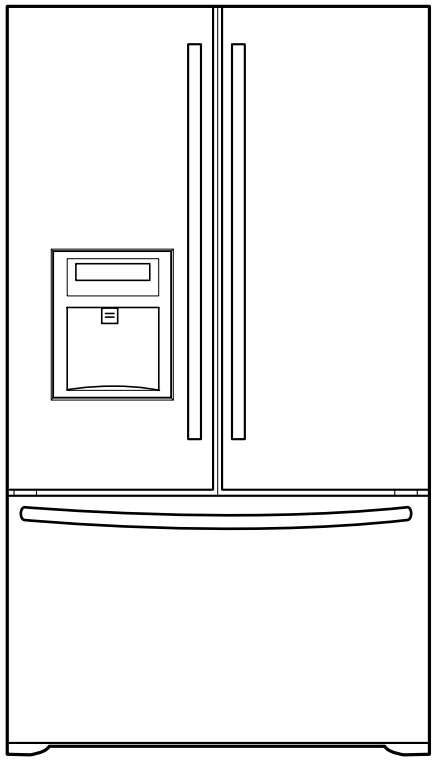
REFRIGERATOR SERVICE MANUAL

CAUTION
BEFORE SERVICING THE UNIT,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



Model #s:

795.71022.010
795.71023.010
795.71024.010
795.71026.010
795.71029.010

P/No. MFL63273703

CONTENTS

SAFETY PRECAUTIONS

Please read the following instructions before servicing your refrigerator.

1. Unplug the power before handling any elctrical componets.
2. Check the rated current, voltage, and capacity.
3. Take caution not to get water near any electrical components.
4. Use exact replacement parts.
5. Remove any objects from the top prior to tilting the product.

1. SPECIFICATIONS

1-1 DISCONNECT POWER CORD BEFORE SERVICING
IMPORTANT - RECONNECT ALL GROUNDING DEVICES

All parts of this appliance capable of conducting electrical current are grounded. If grounding wires, screws, straps, clips, nuts or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

1-2 IMPORTANT NOTICE

This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

1-3 ELECTRICAL SPECIFICATIONS

Temperature Control (Freezer Compartment) .. -6°F to +8°F
Defrost Control .....Total Comp Running Time: 7 hrs~50 hrs
Defrost Thermostat ..... 46°F
Electrical Rating : 115VAC, 60Hz ..... 5.2 A
Maximum Current Leakage ..... 0.5 mA
Maximum Ground Path Resistance ..... 0.14 Ohms
Energy Consumption ..... 25 cu.ft. 547 (E/STAR)

1-4 NO LOAD PERFORMANCE CONTROL POSITION : MID/MID

And Ambient of :	70°F	90°F
Fresh Food, °F	33°F to 41°F	33°F to 41°F
Frozen Food, °F	-4°F to +4°F	-4°F to +4°F
Percent Running Time	35%-45%	50°F-70°F

1-5 REFRIGERATION SYSTEM

Minimum Compressor Capacity Vacuum ..... 21 MIN.
Minimum Equalized Pressure
@ 70°F ..... 49 PSIG
@ 90°F ..... 56 PSIG
Refrigerant R134a ..... 4.94 oz.
Compressor ..... 956 BTU/hr

