S/M No.:

Service Manual

Mineral Water) Refrigerator + Crusher Ice

FPS(N)-X22D1..
FPS(N)-X22E1..

FPS(N)-X22F1..
FPS(N)-X22G1..

FPS(N)-X22D2..
FPS(N)-X22E2..

FPS(N)-X22F2..
FPS(N)-X22G2..

DAEWOO ELECTRONICS

✔ Caution

In this manual, some parts can be changed for improving their performance without notice. So, If you need the latest parts information, please visit and refer to PPL (Parts Price List)] in Service Infromation Center. (http://svc.dwe.co.kr)

April.2012.

1. Information

Buyer No.		X22D..	X22E..	X22F..	X22G..
Gross Vol. (ISO 15502)	Total	608	608	608	608
	Freezer	228	228	228	228
	Refrigerator	380	380	380	380
Storage Vol. (ISO 15502)	Total	549	538	549	538
	Freezer	179	179	179	179
	Refrigerator	370	359	370	359
Diemension	Width (mm)	906	906	906	906
	Depth (mm)	735	735	735	735
	Height (mm)	1770	1770	1770	1770
Weight (kg)		107 kg	109 kg	109 kg	111 kg

Cooling Cycle	Refrigerant Type	R-134a or R-600a	
	Refrigerant Charge	190g (R-134a) or 75g (R-600a)	
	Evaporator Type	Fin Type	
	Condenser Type	Compulsory Convection Type	
	Dryer	Molecular Sieve xH-9	
	Capillary Tube	ID0.7 x T0.55 x L2,340	
Heater	*Defrost Heater*	280W	
	Dispenser Heater	3W	
	Home Bar Heater	x	5W
	Water Pipe Heater	5W	
Sensor	Defrost Sensor	PBN-43	
	Freezer Sensor	PT-38	
	Refrigerator Sensor	PBN-43B	
Electronic Part	Fuse Temp. (Defrost)	AC 250V, 10A, 77C	
	Freezer Fan Motor	DC 12V, 1400rpm	
	Condenser Fan Motor	DC 13V, 1100rpm	
	Freezer Lamp	LED (DC12V / 1.44W)	
	Refrigerator Lamp	LED(DC12V / 2.16W)	

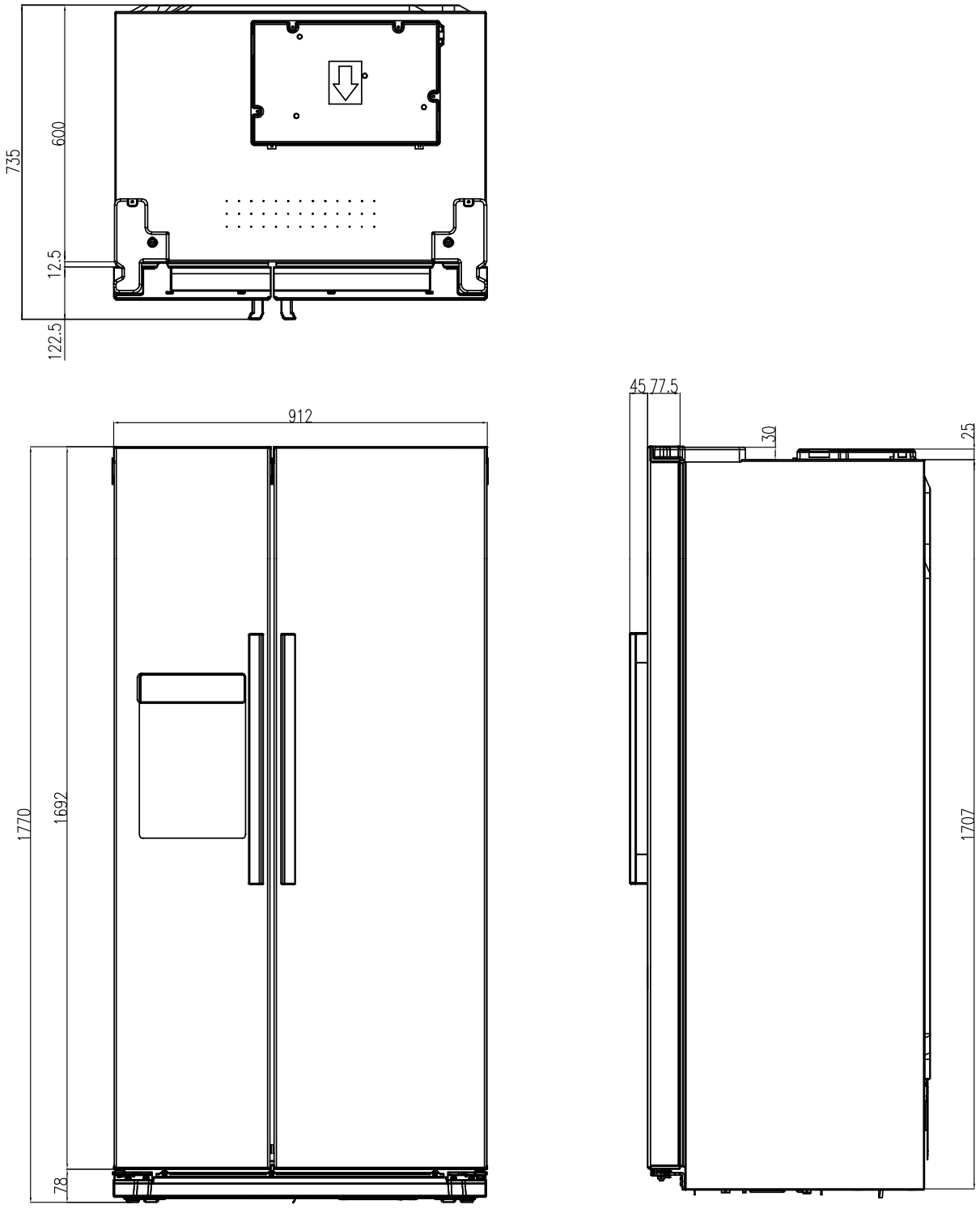
X22D.. : Dispenser Only

X22E.. : Dispenser + Magic cool zone

X22F.. : Dispenser + Home bar door

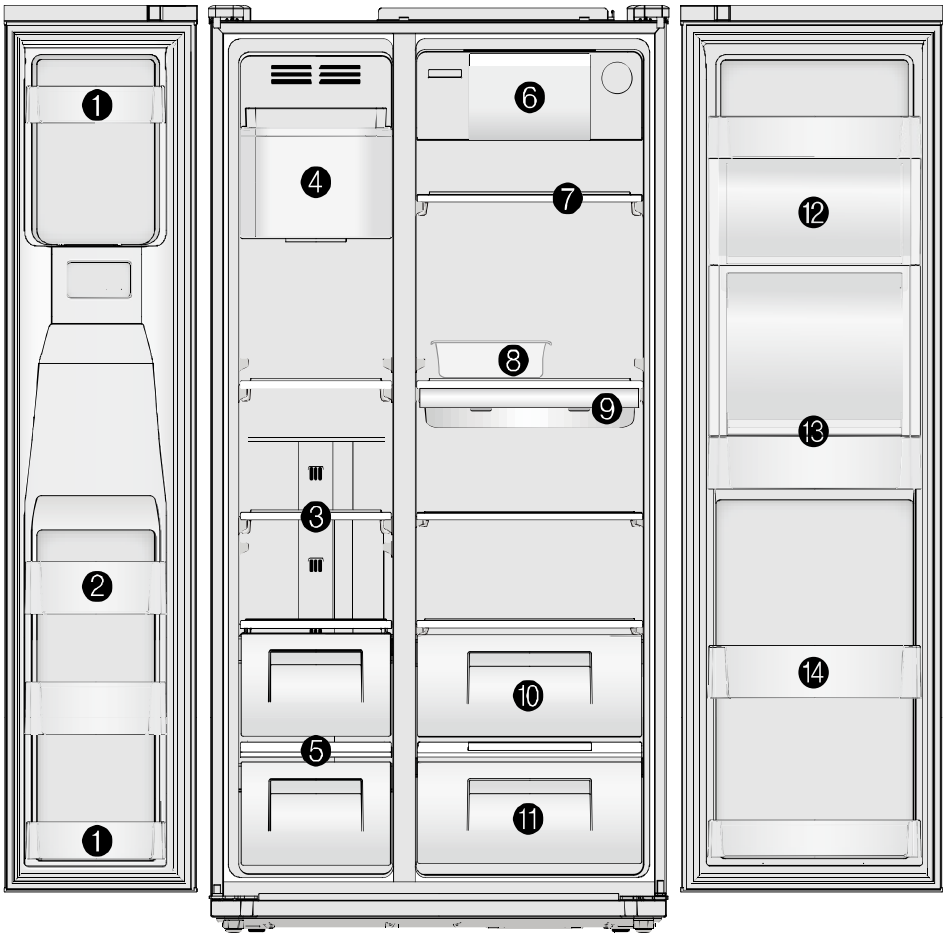
X22G.. : Dispenser + Home bar door + Magic cool zone

2. Outside Diemension



[The real features are model dependent]

3. Interior Parts



※ The real features are model dependent.

1. Door storage compartment
; for shot-term storage

2. Door storage compartment
; for storing frozen food

3. Freezer shelf
; for storing frozen food

4. Ice maker & storage case

5. Freezer case
; for storing dried or fish, meat for long periods of time.

6. Xpress can chiller
; for storing beverage (quick cooling compartment)

7. Refrigerator shelf
; for storing common foods

8. Egg case

9. Water tank
; for storing cold water

10. Vegetable case

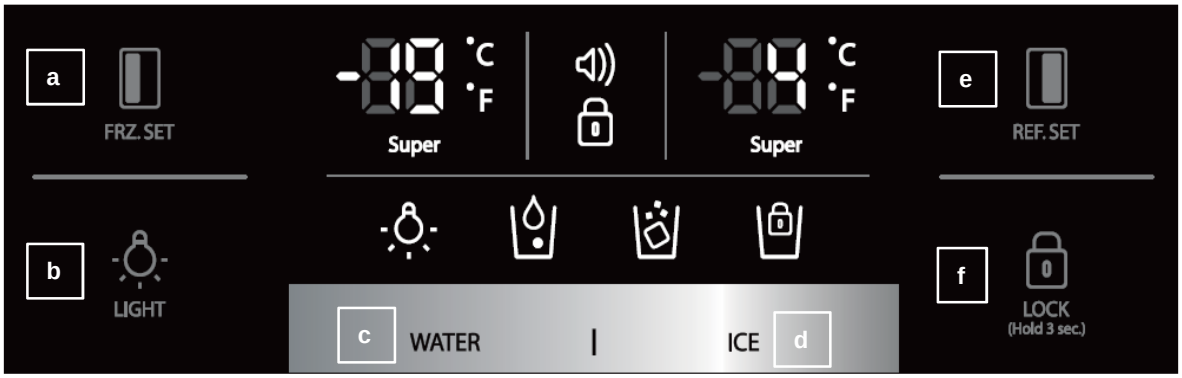
11. Fruit case or Magic cool zone (*not all models)

12. Multi plus zone
; for storing general medicines or cosmetic products.

13. Home bar pocket (*not all models)
; for storing frequently used cans, drink water, beverages.

14. Refreshment pocket
; for storing refrigerating foods. (milk, juice, beer bottles, etc..)

1. Display



a Temperature adjustment button for freezer compratment.

b Dispenser light button.

c Lock & Unlock button.

d Ice selction(Cubed Ice , Crushed Ice) & Ice Maker Lock button.

e Temperature adjustment button for refrigerator compratment.

f Water dispenser selction button.

2. Display Control

FCP	Control
Temp. Display (Set Temp.)	Initial Mode : Freezer / Refrigerator set medium (-19C / 4C)
Quick Freezer & Refresh Compartment	Touch
Lock ice maker / Cubed ice	Touch
KEY LOCK	Touch

3. FRZ.SET button

1) Temperature control of freezer compartment.

2) Initial power plug in : Medium (-19C)

- Every time you press the FRZ.SET button, the setting temperature changes below order.

4. REF.SET button

1) Temperature control of refrigerator compartment

2) Initial power plug in : Medium (4C)

- Every time you press the REF.SET button, the setting temperature changes below order.

5. WATER/ICE select

- Mineral Water Model Only

1) When push the WATER button, water dispensing available.

2) When push the ICE button, cubed ice dispensing available.

3) The initial mode is WATER.

- Crusher + Mineral Water Model Only

1) When push the WATER button, water dispensing available.

2) When push the ICE button, cubed ice , crushed ice dispensing availabel.

[Cubed ice : push the ice button once , Crsuhed ice : push the ice button twice]

3) The initial mode is WATER.

6. ICE MAKER LOCK

1) Push the 'ICE' button for 3 seconds. To unlock push the ICE button for 3 seconds.

2) When cleaning the ice storage case or when not use for a long period of time.

7. LOCK Mode (Childproof lock)

1) When lock the other buttons, press LOCK button.

(In this mode other buttons are unable)

2) To unlock, press again for 3 seconds .

< REFERENCE >

: Please wait for 2 ~ 3 seconds in order to take final ice or drops of water when taking out cup from the pressing switches after taking ice or water.

: The actual inner temperature varies depending on the frood status, as the indicated setting temperature is a target temperature, not actual temperautre within refrigerator.

1. Freezer Compartment Control

1) Adjust by the pushing the FRZ.SET button.

2) Compressor & Freezer Fan controlled by each mode ON/OFF point.

3) Freezer Compartment ON/OFF Difference : 4C

- MEDIUM OFF point : -19.8C

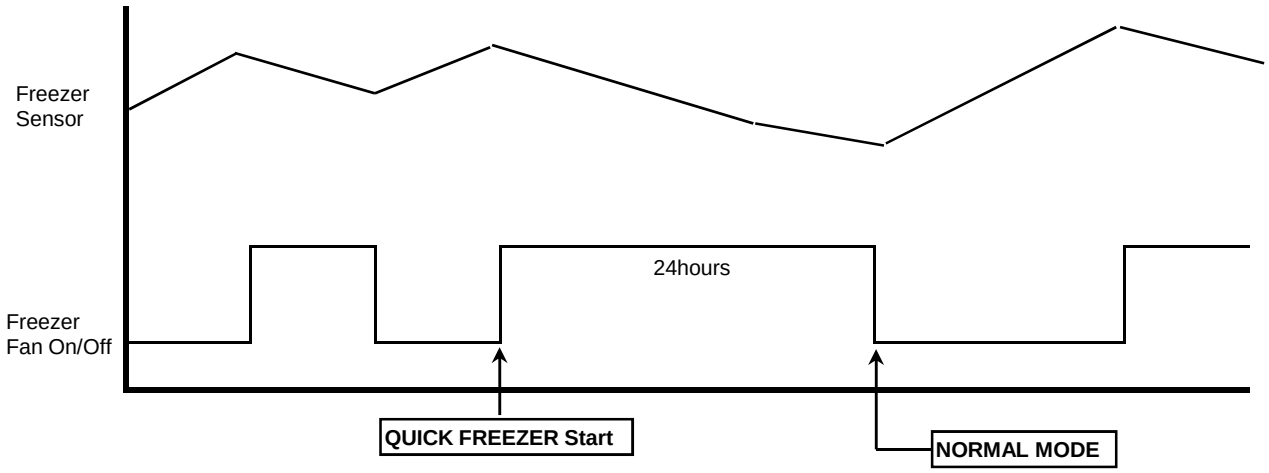
4) Control Temperature Point in Each Mode

Division		*Initially On*	*1st Press*	*2nd Press*	*3rd Press*	*4th Press*	*5th Press*	*6th Press*	*7th Press*
Display		***-19***	***-20***	***-21***	***-22***	***-22 (super)***	***-16***	***-17***	***-18***
Temperature Control		*Medium*	*Medium Max*		*Max*	*-*	*Min*	*Medium Min*	
Normal	*Sensor On*	*-15.8*	*-16.8*	*-18.8*	*-18.8*	*-*	*-10.6*	*-13.9*	*-14.8*
	Sensor Off	*-19.8*	*-20.8*	*-22.8*	*-22.8*	*-*	*-15.1*	*-17.9*	*-18.8*

6) QUICK FREEZER (

) Mode

- In this mode, Compressor & Freezer Fan motor is on unconditionally for 24hours. (free of freezer sensor)



2. Refrigerator Compartment Control

1) Adjust by the pushing the REF.SET button.

2) Refrigerator Damper controlled by each mode ON/OFF point.

3) Refrigerator Compartment ON/OFF Difference : 0.5C

- MEDIUM OFF point : 6.0C

4) Weak Cooling Prevention Function

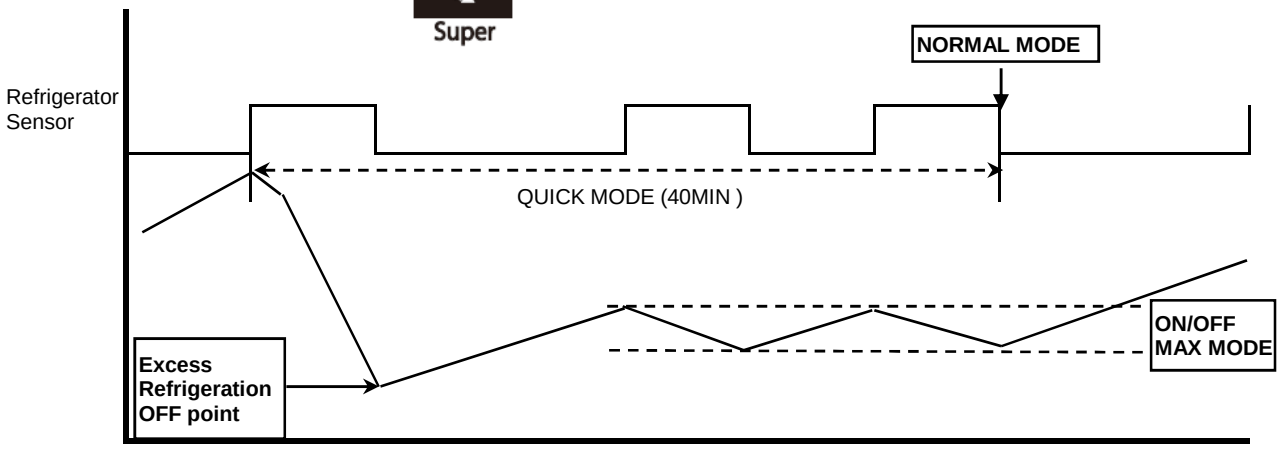
- This funtion is free of Freezer sensor.
- When refrigerator compartment reaches the OFF point, compressor is controlled by freezer sensor.
- Weak cooling temperautre is + 7C in each dial sensor OFF temperature.
- Weak cooling terminate temperautre is same as each dial sensor OFF temperature.

5) Control Temperature Point in Each Mode

Division		*Initially On*	*1st Press*	*2nd Press*	*3rd Press*	*4th Press*	*5th Press*	*6th Press*	*7th Press*
Display		***4***	***3***	***2***	***2 (super)***	***8***	***7***	***6***	***5***
Temperature		*Medium*	*Medium Max*	*Max*	-	*Min*	*Medium Min*		
Normal	*Sensor On*	*6.5*	*5.5*	*4.5*	-	*10.5*	*9.5*	*8.5*	*7.5*
	Sensor Off	*6.0*	*5.0*	*4.0*	-	*10.0*	*9.0*	*8.0*	*7.0*
Weak refrigeration	*Sensor On*	*13.0*	*12.0*	*11.0*	-	*17.0*	*16.0*	*15.0*	*14.0*
	Sensor Off	*6.0*	*5.0*	*4.0*	-	*10.0*	*9.0*	*8.0*	*7.0*

6) QUICK REFRIGERATOR Mode (

) : This mode runs for 40 minutes.



- Until the sensor reaches the Excess Refrigeration OFF point (-7C), Refrigerator Damper, freezer fan and compressor is ON.
- Until the QUICK Mode ends, the appliance runs with MAX dial mode.
- After QUICK Mode (about 40 mins) the normal mode start.

3. Fan voltage per control mode

Exerted fan motor voltage

Mode	*F-Fan*	*C-Fan*
Normal mode	*10 V*	*13 V*
Super Freezer mode	*13 V*	*13 V*
Load mode / 4 hours after defrosting / RT >= 38C	*13 V*	*13 V*

1) Normal control : Slow operation mode with relatively low noise level.

