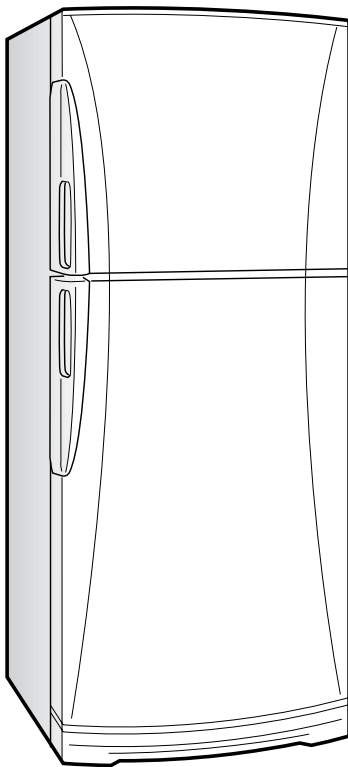


SHARP SERVICE MANUAL

SZ033SE60APWE



REFRIGERATOR-FREEZER

MODELS

SJ-58LM-C2W/C2G/C2B

SJ-63LM-C2W/C2G/C2B

SJ-68LM-C2W/C2G/C2B/C2S

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.



This equipment complies with the requirements of Directives 96/57/EC, 89/336/EEC and 73/23/EEC as amended by 93/68/EEC.

DESTINATION E,I

Refrigerant; HFC-134a

Refer to "HFC-134a COOLING UNIT" Service Manual for handling this refrigerant.

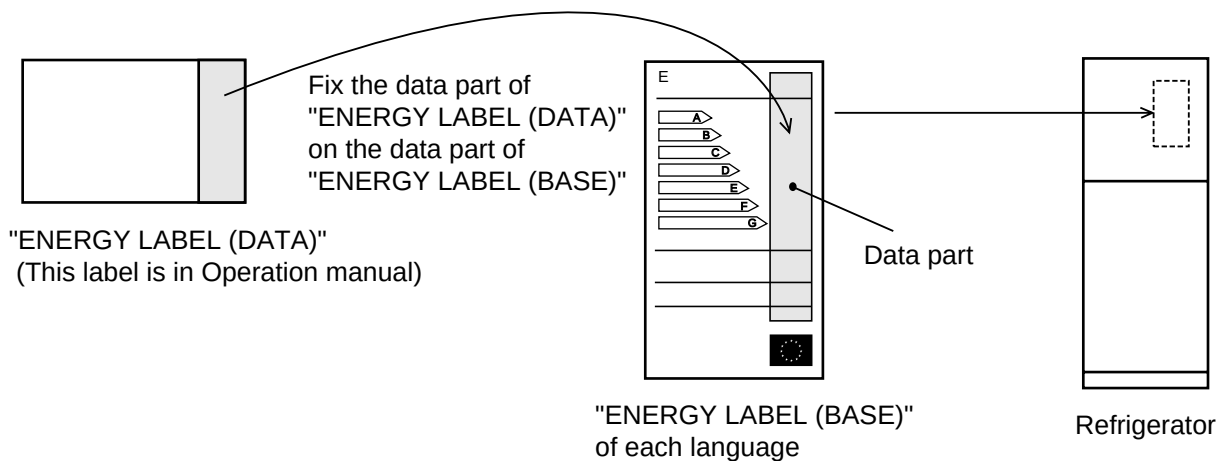
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ENERGY LABEL

Usage of "the ENERGY LABEL"

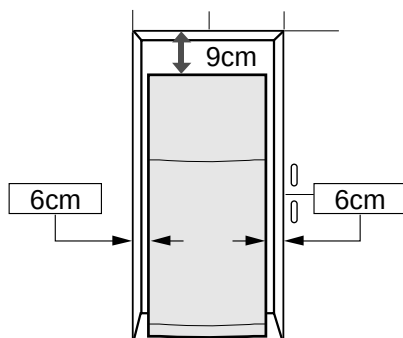
When displaying this refrigerator in the shop-window, attach the "ENERGY LABEL" to it in the following procedure.



INSTALLATION

Free standing type

To ensure adequate ventilation for this refrigerator, install with 6 cm space at the rear and both sides, with a minimum space of 9 cm above the refrigerator.



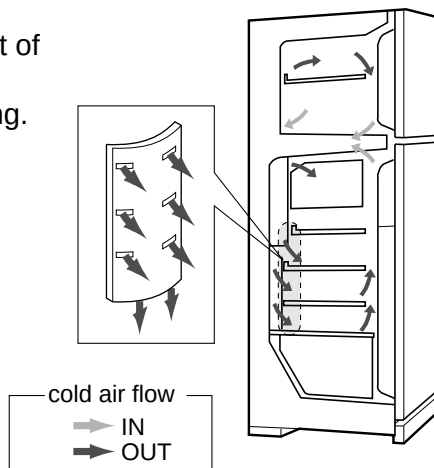
- This refrigerator shall be used under the ordinary place condition between +5°C and +43°C of ambient temperature, and also not be left under -10°C for long days.
- To be used this refrigerator within the range of the rated voltage $\pm 6\%$.

CAUTIONS AND INFORMATIONS

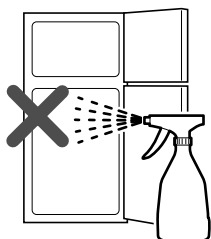
In case of following troubles, the cause is not related with the failure of refrigerator.
Please mention the correct way to the customer for the use of refrigerator when the repairing.

1. Some foods freezed in the refrigerator compartment.

Do not place food directly in front of cold air outlet.
This may lead to the food freezing.



2. Some plastic parts were cracked or splitted.



Some household cleaning chemicals may affect the internal food liner and plastic parts resulting in splitting or cracks occurring.

When cleaning all plastic parts inside this refrigerator, only use diluted dishwashing liquid(soapy water). Make sure that all plastic parts are thoroughly rinsed with water after cleaning.

3. IT IS NORMAL for the refrigerator to produce the following sounds.

Cracking or crunching sound;

Sound produced by expansion and contraction of inner walls and internal parts during cooling.

Squeaking sound;

Sound produced by expansion and contraction of internal parts.

Sound of flowing fluid (gurgling sound, fizzing sound);

Sound of refrigerant flowing in pipes (sound may become louder from time to time).

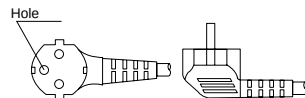
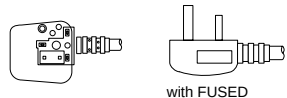
SPECIFICATIONS

Items		SJ-58LM	SJ-63LM	SJ-68LM
Type		2-Door	2-Door	2-Door
Outer dimensions (Including spacer)	Height	1620mm(63.8")	1720mm(67.7")	1820mm(71.6")
	Width	760mm(29.9")	760mm(29.9")	760mm(29.9")
	Depth	740mm(29.1")	740mm(29.1")	740mm(29.1")
Rated storage volume		492 liter (17.4 cu.ft) F: 151 liter (5.3 cu.ft) R: 341 liter(12.1 cu.ft)	535 liter (18.9 cu.ft) F: 151 liter (5.3 cu.ft) R: 384 liter(13.6 cu.ft)	577 liter (20.4cu.ft) F: 151 liter (5.3 cu.ft) R: 426 liter(15.1 cu.ft)
Rated gross volume		525 liter (18.6 cu.ft) F: 171 liter (6.1cu.ft) R: 354 liter(12.5cu.ft)	565 liter (20.0 cu.ft) F: 171 liter (6.1cu.ft) R: 394 liter(13.9cu.ft)	610 liter (21.6 cu.ft) F: 171 liter (6.1cu.ft) R: 439 liter(15.5cu.ft)
Defrosting	System	Heater system		
	Start	Automatic		
	Finish	Automatic		
Temperature control		Automatic (Adjustable)		
No-frost freezer		Yes		
Interior lamp		2		
Caster		4		
Evaporating pan		1		
Refrigerator Compartment	R glass shelf ass'y	2		3
	V glass shelf ass'y	1		
	Vegetable case	1		
	Fruit case	1		
	R door pocket	1		2
	Egg tray	2		
	Bottle pocket	2		
	Utility case pocket	1		
	Slide case	1		
	Tube stand	2		
Freezer Compartment	Freezer shelf ass'y	1		
	Ice cube maker	Twin ice cube maker		
	Ice storage box	1		
	F door pocket	2		
Deodorizing system		No		

RATING

Items		SJ-58LM	SJ-63LM	SJ-68LM
Rated voltage	(V~)	220-240		
Rated frequency	(Hz)	50		
Climate class		T		
Rated input	(W)	170-190		
Rated input of heating elements	(W)	138-164		
Refrigerant (Charging quantity)		HFC-134a(120g)	HFC-134a(125g)	HFC-134a(130g)
Net Weight	(kg)	81	83	88

PLUG TYPE

Destination mark	E	I
Plug cord	3wires	
Plug type	CS 	BF 

COLOR

Items	C2W	C2G	C2B	C2S
Outside color	White	Gray	Blue	Silver
Inside color	White			

OPTIONAL ITEM

SJ-L838LD2 (REFRIGERATOR HINGE KITS). For changing the door to left side opening.

DESIGNATION OF VARIOUS PARTS

The names are the denominations used in the REPLACEMENT PARTS LIST.

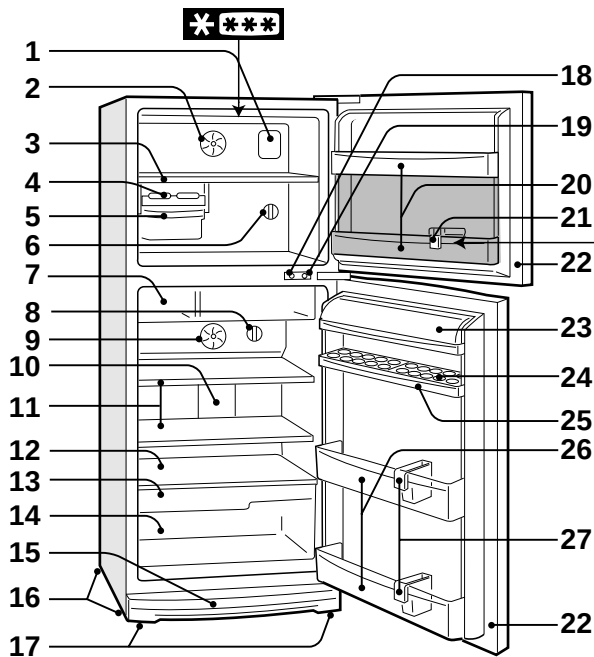
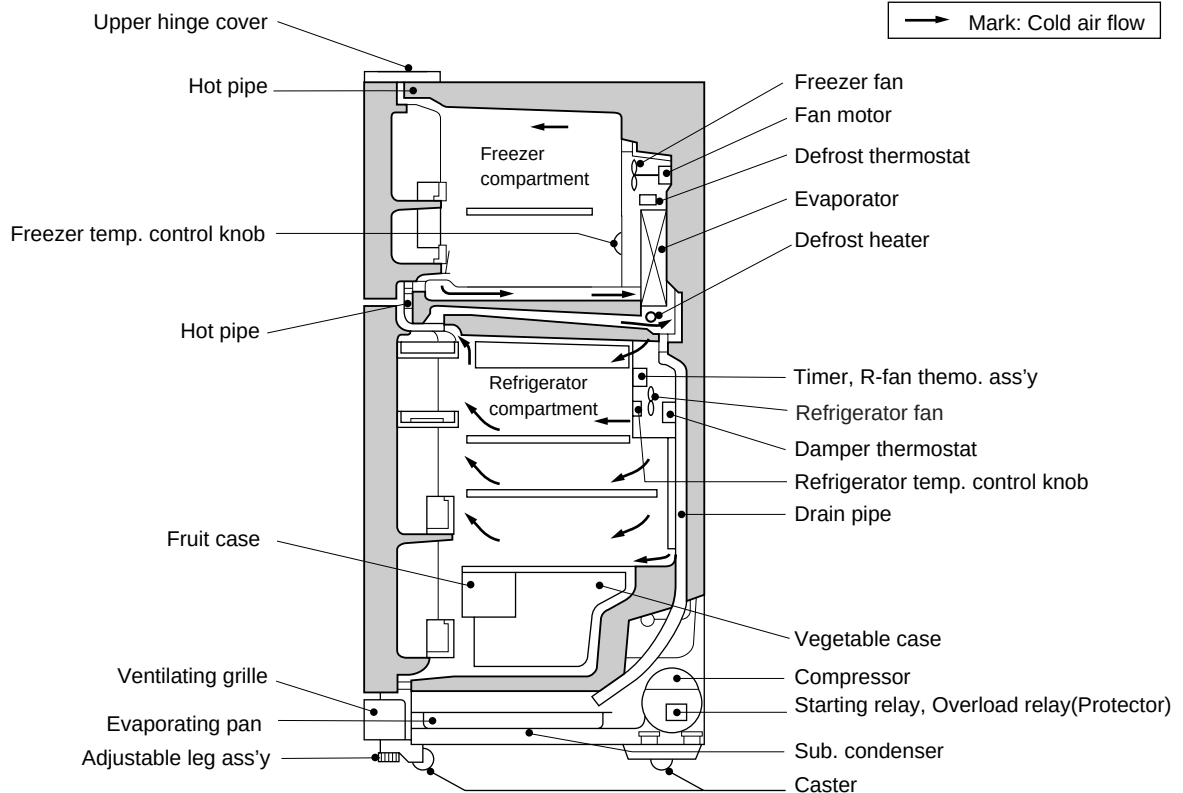


Figure D-1. External Description

1. Freezer light(Lamp)
2. Freezer fan
3. Freezer shelf(F shelf ass'y)
4. Ice cube maker
5. Ice cube box(Ice storage box)
6. Freezer temp. control knob
7. Slide case
8. Refrigerator temp. control knob
9. Refrigerator fan
10. Refrigerator light(Lamp)
11. Refrigerator shelf(R glass shelf ass'y)
(SJ-58LM/ SJ-63LM; 2 shelves, SJ-68LM; 3 shelves)
12. Shelf(V glass shelf ass'y)
13. Fruit case
14. Vegetable crisper(Vegetable case)
15. Evaporating pan & cover
16. Caster
17. Adjustable feet(Adjustable leg ass'y)
18. Fan & light switch(for freezer)
19. Fan & light switch(for refrigerator)
20. Freezer pocket(F door pocket)
21. Water cup
22. Magnetic door seal(Door packing)
23. Utility pocket(Utility case pocket)
24. Egg holder(Egg tray)
25. Free pocket(R door pocket)
(SJ-58LM/63LM; 1 pocket, SJ-68LM; 2 pockets)
26. Bottle pocket
27. Bottle guard(Tube stand)