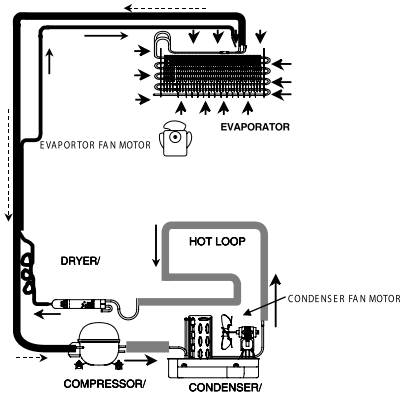
1-6 INSTALLATION

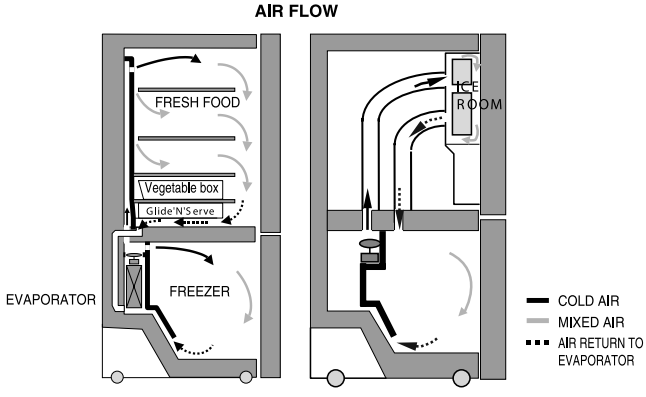
Clearance must be provided at top, sides and rear of the refrigerator for air circulation.
AT REAR ..... 2 in

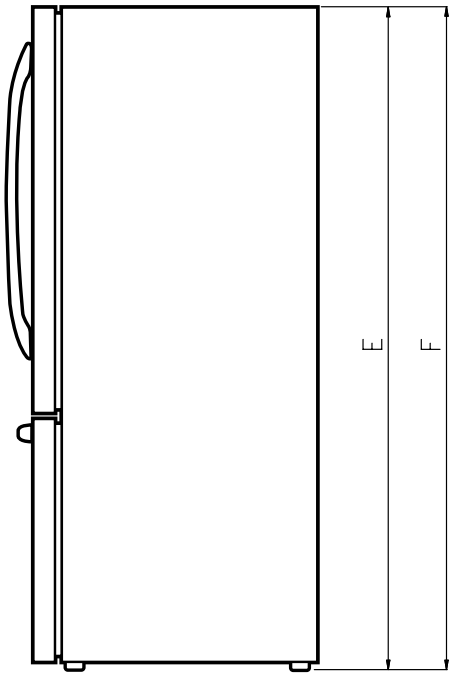
1-7 REPLACEMENT PARTS

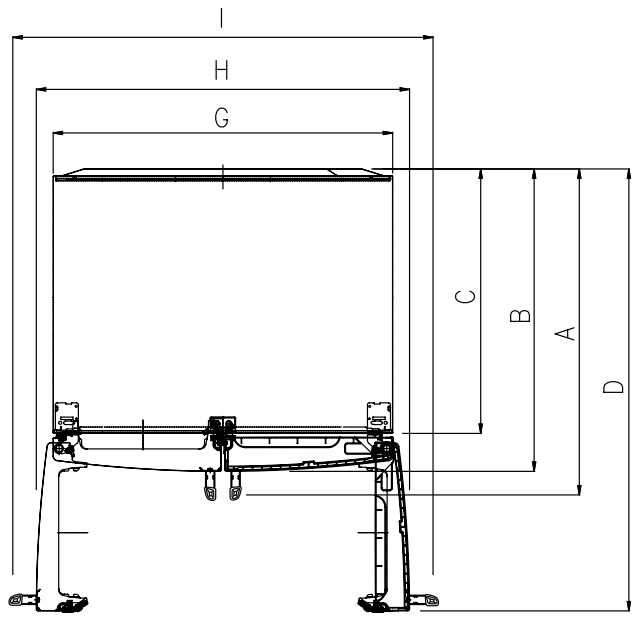
	25 cuft
	795.71022.010 795.71023.010 795.71024.010 795.71026.010 795.71029.010
Defrost Thermostat	6615JB2005H
Defrost Heater	5300JK1005D
Evaporator Fan Motor	4681JB1027C (4681JK1004E)
Capacitor (Running)	EAE58905701
Compressor (Hi-Side)	TCA34649901
Evaporator (Lo-Side)	5421JJ1003B
Condenser	ACG72915205
Dryer	5851JA2007E
Condenser Fan Motor	4681JB1029D
Temperature Control	ACQ36820516(SW) ACQ36820517(STS) ACQ36820518(TI) ACQ36820519(WB) ACQ36820520(BI)
Main Control	EBR67348003
Ice Fan Motor	4681JB1027E