2) Load mode : Operation mode which need to be operated by temperature rise at inner side of refrigerator according to operating condition.

4. Load mode

1) Purpose : To recover temperature rise inside of refrigerator as quickly as possible by load or frequent door opening.

2) Operating condition

- When door opening time is more than 1 minutes per 1 time -> Frz. / Ref. go to load mode.
- When sensing more than R/S On Point + 5deg : Ref. load response.
- When sensing more than F/S On Point + 5deg : Frz. load response.

3) Conditions for inactive load response mode.

- When there is no door opening signal during and after defrost cycle, load response mode is inactive.

4) Terminate condition

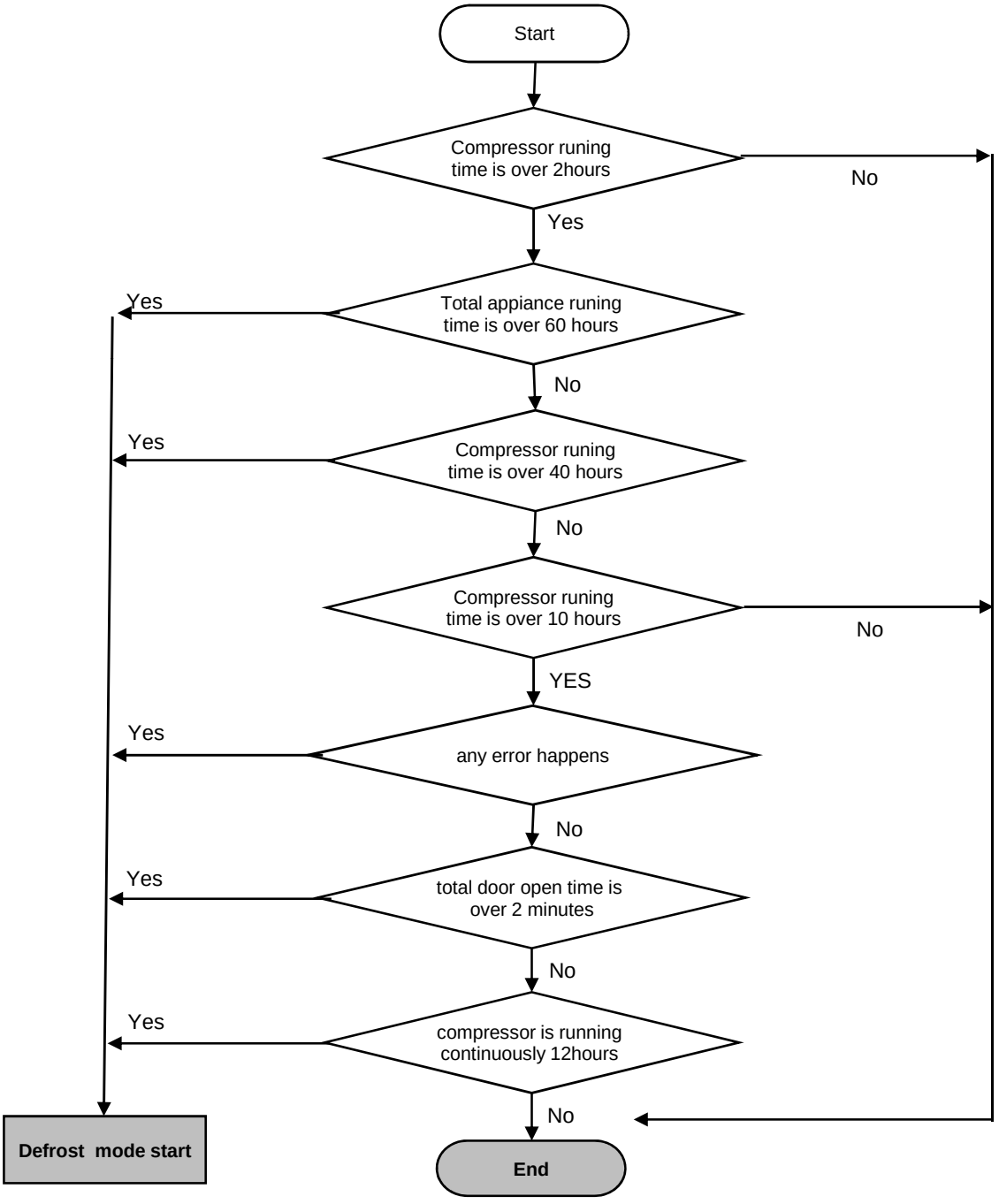
- After 20 mintues.
- When Ref. sensor reaches to off point, Ref. load mode ends.
- When Frz. sensor reaches to off point, Frz. load mode ends.

1. When Defrost Mode start?

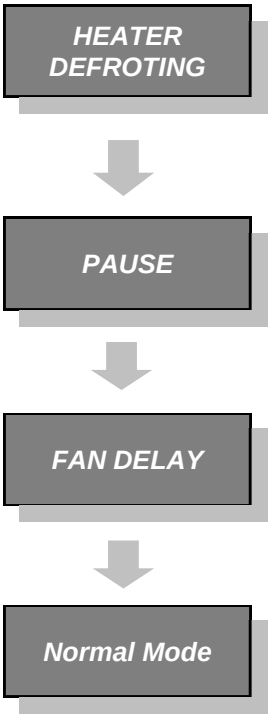
1) When total Compressor runnig time becomes at 10,12,14..40hours.

- Door opening time is over 2 minutes (Each Freezer / Refrigerator door)
- Any error happens. (R1, F1, D1, F3, RT-Sensor, C1, Door switch etc.)
- The compressor runing time is over 12 hours.

2) Total compressor running time (on time + off time) is 70hours.



2. Normal Defrost Mode



1) HEATER DEFROSTING
- Defrost heater is switch on until Defrost Sensor temperature reaches 13C.
- Heater operation time
  ; 30 seconds - Heater is ON free of Defrost Sensor.
  ; 30 minutes - When Defrost Sensor is malfunction. (D1 error)
  ; 60 minutes - Heater maximum operation time. (F3 error)

2) PAUSE
- After Defrost Heater switch OFF, Compressor dosen't run within 10 minutes.

3) FAN DELAY
- Freezer & Refrigerator fan switch on after 5miunuts' cmopressor running.

Division	*HEATER DEFROST*	*PAUSE*	*FAN DELAY*
Compressor	*OFF*	*OFF*	*ON*
Freezer Fan	*OFF*	*OFF*	*OFF*
Refrigerator Fan	*OFF*	*OFF*	*OFF*
Defrsot Heater	*ON*	*OFF*	*OFF*
Time	*30min (D1 error)* *60min (F3 error)*	*10min*	*5min*

1. How to enter this check mode

1) Push the LOCK button.

2) Push the WATER button 5 times while pressing the FRZ.SET butto

2. The Front LED displays the current error code (if happens).

; Every time you press the Freezer Set button, the following value display.

1) The appliance running time. (From the plug in.)

2) Freezer sensor temperature.

3) Defrost sensor temperature.

4) Refrigerator sensor temperature.

5) Room temperature.

6) P Factor display.

3. How to exit this mode

1) Push the LOCK button.

2) After 4 minutes automatically exit.

4. Error Code

No	Display (Error Code)	Remark
1	***F1***	Freezer sensor disconnection or short
2	***r1***	Refrigerator sensor disconnection or short
3	***rt***	Room temperature sensor disconnection or short
4	***d1***	Defrost sensor disconnection or short
5	***dr***	Refrigerator Door switch is defective.
6	***dF***	Freezer Door switch is defective.
7	***dH***	Home bar door switch is defective. (*Home bar models only)
8	***El***	Ice sensor disconnection or short
9	***Et***	Horizontal switch error
10	***Eg***	Water supply error
11	***EA***	Drop the ice while Et
12	***Eu***	Full ice switch error
13	***C1***	Abnormal or defective cycle
14	***F3***	Return after defrosting : abnormal or defective
15	***Co***	Pull-Down mode display (No error)
16	***d2***	Forced Defrost mode display (No error)

; All Error Code reset, when the relative parts turn into normal.

5. Troubleshooting when error happens

(If the relative parts is normal, Error code display will be reset.)

1) F1 error

- Cause : Freezer sensor disconnection or short.
- Check point : Measure the resistance of freezer sensor in the Main PCB.

  If sensor is disconnected or short, change that in the freezer compartment.
- Error code display

Freezer sensor is short.


Freezer sensor is disconneted.

2) R1 error

- Cause : Refrigerator sensor disconnection or short.
- Check point : Measure the resistance of refrigerator sensor in the Main PCB.

  If sensor is disconnected or short, change that in the refrigerator compartment.
- Error code display

Refrigerator sensor is short.


Refrigerator sensor is disconneted.

3) rt error

- Cause : Room temperature sensor disconnection or short.
- Check point : Measure the voltage of sensor part on the Main PCB.

  If voltage is 0.5~4.5V, normal. If voltage is 0V (short) or 5V (disconnect), change new one.
- Error code display

RT sensor is short.


RT sensor is disconneted.

4) d1 error

- Cause : Defrost sensor disconnection or short.
- Check point : Measure the resistance of defrosting sensor in the Main PCB.

  If sensor is disconnected or short, change that on the evaporator.
- Error code display

Defrost sensor is short.


Defrost sensor is disconneted.

5) Door switch error (dr, dF, dH on display)

- Cause : When it senses the door open for more than 1 hour.
- Check point : Check the each door switch and exchange.

6) EI error

- Cause : Ice sensor is abnormal.
- Check point : Measure the resistance between both terminals after separating CN11 of the Main PCB.

  If sensor is disconnected or short, change that in the automatic ice maker.

7) Et error

- Cause : Level switch abnormal. (No pulse is sensed for some time.)
- Control : By time. (Supply mode is skipped.)

8) Eg error

- Cause : When Ice sensor temperature (5 minutes after water supply) doesn't go up.
- Check point : Ice sensor or water supply line.

9) EA error

- Cause : When sensing ice drop 3 times in level sensor switch error.
- Control : Stop ice maker
- After 1 time rotation EA error code disappear if level swtich is normal.

10) Eu error

- Cause : Sensor which senses if ice is full or not is abnormal.
- Control : When drops the ice, the motor rotates 90 degree.

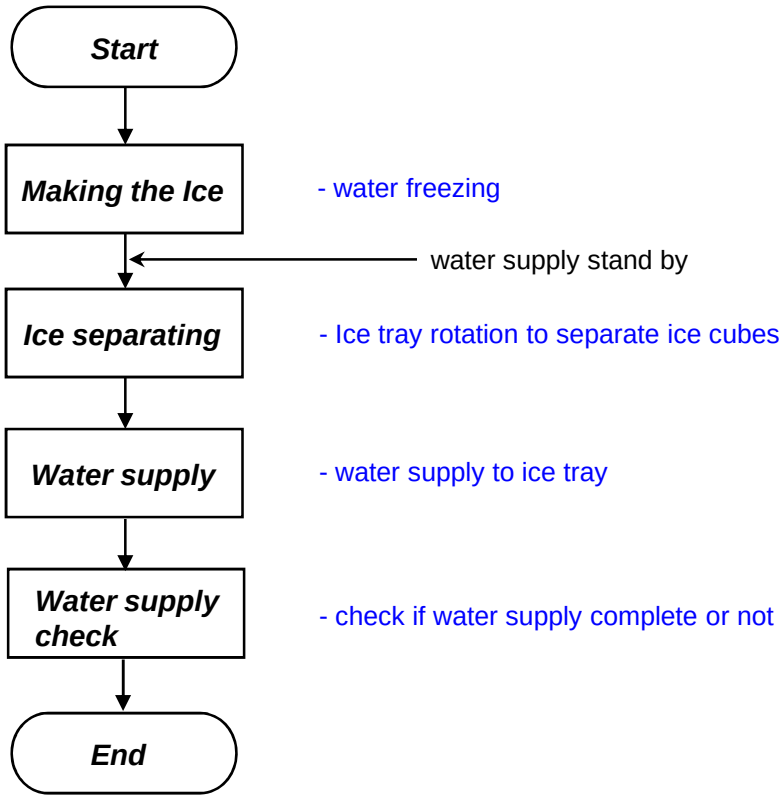
11) C1 error

- Cause : When compressor works for over 3 hours although Defrost sensor is over -5C.
- Check point : Refrigerant leakage.

12) F3 error

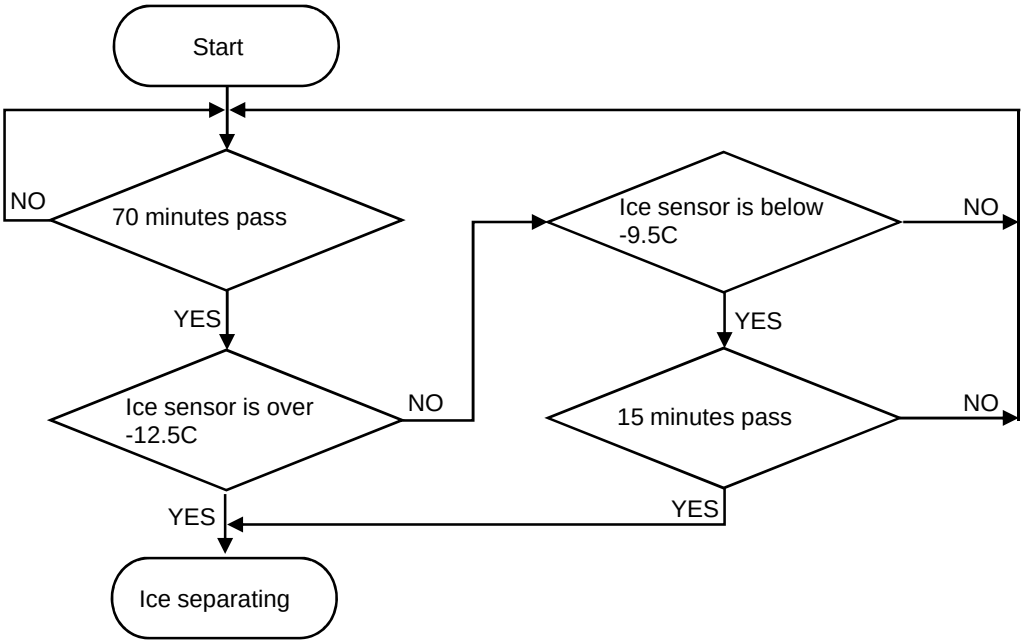
- Cause : in case defrosting mode ends after 60 minutes.
- Check point : Measure the resistance between both terminals of the defrost heater.
  If the resistance is infinity (disconnection) or 0 ohm (short).

1. Ice making flow



1) Press Test switch (which is under the ice tray) for more than 1 second and then test starts.
 - Test mode starts from ice separating mode.
 - In case test switch is abnormal, test is done only 1 time.
2) When the initial power input, ice tray turns to be horizontal.
3) Water supply hose heater control - defrost heater linkage operation
 - Heater is always ON if Room temperature sensor is abnormal or room temperature is below 15 degree.
 - Heater is ON for 60minutes (max limit time) if Flow sensor is abnormal.
4) Water supply stand by
 - Condition : When ice is full
 - Operation : Proceeds to ice making mode. (stop ice separating and water supply mode)
5) Crusher function
 - It stops operation when freezer door is open.
 - It operates if door is close.

2. Ice making mode

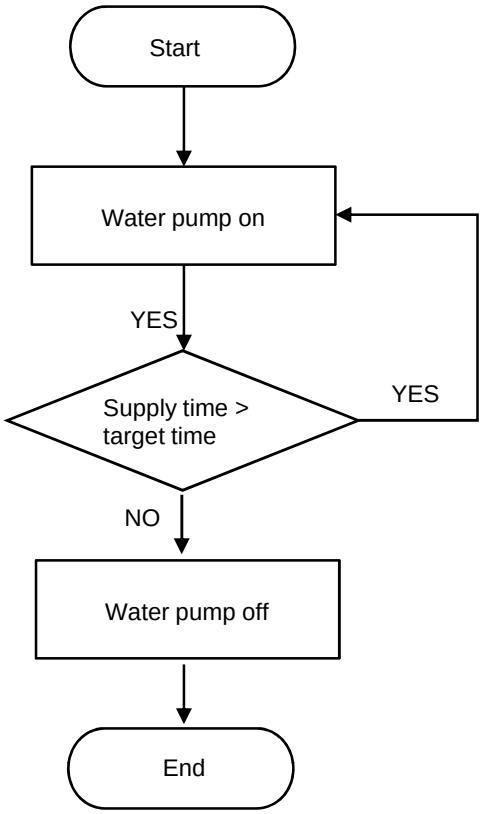


1) If Ice sensor temperature is below -12.5C after 70minutes, ice making completes.

2) If Ice sensor temperature keep below -9.5C for 15 minutes ice making complete, although the sensor is not below -12.5C

3) After 4.8hours ice making complete, when ice sensor is abnormal,

3. Water supply mode



1) If water supply mode starts, the water pump is ON.

2) Supply mode controlled by the time.

3) Factor value is variable when After sales action.

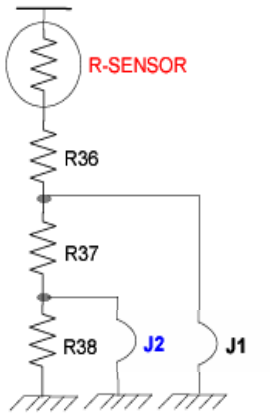
(Adjust water quantity)

; Normal Water flow time setting is 6.3 seconds.

(Maximum time limit is 15 seconds.)

4. Weak Cooling Trouble Shooting

; Adjust refrigerator sensor OFF point



- Normal sensor resistance. (31.4kohm)
- Cut the J18 and increase sensor resistance. (33.4kohm)
- Cut the J18, J19 and increase resistance. (35.4kohm)

Option	*Normal*	*Weak Cooling happens*	
		1.5C down	*3.0C down*
J1	-	*Cut*	*Cut*
J2	-	-	*Cut*

5. Magic cool zone (*not all models)

Step	Vegetable mode	Fish mode	Meat mode	Fresh mode
Damper Open	8C	4.5C	3C	-
Damper Close	7C	3.5C	2C	-

1) Magic cool zone damper always close when refrigerator damper is open.

2) When refrigerator damper is close, the magic cool zone damper is controlled by each mode.

3) Magic cool zone damper is close when 'Fresh' mode select.

[How to check Magic cool zone error]

1) Push the Select button for 3 sec.

2) If the sensor is normal, Fish and Meat LED is ON. (If the sensor is malfunction, all LED is ON.)

3) Push the 'Select' button, the damper is open. (Fish and Fresh LED is on)

4) Push the 'Select' button again, the damper is close. (Vegetable and Fresh LED is on)

6. Pull Down Mode (Test Mode)

1) How to start

- Push the LOCK button.
- Push the ICE button 5 times while keep pressing the REF.SET & FRZ.SET button.

2) How to control : Compressor, Freezer Fan, Refrigerator Fan and Compressor Cooling Fan is ON for 30 hours.

3) Display : ***Co*** display in Error Mode

4) Termination : After 30 hours or power reset.

7. System Off function

1) Purpose: Stop refrigerator operating without unplugging especially on holidays.

2) How to start : Pressing **FRZ.SET** and **REF.SET** button at the same time for 5 seconds will make the appliance turn off.

3) Under the 'off' mode Freezer and refrigerator temperature displays "- -".

Other LED lights go out and all the operation of your appliance halt.

4) Conversely pressing **FRZ.SET** and **REF.SE**T button together for 5 seconds in order to switch back on.

8. Display Off function

1) 5 minutes after no buttons or doors are operated by costomer, all the display LED except for;

WATER, ICE or LOCK ICE which is selected by the user

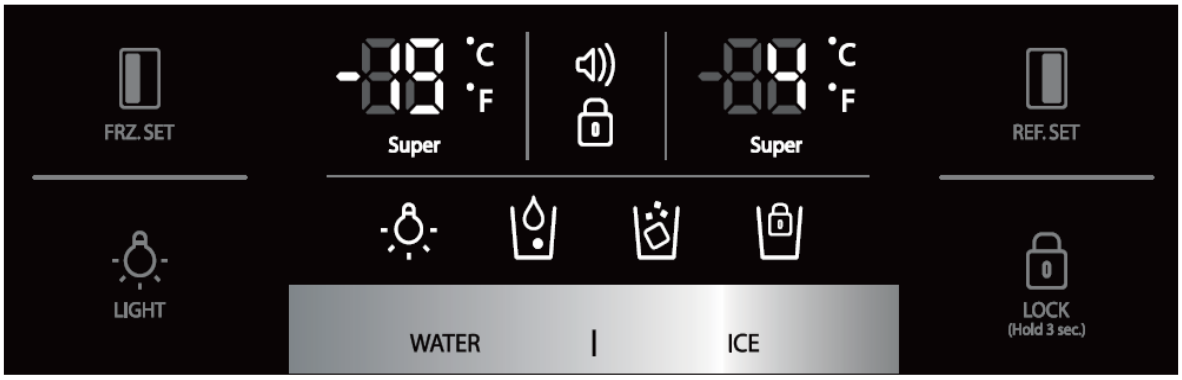
2) Under the LED off status it returns to normal display mode when customers operate buttons or doors.