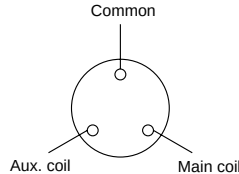
※ This figure shows SJ-63LM

Figure D-2. Constructions

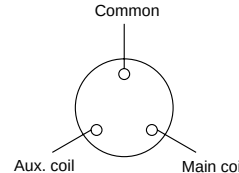
LIST OF ELECTRICAL PARTS

ITEMS	TYPE NAME	RATING	SPECIFICATIONS
Thermostat	MM1-8123	125V 6A 250V 3A	(At normal notch) ON/OFF : -19/-24°C
Defrost thermostat	S101	250V 8A	Open/Close : 10/1°C
Thermo. fuse	SF70E	250V 10A	Working temp. : 70°C
F-fan motor	3R00044B	220-240V 50/60Hz	Working with ø100 fan
R-fan motor (R-fan fuse)	3R00122A 123	220-240V 50/60Hz 250V 2A	Working with ø80 fan Cut OFF 130°C
Defrost heater	MM6-4198	220-240V 353Ω	150W at 230V
Door switch	DSD-5	250V 0.25A	4 terminals push-button type
Damper thermostat	MM1-6170(SJ-63LM,68LM)	—	Open/Close : 3/-2°C
	MM1-6171(SJ-58LM)	—	Open/Close : 5/0°C
Defrost timer	TMD904FD2	220-240V 50/60Hz	Integration type Cycle time : 10.8/9.0 hours(50/60Hz) Delay time : 4.3/3.6 min.(50/60Hz)
Lamp socket (F/R)	—	250V 1A	E-12(Hard plastic body type)
F-lamp	—	240V 10W	E-12
R-lamp	—	240V 15W	E-12
R-fan thermo. ass'y	R-fan thermo. S101	250V 8A	Open/ Close : 7/15°C
	R-fan thermo.heater RSS2	350V, 2W, 10kΩ	1.1W at 230V

SJ-58LM,63LM

Compressor	GLY80AA	220-240V/50Hz	Cooling capacity : 197kcal/h(50Hz) Main coil : 10.3Ω Aux. coil : 14.2Ω (at 25°C) 
Starting relay	UH3003-7	—	14.0 Ω ± 30%
Runnig capacitor	—	430VAC 5μF	—
Overload relay(Protector)	4TM308NFBYY	—	Open/ Close : 120/61°C

SJ-68LM

Compressor	GLY90AA	220-240V/50Hz	Cooling capacity : 220kcal/h(50Hz) Main coil : 8.8Ω Aux. coil : 14.2Ω (at 25°C) 
Starting relay	UH3003-7	—	14.0 Ω ± 30%
Runnig capacitor	—	430VAC 5μF	—
Overload relay(Protector)	4TM757NFBYY	—	Open/ Close : 120/61°C

THE FICHE (according to ANNEX II : 94/2/EC)

NO.	Items	Description			Remarks
1	Trade mark	SHARP	SHARP	SHARP	
2	Model name	SJ-58LM	SJ-63LM	SJ-68LM	
3	Type	Category; 7 Refrigerator/Freezer	Category; 7 Refrigerator/Freezer	Category; 7 Refrigerator/Freezer	
4	Energy efficiency class	B	B	B	
5	Eco-award mark	—	—	—	880/92
6	Energy consumption (220V 50Hz at 25°C)	680 kWh/year	710 kWh/year	735 kWh/year	EN153
7	Net storage volume of fresh food storage compartment	341 L	384 L	426 L	
8	Net storage volume of frozen food storage compartment	133 L	133 L	133 L	✱ ***
		18 L	18 L	18 L	✱✱
9	Star rating of frozen food compartment	4-STAR ✱ ***	4-STAR ✱ ***	4-STAR ✱ ***	
		2-STAR ✱✱	2-STAR ✱✱	2-STAR ✱✱	
10	No frost	No frost	No frost	No frost	
11	Temperature rise time	10 h	10 h	10 h	
12	Freezing capacity	8 kg /24h	8 kg /24h	8 kg /24h	
13	Climate class	T	T	T	
14	Noise	41 dB(A) re 1 pw	41 dB(A) re 1 pw	41 dB(A) re 1 pw	86/594/EEC dB(A) re 1 pw

(96/57/EC)

15	Maximum allowable electricity consumption (E _{max})	938 kWh/year	985 kWh/year	1029 kWh/year	
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G : GRAY
Br : BROWN
O : ORANGE
Y : YELLOW
R : RED
P : PINK
B : BLUE
Bk : BLACK
S-B : SKY-BLUE
G-Y : GREEN-YELLOW
W : WHITE

□ CONNECTOR



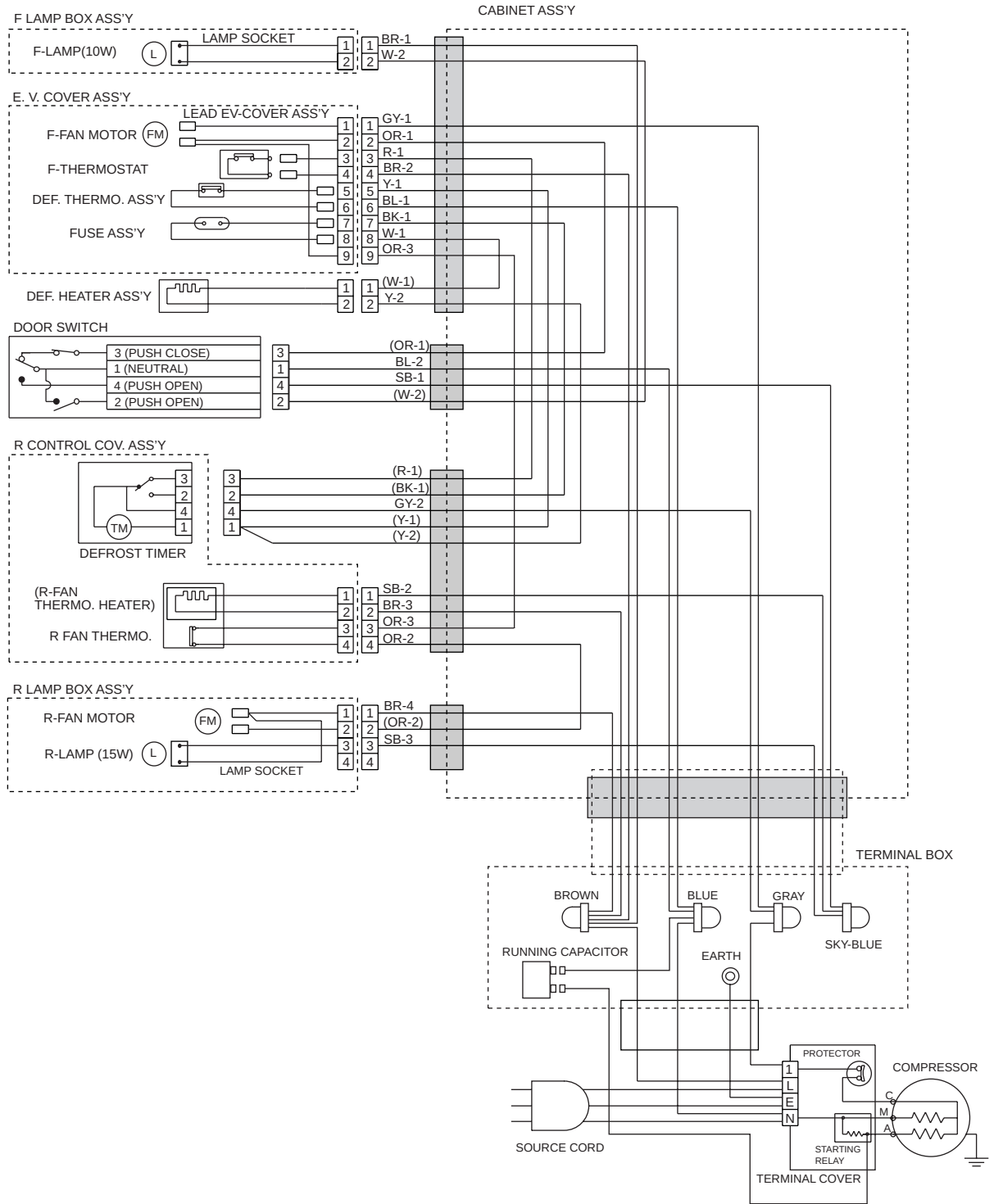


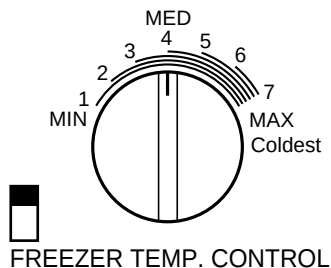
Figure W-2. Electric Accessories Layout

FUNCTIONS

1. ADJUSTABLE TEMPERATURE CONTROL

(1) Temperature control of freezer ❄️❄️❄️

- Thermostat (senses freezer temperature) operates on ON/OFF switchover to control the compressor and cool air circulating fan (F-fan motor), and allows the freezer temperature to keep at a suitable temperature.
- However adjust the freezer temp. control knob as follows depending upon the storing condition of foods.



FREEZER TEMP. CONTROL

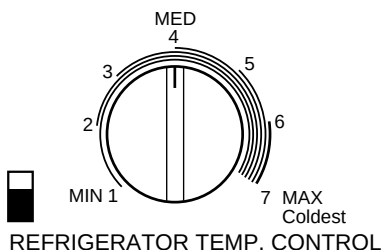
KNOB SETTING	PURPOSE
MAX(Coldest)	• For making ice rapidly or fast freezing.
↑	• When restocking with fresh food.
MED	• For normal freezing.
↓	• For storing frozen food for a short period (up to one month).
MIN	• When frozen food or ice cream is not stored.

Figure F-1.

2 star section ❄️❄️ for frozen food storage only.

(2) Temperature control of refrigerator

- Damper-thermostat senses temperature of the refrigerator and changes the opening angle of the damper automatically.
- However, as the Damper-thermostat has no function to switch on or off the compressor and F-fan motor, the freezer temperature control causes temperature in the refrigerator to vary to some extent.
- However, adjust the refrigerator temp. control knob as follows depending upon the cooling condition.



REFRIGERATOR TEMP. CONTROL

KNOB SETTING	PURPOSE
MAX(Coldest)	• For making ice rapidly or fast freezing.
↑	• When restocking with fresh food.
MED	• For normal freezing.
↓	• For storing frozen food for a short period (up to one month).
MIN	• When frozen food or ice cream is not stored.

Figure F-2.

- When the temperature of the refrigerator is higher, R-fan thermo. senses the temperature and the refrigerator is cooled efficiently by running of R-fan motor.
- R-fan thermo. heater energizes when the door is opened intend to promote to running of R-fan motor.

- NOTE:
- The refrigerator temperature is affected also by the freezer temperature. If the freezer temp. control knob is set at the position "MAX", the temperature tends to be lower than the following values, and if set at near the position "MIN", temperature tends to be higher.
 - If the refrigerator is operated for a long time with the freezer temperature control sets the "MAX" position, foods stored in the refrigerator compartment may also freeze.
 - When refrigerator temperature control sets to the "MAX", some foods stored may freeze. In this case adjust control set back to the "MED" position.
 - When refrigerator temperature control sets to the "MAX", some foods stored in slide case may also become frozen.

(3) Reference value of temperature

SETTING OF FREEZER TEMP. CONTROL KNOB	MAX (Coldest)	MED	MIN
Freezer temperature ❄️❄️❄️	Approx. -21°C	Approx. -18°C	Approx. -15°C
2 star section ❄️❄️	-15°C	-12°C	-9°C

SETTING OF REFRIGERATOR TEMP. CONTROL KNOB	MAX (Coldest)	MED	MIN
Refrigerator temperature	Approx. 0 °C	Approx. 3 °C	Approx. 6 °C
Slide case temperature	Approx. -3 °C	Approx. 1 °C	Approx. 4 °C

The values shown above refer to the case where the freezer temp. control knob is set at "MED".

The values shown above refer to the measurement carried out center area and 1/3 of overall height from the bottom at each of the refrigerator and the freezer after machine has been operated at an ambient temperature of 30°C with no food stored and the door closed until the temperature is stabilized.

The values vary depending upon frequency of opening and closing the door, ambient temperature, amount of stored foods and manner of storing foods.

2. DEFROSTING

(1) No defrosting operation is necessary

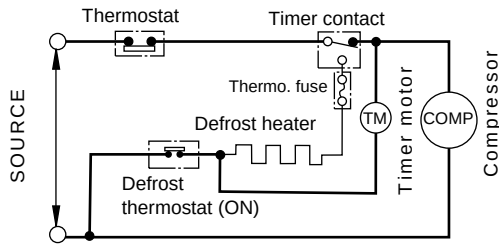
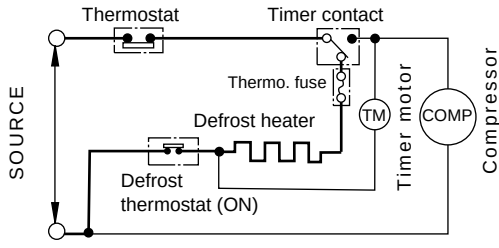
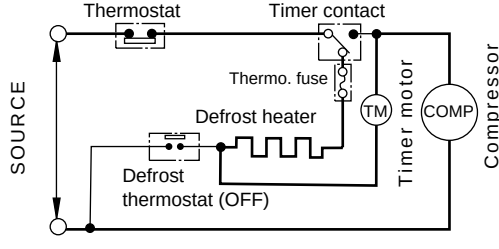
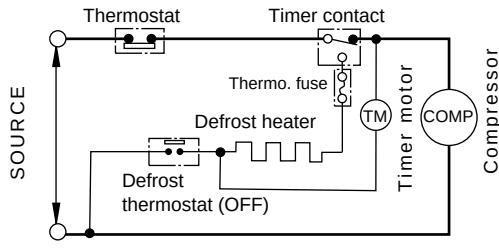
No defrosting operation is necessary. As this machine is so designed that a built-in evaporator cools air and a fan circulates cooled air, neither the freezer nor the refrigerator is frosted, though the evaporator is frosted.

The frosted evaporator is defrosted automatically due to the function of defrosting timer and heater, requiring no defrosting operation.

(2) Where is melted frost brought

1. Melted frost is brought into the evaporating pan at the bottom of the set and is evaporated here by the heat of sub condenser.
2. Be sure that the evaporating pan is inserted correctly and is level.

(3) The following circuit diagrams in the table show automatic defrosting function of the refrigerator with timer and defrost thermostat.

Operation	Electric diagram	Description
1. Cooling (Normal)	● Defrost thermostat ON ● Compressor running ● Timer motor running  Figure F-3.	The integration timer integrates running time of the compressor. When it reaches cycle time of defrost timer, the timer contact is changed to start defrosting.
2. Defrosting (Time 20 to 30 min.)	● Defrost thermostat ON ● Compressor stops ● Timer motor stops  Figure F-4 .	● The timer contact is changed to start defrosting, the timer motor stops, and power is supplied to the defrost heater. ● It takes about 20 to 30 min. to defrost. When little frosted, the defrosting takes little time. When much frosted, the defrosting takes much time.
3. Drain (Time approx. 5 min.)	● Defrost thermostat OFF ● Compressor stops ● Timer motor running  Figure F-5.	When the defrost thermostat becomes OFF, the timer motor starts running. During the operation time (delay time of defrost time) defrosted water is drained outside the refrigerator.
4. Restart (Time approx. 5 min.)	● Defrost thermostat OFF ● Compressor running ● Timer motor stops  Figure F-6.	● Timer contact is changed to cooling operation and the compressor starts running and the timer motor stops. ● Defrost thermostat contact becomes ON when it's cooled. And the timer motor starts running. (Figure F-3.)

(4) As a reference to determine the causes of trouble, malfunction and phenomena are described below. Refer to the following when repairing.