1-8 AIR FLOW / CIRCULATION D'AIR



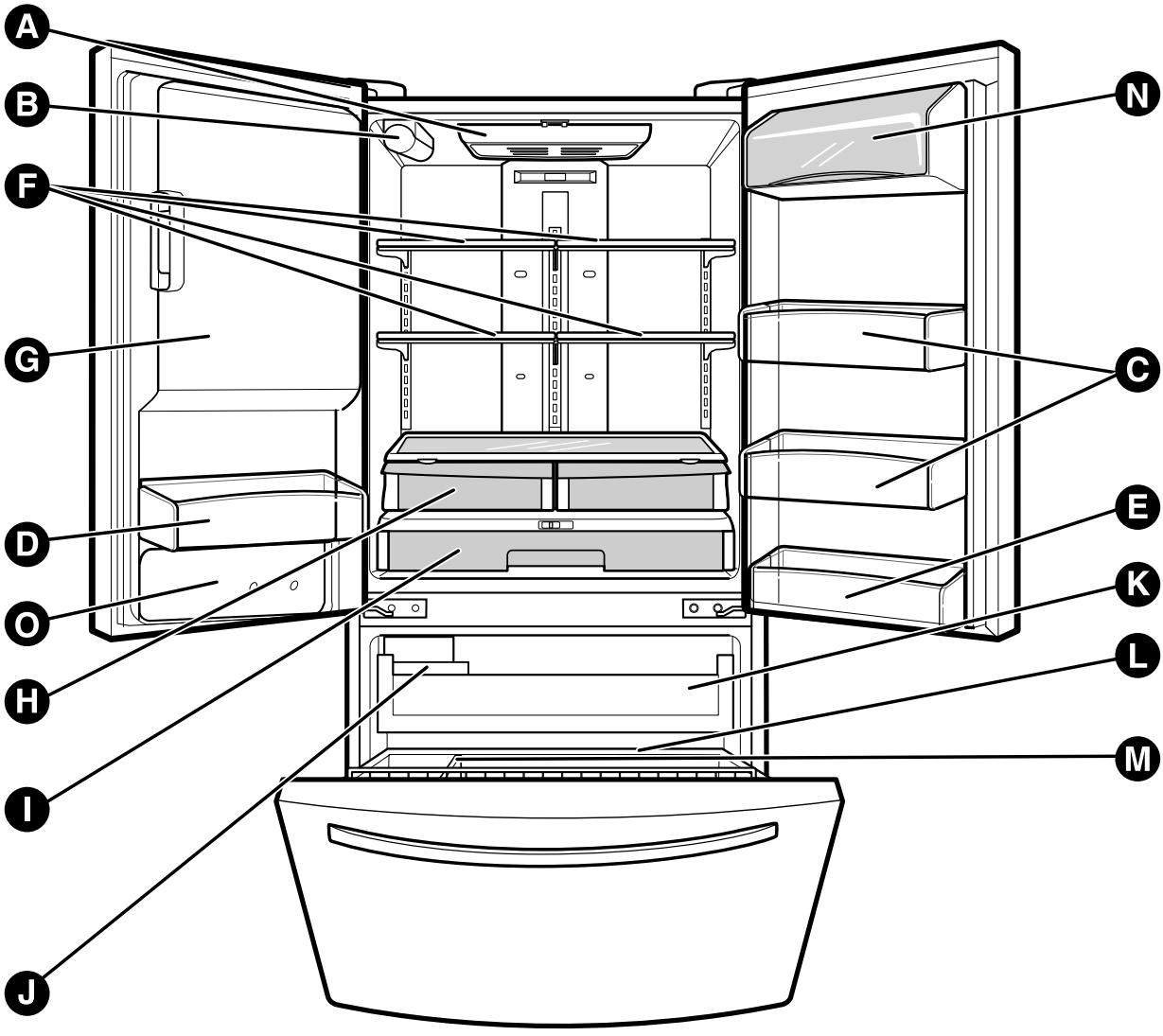






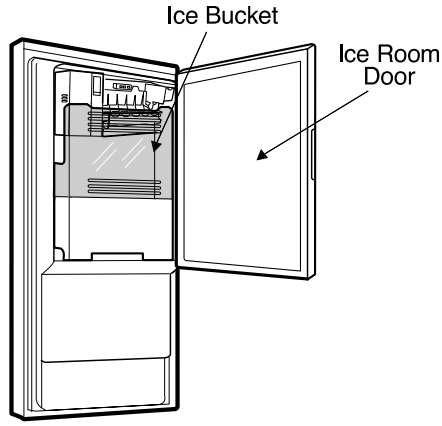
Description		795.710*
Depth w/ Handles	A	34 1/4 in
Depth w/ Handles	B	31 3/4 in
Depth w/ o Door	C	27 7/8 in
Depth (Total with Door Open)	D	46 1/2 in
Height to Top of Case	E	68 3/8 in
Height to Top of Door Hinge	F	69 3/4 in
Width	G	35 3/4 in
Width (door open 90 deg. w/o handle)	H	39 1/4 in
Width (door open 90 deg. w/ handle)	I	44 1/4 in

2. PARTS IDENTIFICATION



Use this page to become more familiar with the parts and features. Page references are included for your convenience.
NOTE : This guide covers several different models. The refrigerator you have purchased may have some or all of the items listed below. The locations of the features shown below may not match your model.