9. Temperature indicator convert (Celsius ↔ Fahrenheit)

1) Press the Lock button to enter locked mode.

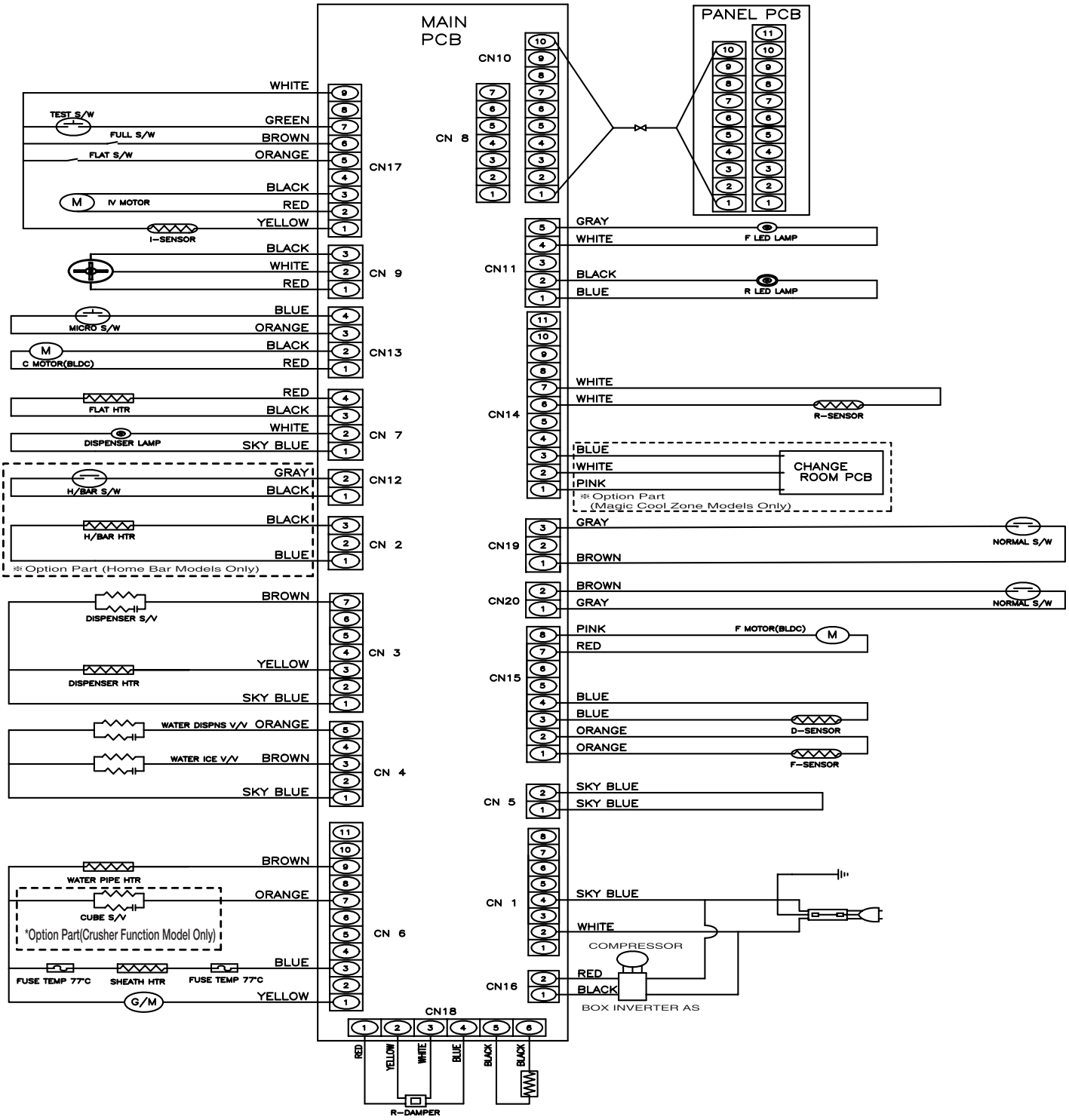
2) Press the Light and Water button at the same time for 10 sec to swap temperature scale.

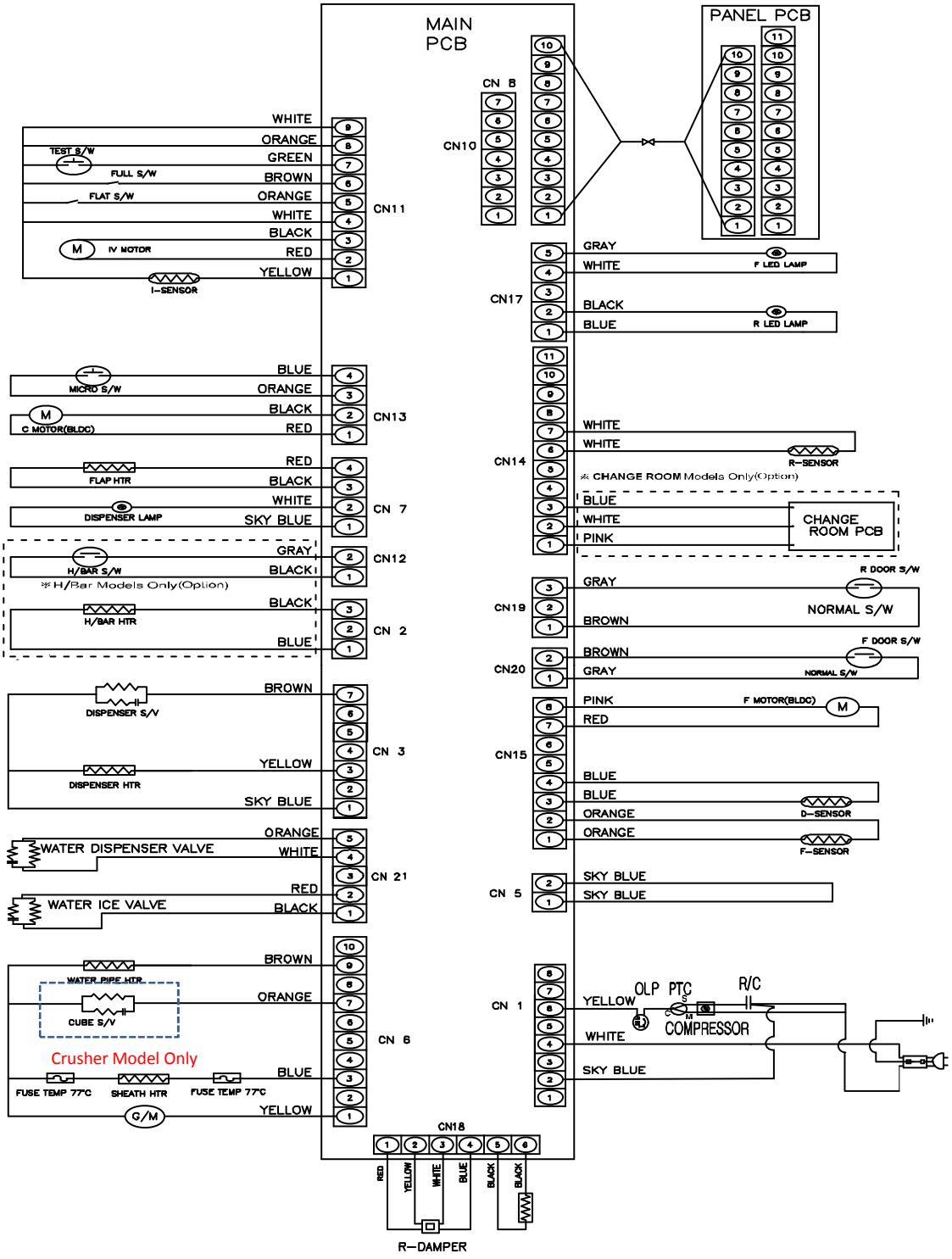
(Default setting is celsius)



- All the modes active in LOCK (Push the LOCK button)

Mode	How to enter	Remark
A/S Forced Defrosting	REF.SET button 5 times while keep pressing FRZ.SET button.	
Pull Down	ICE button 5 times while keep pressing REF.SET & FRZ.SET button.	
Error Display	WATER button 5 times while keep pressing FRZ.SET button.	


MAIN PCB
PANEL PCB
CN10
CN 8
CN17
CN 9
CN13
CN 7
CN12
CN 2
CN 3
CN 4
CN 6
CN18
CN11
CN14
CN19
CN20
CN15
CN 5
CN 1
CN16
WHITE
GREEN
BROWN
ORANGE
BLACK
RED
YELLOW
TEST S/W
FULL S/W
FLAT S/W
M
IV MOTOR
I-SENSOR
BLACK
WHITE
RED
BLUE
ORANGE
MICRO S/W
M
C MOTOR(BLDC)
RED
BLACK
FLAT HTR
WHITE
SKY BLUE
DISPENSER LAMP
GRAY
BLACK
H/BAR S/W
BLACK
BLUE
H/BAR HTR
※ Option Part (Home Bar Models Only)
BROWN
DISPENSER S/V
YELLOW
DISPENSER HTR
SKY BLUE
WATER DISPNS V/V ORANGE
WATER ICE V/V
BROWN
SKY BLUE
BROWN
WATER PIPE HTR
ORANGE
CUBE S/V
*Option Part(Crusher Function Model Only)
BLUE
FUSE TEMP 77°C
SHEATH HTR
FUSE TEMP 77°C
YELLOW
G/M
RED
YELLOW
WHITE
BLUE
BLACK
BLACK
R-DAMPER
GRAY
WHITE
F LED LAMP
BLACK
BLUE
R LED LAMP
WHITE
WHITE
R-SENSOR
BLUE
WHITE
PINK
※ Option Part
(Magic Cool Zone Models Only)
CHANGE ROOM PCB
GRAY
NORMAL S/W
BROWN
BROWN
GRAY
NORMAL S/W
PINK
F MOTOR(BLDC)
M
RED
BLUE
BLUE
D-SENSOR
ORANGE
ORANGE
F-SENSOR
SKY BLUE
SKY BLUE
SKY BLUE
WHITE
COMPRESSOR
RED
BLACK
BOX INVERTER AS


MAIN PCB
PANEL PCB
CN B
CN10
CN11
CN13
CN 7
CN12
CN 2
CN 3
CN 21
CN 6
CN17
CN14
CN19
CN20
CN15
CN 5
CN 1
CN18
WHITE
ORANGE
GREEN
BROWN
ORANGE
WHITE
BLACK
RED
YELLOW
TEST S/W
FULL S/W
FLAT S/W
M
IV MOTOR
I-SENSOR
BLUE
ORANGE
BLACK
RED
MICRO S/W
M
C MOTOR(BLDC)
RED
BLACK
WHITE
SKY BLUE
FLAP HTR
DISPENSER LAMP
GRAY
BLACK
H/BAR S/W
※H/Bar Models Only(Option)
BLACK
BLUE
H/BAR HTR
BROWN
YELLOW
SKY BLUE
DISPENSER S/V
DISPENSER HTR
ORANGE
WHITE
RED
BLACK
WATER DISPENSER VALVE
WATER ICE VALVE
BROWN
ORANGE
BLUE
YELLOW
WATER PIPE HTR
CUBE S/V
Crusher Model Only
FUSE TEMP 77°C
SHEATH HTR
FUSE TEMP 77°C
G/M
GRAY
WHITE
BLACK
BLUE
F LED LAMP
R LED LAMP
WHITE
WHITE
R-SENSOR
※ CHANGE ROOM Models Only(Option)
BLUE
WHITE
PINK
CHANGE ROOM PCB
GRAY
BROWN
R DOOR S/W
NORMAL S/W
BROWN
GRAY
F DOOR S/W
NORMAL S/W
PINK
RED
F MOTOR(BLDC)
M
BLUE
BLUE
ORANGE
ORANGE
D-SENSOR
F-SENSOR
SKY BLUE
SKY BLUE
YELLOW
WHITE
SKY BLUE
OLP
PTC
R/C
COMPRESSOR
RED
YELLOW
WHITE
BLUE
BLACK
BLACK
R-DAMPER

1. Inner lamp changing method

Disassembling Procedure

Freezer LED changing

Separate back side of a LED cover using (−) driver.

Separate LED cover and loosen 2 fixing screws for LED plate.

Disconnect harness of LED plate and change LED.

Refrigerator LED changing

Same as disassemble of a freezer.

Same as disassemble of a freezer.

Same as disassemble of a freezer.

Dispenser Type Freezer LED changing

◆ Separate Geared-Motor Box. (Refer 'Geared-Motor separation' part)

Separate back side of a LED cover located at bottom of Geared-Motor Box using (−) driver.

Separate cover and loosen 2 fixing screws for LED plate.

Disconnect harness from LED plate and change LED.

Ice maker changing

Loosen 2 fixing screws at roof of a freezer and pull a ice maker toward forward direction to separate it.

Disconnect harness connected to a ice maker and separate ice maker from a freezer.

Geared-Motor changing

◆ Separate ice maker.

Disconnect 2 kinds of harness which is connected with a Geared-Motor box at upper part of a freezer.

Loosen 4 fixing screws for a Geared-Motor box.

3.Freezer cooler area changing method

Disassembling Procedure

◆ Pull out food stuffs and rack inside of a freezer

Separate cooler fan cover – Dispenser Model

◆ Separate ice maker & Geared-Motor box.

Separate heater housing for water supply pipes.

Loosen fixing screw for a fan cover of a cooler.

Separate cover & water supply port (silicon rubber) by loosening screw at cover of a water supply pipe at back side of a refrigerator.

Grip cooling air discharge port at fan cover of a cooler by hand and separate it from lock.

Push back a water supply pipe located at back side of a freezer and go to back side of a refrigerator and pull out a water supply pipe.

Lift up right side of a cooler fan cover to forward direction and tilt it to disconnect and pull out fan harness located at left side of a cooler fan cover.

Remove screw cap of a fan cover located at upper rear side of a freezer.

Separate fan cover of a cooler.

4.Cooler fan / Fan separation

Disassembling Procedure

Cooler fan / Fan motor separation

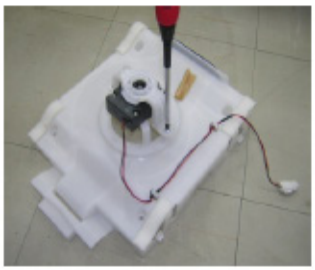
◆ Separate cooler fan cover.

Loosen 4 fixing screws for a fixture f motor located at rear side of a cooler fan cover.

Separate 4 hooks to separate a fixture f motor.

Pull out fan assembled at inner side of a fixture fan motor to vertical direction. [Fan separation]

Fan fixing rings are fixed with lock tight. (Kinds of bond)



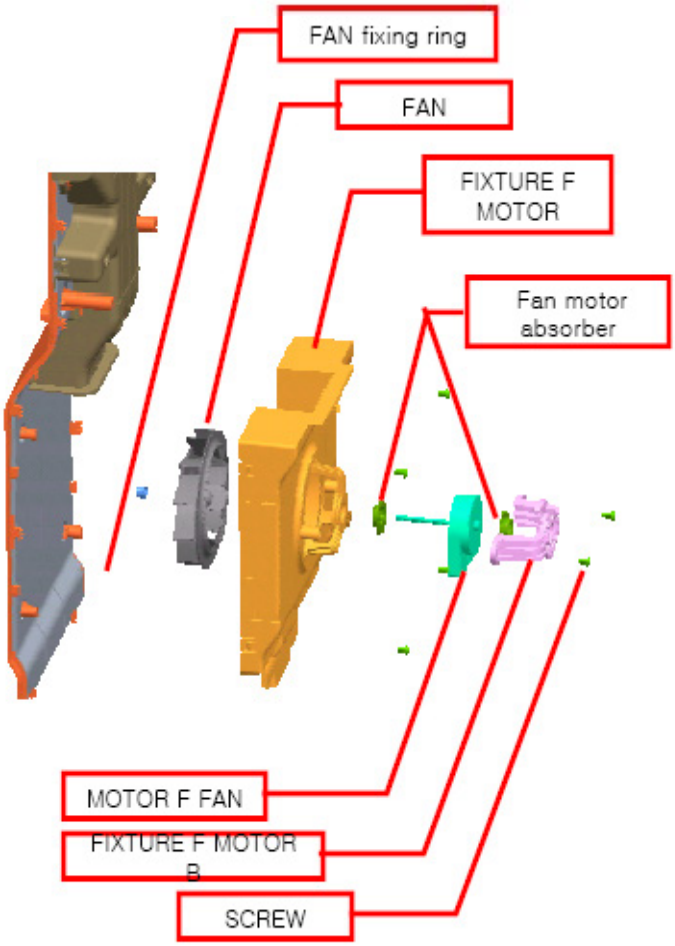
Loosen 2 fixing screws for fixture f motor B from back side of a fixture fan motor.

Motor can be separated by separation of a fixture f motor B.

Caution when disassemble/assemble fan & fan motor.

- Assemble motor so that there is no tilt or loosening. (To prohibit noise generating problem)
- When fixing a fan, fix it using fan fixing rings to protect moving or separation and apply lock tight. (Kinds of bond)
- After fixing a fan, rotates fan by hand to check interference with surrounding parts. When there is interference with surrounding parts, fix fan or motor again.

Disassemble drawing for fan & fan motor



5. Cooler front cover separation

Disassembling Procedure

Remove a screw cap at center of a return cover located at bottom of a cooler front cover.

Loosen a screw at center of a return cover.

Separate hooks using (−) driver by twisting it which is assembled at return cover and front cover.

Pull upper part of a return cover and press it to downwards.

Separate a return cover through bottom of a freezer.

Grip upper part of a duct cover which is assembled at center of a cooler front cover and pull it out to forward direction to separate.

Loosen a fixing screw at cooler front cover.

Grip upper part of a cooler front cover by hand and pull it forward direction to separate it.

Figure of a freezer room after cooler front cover is removed.

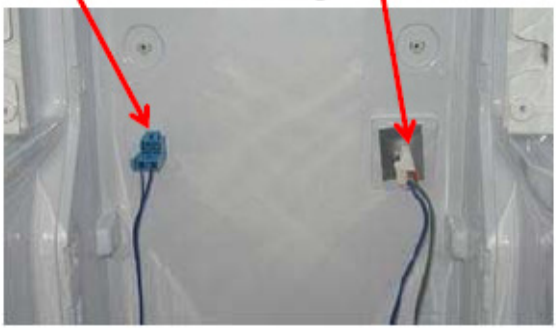
Evaporator in detail

cooler(EVA)

cooler housing connection

D-sensor housing

Defrost heater +temp. fuse housing



D-sensor

Temp. fuse

EVA upper area

Defrost heater

EVA bottom area

6. Refrigerator Damper changing method

Disassembling Procedure

◆ Pull out food stuffs and rack from refrigerator .