1. Disconnection of defrost heater

As off-cycle defrosting is performed, the defrosting time is extremely prolonged. Each time defrosting is started, the freezer temperature rises and a portion of ice and stored foods are melted.

2. Melted thermo. fuse or opened-circuit due to the defect of defrost thermostat.

When the above mentioned trouble occurs in cooling operation, the timer motor does not run, defrosting will not take place, and consequently freezing is caused. In the above mentioned condition, when the timer shaft is turned by hand to defrost, the timer motor runs during the operation time. However, the motor stops from the time when the contact is changed, and freezing causes.

NOTE:

- As the thermo. fuse assembly is intended to prevent dangers, do not use it under shorted condition even for a short period.

3. DEW PREVENTION

The hot pipe, namely D.P.-condenser, is arranged around the flange part of cabinet and the C-partition plate, preventing dew from being generated on the cabinet.

NOTE:

- D.P.-condenser pipe may be felt hot if touched by hand while the compressor is in operation.
- If you are asked about this, please explain that the hot pipe serve to prevent the dew generation.

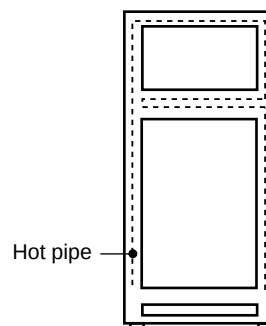


Figure F-7

4. INSPECTION OF INITIAL STARTING

(1) Inspection of cooling unit

1. Set the temperature control knob to "MAX" and check that the compressor starts to operate.
2. Depress the door switch to run the fan and check that cool air is blown out of the cold air outlet of the freezer and the refrigerator.
3. When the compressor does not work, check that the timer is not set to "defrost" position.
4. It takes about an hour and a half or two hours to put food in the refrigerator after starting operation.

NOTE:

- After return the temperature control knob to "MED" position.
- When the refrigerator is operated initially after installed, the compressor may vibrate excessively for 1 to 2 min. However, vibration becomes normal if it is continuously operated.

(2) Inspection of defrost device

Operate the refrigerator for 20 to 30 min. and then check the defrost device in the following procedures : Allow 5 min. to restart the compressor since immediate starting after stopping will cause unsmooth operation.

1. Turn the timer shaft clockwise with a screw driver.
At this time, make certain the timer clicks and the compressor stops.
2. After more than 5 min., turn the shaft further to operate.
Make certain cooling operation is started again.

ASSEMBLING PROCEDURES OF MAIN PARTS AND CAUTIONS

CAUTION: DISCONNECT THE UNIT FROM THE POWER SUPPLY BEFORE ANY REPAIRING.

1. R-CONTROL COV. ASSEMBLY

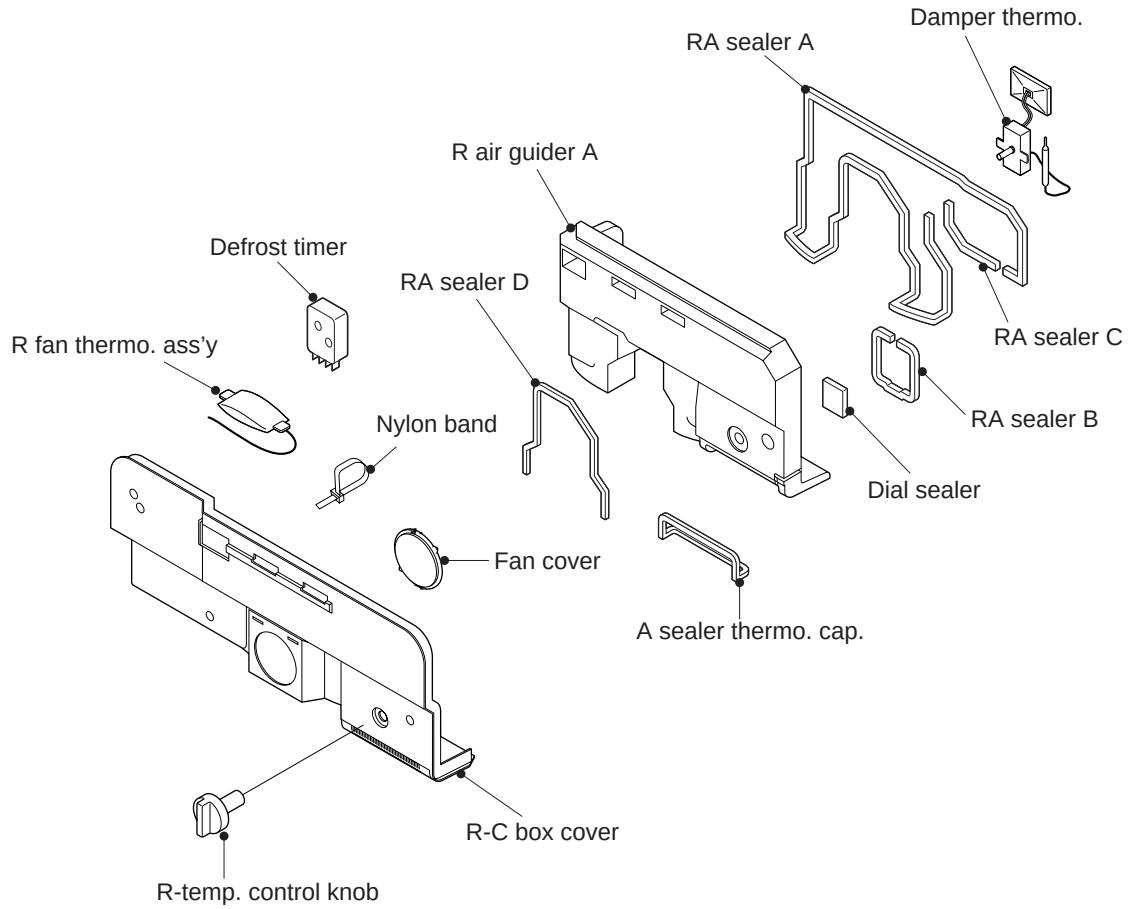


Figure A-1

(1) Forming sensor of Damper thermo.

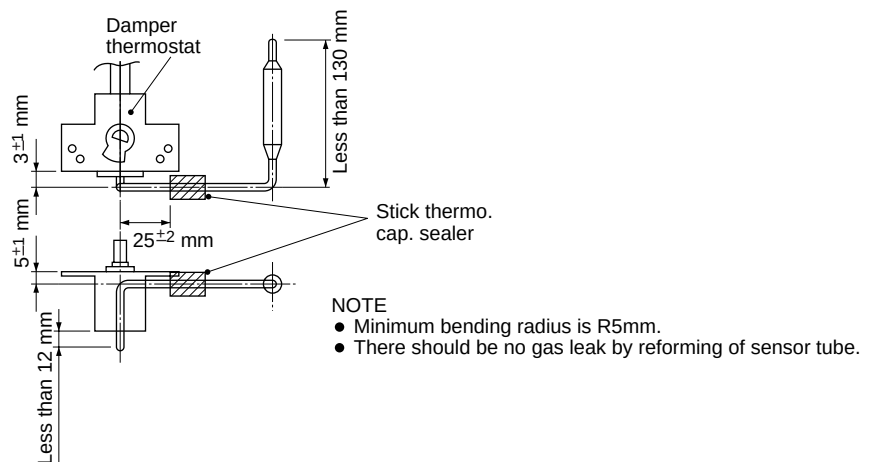


Figure A-2

After forming, fix it to the refrigerator.

(2) Sticking of sealers to R air guider A.

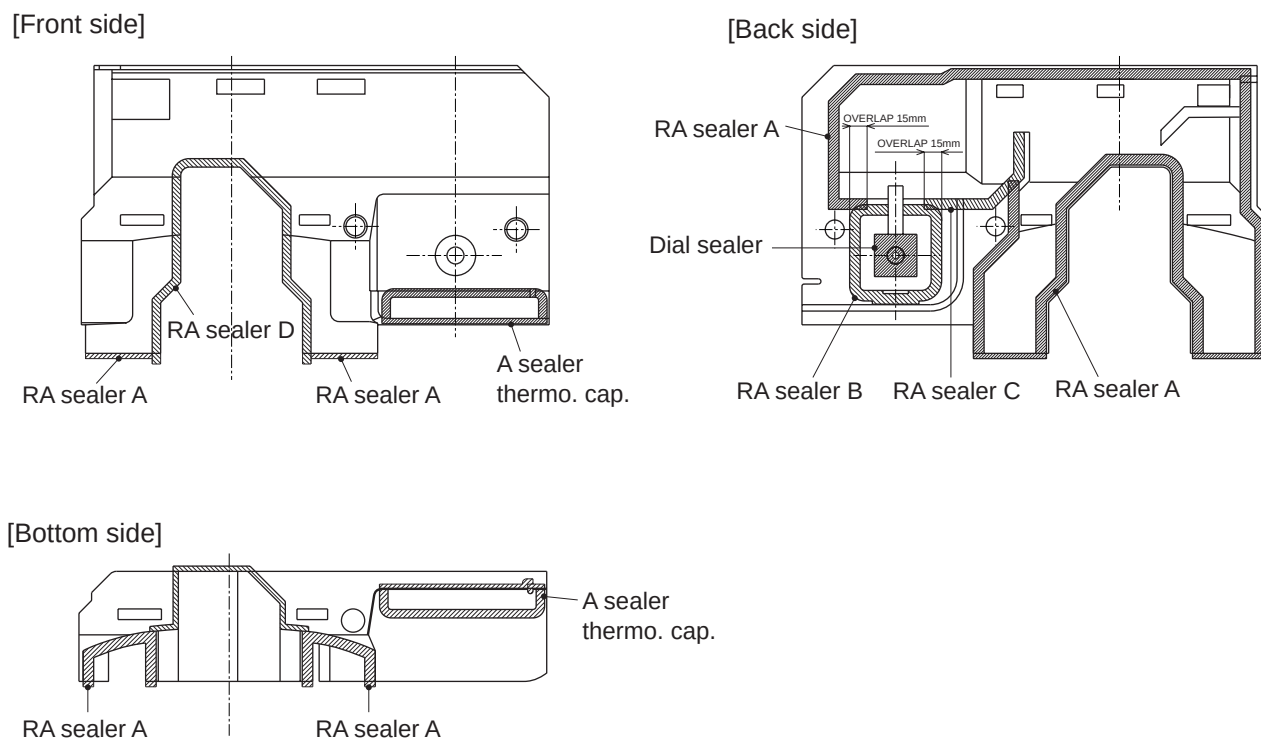


Figure A-3

(3) Fixing of Defrost timer, R fan thermo. ass'y cover to R-C box cover.

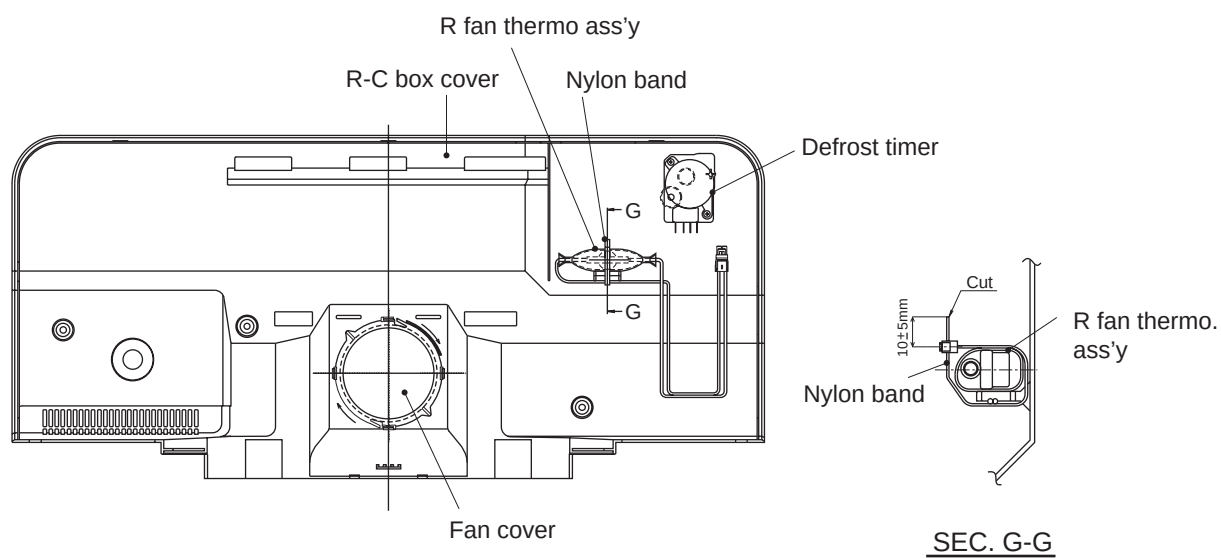


Figure A-4

2. R LAMP BOX ASSEMBLY

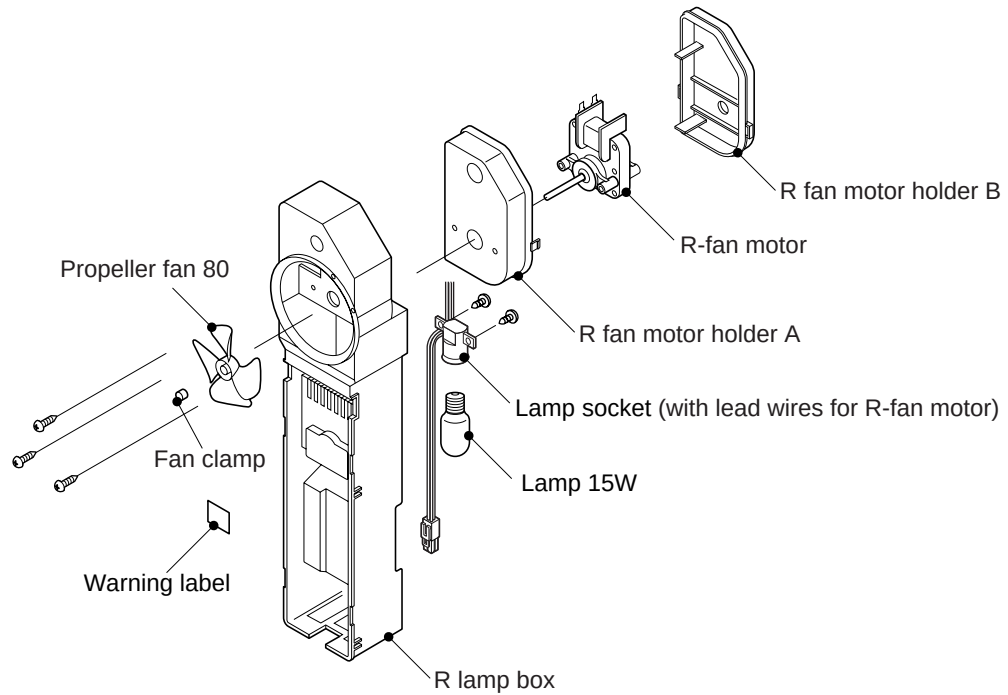


Figure A-5

(1) Fixing of Lamp and Lamp socket.

- (1)-1 Screw Lamp 15W into Lamp socket.
- (1)-2 Fix Lamp socket on R lamp box by tapping screws.