- **A** Refrigerator Light
- **B** Filter (Inside)
- **C** Modular Door Bins
- **D** Fixed door bin
- **E** Fixed door bin
- **F** Refrigerator Shelves
- **G** Ice Room (Ice Maker and Ice Bucket)
- **H** Humidity Controlled Crisper
- **I** Glide'N'Serve
- **J** Extra Ice Bin
- **K** Pull out Drawer
- **L** Durabase
- **M** Divider
- **N** Dairy Bin
- **O** Water Tank Cover

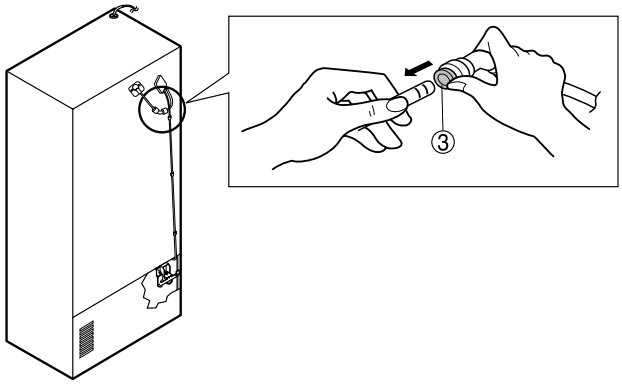


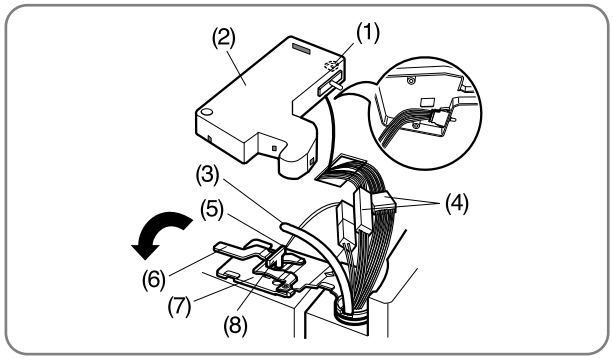
3. DISASSEMBLY

3-1 REMOVING AND REPLACING REFRIGERATOR DOORS

⚠ **CAUTION :** Before you begin, unplug the refrigerator and remove the food and bins from the doors.