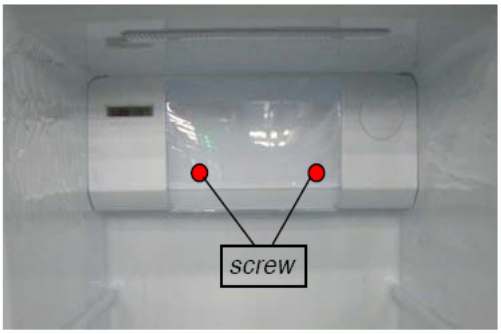
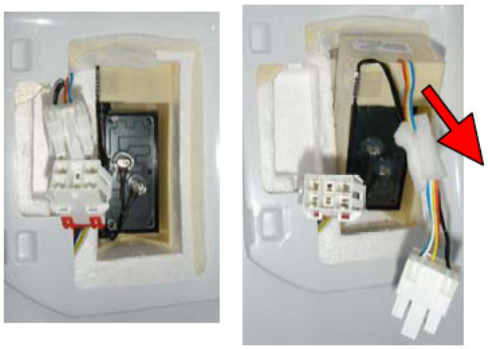
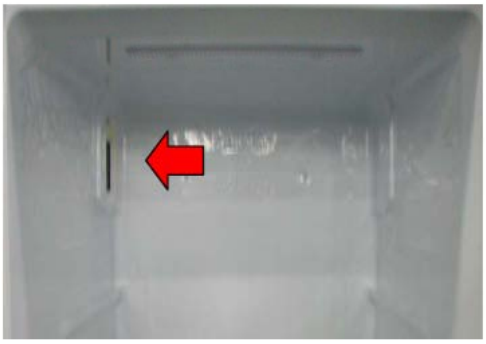
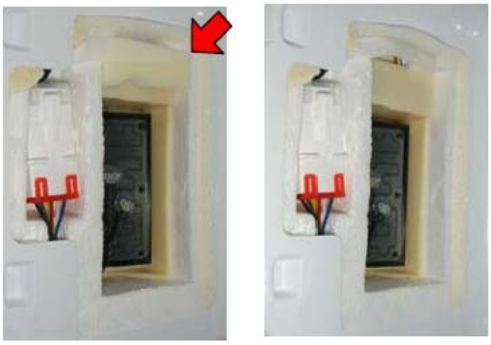
Damper cover disassemble

Open window of a damper cover and bend it lightly at center part to separate window.

Loosen 2 screws inside of a damper cover.

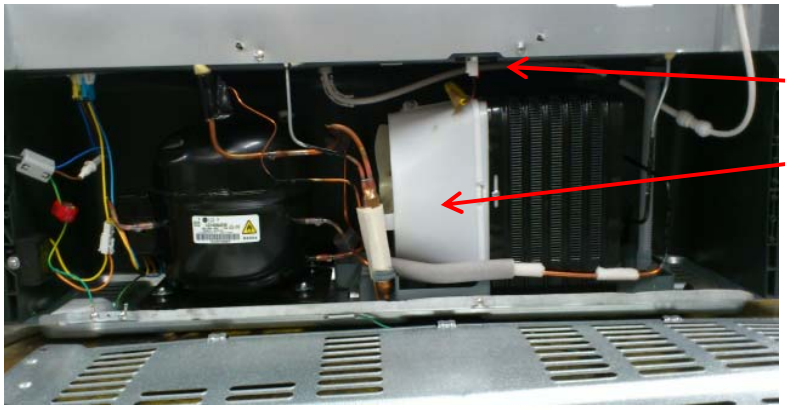
Grip lower side of a damper cover and pull it forward to separate it.

7. Refrigerator Damper changing method

No	Procedure	No	Procedure
1	 Remove the R Damper As. (Unscrew 2 point with + diriver.)	4	 Disconnect and pull out. (Be careful not to damage the styrofoam.)
2	 You can see the electric damper on the left.	5	 Exchange the new damper.
3	 Peel off tape and sealing substance.	6	 After exchange sealing tightly for better performance.

8. C-Fan Motor changing method

Disassembling Procedure



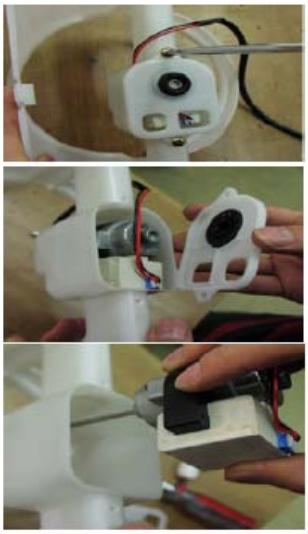
Separate C-fan motor housing at upper right part of a machine room.

Loosen screws at upper, lower part of a bell mouth.

Make a space to pull out bell mouth by pushing dryer lightly which is located in front of a bell mouth to a compressor side.

Push and pull forward lock of a bell mouth and separate bell mouth ass'y. (Be careful blade of a fan not to be deformed during disassemble)

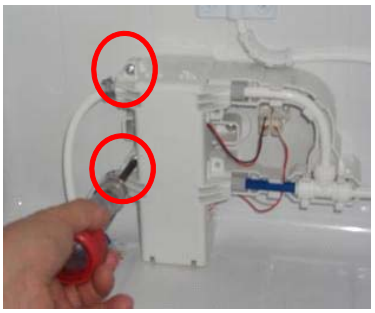
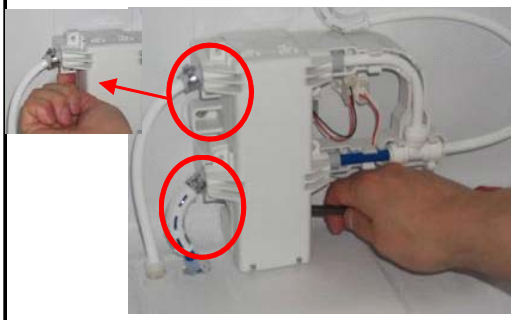
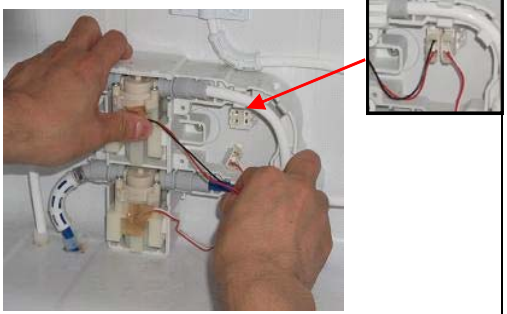
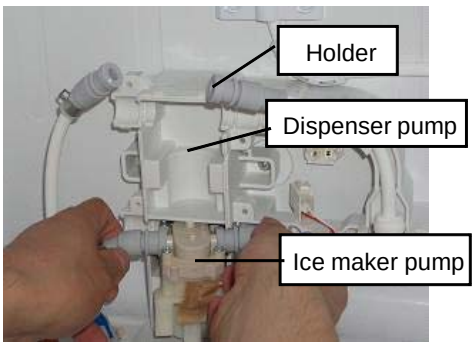
Separate a blade of a fan from a C-Fan motor shaft.



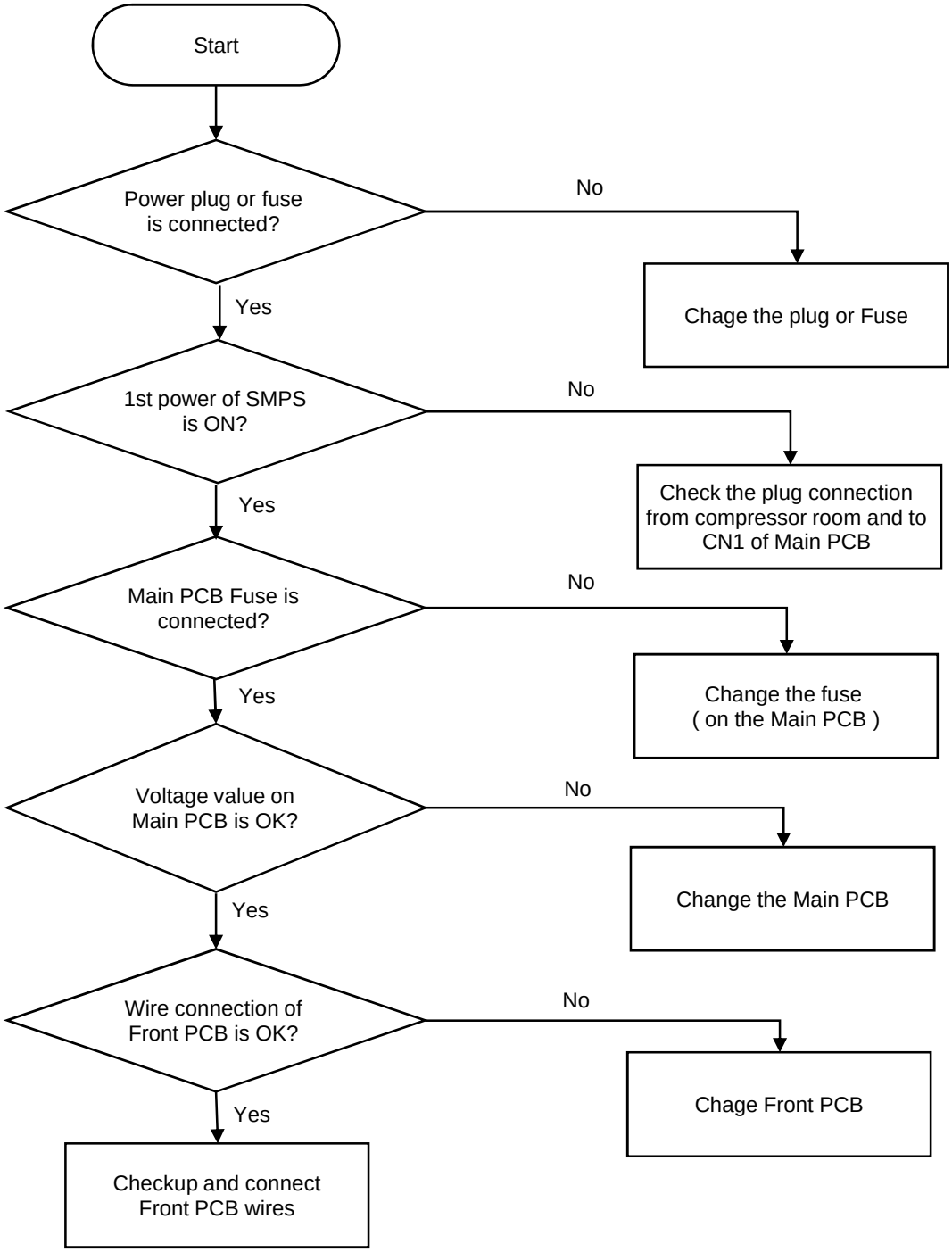
Loosen screws of a motor cover and separate cover and pull out C-fan motor.

9. Pump (Dispenser / Ice Maker)

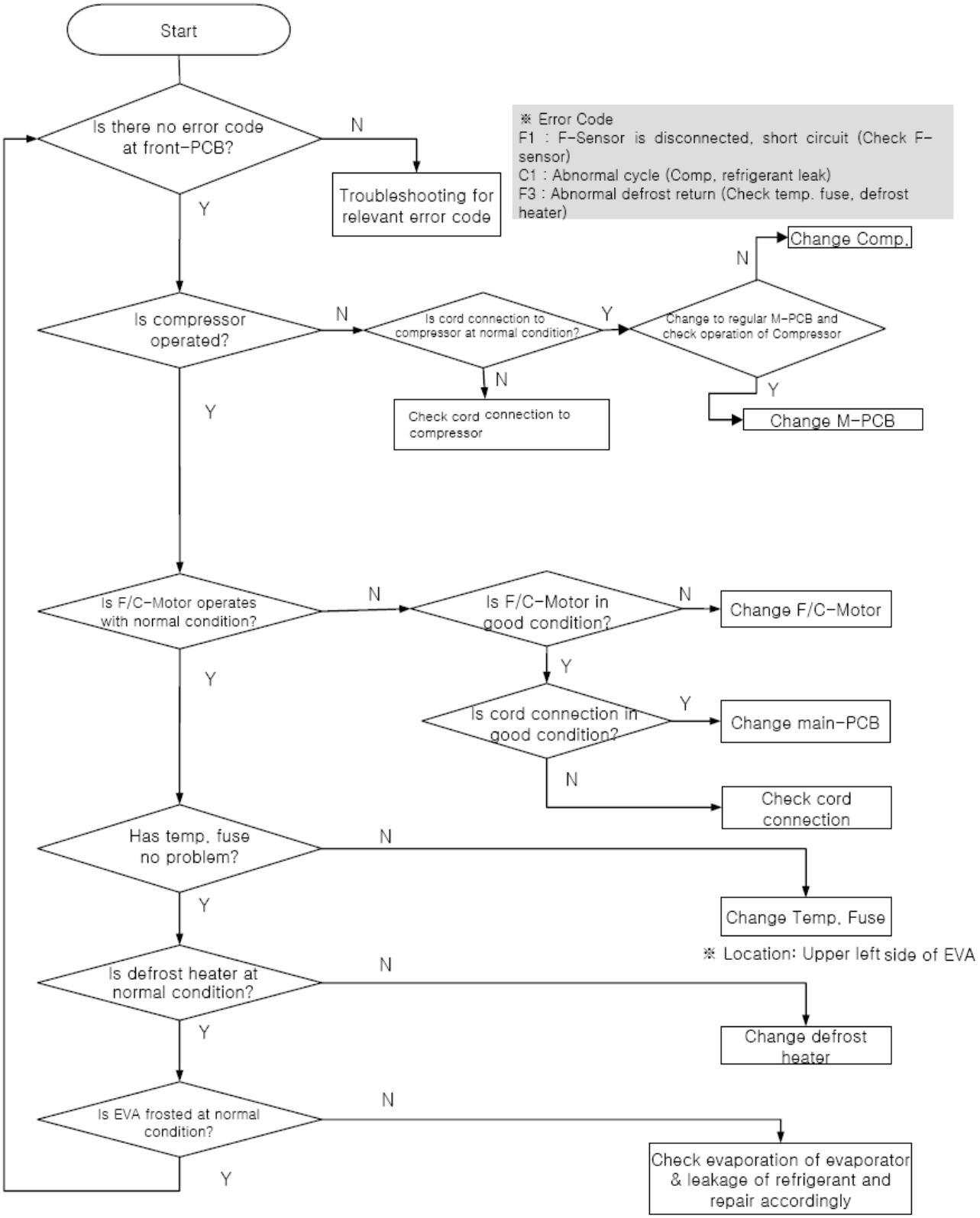
1) Disassembling Procedure

No	Procedure	No	Procedure
1	 *Pull out the water tank*	5	 *Unscrew 2 points with (+) driver*
2	 *After Turning on water icon lamp , Press button to drain water in the tube.*	6	 *Pull both locker and Separate the cover on the left with thin driver.*
3	 *Pull out the vegetable case and shelf*	7	 *Disconnect the pump wire housing(2Points)*
4	 *First, Remove the cover on the right.* *(No need driver)*	8	 *Separate pump from holder made by silicon*

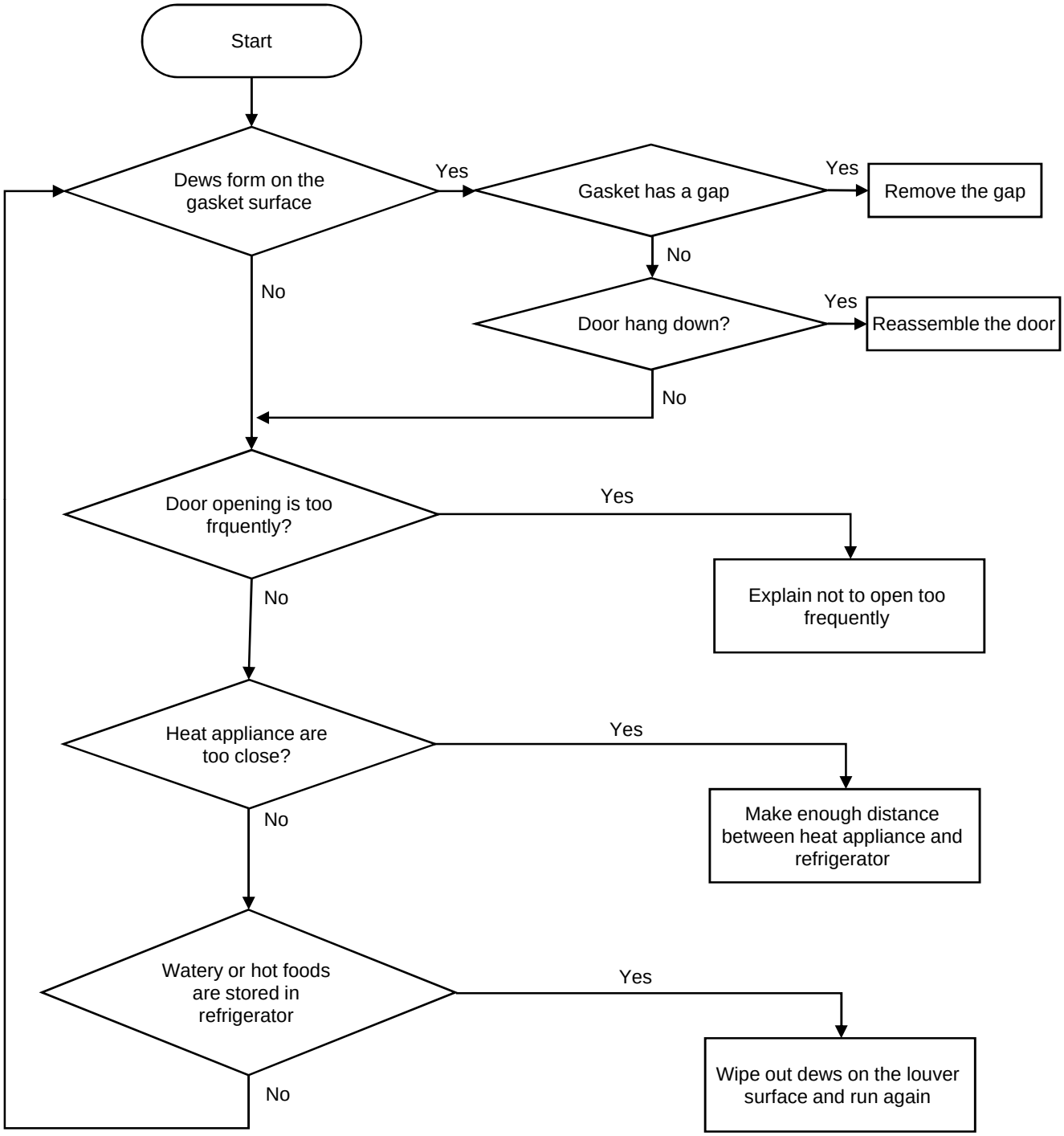
1. Faulty Start (Lights OFF, Front PCB Power Dead)