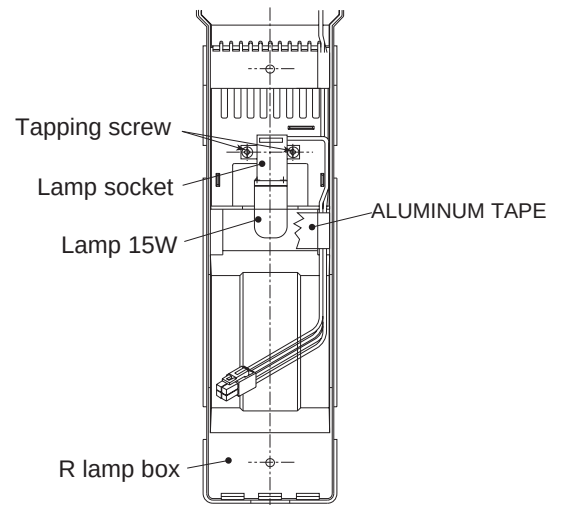


Figure A-6

(1)-3 Insert the terminal of Lamp socket to R-fan motor.

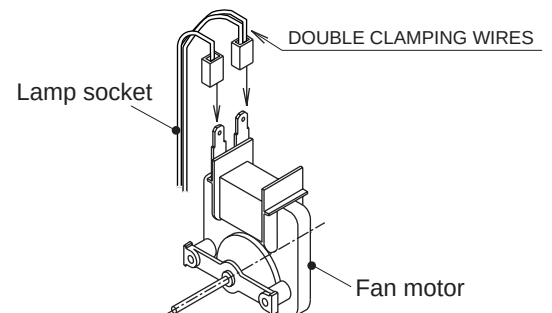


Figure A-7

(2) Fixing of R-fan motor and Fan

- (2)-1 Set R-fan motor holder A to R lamp box by tapping screw.
- (2)-2 Set R-fan motor to R fan motor holder A by machine screw.
- (2)-3 Set R fan motor holder B to A.

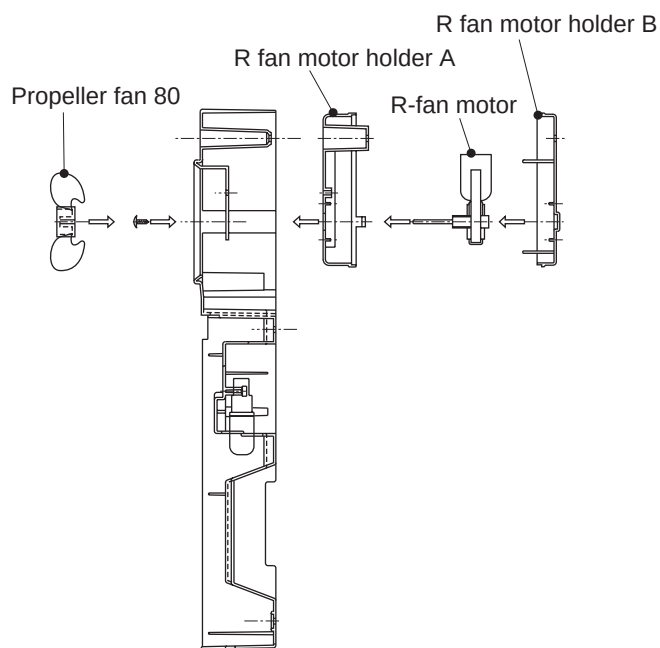


Figure A-8

- (2)-4 Set Fan clamp to Propeller fan 80 and insert it to the shaft of R-fan motor.

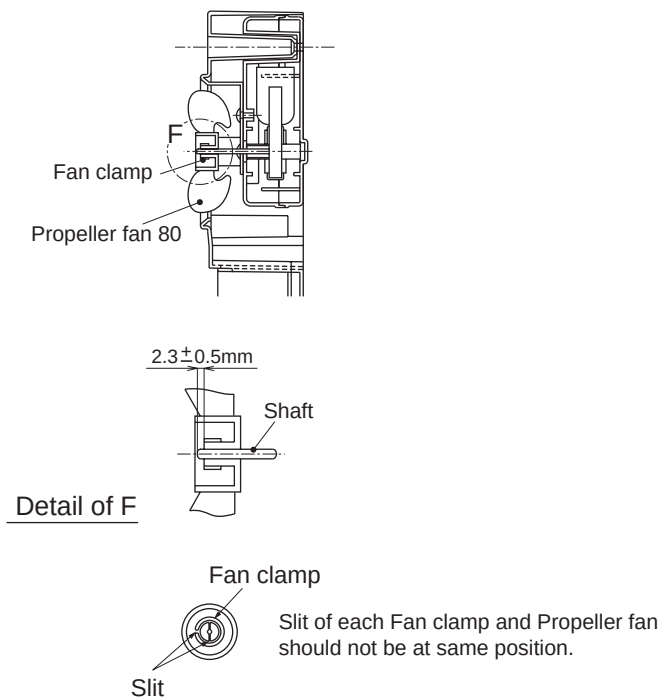


Figure A-9

(3) Sticking Warning label.

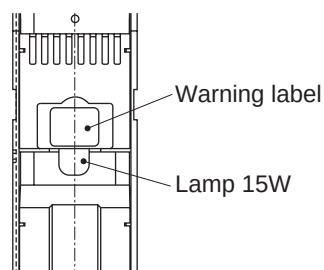


Figure A-10

3. E.V COVER ASSEMBLY

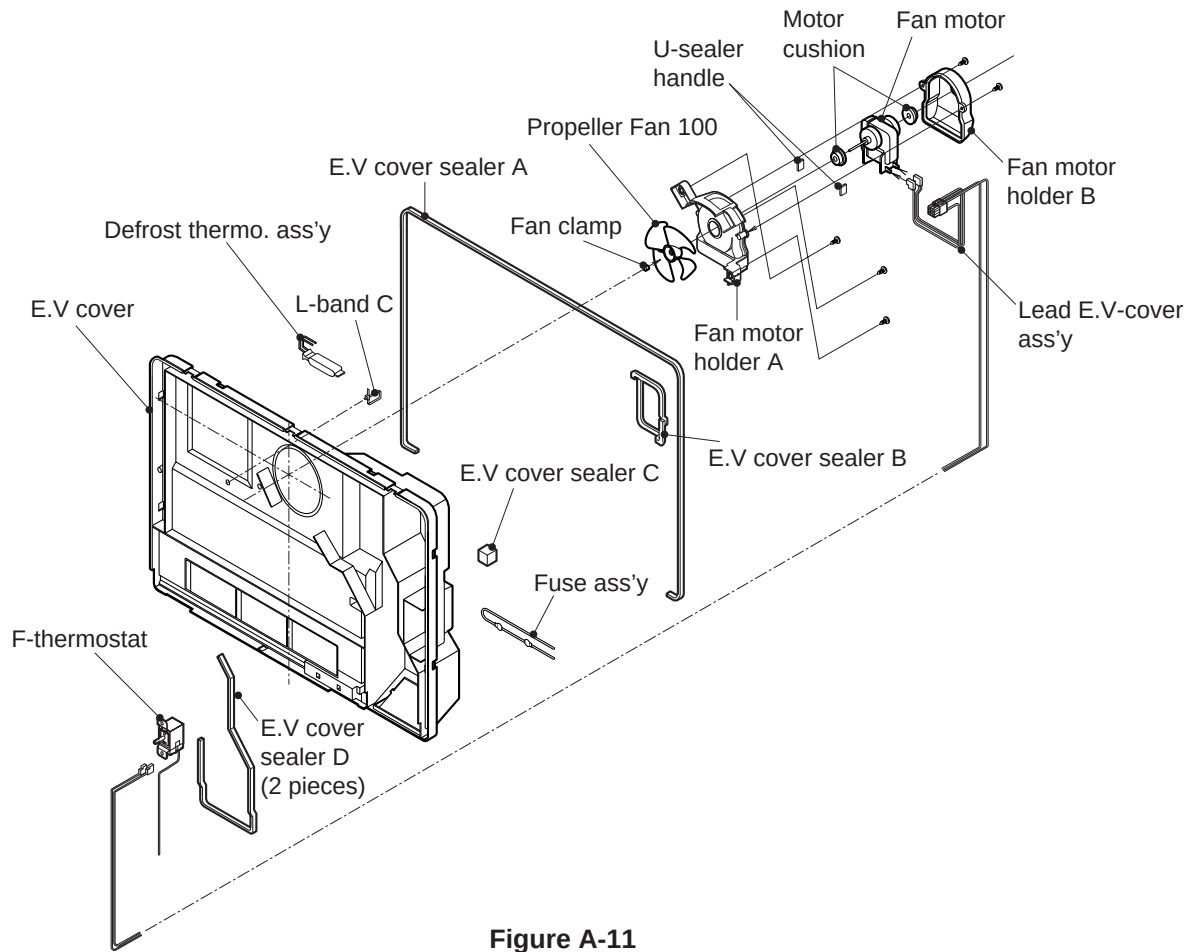


Figure A-11

(1) Sticking of Sealers to E.V cover

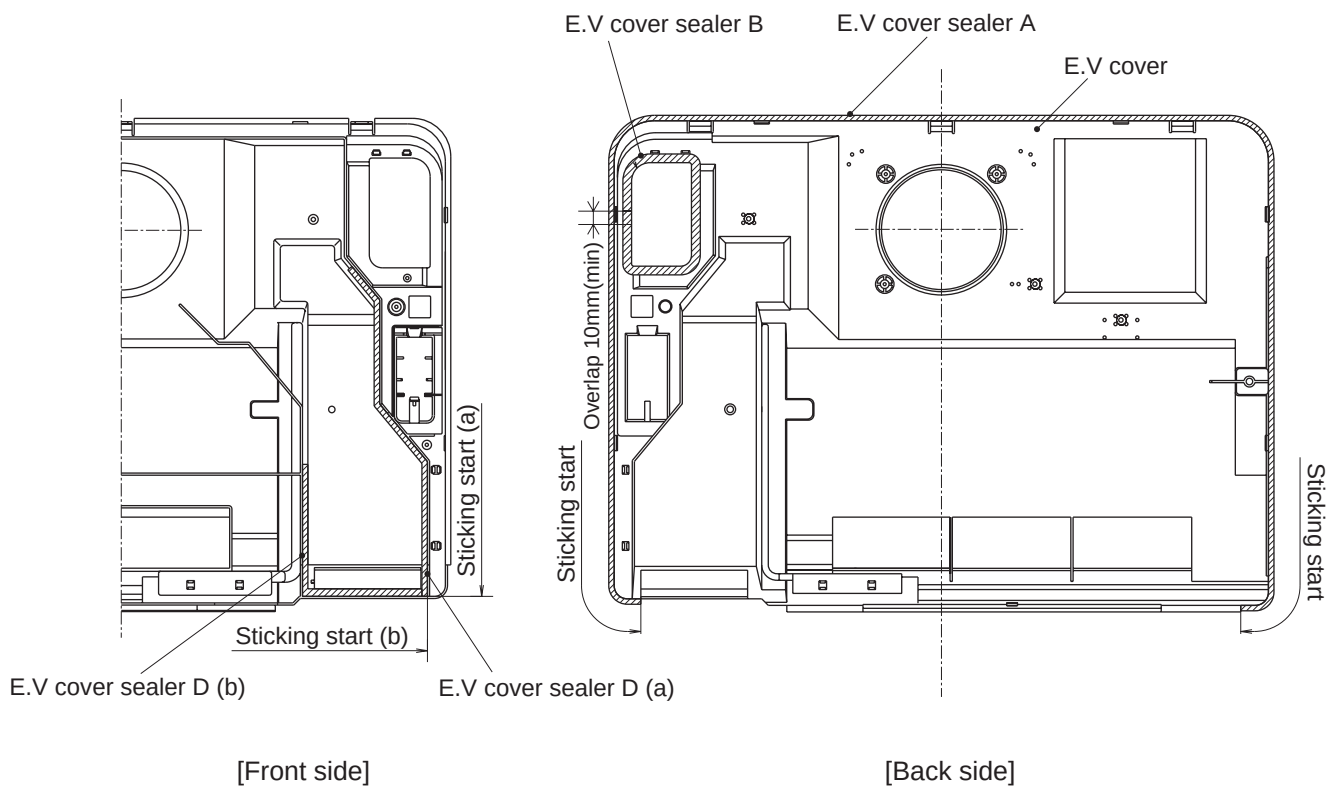


Figure A-12

(2) Fixing of Fan motor and Fan

(2)-1 Stick U-sealer handle to Fan motor holder A.

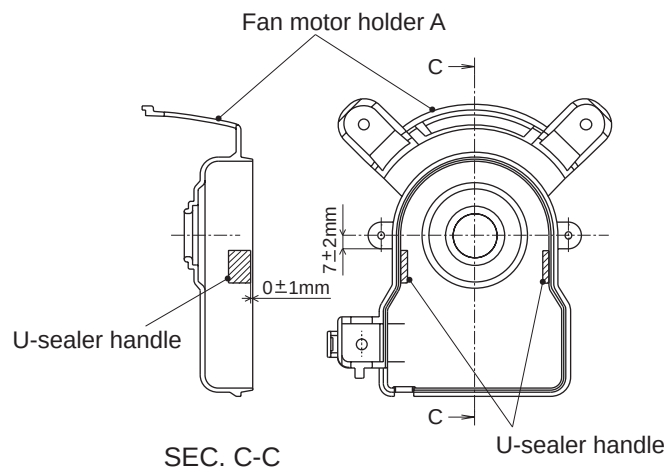


Figure A-13

(2)-2 Insert the terminals of Lead EV-cover ass'y to R-fan motor.

(2)-3 Fix two Motor cushions to R-fan motor, and set it at Fan motor holder A and B. Then fix with Tapping screw.

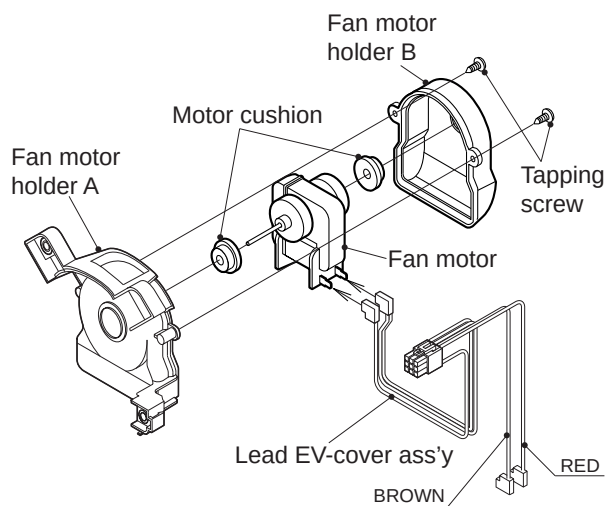


Figure A-14

(2)-4 Set Fan clamp to Propeller fan 100 and insert it to the shaft of Fan motor.