To remove the left refrigerator door:
On the back of the refrigerator, press back on the release ring of the fitting (see 3 in figure below) and pull out the water tube in the direction of the arrow.



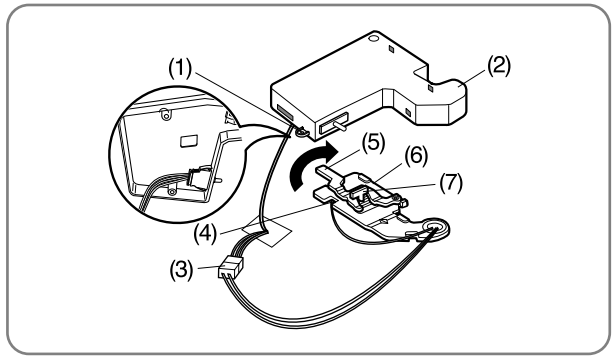


1. Open the door. Remove the top hinge cover screw (1).
2. Use a flat-head screwdriver to pry back the hooks (not shown) on the front underside of the cover (2). Lift up the cover.
3. Remove the cover. Pull out the tube (3).
4. Disconnect all the wire harnesses (4).
5. Remove the grounding screw (5).
6. Rotate hinge lever (6) counterclockwise. Lift the top hinge (7) free of the hinge lever latch (8).

⚠ **CAUTION :** When lifting the hinge free of the latch, be careful that the door does not fall forward.

7. Remove the door by lifting it off the middle hinge pin, located at the bottom of the door.
8. Place the door on a soft, smooth surface with the inside up to prevent damage.

To remove the right refrigerator door:



1. Open the door. Remove the top hinge cover screw (1). Lift up cover (2).
2. Remove cover.
3. Disconnect wire harness (3).
4. Remove the grounding screw (4).
5. Rotate hinge lever (5) clockwise. Lift top hinge (6) free of hinge lever latch (7).
6. Remove the door by lifting it off the middle hinge pin, located at the bottom of the door.
7. Place the door on a soft, smooth surface with the inside up to prevent damage.

⚠ **CAUTION :** When lifting the hinge free of the latch, be careful that the door does not fall forward.

⚠ WARNING

Electrical Shock Hazard

- Disconnect electrical supply to the refrigerator before installing. Failure to do so could result in death or serious injury.
- Do not put hands or feet or other objects into the air vents, base grille, or bottom of the refrigerator. You may be injured or receive an electrical shock.
- Be careful when you work with the hinge, base grille, and stopper. You may be injured.

3-2 DOOR

● **Door Gasket Removal**

1. Remove door frame cover

Starting at top of cover and working down, snap cover out and away from door.

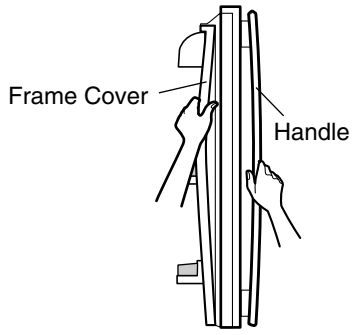


Figure 1

2. Remove gasket bracket clips

There are two clips on each door. Start bracket removal near one of the middle clips.

1) Pull gasket back to expose gasket bracket clip and door frame.
2) Insert a flat tip screwdriver into seam between gasket bracket and door frame and pry back until clips snap out.
3) Continue prying back along seam until all clips snap out.