2. Freezing or cooling failure (Weak cooling)

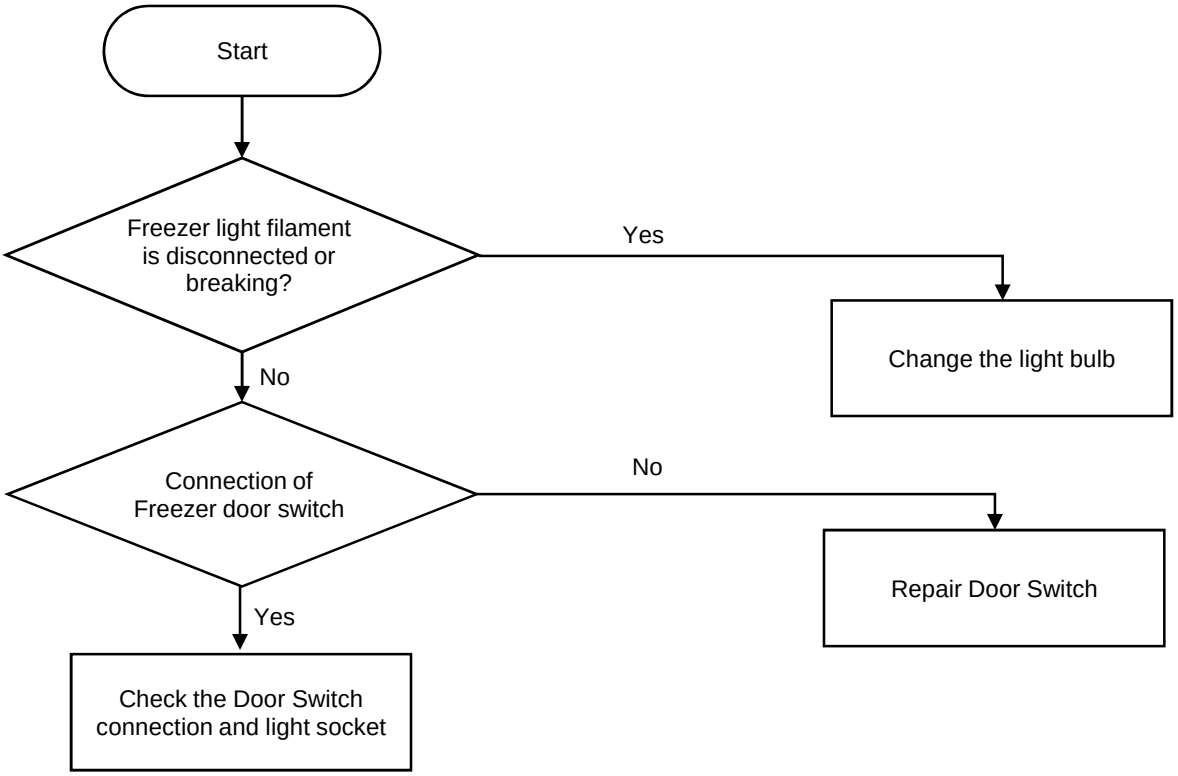


3. Ice formation on Freezer Louver

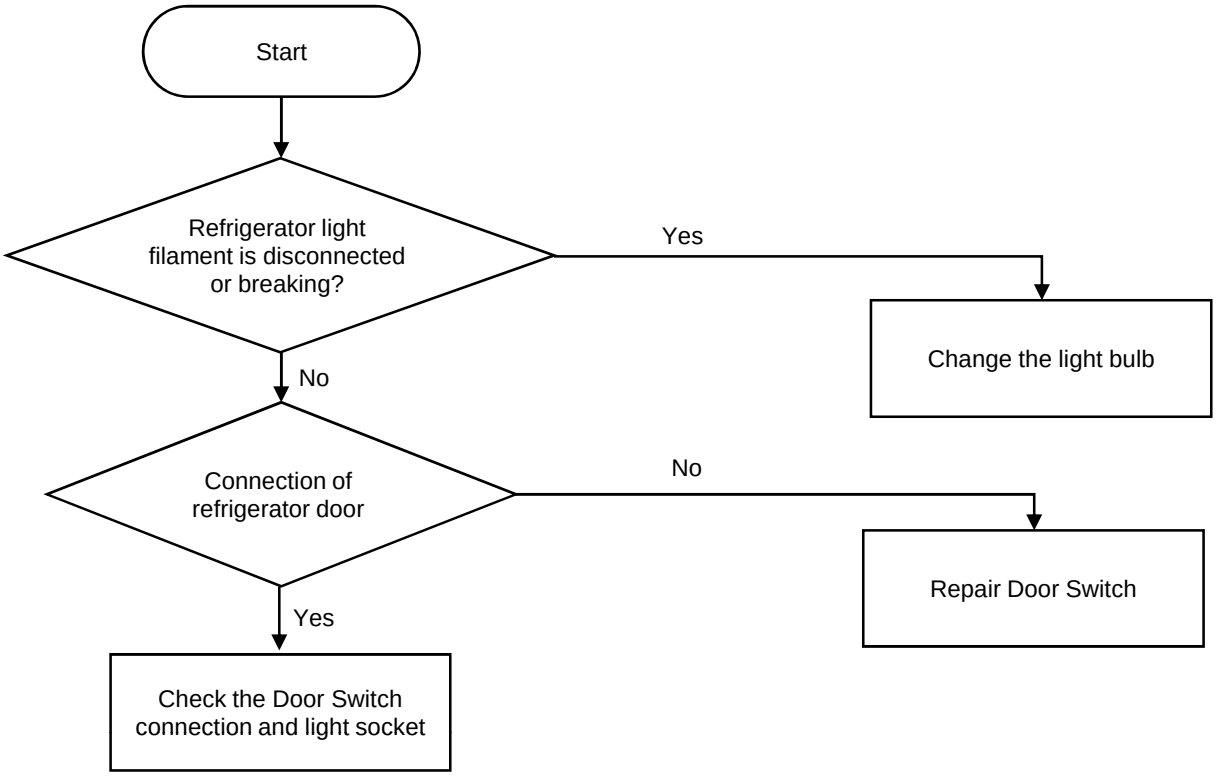


4. Disconnection / Breaking of Interior Lights Wire

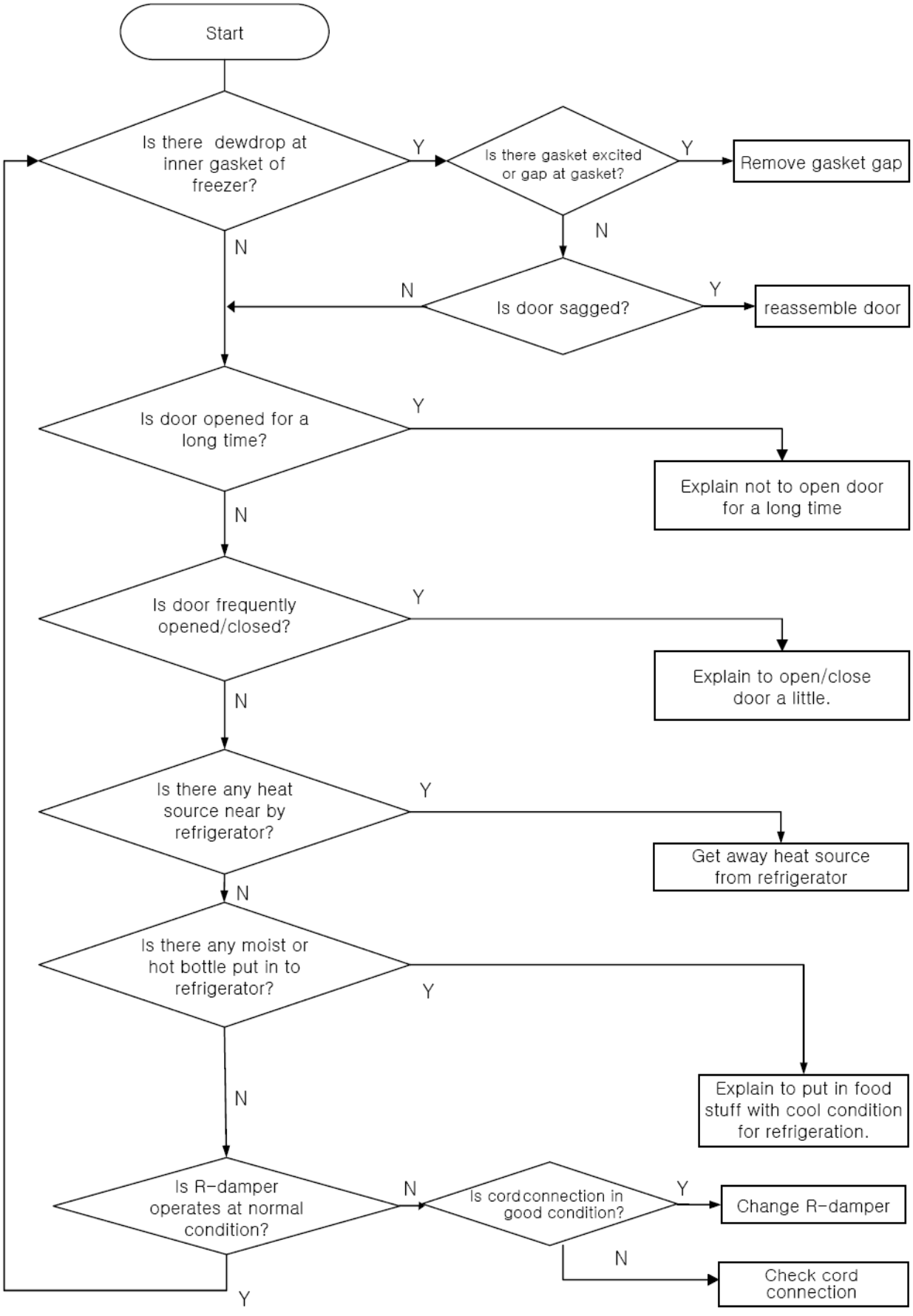
4-1. Freezer Door



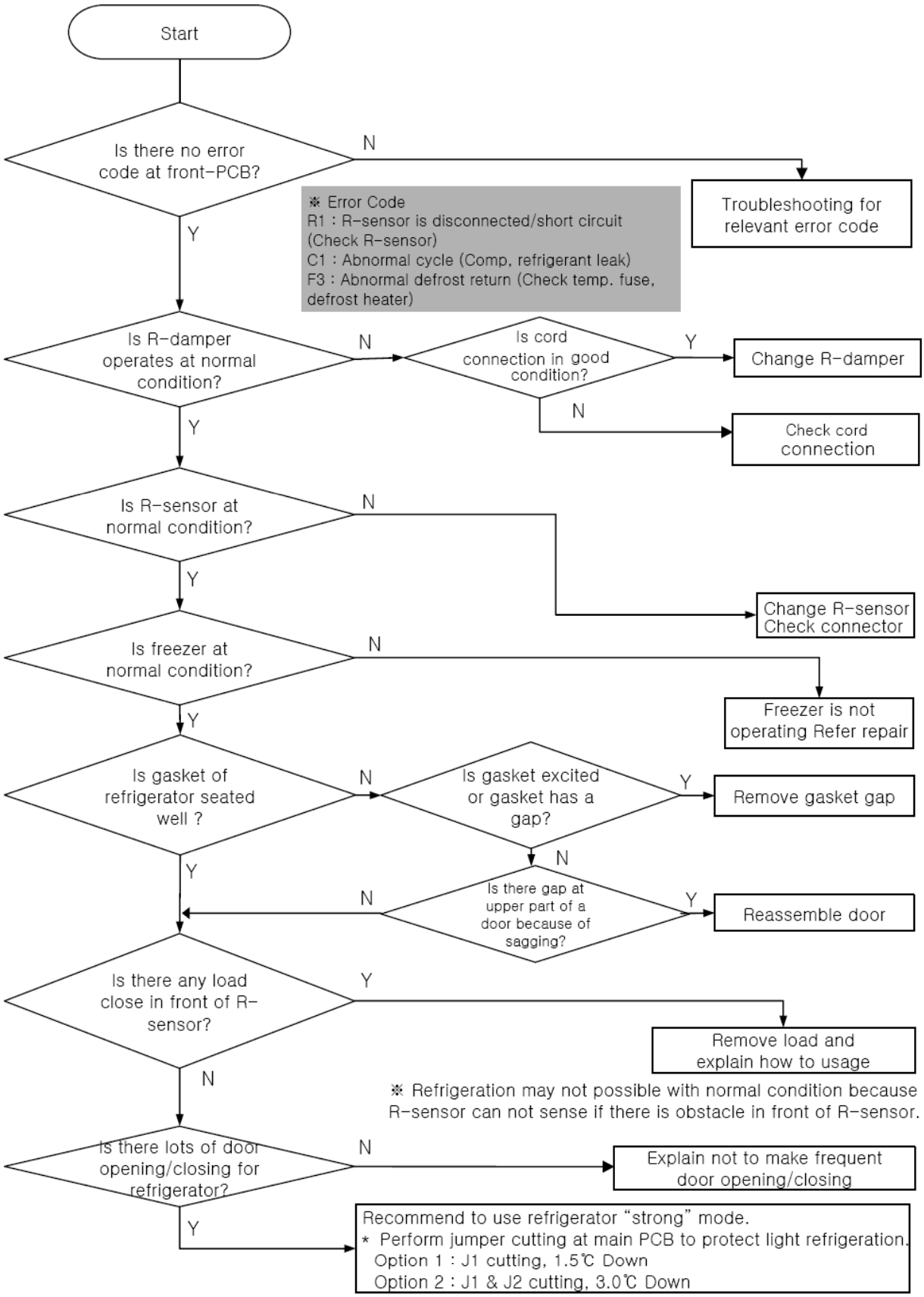
4-2. Refrigeraotor Door



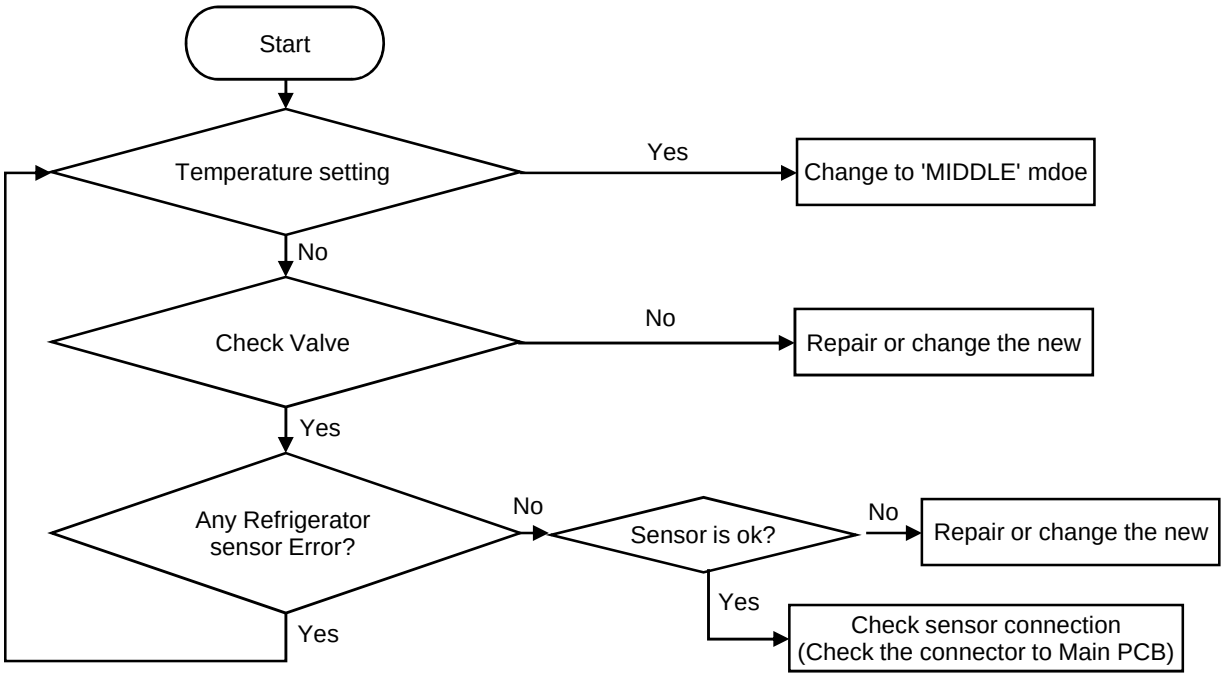
6. Dews on Refrigerator Compartment



5. Refrigeration failure (Foods does not get cool or cold soon)



7. Cold of Vegetable Case



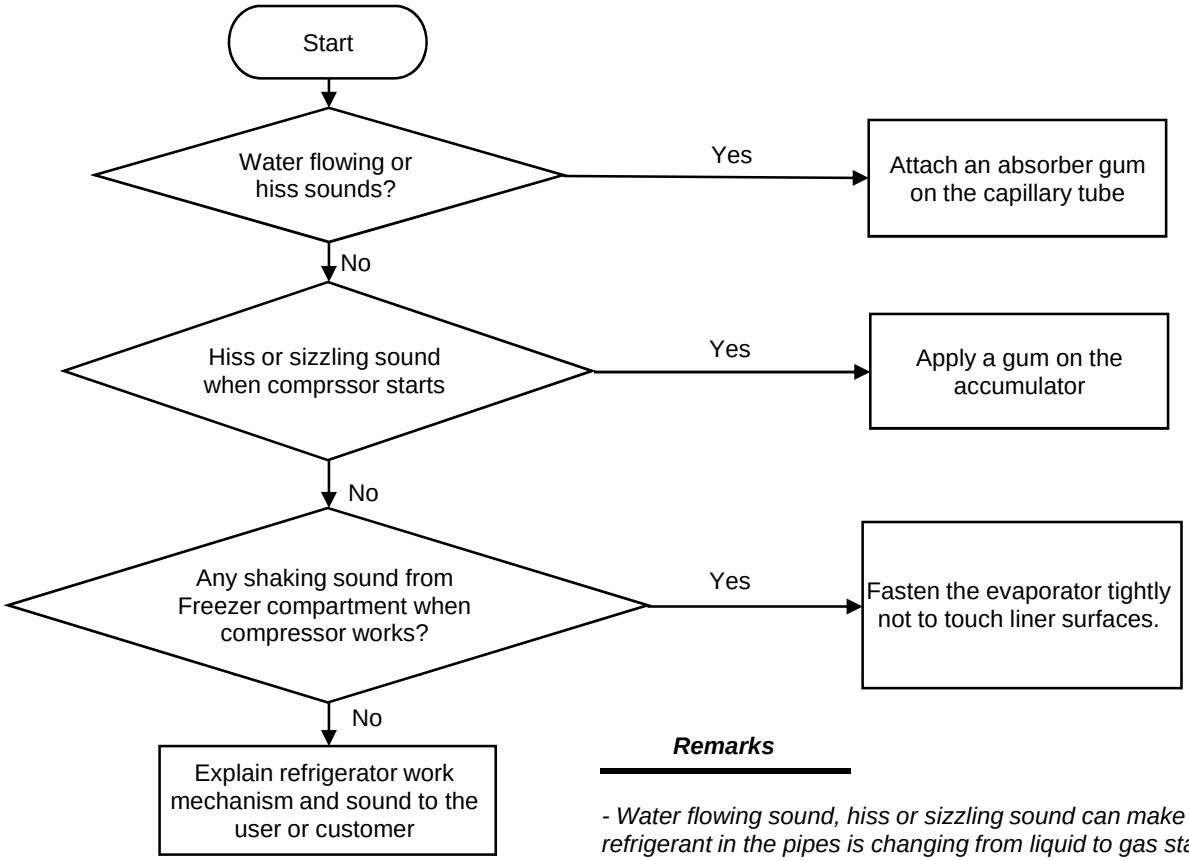
Remark

- Compressor sound is somewhat normal because it works like a heart to circulate the refrigerant in the pipes.

- Rattling or metalic touch sound of motor, piston of compressor can be heard when it starts or stops.

8. Operation Noise of Refrigerator

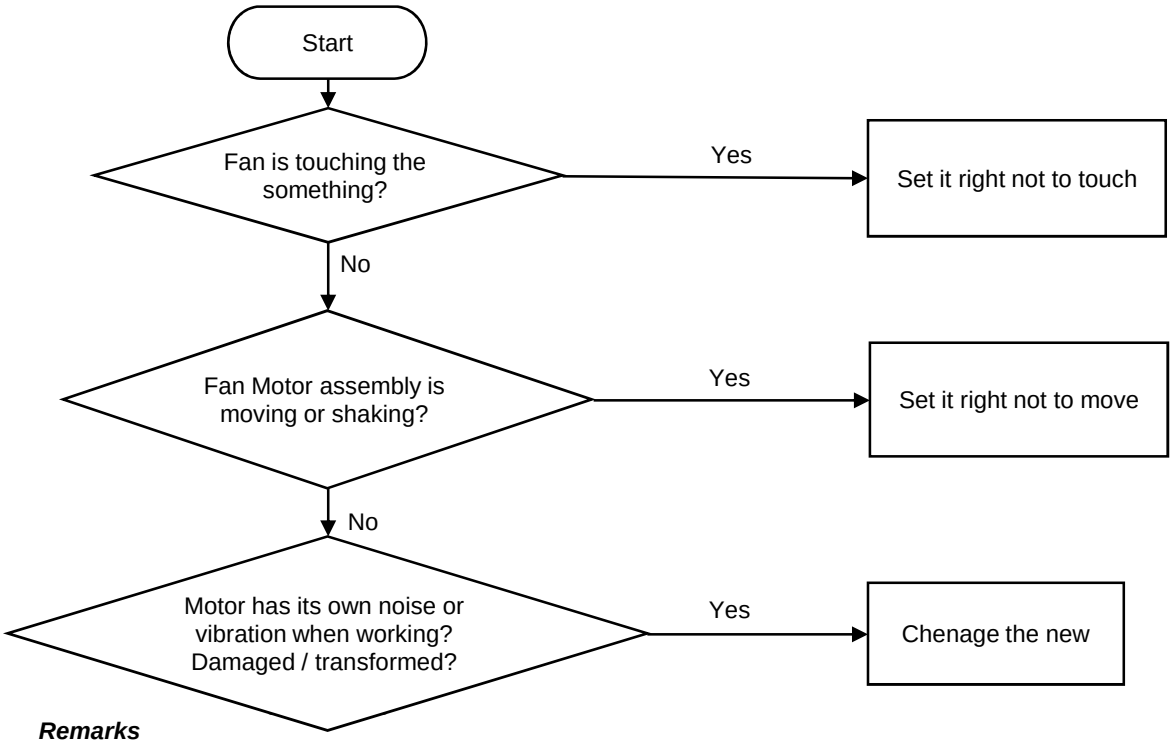
8-1. Refrigerant Flow Sound



Remarks

- Water flowing sound, hiss or sizzling sound can make while refrigerant in the pipes is changing from liquid to gas state when compressor starts or stops.
- It is normal sound.