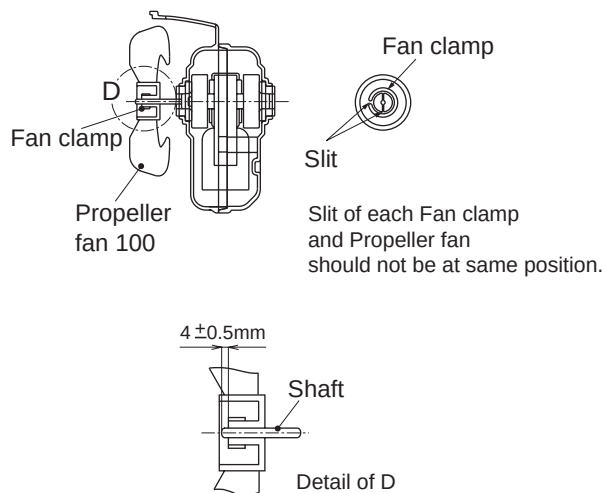


Figure A-15

(3) Setting of Fan motor ass'y , Defrost thermo. ass'y and Fuse ass'y

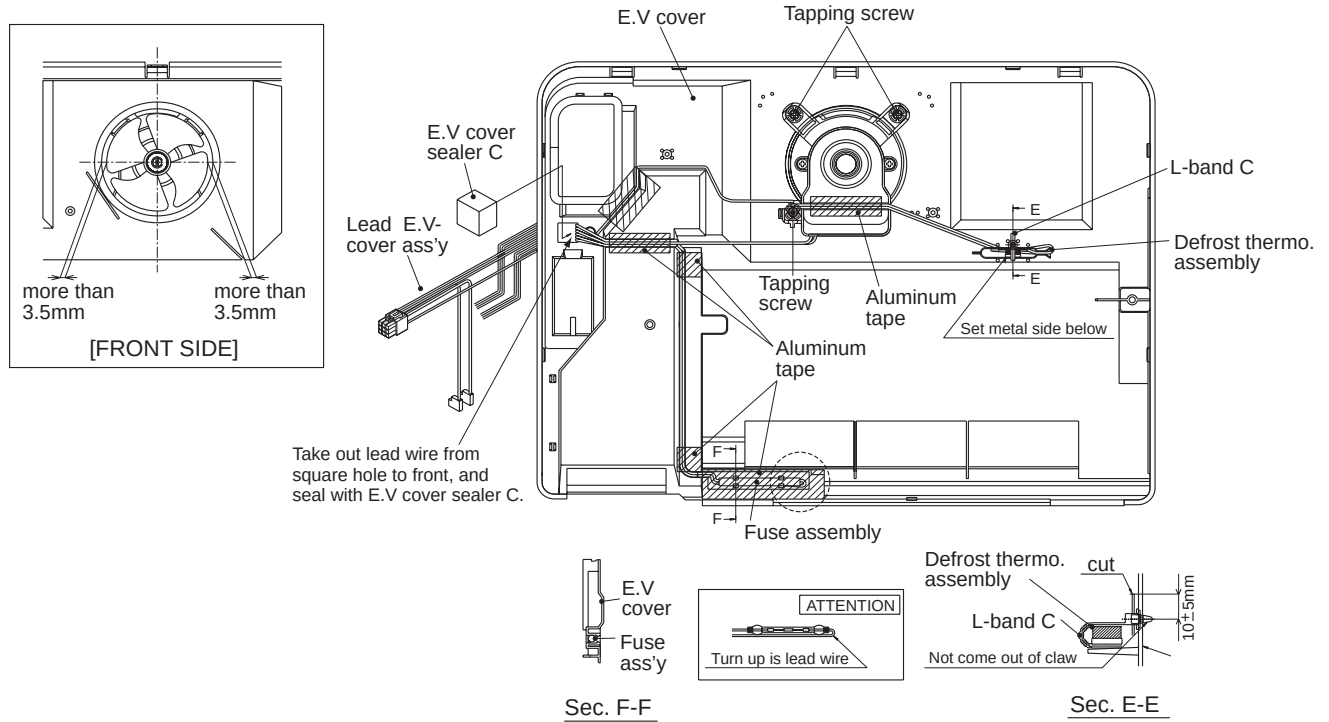
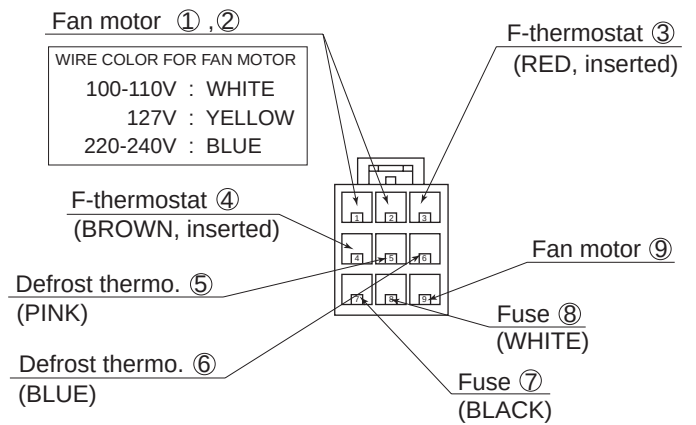


Figure A-16

(4) Inserting of pins



Note • Pins should be inserted surely, and check by pulling it.

Figure A-17

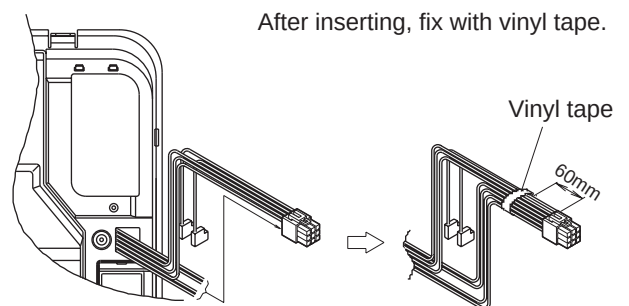
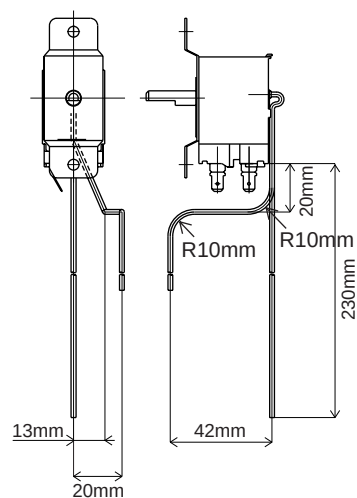


Figure A-18

(5) Setting of F-thermostat

(5)-1 Form capillary tube of F-thermostat.



Note

- Bending radius of capillary tube should be from R5mm to R10mm.

Figure A-19

(5)-2 Insert terminal of Lead EV-cover ass'y.

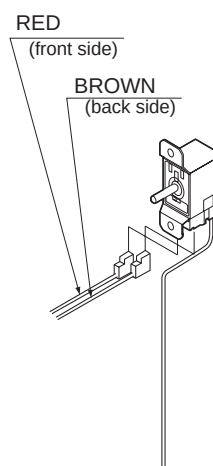


Figure A-20

(5)-3 Set to E.V cover.

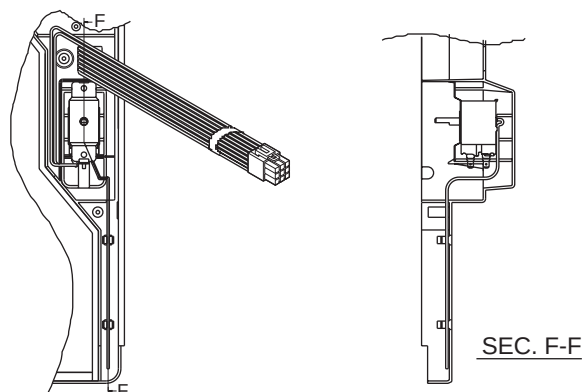


Figure A-21

MODIFICATION PROCEDURE OF THE DOOR OPEN SIDE

It is possible to change the door to left side opening.

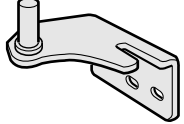
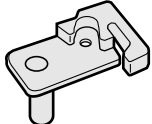
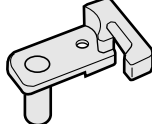
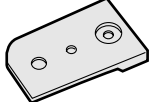
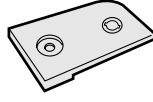
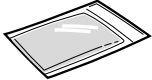
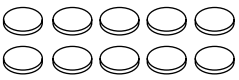
To modify the door to left side opening, REFRIGERATOR HINGE KITS (for left side opening) SJ-L838LD2 (optional item)is necessary.

These kits are used to change the refrigerator doors from right to left opening.
if you wish to change the door to left opening for some reason, such as restricted installation space, **ask your authorized service agent for this modification.**

by SJ-L838LD2 OPERATION MANUAL

Parts list

★ Select the same color as the refrigerator exterior.

			★ 	★ 
A Bottom hinge L	B Stopper spring L (for upper door)	C Stopper spring L (for lower door)	D Door cap cover (for upper door)	E Door cap cover (for lower door)
★ 			★ 	
F Door hole cover	G Screw and Cover	H Silicon grease	J Screw cap for handle (Spare)	

Tools required

- Phillips and slotted screwdrivers
- Drill bit (ø 3.8 mm)
- Socket wrench or spanner (8 mm) :The socket wrench or spanner is used to detach and attach hinges.
- Silicon sealer: Q-TSE382 (as required)

Caution

- Always disconnect the power plug from the wall outlet before performing work.
- Caution should be taken when handling the doors.
These are heavy and could cause personal injury if mishandled.
- Always tighten screws securely. May cause personal injury if door becomes unlatched and falls.
- Reattach doors paying careful attention to the door alignment. Failure to fit the door correctly might cause the cool air to leak out and lower the cooling performance.

Fitting Instruction

1 Preparation/Removing Doors

1. Remove Evaporating pan cover, Upper hinge cover, and Top cover.
(Carefully remove Upper hinge cover using a screwdriver, making sure that the door is not damaged.)
2. Remove Upper hinge and Spacer, and detach Upper door by lifting off the center hinge.
3. Remove Center hinge and detach Lower door by lifting off the bottom hinge. Remove the 2 Hole caps, replace them on the screw holes of the removed center hinge, then screw in **G** (screw and cover) in the center hole.
4. Remove Bottom hinge. Remove the 3 screws on the left side, then install them in the screw holes of Bottom hinge.

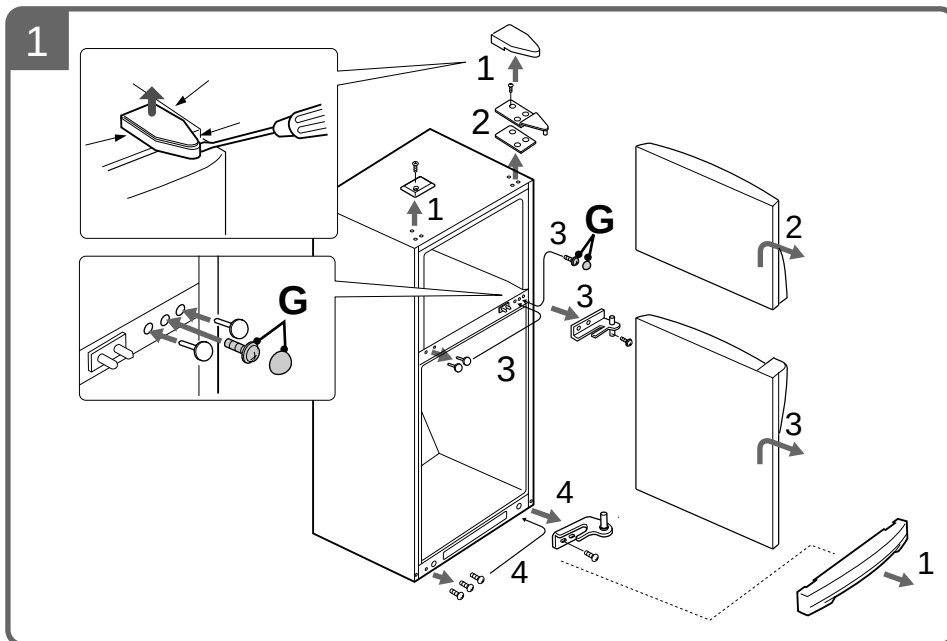


Figure M-1

2 Replacing Handles and Door Parts

1. Remove Screw caps and Screws on each door handle, then remove the handles.
Flatten the surface of the screw holes using the handle of a screwdriver, etc., then mount 3 units of F (Door hole covers) on each door.
If the door hole covers are easily removed, use the specified silicon sealer to mount the covers.
2. Remove the Nylon bearings, Door stopper(Lower door only), Stopper springs on the right side of each door and the cap on the left side of the Upper door. Furthermore, open the hidden holes on the bottom of the door using a screwdriver, then remove a screw(Lower door only).
3. Remove Screw caps and Screws on the right side of each door, then remove the Door cap covers and mount D and E (Door cap covers) on the left side.
4. Replace Nylon bearings to the left side of each door, then mount the Upper door cap on the right side. Furthermore, mount Door stopper and B and C(Stopper springs) on the left side as well. Screw in a screw in the screw hole on the lower right of the Lower door.
5. Fix upper portion of Upper handle using one screw on the right side of Lower door, then temporarily fix the handle to the door using tape.
6. To open screw holes, first make marks on the doorplate surface through the 3 holes of the handle, then temporarily remove the handle (make sure that the dimensions of the markings are as shown in the diagram).
7. Lightly dent the center of each marking, then open holes using a $\varnothing 3.8$ mm drill bit.
 - Use a drill guide, etc., to prevent the drill bit from entering more than 5 mm.
 - Make sure to open the hole straight. Opening the hole in an angle will cause the handle to clatter.**The door will be unusable if the hole are too large or too deep or if the screws are tightened too much.**
8. Mount the handle using the 4 screws and install Screw caps. If the screw caps are easily removed, use the specified silicon sealer to mount the caps.
9. Mount Lower handle on the right side of Upper door by repeating steps 5. ~ 8. above.