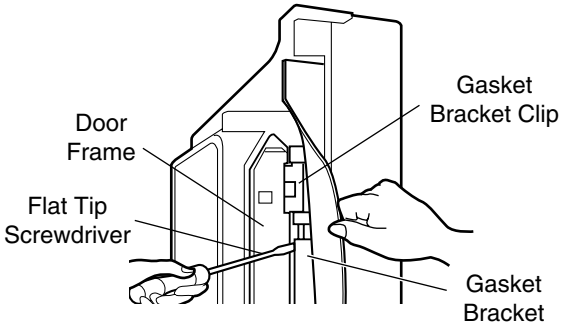


Figure 2

3. Remove gasket

Pull gasket free from gasket channel on the three remaining sides of door.

Figure 3

● **Door Gasket Replacement**

1. Insert gasket bracket clips

1) Insert gasket bracket edge beneath door frame edge.
2) Turn upper gasket bracket spring so that the spring ends are in the door channel.
3) Push in clip until you hear it snap securely into place.

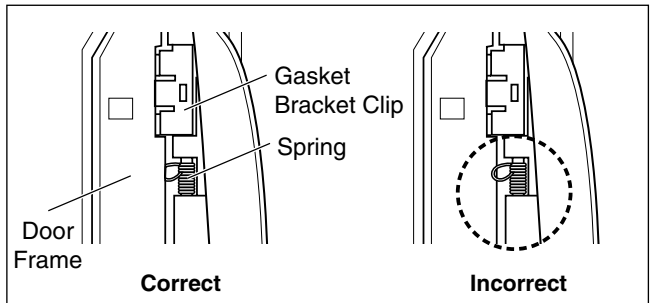


Figure 4

4) Push in remaining clip until you hear it snap securely into place.

Note : Make sure that no part of gasket bracket edge protrudes from beneath door frame edge.

2. Insert gasket into channel

1) Snap gasket assembly into the door bracket.

<Inserting the Gasket Assembly into the Bracket Door>

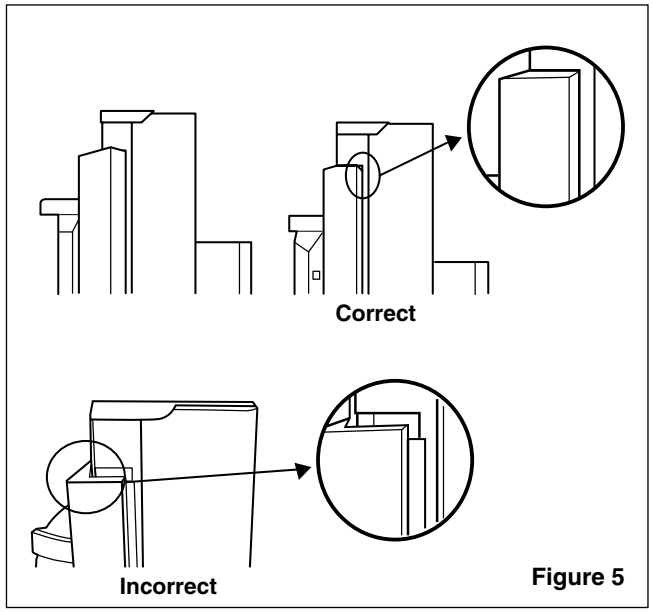


Figure 5

2) Press gasket into channels on the three remaining sides of door.

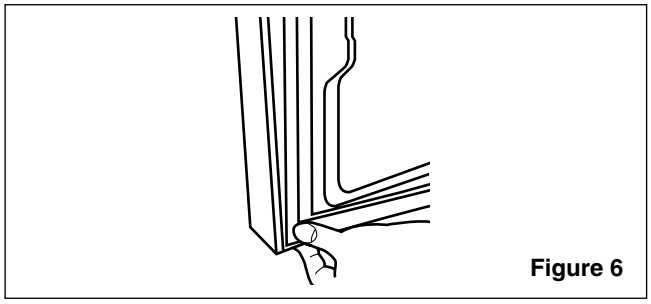


Figure 6

3. Replace door frame cover

Starting at top of cover and working down, snap cover back into door.