8-2. Fan Noise

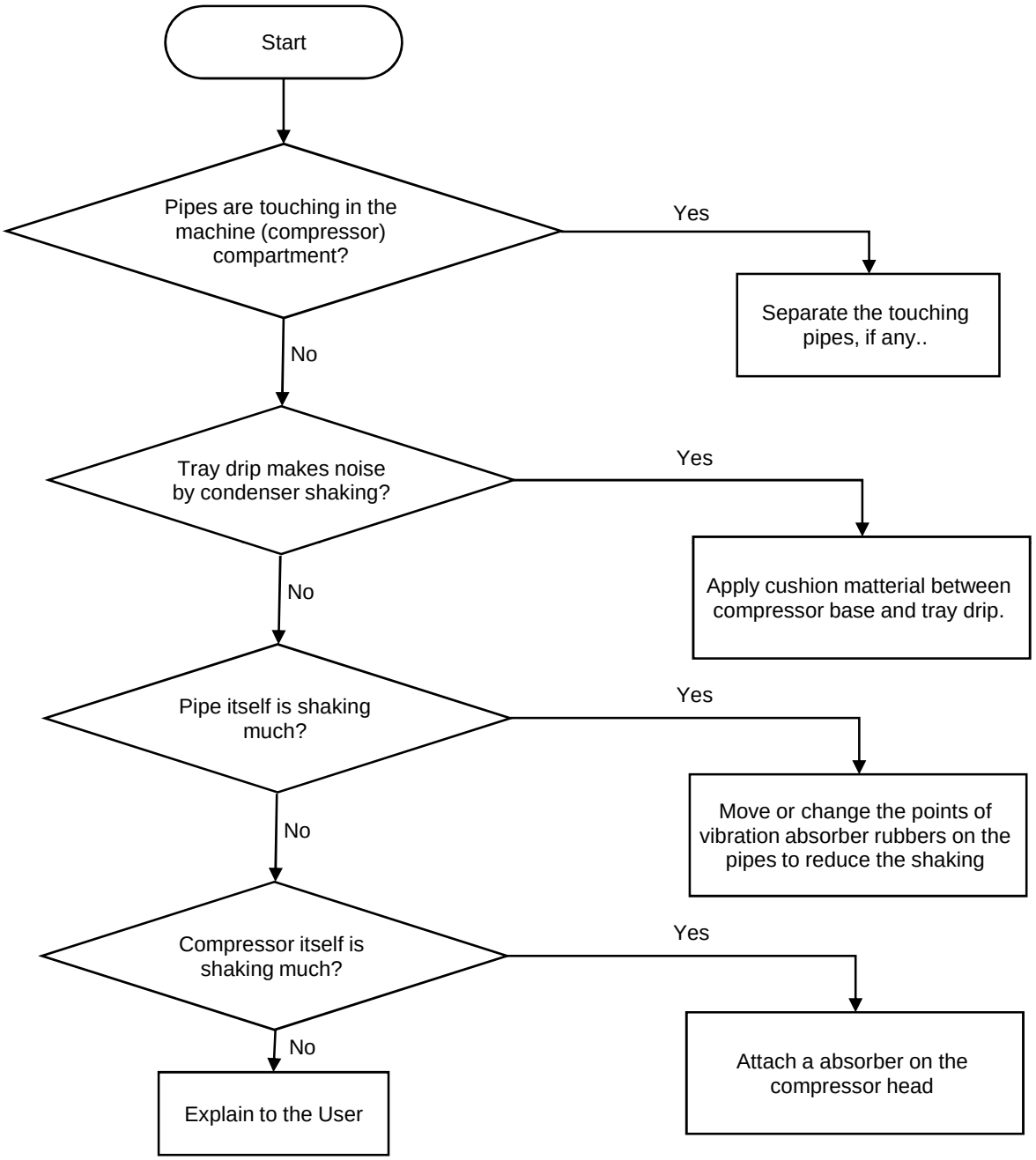


Remarks

- The fan is sending out cold air to circulate each corner of the compartsment.

- When the air is touching the surface of louver or liner wall, such sound can make.

8-3. Pipe Noise

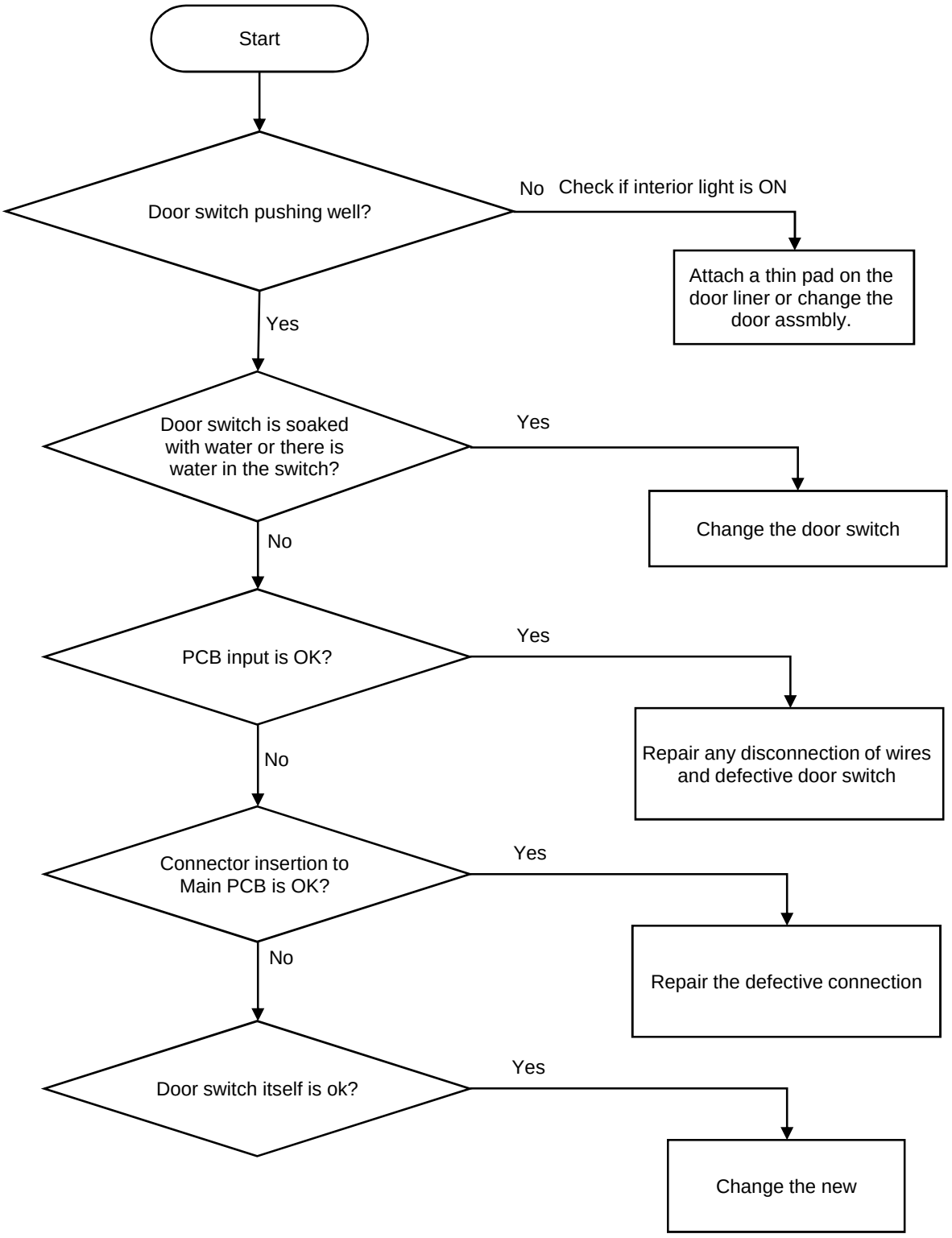


Remarks

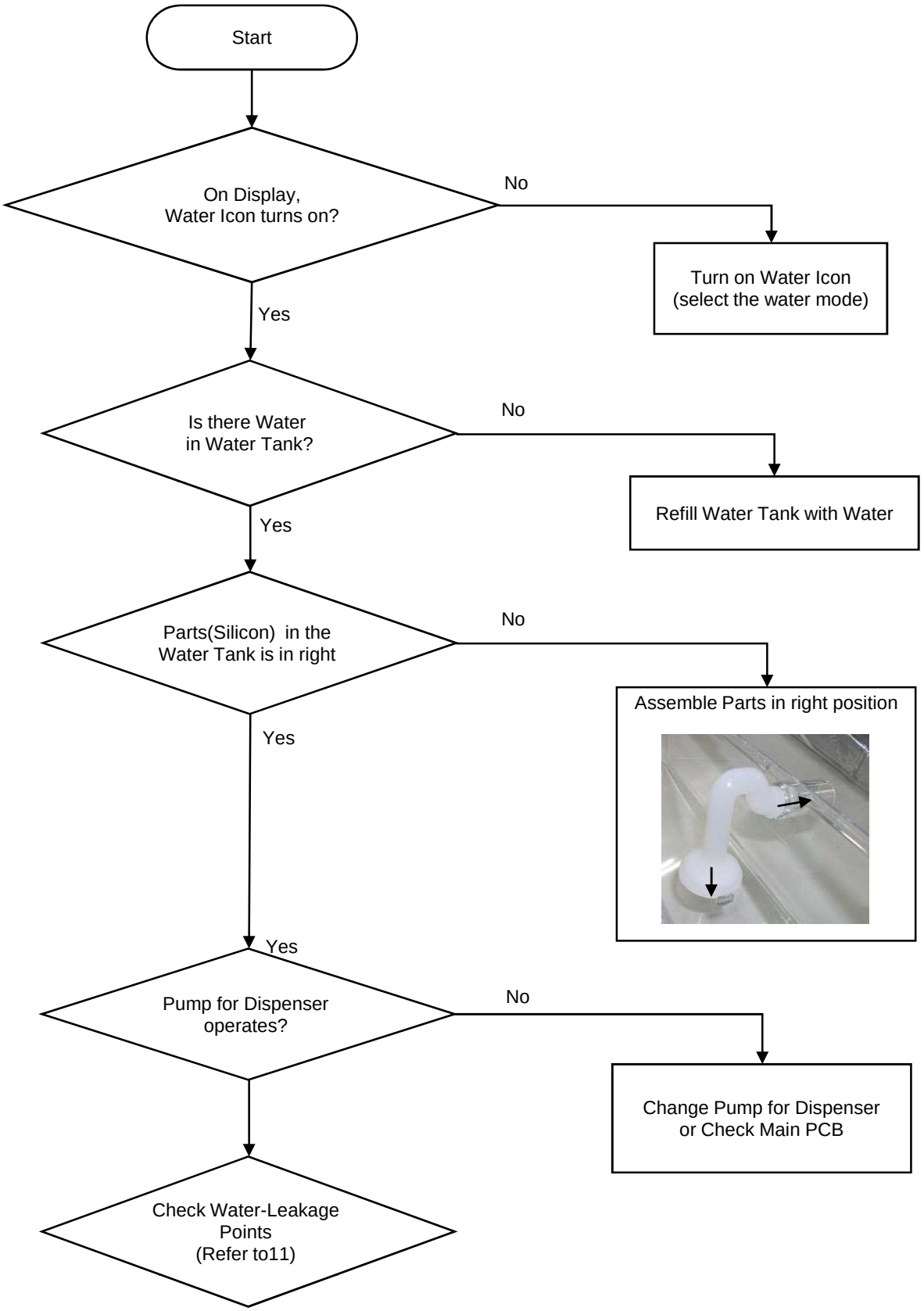
- Refrigerant is erupting rapidly from the compressor to circulate pipes, so pipe shaking noise can make to some degree.

- In case compressor vibration is sent to a pipe directly, apply vibration absorber rubbers to welding pionts of pipepe and comprssor or to a much bent piont on the pipe.

9. Door opening alarm continues after closing



10. Dispenser (Water Supply) Operation



11. Dispenser (Water Supply) Water-Leakage Points

- Freshefood Compartment

1. Water tank Guide

Front Image

Back Image

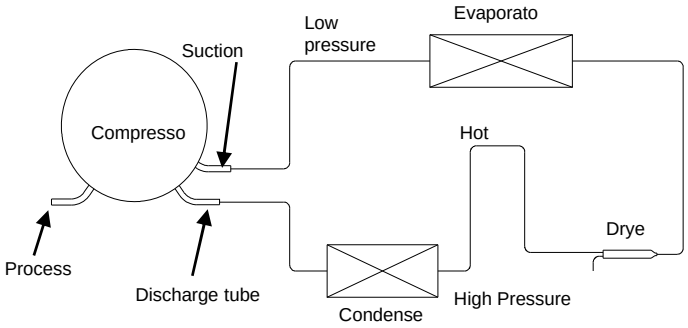
2. Pump

- Compressor Compartment

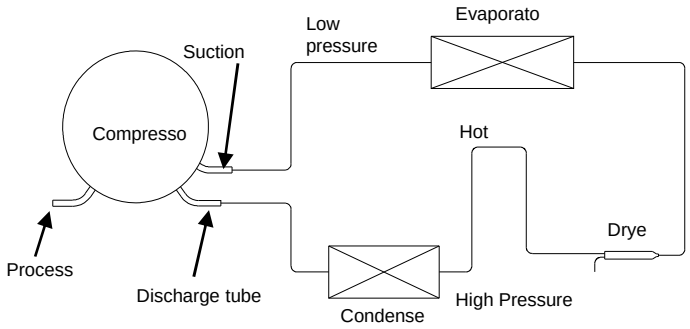
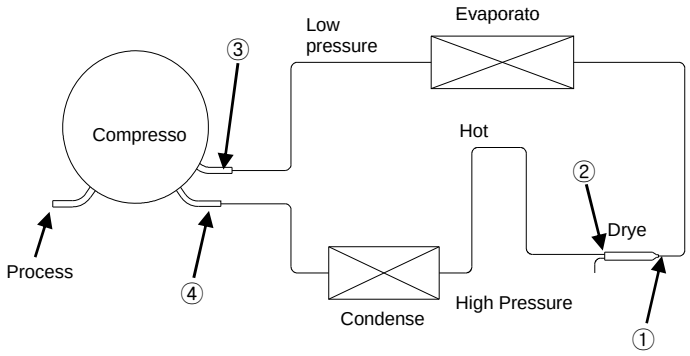
1. Summary of Heavy Repair

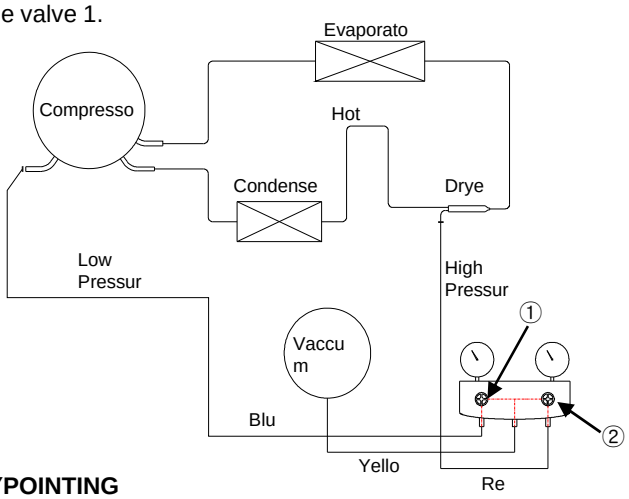
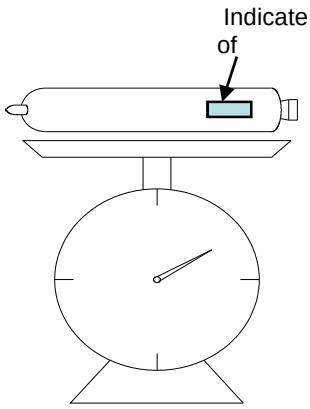
Process	Contents	Tools
Remove refrigerant Residuals	Cut charging pipe ends (Comp. & Dryer) and discharge refrigerant from drier and compressor.	Nipper, side cutters
Parts replacement and welding	Confirm refrigerant (R-134a or R-600a) and oil for compressor and drier. Confirm N2 sealing and packing conditions before use. Use good one for welding and assembly. Weld under nitrogen gas atmosphere. Repair in a clean and dry place.	Pipe Cutter, Gas welder, N2 gas
Vacuum	Evacuate for more than forty minutes after connecting manifold gauge hose and vacuum pump to high (drier) and low (compressor) pressure sides.	Vacuum pump , Manifold gauge.
Refrigerant charging and charging inlet welding	Weigh and control the bombe in a vacuum conditions with electronic scales and charge through compressor inlet (Process tube). Charge while refrigerator operates). Weld carefully after inlet pinching.	Bombe (mass cylinder), refrigerant manifold gauge, electronic scales, punching off flier, gas welding machine
Check refrigerant leak and cooling capacity	Check leak at weld joints. Note :Do not use soapy water for check. Check cooling capacity - Check condenser manually to see if warm. - Check hot pipe manually to see if warm. - Check frost formation on the whole surface of the evaporator.	Electronic Leak Detector, Driver.
Compressor compartment and tools arrangement	Remove flux from the silver weld joints with soft brusher wet rag. (Flux may be the cause of corrosion and leaks.) Clean tools and store them in a clean tool box or in their place.	Copper brush, Rag, Tool box
Transportation and installation	Installation should be conducted in accordance with the standard installation procedure. (Leave space of more than 5 cm from the wall for compressor compartment cooling fan mounted model.)	

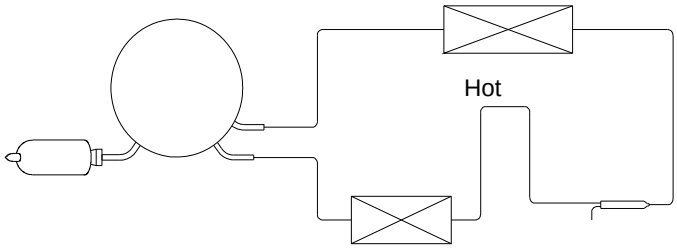
2. Precautions During Heavy Repair

Items	Precautions
Use of tools.	- Use special parts and tools for R-134a or R-600a.
Removal of retained refrigerant.	1) Remove retained refrigerant more than 5 minutes after turning off a refrigerator. (If not, oil will leak inside.) 2) Remove retained refrigerant by cutting first high pressure side (drier part) with a nipper and then cut low pressure side. (If the order is not observed, oil leak will happen.) 
Replacement of drier.	- Be sure to replace drier when repairing pipes and injecting refrigerant.
Nitrogen blowing welding.	- Weld under nitrogen atmosphere in order to prevent oxidation inside a pipe. (Nitrogen pressure : 0.1~0.2 kg/cm2.)
Others.	1) Nitrogen only should be used when cleaning inside of cycle pipes inside and sealing. 2) Check leakage with an electronic leakage tester. 3) Be sure to use a pipe cutter when cutting pipes. 4) Be careful not the water let intrude into the inside of the cycle.

3. Practical Work for Heavy Repair

Items	Precautions
1. Removal of residual refrigerant.	1) Remove residual refrigerant more than 5 minutes later after turning off the refrigerator. (If not, compressor oil may leak inside.) 2) Remove retained refrigerant slowly by cutting first high pressure side (drier part) with a nipper and then cut low pressure side. 
2. Nitrogen blowing welding.	 *** When replacing a drier:** Weld 1 and 2 parts by blowing nitrogen (0.1~0.2kg/cm2) to high pressure side after assembling a drier. *** When replacing a compressor:** Weld 3 and 4 parts by blowing nitrogen to the low pressure side. Note) For other parts, nitrogen blowing is not necessary because it does not produce oxidized scales inside pipe because of its short welding time. **- KEYPOINTING** Welding without nitrogen blowing produces oxidized scales inside a pipe, Which affect on performance and reliability of a product.