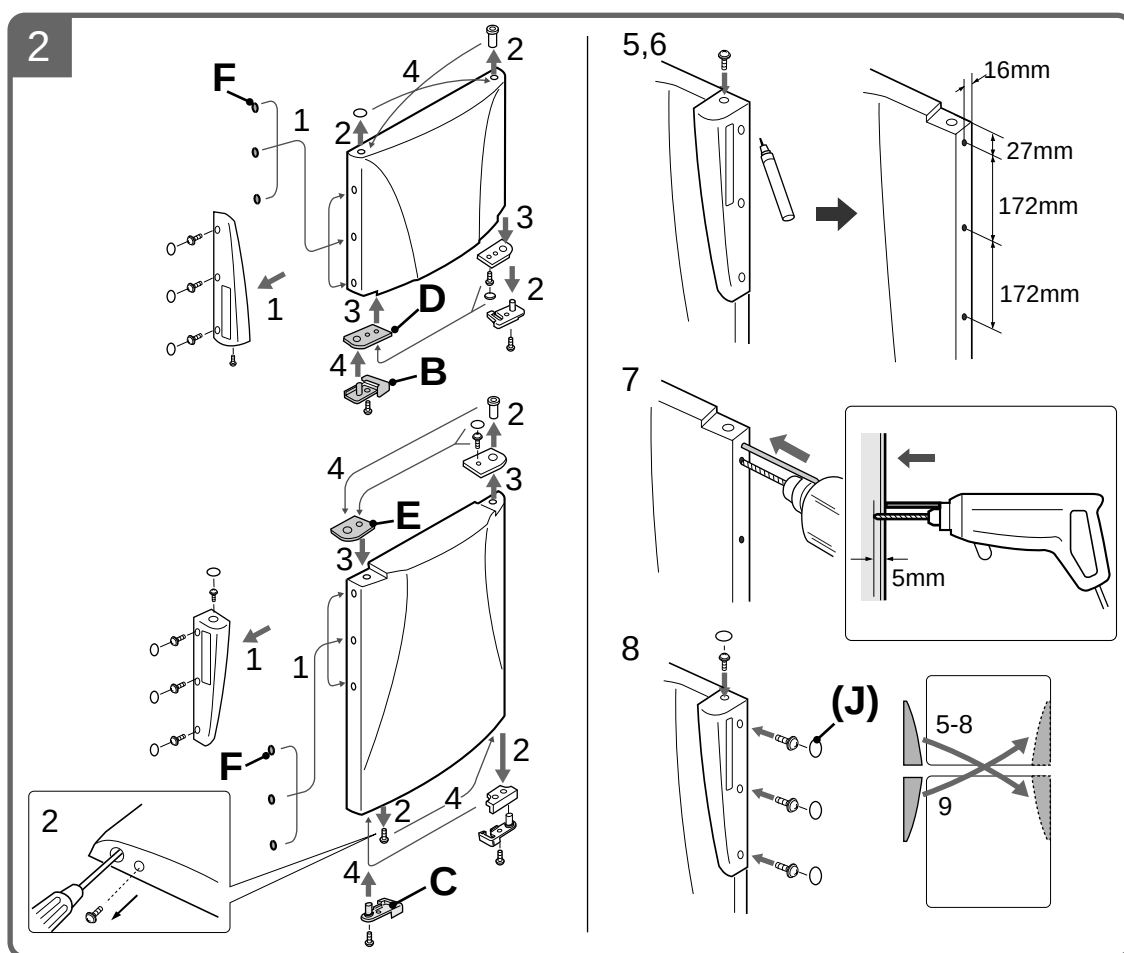


Figure M-2

3 Mounting the Door/Finishing

1. Apply Silicon grease **H** to the shaded portion  of part **A**(Bottom hinge L) and attach it to the left side.
2. Insert Lower door and fit Center hinge vertically inverted. Remove washer if installed. Tighten the screws temporarily.
3. Fit Upper door and attach Upper hinge together with spacer. Tighten the screws temporarily.
4. Adjust the alignment of the door. Ensure that the gap between the cabinet and door is 12 mm. Tighten the upper hinge screws.
5. Secure Upper door. Open Lower door and tighten the center hinge screws. (No drawing)
6. Check the following. To readjust the door position, loosen Center and Bottom hinges.
 - Whether the distance to activate the door switch is correct.
 - Whether each door can be opened/closed smoothly.
 - Whether each door is properly sealed when closed. (Check by inserting a sheet of paper between the door and cabinet when closing. The refrigerator is not properly sealed if the paper falls.)
7. Apply Silicon grease **H** to the shaded portion  of the door packing.
8. Replace the cap in Evaporating pan cover on the right side.
9. Reattach Evaporating pan cover, Upper hinge cover and Top cover.
10. Make sure that each door can be opened and closed normally. (If any of the doors cannot open/closes normally, tilt the refrigerator slightly backward by screwing out the two adjustable feet.) Furthermore, connect the power plug, make sure that cold air is not leaking from the door packing, and that the cabinet lamp operates properly when the door is opened/closed.

※ Retain removed parts in case doors are to be changed back to right opening.

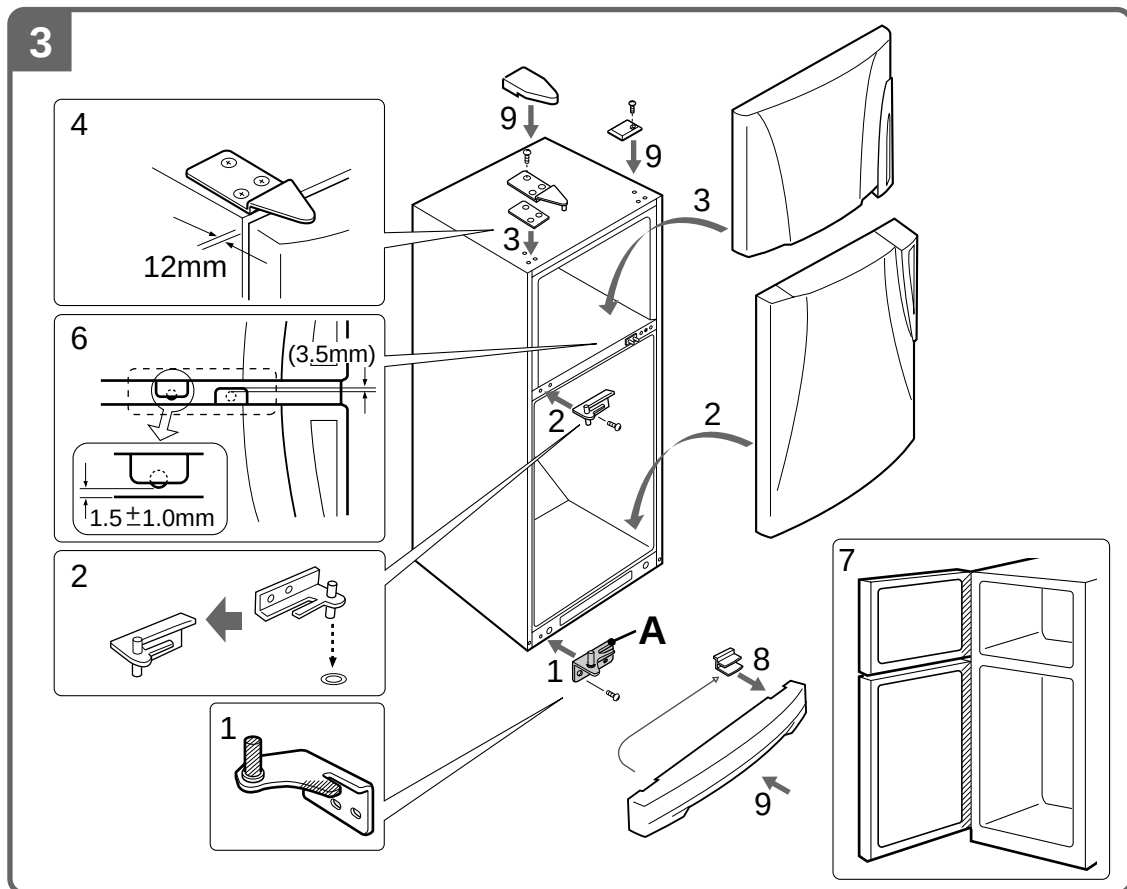


Figure M-3

COOLING UNIT

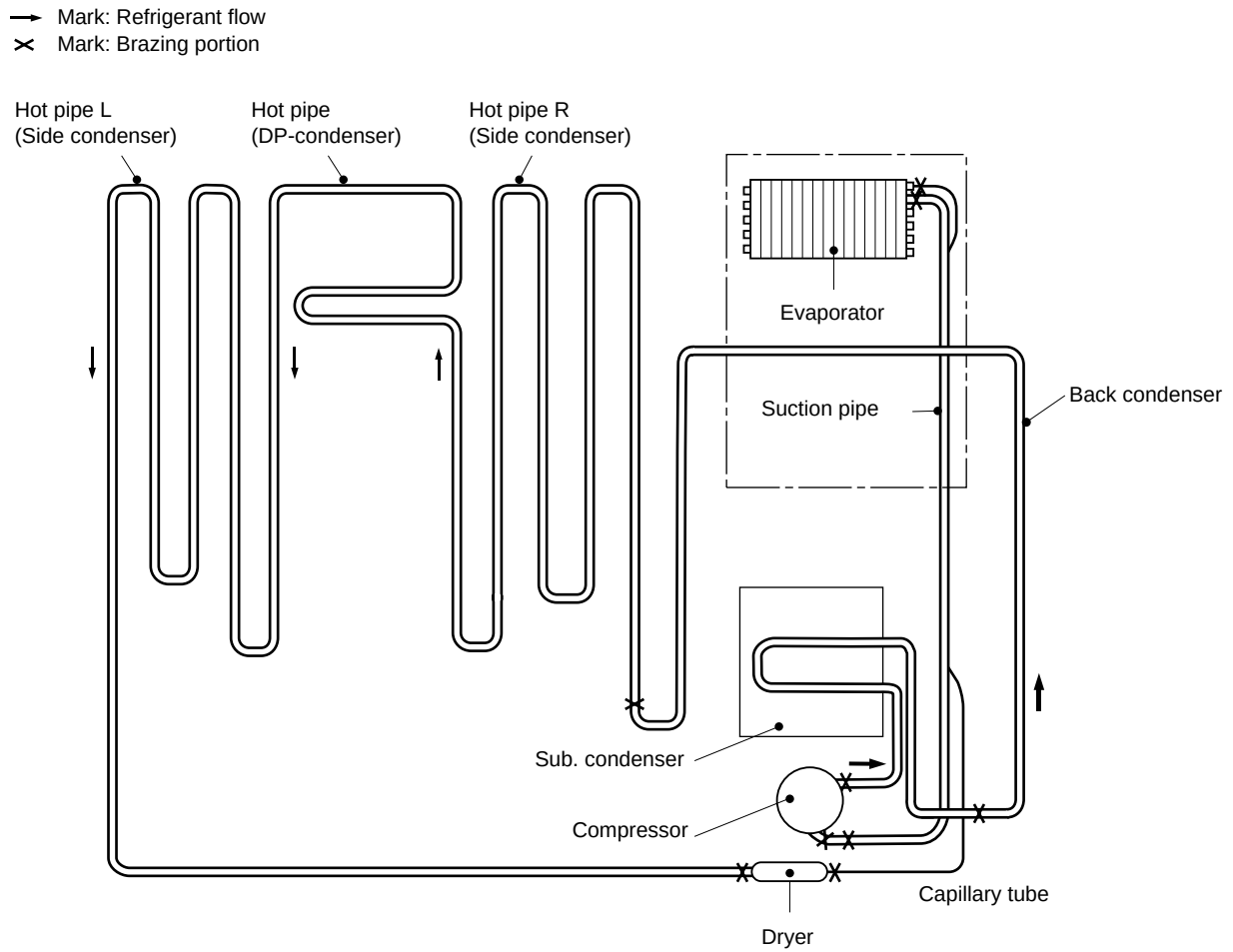


Figure C-1. Cooling unit

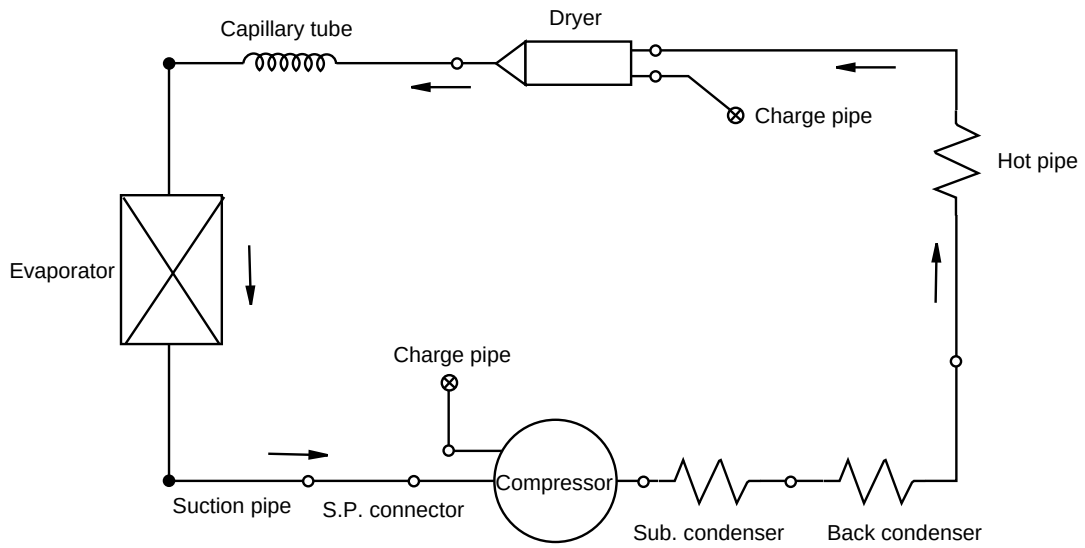


Figure C-2. Location

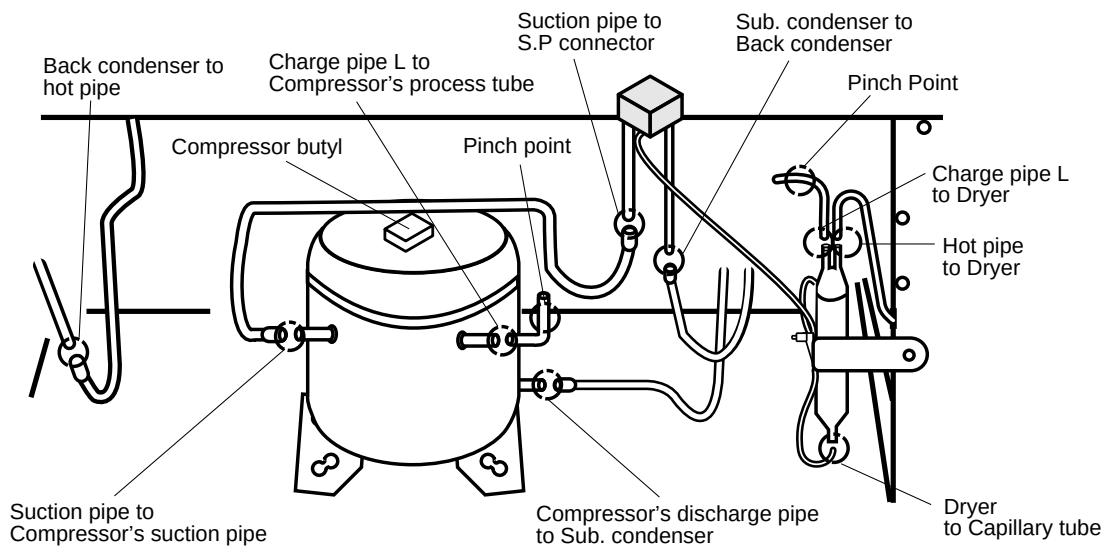


Figure C-3. Location

REPLACEMENT PARTS LIST (SJ-58LM/63LM/68LM)

REF. NO.	PART NO.	DESCRIPTION	Q'TY			CODE
			SJ-58LM	SJ-63LM	SJ-68LM	

ELECTRIC PARTS

1-1	RTHM-A097CBEZ	F-thermostat	1	1	1	AX
1-2	RSTT-A144CBEZ	Starting relay	1	1	1	AW
1-3	QSWTDA035CBE0	Defrost timer	1	1	1	BB
1-4	PDMP-A046CBEZ	Damper thermo	-	1	1	AX
1-4	PDMP-A048CBEZ	Damper thermo	1	-	-	AW
1-5	FTHM-A028CBKZ	Defrost thermo. ass'y	1	1	1	AN
1-6	RMOTRA040CBE0	Fan motor	1	1	1	AZ
1-7	QSOCAA074CBEZ	Lamp socket	1	1	1	AP
1-8	RLMP-A012CBE0	Lamp	1	1	1	AH
1-9	QACC-A097CBE0	Source cord	1	1	1	AV
1-9	QACC-A104CBE0	Source cord (for U.K.)	1	1	1	AZ
1-10	QSW-PA090CBZA	Door switch	1	1	1	AS
1-11	RHOG-A084CBE0	Protector	1	1	-	AN
1-11	RHOG-A105CBE0	Protector	-	-	1	AV
1-17	FFS-TA055CBKZ	Fuse ass'y	1	1	1	AL
1-20	FW-VZA144CBEZ	Lead ev-cover ass'y	1	1	1	AK
1-21	FHETBA146CBEZ	Def. Heater ass'y	1	1	1	AZ
1-22	FCNW-A517CBK0	Relay cord s ass'y	1	1	1	AM
1-23	QCNW-A671CBE0	Relay wire RC	1	1	1	AD
1-25	QTAN-A032CBE0	Terminal block	1	1	1	AE
1-27	RMOTRA061CBEZ	Fan motor	1	1	1	AW
1-28	RLMP-A029CBEZ	Lamp15W	1	1	1	AH
1-29	QSOCAA072CBEZ	Lamp socket	1	1	1	AN
1-30	FTHM-A029CBKZ	R fan thermo ass'y	1	1	1	AQ
1-31	RC-EZA190CBEZ	Running capacitor	1	1	1	AW