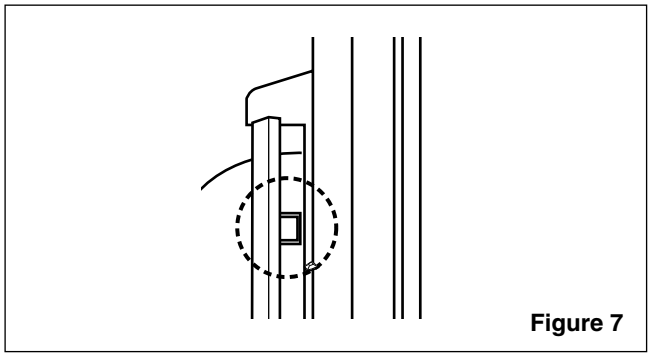


Figure 7

3-3 DOOR ALIGNMENT

If the space between your doors is uneven, follow the instructions below to align the doors :

1. With one hand, lift up the door you want to raise at middle hinge.
2. With other hand, use pliers to insert snap ring as shown.
3. Insert additional snap rings until the doors are aligned. (Three snap rings are provided with unit.)

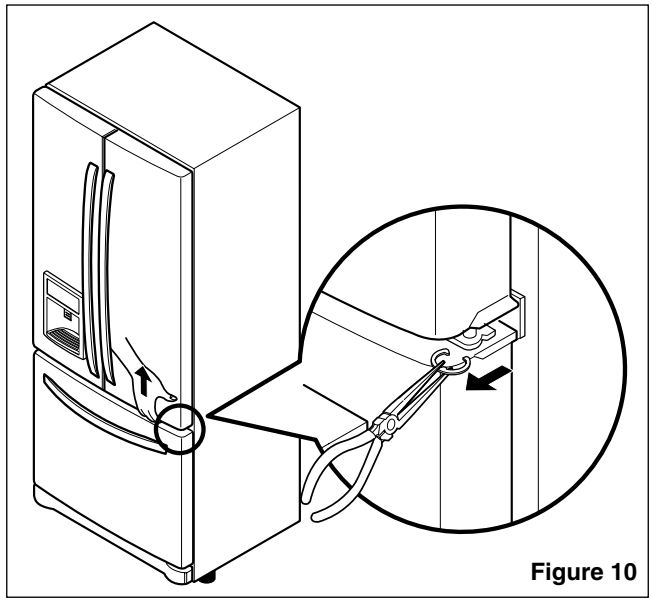


Figure 10

3-4 FAN AND FAN MOTOR(EVAPORATOR)

1. Remove the freezer shelf. (If your refrigerator has an icemaker, remove the icemaker first)
2. Remove the plastic guide for slides on left side by unscrewing phillips head screws.
3. Remove the grille by removing one screw and pulling the grille forward.
4. Remove the Fan Motor assembly by loosening 2 screws and disassembling the shroud.
5. Pull out the fan and separate the Fan Motor and Bracket.

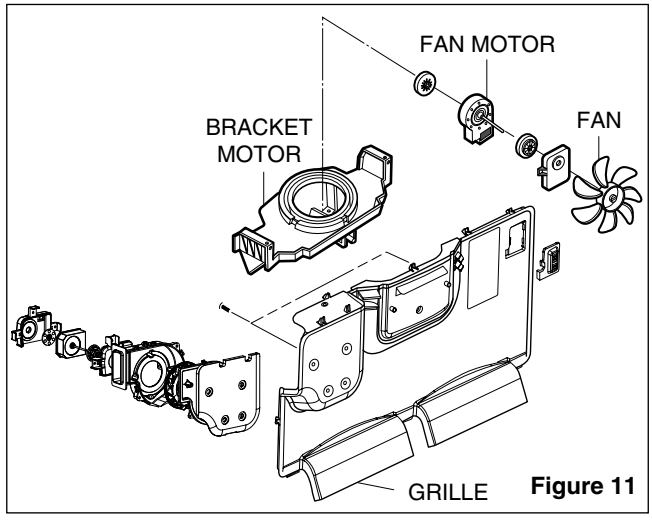


Figure 11

* Ice Fan Scroll Assembly Replacement

1) Remove the plastic guide for slides on left side by unscrewing phillips head screws.
2) Pull the grille forward as shown in the second picture.
3) Disconnect wire harness of the grille.
4) Remove the scroll assembly by loosening all screws.