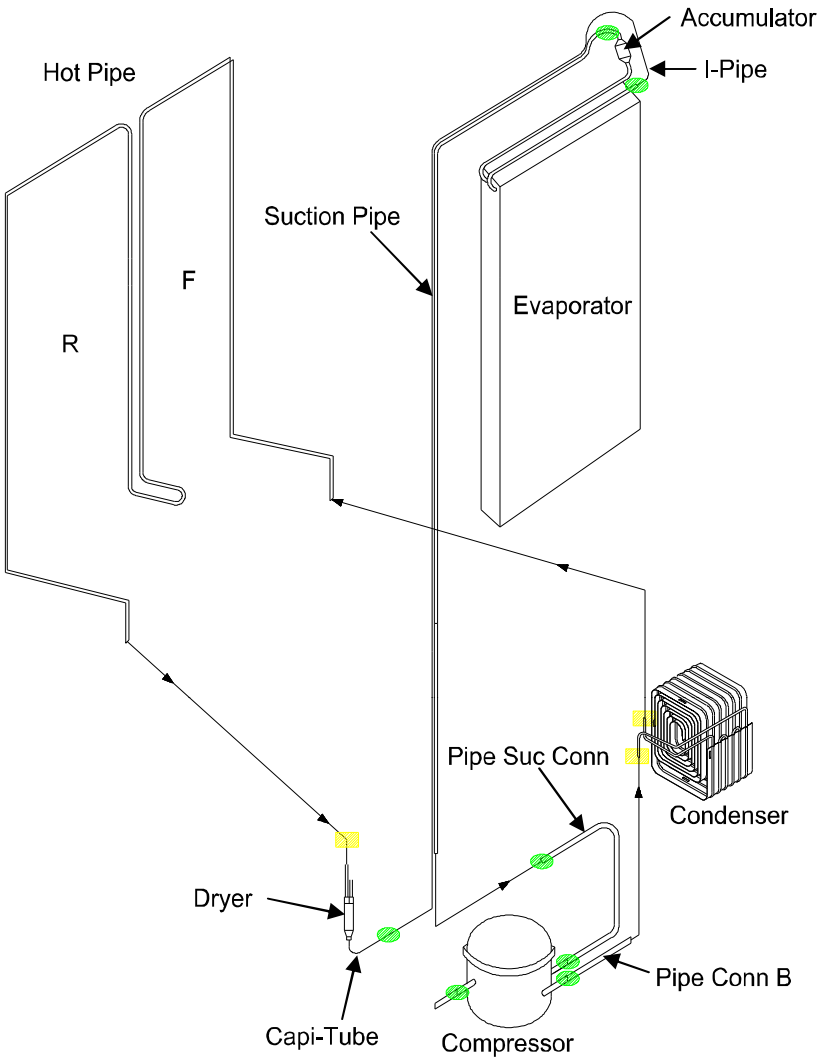
Items	Precautions
3.Vacuum degassing	*** Pipe Connection** Connect a red hose to the high pressure side and a blue hose to the low pressure side. *** Vacuum Sequence** Open 1,2 valves and evacuate for 40 minutes. Close valve 1.  **KEYPOINTING** 1) If power is applied during vacuum degassing, vacuum degassing shall be more effective. 2) Operate compressor while charging refrigerant. (It is easier and more certain to do like this.)
4.Refrigerant charging	*** Charging sequence** 1) Check the amount of refrigerant supplied to each model after completing vacuum degassing. 2) Evacuate bombe with a vacuum pump. 3) Measure the amount of refrigerant charged. - Measure the weight of an evacuated bombe with an electronic scale. - Charge refrigerant into a bombe and measure the weight. Calculate the weight of refrigerant charged into the bombe by subtracting the weight of an evacuated bombe.  **- KEYPOINTING** 1) Be sure to charge the refrigerant at around 25C. 2) Be sure to keep -5g in the winter and +5g in summer. Calculation of amount of refrigerant the amount of refrigerant charged = a weight after charging - a weight before charging (a weight of an evacuated cylinder)

Item	Precautions
4.Refrigerant charging	4) Refrigerant Charging Charge refrigerant while operating a compressor as shown above. 5) Pinch a charging pipe with a pinch-off plier after completion of charging. 6) Braze the end of a pinched charging pipe with copper brazer and take a gas leakage test on the welded parts. 
5. Gas-leakage test	* Take a leakage test on the welded or suspicious area with an electronic leakage tester.
6. Pipe arrangement in each cycle	* Check each pipe is placed in its original place before closing a cover back-M/C after completion of work.

< Standard Regulations for Heavy Repair >

1) Observe the safety precautions for gas handling.
2) Use JIG (or wet towel) in order to prevent electric wires from burning during welding.
(In order to prevent insulation break and accident.)
3) The inner case shall be melted and insulation material (polyurethane) shall be burnt if not cared during welding inner case parts.
4) The copper pipe shall be oxidized by overheating if not cared during welding.
5) Not allow the aluminum pipes to contact to copper pipes. (In order to prevent corrosion.)
6) Make sure that the inner diameter should not be distorted while cutting a capillary tube.
7) Be sure that a suction pipe and a filling tube should not be substituted each other during welding.
(High efficiency pump.)

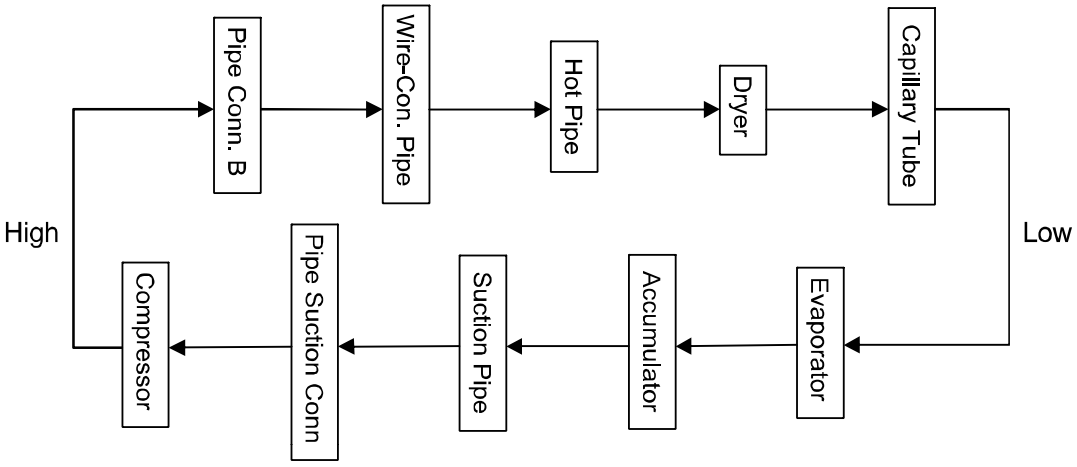
Brzing Reference Drawings

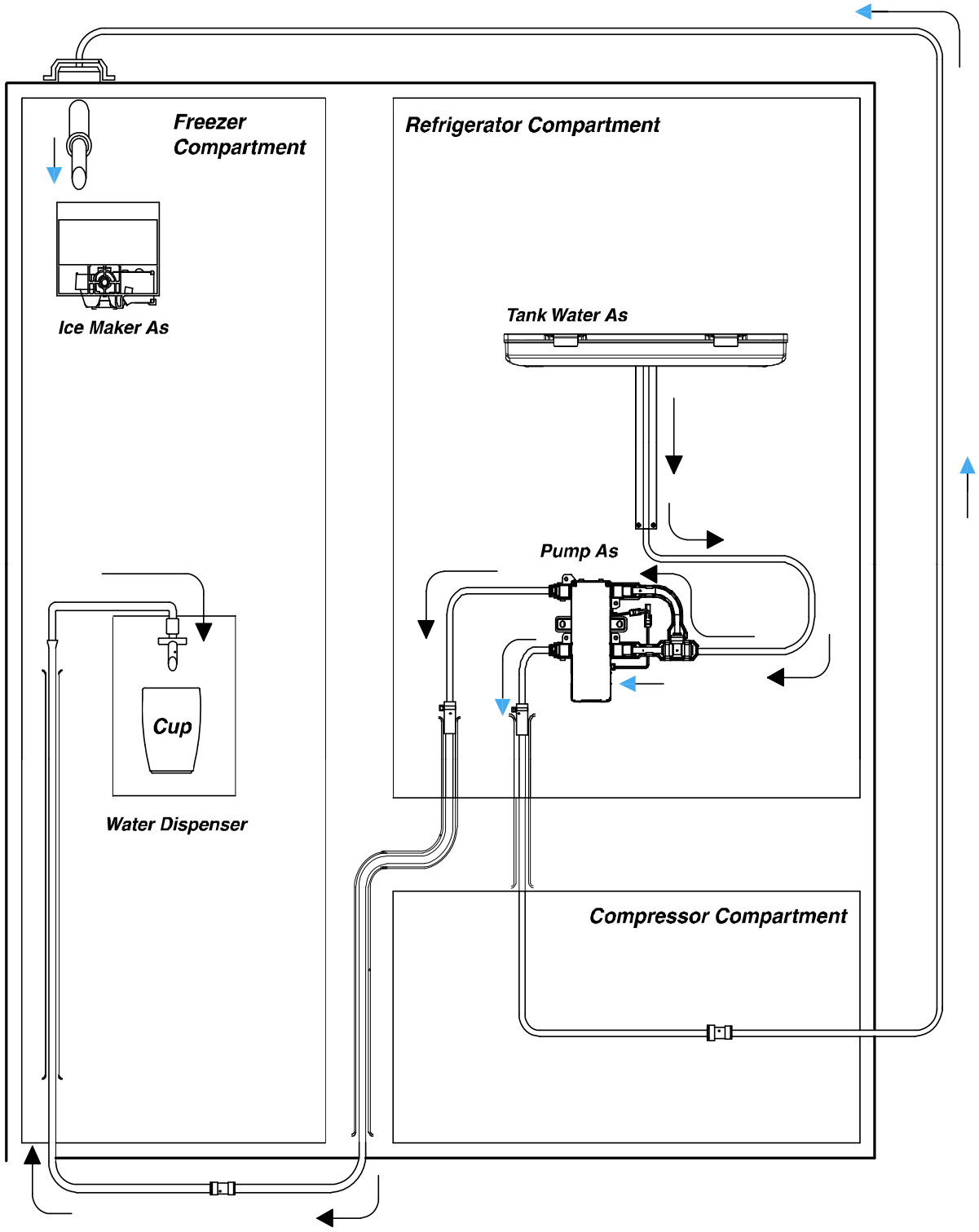


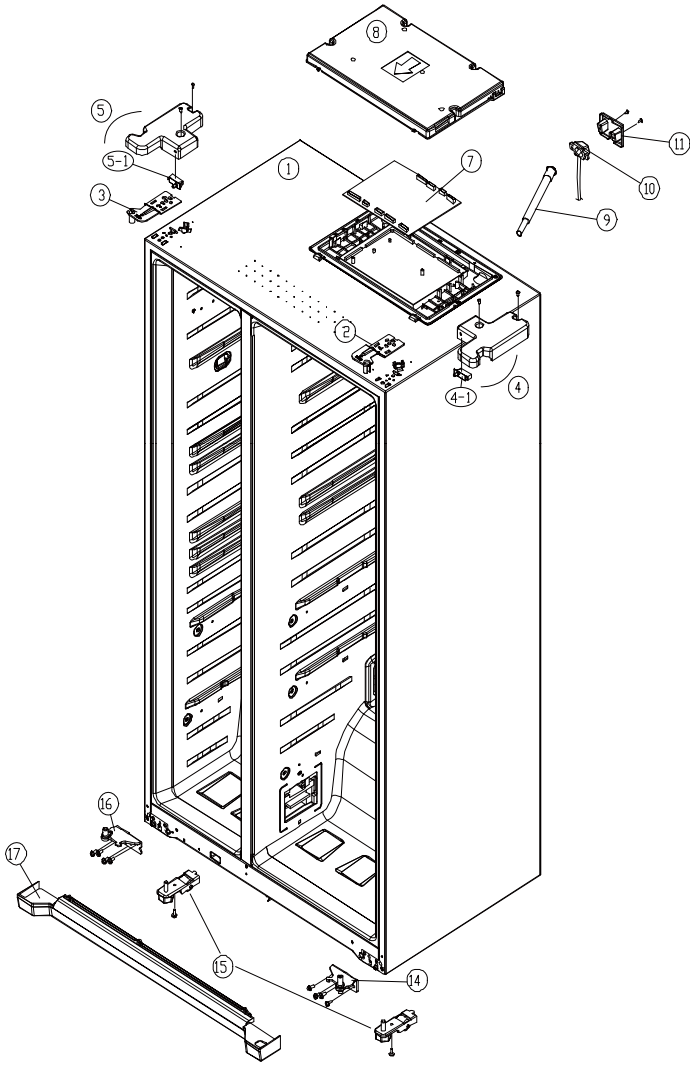
▶ Welding Point

●	Copper Welding (Ag 5%)	7 Points
■	Silver Welding (Ag 35%)	3 Points

▶ Flow of Refrigeration Cycle




Freezer
Compartment
Refrigerator Compartment
Ice Maker As
Tank Water As
Pump As
Cup
Water Dispenser
Compressor Compartment



No	Part Code	Part Name	Description	Q'ty	
				D / E *	F / G *
1	-	ASSY CAB URT	-	1	1
2	**3012933100**	HINGE *T *R	PO T3.0+PAINT	1	1
3	**3012933000**	HINGE *T *L	PO T3.0+PAINT	1	1
4	**3001436800**	COVER HI *T *R AS	FRX-621B	1	1
4-1	**3018125601**	SWITCH H/BAR DR AS	SP101B-2D1(G) GRAY	1	1
5	**3001436700**	COVER HI *T *L AS	FRX-621B	1	1
5-1	**3018125601**	SWITCH H/BAR DR AS	SP101B-2D1(G) GRAY	1	1
7	**30143KV070**	PCB MAIN AS(Mineral Model Only	22D..(None Inverter Comp.)	1	x
	30143KV090		22D..(Inverter Comp.)		
	30143KV060		22F..(None Inverter Comp.)	x	1
	30143KV080		22F..(Inverter Comp.)		
	30143KV020	PCB MAIN AS (Mineral + Crusher Model Only)	22D..(None Inverter Comp.)		
	30143KV010		22F..(None Inverter Comp.)		
8	**3011446001**	COVER M/PCB BOX	PP(FB-72)	1	1
9	**3013226800**	HOSE ICE MAKER TUBE AS	220~240V/5W	1	1
	3013226810		110~127V/5W		
10	**3012540200**	GUIDE CAB W/TUBE A AS	X22.. MODEL	1	1
11	**3011444100**	COVER GUIDE CAB W/T A	PP	1	1
14	**3012933500**	HINGE *U *R AS		1	1
15	**3010673800**	BRACKET ADJ FOOT AS		2	2
16	**3012933400**	HINGE *U *L AS		1	1
17	**3001440200**	COVER CAB BRKT AS	FRX-621B	1	1

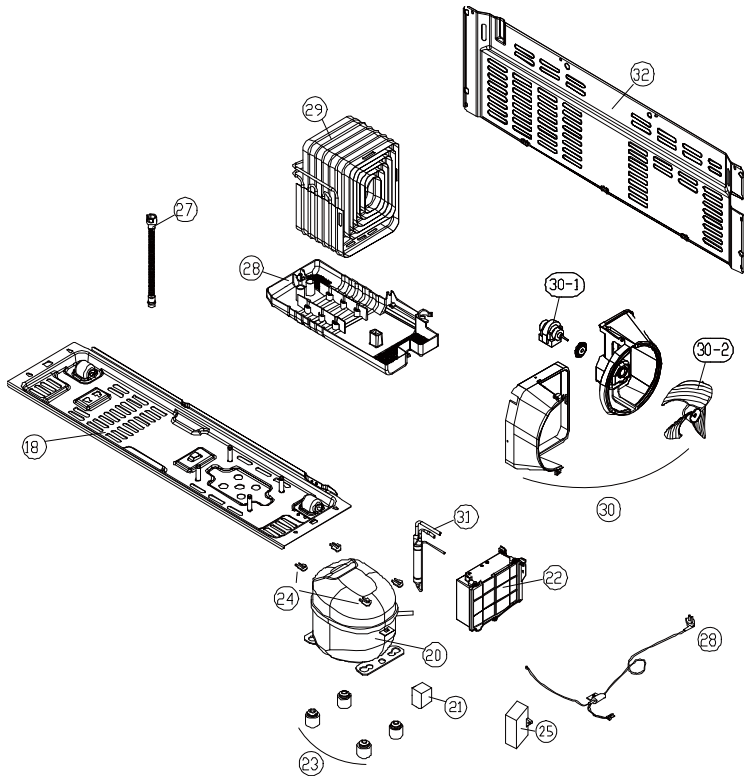
- Some parts can be chaged for improving their perfomance without notice.

**** D : Dispenser Model***

E : Dispenser + Change Room Model

F : Dispenser + H/bar Model

G : Dispenser + H/bar + Change Room Model



No	Part Code	Part Name	Description	Q'ty
18	**3010359600**	BASE COMP AS	-	1
19	**OPTION**	CORD POWER AS	country dependent	1
20	**3956183H4B**	COMPRESSOR	MK183H-L2UB(220V/60HZ)	1
	3956183D2B		MK183D-L2UB(110~127V)	
	3956183Q5B		MK183Q-L2UB(220~240V/50Hz)	
	3956112250		DG125E11RAW5(220~240V/50Hz)	
	3956114M80		LQ140NAEM(220~240V/50Hz)	
	3959115280		EU4A5Q-L2X, Inverter Comp.	
21	**3018129720**	SWITCH P RELAY AS	265RFB, J531Q34E220M(MK183H-L2UB)	1
	3018129710		445PHB, J531Q32E6R8M(MK183D-L2UB)	
	3018129600		265RHB, J531Q35E330M(MK183Q-L2UB)	
	3018129650		232NFB, PTH7M330MD2(DG12E11RAW5)	
	3018133900		4TM205RFB, 330M(LQ140NAEM)	
	3018133800		4TM319SFB(EU4A5Q), Inverter Comp.	
22	**3814300300**	BOX INVERTER AS	PP(EU4A5Q Only), Inverter Comp.	1
23	**3010101600**	ABSORBER COMP	NBR	4
	3010101480	ABSORBER COMP AS	NBR+SPRING	
24	**3016002500**	COMP WASHER	SK-5 T0.8	4
25	**3016406100**	CAPACITOR RUN	400VAC/5 ㎌ (WIRE,P2)	1
	3016405900		350VAC/5 ㎌ (WIRE, P2)	
	3016405020		250VAC/12 ㎌ (WIRE,P2)	
27	**3013201700**	HOSE DRN B	PE FRB-5970NB	1
28	**3011199L00**	CASE VAPORI AS	FRX-621B	1
29	**3014467200**	PIPE WICON AS	TWS OD4.76*T0.7	1
30	**3018410500**	MOUTHBELL AS	FRX-621B	1
30-1	**3015920900**	MOTER C FAN	D4612AAA31	1
30-2	**3011836300**	FAN	PP OD3.17*D150	1
31	**3019808100**	DRYER AS	C1220T-M OD19.05*L135	1
32	**3001436500**	COVER MACH RM AS		1

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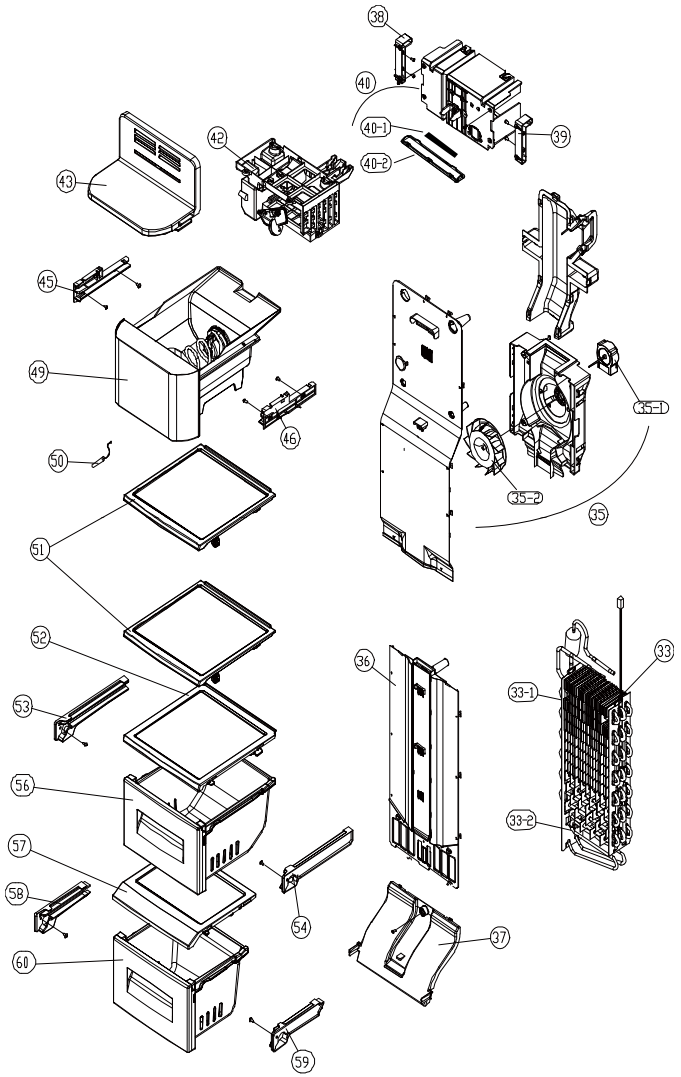