MECHANICAL PARTS

2-2	JKNB-A036CBFB	F-temp. control knob	1	1	1	AD
2-4	LPLTMA568CBEZ	Fl plate AL.	1	1	1	AF
2-7	FLEGA077CBKZ	Leg holder L ass'y	1	1	1	AQ
2-7-1	FAJS-A009CBK0	Adjustable leg ass'y	2	2	2	AD
2-7-2	LHLD-A533CBPZ	Leg holder L	1	1	1	AL
2-8	FLEGA078CBKZ	Leg holder R ass'y	1	1	1	AQ
2-8-2	LHLD-A534CBPZ	Leg holder R	1	1	1	AP
2-10	PSPAVA083CBEA	Upper hinge spacer	1	1	1	AD
2-11	PSPAVA084CBEA	Bottom hinge spacer	1	1	1	AC
2-12	PSPAVA075CBEA	Center hinge spacer	1	1	1	AD
2-13	DHNG-A363CBMZ	Upper hinge ass'y	1	1	1	AE
2-14	DHNG-A365CBMZ	Bottom hinge R ass'y	1	1	1	AE
2-15	DHNG-A364CBMZ	Center hinge R ass'y	1	1	1	AF
2-16	GCOV-A191CBFZ	E.v cover	1	1	1	AS
2-17	LCRA-A010CBE0	Fan clamp	2	2	2	AD
2-19	LHLD-A389CBF0	Motor cushion	2	2	2	AF
2-20	NFANPA020CBFA	Propeller fan 100	1	1	1	AE
2-21	PSEL-B845CBEZ	E.v cover sealer A	1	1	1	AC
2-22	PSEL-B846CBEZ	E.v cover sealer B	1	1	1	AC
2-23	PSEL-A415CBE0	E.v cover sealer C	1	1	1	AC
2-24	PCOVPA164CBFA	Terminal cover	1	1	1	AE
2-25	PCOV-A253CBFA	F lamp cover	1	1	1	AC
2-26	PCOV-A254CBFA	R lamp cover	1	1	1	AF
2-27	GCOVPA119CBRA	R-c box cover	1	1	1	AS
2-28	HGRL-A184CBRA	Fan louver	1	1	1	AU
2-29	GCOV-A162CBFJ	Upper hinge cover	1	1	1	AD
2-30	PCOV-A255CBFA	Fan cover	2	2	2	AD
2-31	JKNB-A033CBFB	R-temp. control knob	1	1	1	AD
2-36	PCAP-A006CBFW	Screw cover	2	2	2	AB
2-37	PCAP-A056CBFF	Screw cover B	2	2	2	AC
2-38	PGID-A156CBFZ	R air guider A	1	1	1	AG
2-41	PSEL-B848CBEZ	A-sealer thermo. cap	1	1	1	AC
2-49	LSTPPA108CBFA	Chilled stopper	2	2	2	AC
2-50	NFANPA019CBFA	Propeller fan 80	1	1	1	AM
2-51	PBOX-A121CBFA	F lamp box	1	1	1	AF
2-52	PBOX-A122CBFA	R lamp box	1	1	1	AM
2-53	LHLD-A536CBFA	R fan motor holder A	1	1	1	AF
2-54	LHLD-A537CBFA	R fan motor holder B	1	1	1	AE
2-55	HGRL-A181CBFA	Multi louver L	-	-	1	AN
2-55	HGRL-A186CBFA	Multi louver M	-	1	-	AM
2-55	HGRL-A188CBFA	Multi louver S	1	-	-	AG
2-56	PFPFPB233CBFZ	R-louver insu. L	-	-	1	AG
2-56	PFPFPB239CBFZ	R-louver insu. M	-	1	-	AF
2-56	PFPFPB248CBFZ	R-louver insu. s	1	-	-	AE
2-57	PSEL-B843CBEZ	A-sealer r-louver	-	-	2	AC
2-57	PSEL-B857CBEZ	A-sealer r-louver	-	2	-	AC
2-57	PSEL-B861CBEZ	A-sealer r-louver	2	-	-	AC

REF. NO.	PART NO.	DESCRIPTION	Q'TY			CODE
			SJ-58LM	SJ-63LM	SJ-68LM	
2-59	PCOV-A264CBEZ	F lamp box cover	1	1	1	AC
2-63	LHLD-A484CBFA	Fan motor holder B	1	1	1	AH
2-64	LHLD-A485CBFA	Fan motor holder A	1	1	1	AH
2-65	PSEL-B209CBE0	U-sealer handle	2	2	2	AB
2-66	PSHEMA132CBP0	Heater cover AL	1	1	1	AD
2-67	LPLTMA570CBPZ	Drain support AL	1	1	1	AE
2-69	PSEL-B847CBEZ	E.v cover sealer D	2	2	2	AC
2-71	PSEL-A552CBE0	Dial sealer	1	1	1	AC
2-72	PSEL-B841CBEZ	Ra sealer A	2	2	2	AC
2-73	PSEL-B842CBEZ	Ra sealer B	1	1	1	AC
2-74	PSEL-B122CBE0	A-sealer thermo. cap.	1	1	1	AB
2-77	LHLD-A391CBE0	Sl-5n clip	1	1	1	AD
2-78	LPLTMA399CBP0	Dryer support	1	1	1	AD
2-79	LBND-A019CBE0	Nylon band	3	3	3	AB
2-80	PBOX-A071CBFA	Terminal box	1	1	1	AE
2-81	PPIPPA097CBEZ	Drain pipe S	1	1	1	AE
2-83	PSEL-B849CBEZ	Ra sealer C	1	1	1	AC
2-84	PSEL-B850CBEZ	Ra sealer D	1	1	1	AC
2-87	LBND-A018CBE0	Fastening band a	1	1	1	AP
2-90	HGRL-A179CBFA	F shower duct	1	1	1	AM
2-91	HGRL-A180CBFA	F return cover	2	2	2	AC
2-93	PCAP-A068CBFA	C sliding cap A	2	2	2	AC
2-95	NROL-A027CBEZ	V roller	2	2	2	AC
2-96	LHLD-A535CBFA	Shaft holder	2	2	2	AC
2-97	LPIN-A178CB1Z	Shaft	2	2	2	AC
2-99	GCOV-A192CBFE	Top cover	1	1	1	AC
2-105	PSEL-B896CBEZ	A-sealer FS-A	1	1	1	AC
2-106	PSEL-B897CBEZ	A-sealer FS-B	2	2	2	AC

DOOR PARTS

3-5	FDORFB308CBKZ	F-door ass'y(for C2W)	1	1	1	BK
3-5	FDORFB299CBKZ	F-door ass'y(for C2G)	1	1	1	BK
3-5	FDORFB306CBKZ	F-door ass'y(for C2B)	1	1	1	BM
3-5	FDORFB421CBKZ	F-door ass'y(for C2S)	-	-	1	BL
3-5-1	LSTPPA107CBFA	Fd stopper spring R	1	1	1	AD
3-5-2	NBRGPA022CBFA	Nylon bearing 3S	2	2	2	AC
3-5-3	PCOV-A251CBFE	Dc cover FR(for C2W)	1	1	1	AC
3-5-3	PCOV-A251CBFA	Dc cover FR(for C2G)	1	1	1	AC
3-5-3	PCOV-A251CBFB	Dc cover FR(for C2B)	1	1	1	AC
3-5-3	PCOV-A251CBFG	Dc cover FR(for C2S)	-	-	1	AC
3-6	FPACGA309CBKZ	F-door packing	1	1	1	AX
3-8	FHNDPA039CBKZ	Door handle FL ass'y(for C2W)	1	1	1	AR
3-8	FHNDPA036CBKZ	Door handle FL ass'y(for C2G)	1	1	1	AR
3-8	FHNDPA037CBKZ	Door handle FL ass'y(for C2B)	1	1	1	AR
3-8	FHNDPA056CBKZ	Door handle FL ass'y(for C2S)	-	-	1	AP
3-9	PCAP-A067CBFE	Screw cover HD(for C2W)	10	10	10	AD
3-9	PCAP-A067CBFA	Screw cover HD(for C2G)	10	10	10	AC
3-9	PCAP-A067CBFB	Screw cover HD(for C2B)	10	10	10	AC
3-9	PCAP-A067CBFG	Screw cover HD(for C2S)	-	-	10	AC
3-15	FDORRB170CBKZ	R-door ass'y(for 68LM-C2W)	-	-	1	BQ
3-15	FDORRB166CBKZ	R-door ass'y(for 68LM-C2G)	-	-	1	BQ
3-15	FDORRB168CBKZ	R-door ass'y(for 68LM-C2B)	-	-	1	BR
3-15	FDORRB250CBKZ	R-door ass'y(for 68LM-C2S)	-	-	1	BS
3-15	FDORRB177CBKZ	R-door ass'y(for 63LM-C2W)	-	1	-	BP
3-15	FDORRB173CBKZ	R-door ass'y(for 63LM-C2G)	-	1	-	BQ
3-15	FDORRB174CBKZ	R-door ass'y(for 63LM-C2B)	-	1	-	BQ
3-15	FDORRB185CBKZ	R-door ass'y(for 58LM-C2W)	1	-	-	BQ
3-15	FDORRB181CBKZ	R-door ass'y(for 58LM-C2G)	1	-	-	BP
3-15	FDORRB183CBKZ	R-door ass'y(for 58LM-C2B)	1	-	-	BP
3-15-1	LSTP-A058CBM0	R-door stopper R	1	1	1	AF
3-15-2	LSTPPA084CBFA	Rd-stopper spring R	1	1	1	AD
3-15-3	PCOV-A252CBFE	Dc cover RR(for C2W)	1	1	1	AC
3-15-3	PCOV-A252CBFA	Dc cover RR(for C2G)	1	1	1	AC
3-15-3	PCOV-A252CBFB	Dc cover RR(for C2B)	1	1	1	AC
3-15-3	PCOV-A252CBFG	Dc cover RR(for C2S)	-	-	1	AC
3-17	FPACGA310CBKZ	R-door packing	-	-	1	AY
3-17	FPACGA314CBKZ	R-door packing	-	1	-	AY
3-17	FPACGA315CBKZ	R-door packing	1	-	-	AY
3-19	FHNDPA046CBKZ	Door handle RL ass'y(for C2W)	1	1	1	AR
3-19	FHNDPA043CBKZ	Door handle RL ass'y(for C2G)	1	1	1	AR
3-19	FHNDPA044CBKZ	Door handle RL ass'y(for C2B)	1	1	1	AR
3-19	FHNDPA057CBKZ	Door handle RL ass'y(for C2S)	-	-	1	AP
3-25	FBDGDA280CBYZ	Badge ass'y	1	1	1	AY
3-25	FBDGDA307CBYZ	Badge ass'y	-	-	1	AW

REF. NO.	PART NO.	DESCRIPTION	Q'TY			CODE
			SJ-58LM	SJ-63LM	SJ-68LM	

OTHER PARTS

4-1	LBND-A023CBE0	L-band C	4	4	4	AC
4-3	LX-VZA003CBE0	Special screw	2	2	2	AB
4-10	QTAN-A013CBE0	Solderless term. A	4	4	4	AH
4-15	LX-BZA018CBE0	Special screw	1	1	1	AA
4-17	LX-WZA003CBE0	Washer	4	4	4	AA
4-18	LX-BZA076CBEZ	Handle screw	10	10	10	AC

ATTACHMENT PARTS

5-1	UPOK-A166CBRA	Bottle pocket	2	2	2	AN
5-3	UPOK-A168CBRA	F door pocket	2	2	2	AP
5-4	UPOK-A165CBRA	R door pocket	1	1	2	AN
5-5	UTNA-A282CBFB	Egg tray	2	2	2	AG
5-6	FSRA-A193CBYZ	Ice cube maker	1	1	1	AS
5-9	FSRA-A194CBKZ	F shelf ass'y	1	1	1	AY
5-13	HGRL-A178CBFE	Ventilating grille(for C2W)	1	1	1	AN
5-13	HGRL-A178CBFA	Ventilating grille(for C2G)	1	1	1	AG
5-13	HGRL-A178CBFB	Ventilating grille(for C2B)	1	1	1	AM
5-13	HGRL-A178CBFG	Ventilating grille(for C2S)	-	-	1	AN
5-14	USRA-A252CBFA	Drain pan	1	1	1	AN
5-15	UYOK-A330CBFA	Fruit case	1	1	1	AW
5-16	UYOK-A331CBFA	Vegetable case	1	1	1	AZ
5-17	UYOK-A328CBFA	Ice storage box	1	1	1	AF
5-18	UYOK-A329CBFA	Slide case	1	1	1	AX
5-19	GDORPA066CBRA	Slide case door	1	1	1	AP
5-24	FTNA-A301CBKZ	R glass shelf ass'y	2	2	3	BC
5-25	FTNA-A302CBKZ	V glass shelf ass'y	1	1	1	BC
5-26	PCAP-A076CBFE	Venti. grille cap(for C2W)	1	1	1	AD
5-26	PCAP-A076CBFA	Venti. grille cap(for C2G)	1	1	1	AC
5-26	PCAP-A076CBFB	Venti. grille cap(for C2B)	1	1	1	AC
5-26	PCAP-A076CBFG	Venti. grille cap(for C2S)	-	-	1	AC
5-28	PCAP-A069CBFA	V sliding cap L	1	1	1	AC
5-29	PCAP-A070CBFA	V sliding cap R	1	1	1	AC
5-31	LRALPA132CBFA	Ice tray holder L	1	1	1	AF
5-32	LRALPA133CBFA	Ice tray holder R	1	1	1	AF
5-33	LRALPA134CBFA	Ice tray holder B	1	1	1	AF
5-34	PCUP-A009CBFA	Water cup	1	1	1	AD
5-35	UPOKPA251CBFA	Tube stand	2	2	2	AC
5-36	PCOV-A259CBFA	Case cover	1	1	1	AH
5-37	UPOK-A167CBRA	Utility case pocket	1	1	1	AM

