY	R8272-220		1		1			
DOOR ASSEMBLY	R8272-170			2		2		
GLASS DOOR ASSEMBLY L	R8172-650							1
GLASS DOOR ASSEMBLY R	R8172-630							1
GLASS DOOR ASSEMBLY	R8172-640						1	
DOOR GASKET	R3903-354	RD-PVC BLACK	1	2	1	2		
MULLION	R8163-031	30W PINK		1				
MULLION	R8163-121	38W YELLOW				1		
DOOR HINGE TOP	R3394-120	AL	1	2	1	2		
DOOR HINGE BOTTOM	R3394-130	AL	1	2	1	2		
DOOR HINGE WASHER	R3034-020	18 T2.2	2	4	2	4		
DOOR HINGE STOP PIN	R3044-040	3 30	1	2	1	2		
LAMP								
LAMP BULB	R7394-010	25W, E26	1	1	1	1		
LAMP SHIELD	R3813-130	MIPS (HR-3370)	1	1	1	1		
LAMP SOCKET	R7393-020	660W 250V	1	1	1	1		
FLUORESCENT LAMP								
FLUORESCENT	R7394-150	PHILIPS 32W/865RS					1	1
BALLAST	R7553-010	ADVANCE (R-1P32-TP)					1	1
LAMP GUARD	R3894-030	PP					1	1
GUARD SOCKET	R3814-550	ABS V0					2	2
LAMP SOCKET	R7393-180	ABS V0					2	
LAMP SOCKET	R7393-170	ABS V0						2

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