No	Part Code	Part Name	Description	Q'ty
33	**3017068900**	EVA AS	220-240V, 280W	1
	3017068910		110-127V, 250W	
33-1	**3014809500**	SENSOR D AS	PBN-43	1
33-2	**3012824210**	HEATER SHEATH AS	220-240V, 280W	1
	3012824220		110-127V, 250W	
35	**3018928600**	LOUVER F A AS	FRY-621B	1
35-1	**3015920700**	MOTOR F FAN AS		1
35-2	**3011836400**	FAN F		1
36	**3018928900**	LOUVER F B AS	FRY-621B	1
37	**3001434700**	COVER F RETURN	HIPS	1
38	**3012517800**	GUIDE G MOTR BRKT*L	ABS	1
39	**3012517900**	GUIDE G MOTR BRKT*R	ABS	1
40	**3010673600**	BRACKET GEARED MOTR AS (Mineral Model Only)	FRX-601D, 220-240V	1
	3010673610		FRX-601D, 110-127V	
	3010673630	BRACKET GEARED MOTR AS (Mineral + Crusher Model Only)	110-127V	1
	3010673640		220V/60Hz	
	3010673650		220-240V	
40-1	**30143HJ230**	PCB FRE LED AS	5-LED FR-4 125X20-1.6T	1
40-2	**3015517200**	WINDOW F LED *T	ABS	
42	**3012231400**	FRAME I/MAKER AS	FRX-601D	1
43	**3001435000**	COVER I/CRUSHER*T	HIPS	1
45	**3012538200**	GUIDE I/CRUSHER *L	ABS	1
46	**3012538100**	GUIDE I/CRUSHER *R	ABS	1
49	**3011199K00**	CASE I/CRUSHER AS	Mineral Model Only	1
	3011199K20		Mineral + Crusher Model Only	1
50	**3014809300**	SENSOR F AS	PT-38	1
51	**3017851200**	SHELF F AS		2
52	**3001438000**	COVER F CASE*T AS		1
53	**3012514512**	GUIDE CASE A *L AS	FR-S580EG(PP)	1
54	**3012514612**	GIDUE CASE A *R AS	FR-S580EG(PP)	1
56	**3011124000**	CASE F*T AS		1
57	**3001434500**	COVER F CASE *U	HIPS	1
58	**3012529712**	GUIDE CASE C *L AS	FRU-571I(PP)	1
59	**3012529812**	GUIDE CASE C *R AS	FRU-571I(PP)	1
60	**3011124100**	CASE F*U AS	FRX-621B	1

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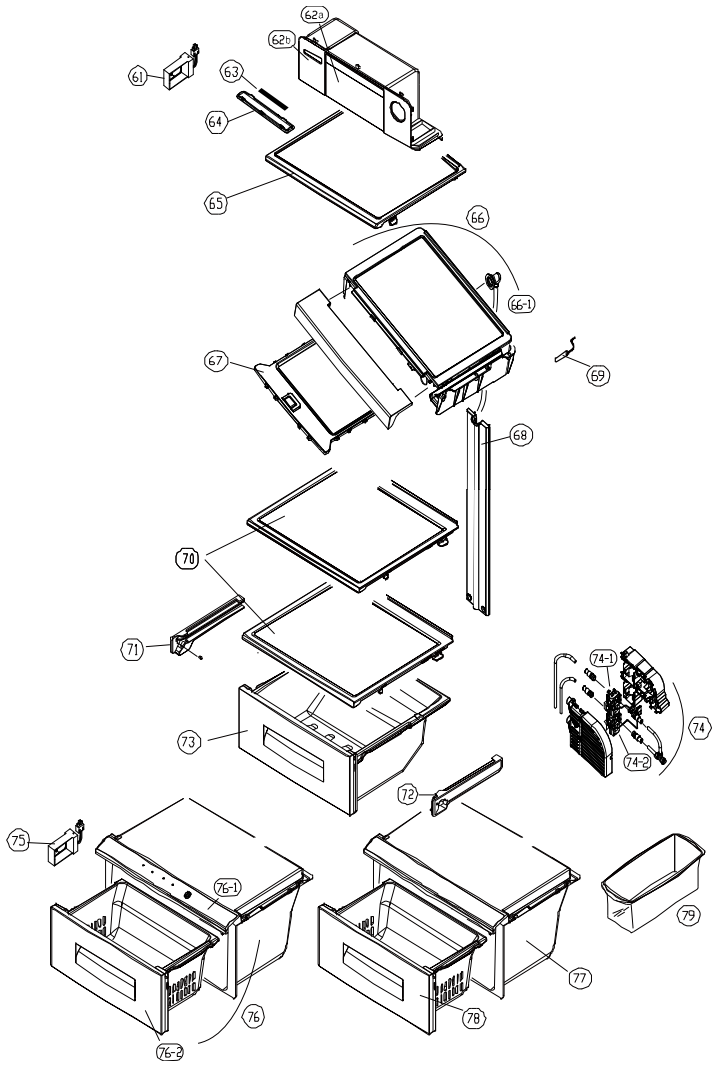
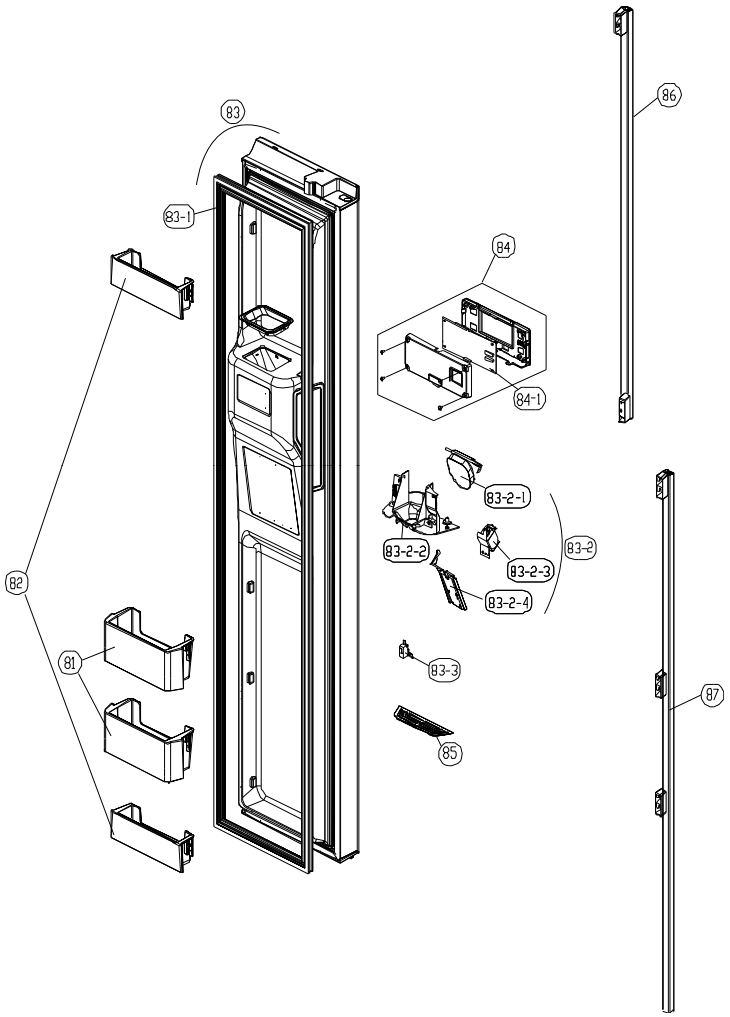


NO	PART-CODE	PART NAME	SPEC.	Q'ty	
				D / F	E / G
61	**3016767100**	DAMPER AS	DU24-013	1	1
62a	**3001436900**	COVER DAMPER AS	FRX-621B	1	1
62b	**3015517000**	WINDOW COVR DAMP	GPPS	1	1
63	**30143HJ220**	PCB REF LED AS	9-LED FR-4 230X20-1.6T	1	1
64	**3015517100**	WINDOW R LED *T	ABS	1	1
65	**3017851300**	SHELF R AS	FRX-621B	1	1
66	**3017858300**	SHELF W/TANK TOTAL AS	FPX-602	1	1
66-1	**3012544900**	GUIDE W/TANK CASE	FPX-602,SILICON	1	1
67	**3018202700**	TANK WATER TOTAL AS	FPX-602	1	1
68	**301149AX00**	COVER W/TUBE	HIPS	1	1
69	**3014809400**	SENSOR R AS	PBN-43B	1	1
70	**3001437200**	COVER VEGETB CASE AS	PP+GLASS	2	2
71	**3012514512**	GUIDE CASE A *L AS	FR-S580EG(PP)	1	1
72	**3012514612**	GIDUE CASE A *R AS	FR-S580EG(PP)	1	1
73	**3011199P00**	CASE VEGETB *M AS	FRX-621B	1	1
74	**3010580800**	BOX W/PUMP AS	FPX-602	1	1
74-1	**3018450000**	PUMP DISPENSER AS	DC12V, SANKYO	1	1
74-2	**3018450100**	PUMP I/MAKER AS	DC12V, SANKYO	1	1
75	**3001438100**	COVER CHANGE RM AS	FRX-601G	1	1
71	**3011124200**	CASE VEGETB *U AS	FRX-621B	1	1
75	**3016767100**	DAMPER AS	DU24-013	x	1
76	**3010573700**	BOX CHANGE RM AS	FRX-601G		1
76-1	**30143HJ360**	PCB FRONT SUB AS	FRX-601G		1
76-2	**3011199M00**	CASE CHANGE RM AS	FRX-601G		1
77	**3001438100**	COVER CHANGE RM AS	FRX-621B	1	x
78	**3011124200**	CASE VEGETB *U AS	FRX-621B	1	
79	**3011171310**	CASE EGG AS	CASE+VINYL	1	1



No	Part Code	Part Name	Description	Q'ty	
				Middle Handle	Long Handle
81	**3019057900**	POCKET F*M	GPPS	2	2
82	**3019058100**	POCKET F*U	GPPS	2	2
83	**30100A4J00**	ASSY F DR	FRX-601D, TITANIUM ELLIO	1	x
	30100A4J10		FRX-601D, TITANIUM VCM		
	30100A4J20		FRX-601D, WHITE VCM		
	30100A4J40		FRX-601D, SUS430		
	30100A5J00	ASSY F DR	FRX-602D, TITANIUM ELLIO	x	1
	30100A5J10		FRX-602D, TITANIUM VCM		
	30100A5J20		FRX-602D, WHITE VCM		
	30100A5J40		FRX-602D, SUS430		
83-1	**3012318860**	GASKET F DR AS	FRX-621B	1	1
83-2	**3010574300**	BOX DISPNS I/SHUT AS	220-240V/50Hz	1	1
	3010574310		110-127V/60Hz		
83-2-1	**3001436601**	COVER I/FLAP AS	FRX-601D	1	1
83-2-2	**3010573300**	BOX DISPNS I/SHUT	ABS	1	1
83-2-3	**3015403000**	VALVE SOL DISPNS	220-240V/50Hz	1	1
	3015403120		110-127V/60Hz		
83-2-4	**3013703100**	LEVER DISPNS BOX AS	FRX-601D	1	1
83-3	**3018133600**	SWITCH MICRO	GSM-V603**	1	1
84	**3014247030**	PANEL *F CONTL AS	SILVER	1	1
	3014247040		WHITE	1	1
84-1	**30143KV160**	PCB FRONT AS	FRX-22D..	1	1
85	**3012407800**	GRILLE DISPNS	ABS	1	1
86	**3012653700**	HANDLE F DR AS	MIDDLE HANDLE	1	1
87	**3012653710**	HANDLE F DR AS	LONG HANDLE	1	1

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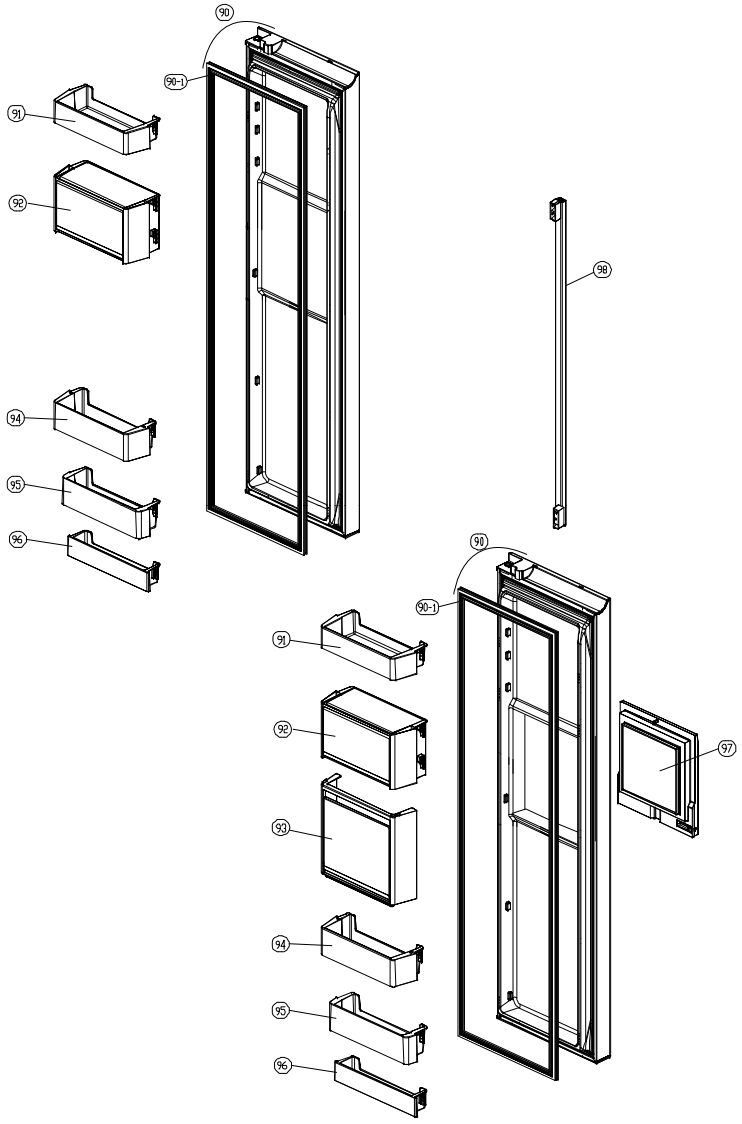
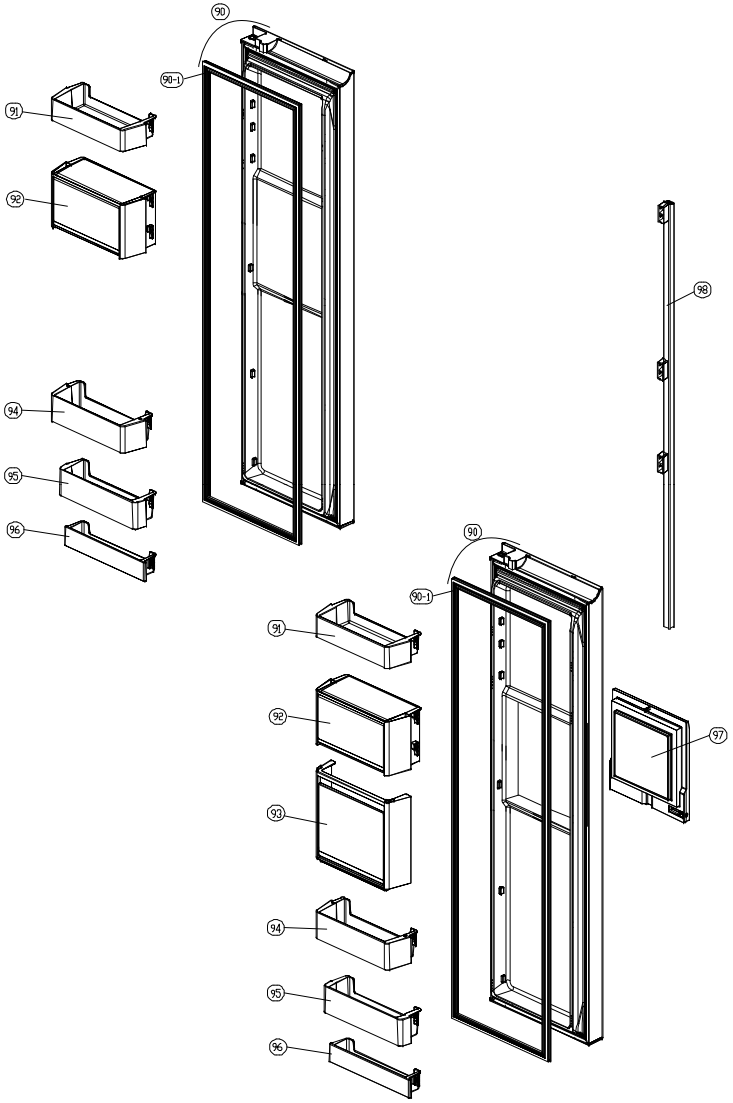


No	Part Code	Part Name	Description	Q'ty	
				D / E	F / G
90	**30100A4K00**	ASSY R DR	FRX-621B, TITANIUM ELLIO	1	x
	30100A4K10		FRX-621B, TITANIUM VCM		
	30100A4K20		FRX-621B, WHITE VCM		
	30100A4K40		FRX-621B, SUS430		
	30100A4L00		FRX-601F, TITANIUM ELLIO	x	1
	30100A4L10		FRX-601F, TITANIUM VCM		
	30100A4L20		FRX-601F, WHITE VCM		
	30100A4L40		FRX-601F, SUS430		
90-1	**3012318960**	GASKET R DR AS	PVC+MAGNET	1	1
91	**3019058400**	POCKET R*T	GPPS	1	1
92	**3019058800**	POCKET MULTI AS	GPPS	1	1
93	**3011199J00**	CASE H/BAR AS	FRX-601G	x	1
94	**3019058600**	POCKET R H/BAR	GPPS	1	1
95	**3019058300**	POCKET R*M	GPPS	1	1
96	**3010058500**	POCKET R*U	GPPS	1	1
97	**3001707720**	DOOR H/BAR AS	TITANIUM	1	1
	3001707730		WHITE		
98	**3012653600**	HANDLE R DR AS	MIDDLE HANDLE	1	1

- Some parts can be chaged for improving their perfomance without notice.

No	Date	Note



No	Part Code	Part Name	Description	Q'ty	
				D / E	F / G
90	**30100A5K00**	ASSY R DR	FRX-622B, TITANIUM ELLIO	1	X
	30100A5K10		FRX-622B, TITANIUM VCM		
	30100A5K20		FRX-622B, WHITE VCM		
	30100A5K40		FRX-622B, SUS430		
	30100A5L00		FRX-602F, TITANIUM ELLIO	X	1
	30100A5L10		FRX-602F, TITANIUM VCM		
	30100A5L20		FRX-602F, WHITE VCM		
	30100A5L40		FRX-602F, SUS430		
90-1	**3012318960**	GASKET R DR AS	PVC+MAGNET	1	1
91	**3019058400**	POCKET R*T	GPPS	1	1
92	**3019058800**	POCKET MULTI AS	GPPS	1	1
93	**3011199J00**	CASE H/BAR AS	FRX-601G	X	1
94	**3019058600**	POCKET R H/BAR	GPPS	1	1
95	**3019058300**	POCKET R*M	GPPS	1	1
96	**3010058500**	POCKET R*U	GPPS	1	1
97	**3001707720**	DOOR H/BAR AS	TITANIUM	1	1
	3001707730		WHITE		
98	**3012653610**	HANDLE R DR AS	LONG HANDLE	1	1

- Some parts can be chaged for improving their perfomance without notice.

No	Date	Note