CYCLE PARTS

6-1	PCMPLA196CBEZ	Compressor	1	1	-	BX
6-1	PCMPLA202CBEZ	Compressor	-	-	1	BX
6-2	PSPAGA028CBE0	Rubber grommet	4	4	4	AD
6-3	FCONSA077CBKZ	Sub. Condenser ass'y	1	1	1	AX
6-3-1	PCOV-A256CBFA	Pipe protector L	1	1	1	AF
6-3-2	PCOV-A257CBFA	Pipe protector R	1	1	1	AF
6-4	FFRM-A113CBKZ	Base frame ass'y	1	1	1	AW
6-5	FDRY-A006CBK0	Dryer ass'y	1	1	1	AX
6-6	PCLI-A035CBE0	Clip	1	1	1	AC
6-9	PSPAFA020CBE0	Sleeve	4	4	4	AB
6-11	PPIPCA357CBEZ	S.p connector	1	1	1	AD
6-15	PGUM-A002CBF0	Absorbent rubber B	1	1	1	AH
6-18	PPIPCA252CBE0	Charge pipe	2	2	2	AD
6-21	PCOVPA165CBE0	Terminal cover	1	1	1	AF
6-27	PSEL-B899CBEZ	S-sealer	2	2	2	AC
6-28	PKYU-A143CBEZ	S-butyl	1	1	1	AD
6-29	PKYU-A036CBE0	S-butyl D-poy	1	1	1	AP
6-30	PKYU-A098CBE0	Compressor butyl	1	1	1	AG
6-31	PKYU-A035CBE0	Sp-butyl h	1	1	1	AG

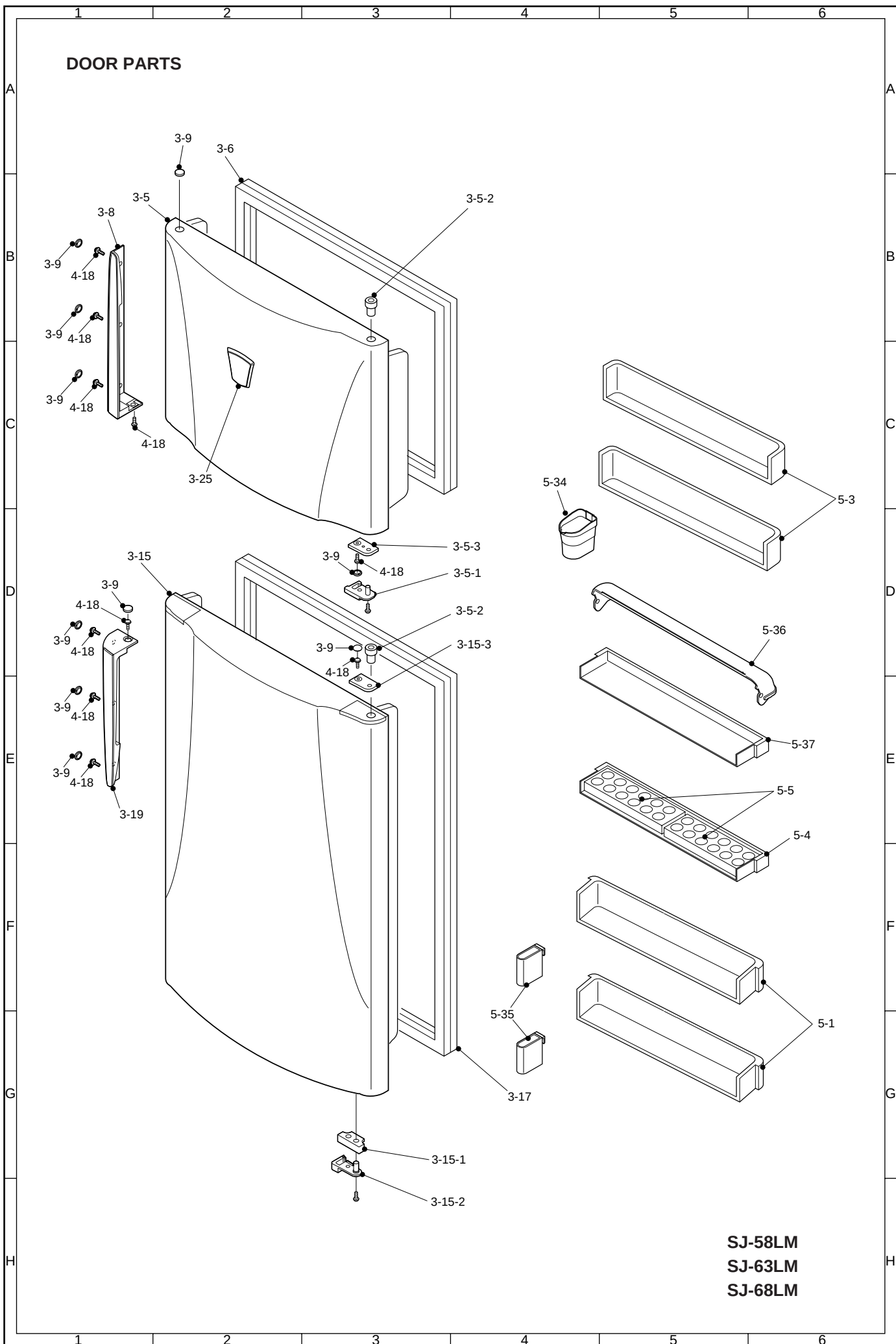
REF. NO.	PART NO.	DESCRIPTION	Q'TY			CODE
			SJ-58LM	SJ-63LM	SJ-68LM	
MISCELLANEOUS						
90-1	TINS-A509CBRZ	Operation manual	1	1	1	AF
90-2	TLAB-A092CBR0	Lamp label	1	1	1	AD
90-3	SPAKCI958YDEZ	Packing case 63LM (for 63LM)	-	1	-	BE
90-3	SPAKCI957YDEZ	Packing case 68LM (for 68LM)	-	-	1	BE
90-3	SPAKCI959YDEZ	Packing case 58LM (for 58LM)	1	-	-	BE
90-5	TLAB-A900CBEZ	Case label C2W (for C2W)	4	4	4	AC
90-5	TLAB-A898CBEZ	Case label C2G (for C2G)	4	4	4	AC
90-5	TLAB-A899CBEZ	Case label C2B (for C2B)	4	4	4	AB
90-5	TLAB-A975CBEZ	Case label C2S (for C2S)	-	-	4	AE
90-6	CPADBA765YDKZ	Bottom pad ass'y	1	1	1	AY
90-7	CPADBA764YDKZ	Top pad ass'y	1	1	1	AR
90-8	TLAB-A876CBRZ	Warning label	1	1	1	AC
90-11	TINS-A343CBR0	Operation manual I (for U.K.)	1	1	1	AG
90-12	TLAB-A991CBRZ	Energy label	-	-	1	AE
90-12	TLAB-A992CBRZ	Energy label	-	1	-	AE
90-12	TLAB-A993CBRZ	Energy label	1	-	-	AE
90-13	TLAB-A637CBR0	Energy label(GB)	1	1	1	AG
90-13	TLAB-A638CBR0	Energy label(D)	1	1	1	AG
90-13	TLAB-A639CBR0	Energy label(F)	1	1	1	AG
90-13	TLAB-A640CBR0	Energy label(E)	1	1	1	AG
90-13	TLAB-A641CBR0	Energy label(I)	1	1	1	AG
90-13	TLAB-A642CBR0	Energy label(GR)	1	1	1	AG
90-13	TLAB-A643CBR0	Energy label(P)	1	1	1	AG
90-13	TLAB-A644CBR0	Energy label(NL)	1	1	1	AG
90-15	TLAB-A985CBRZ	Two star label	1	1	1	AF
90-16	TLAB-A989CBRZ	4-2 star label	1	1	1	AE
90-21	TLAB-A939CBRZ	Caution label rof	1	1	1	AD
90-22	TCAUHA054WRR0	Cord caution (for U.K.)	1	1	1	AE

HOW TO ORDER REPLACEMENT PARTS

To have your order filled promptly and correctly, please furnish the following information.

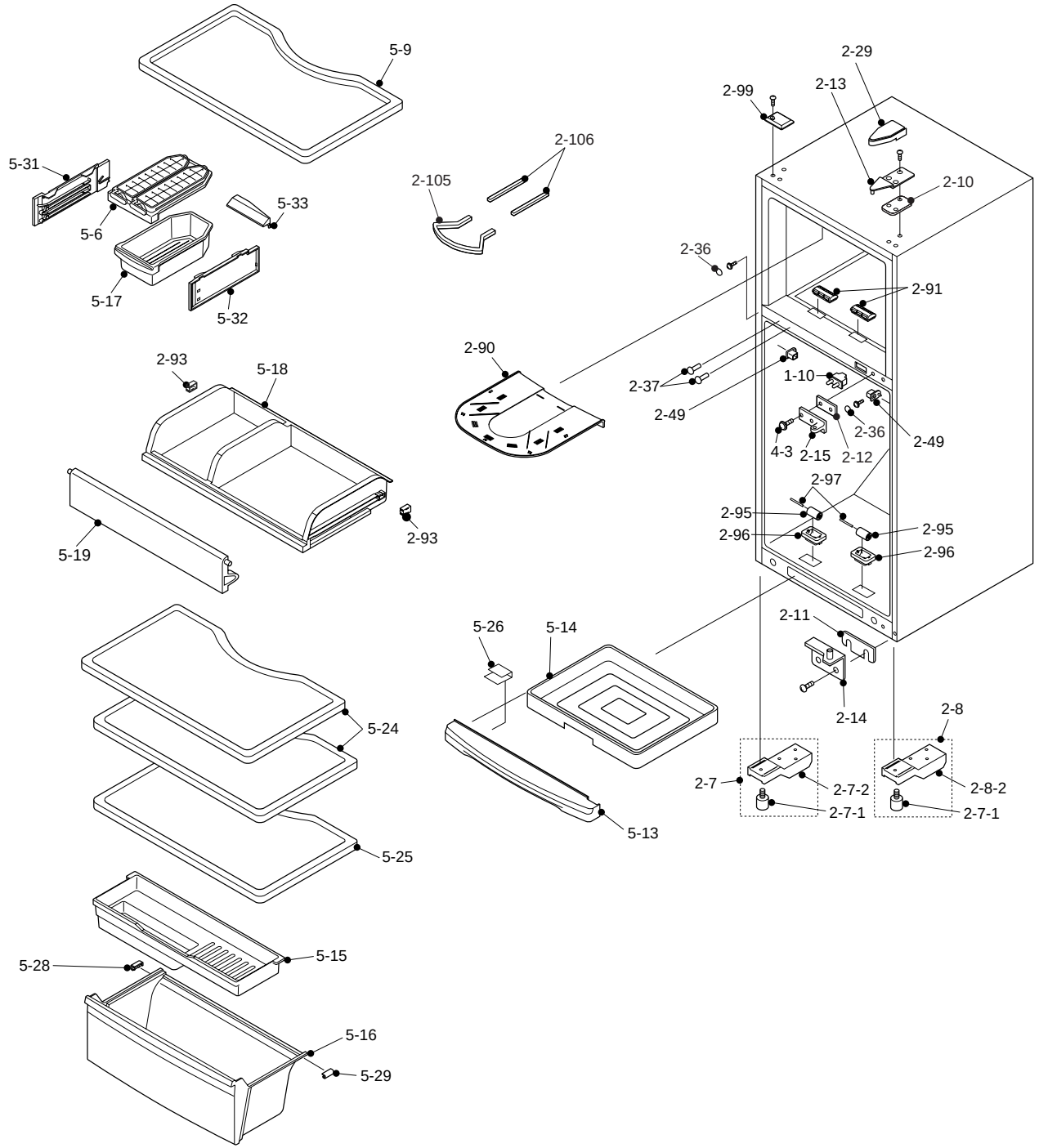
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|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |

DOOR PARTS



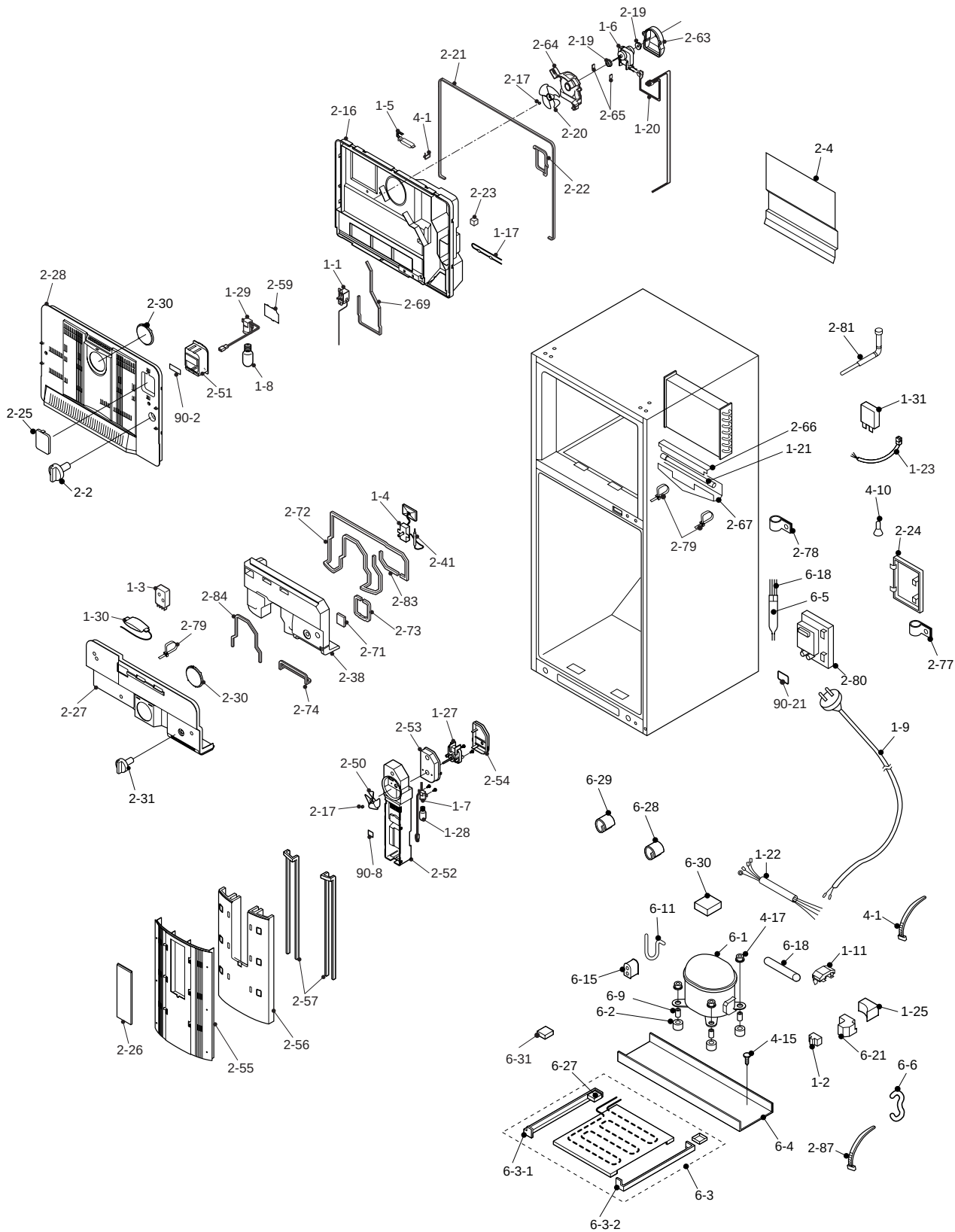
SJ-58LM
SJ-63LM
SJ-68LM

CABINET PARTS



SJ-58LM
SJ-63LM
SJ-68LM

CABINET PARTS



SJ-58LM
SJ-63LM
SJ-68LM