(1)

(2)

(3)

(4)

3-5 DEFROST CONTROL ASSEMBLY

Defrost Control assembly consists of Defrost Sensor and FUSE-M.
The Defrost Sensor works to defrost automatically. It is attached to the metal side of the Evaporator and senses its temperature. At 46°F (8°C), it turns the Defrost Heater off. Fuse-M is a safety device for preventing over-heating of the Heater when defrosting.

1. Pull out the grille assembly. (Figure 10)
2. Separate the connector with the Defrost Control assembly and replace the Defrost Control assembly after cutting the Tie Wrap. (Figure 11)

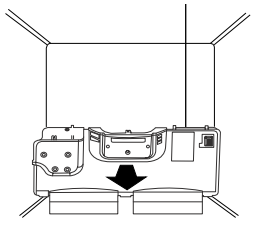


Figure 10

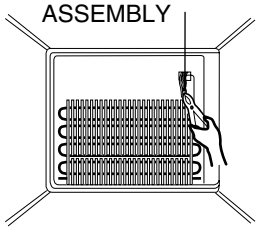


Figure 11

3-6 LAMP

Unplug Refrigerator, or disconnect power at the circuit breaker.
If necessary, remove top shelf or shelves.

3-6-1 Refrigerator Compartment Lamp

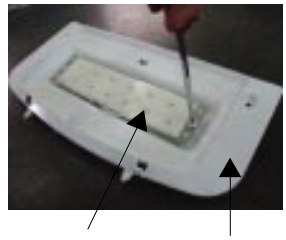
1) Release 2 screws.
2) Hold both ends with your both hands and pull it downward to remove it.
3) Use a flat tool as shown below to remove the cover lamp.

Figure 12

4) As shown below, use a flat tool to remove the cover lamp.

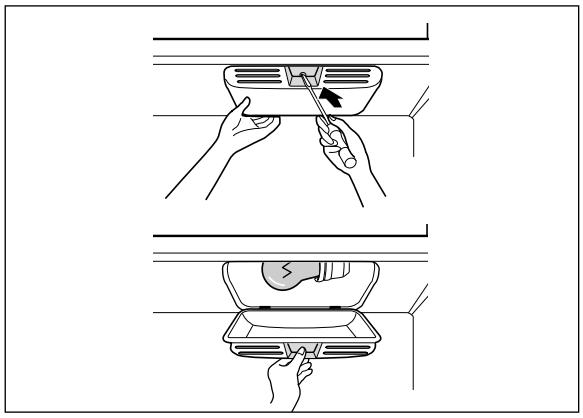
Figure 13

Cover, Lamp



LED, Assembly Case Lamp

Figure 14



To change freezer light

NOTE: Some models have LED interior lighting and service should be performed by a qualified technician.

1. Unplug refrigerator power cord form outlet.
2. Using a flat instrument, gently pry the lamp cover loose in the front as shown. Rotate downward to remove the rear tabs.
3. Make sure the bulb is cool to the touch. Turn the bulb counterclockwise to remove.
4. Replace with a new 60-watt appliance bulb.
5. Insert tabs on back of cover into slots in freezer ceiling. Push cover up to snap front into place.

3-7 MULTI DUCT

1. Remove the upper and lower Caps by using a flat screwdriver, and remove 2 screws. (Figure 17)
2. Disconnect the lead wire on the bottom position.

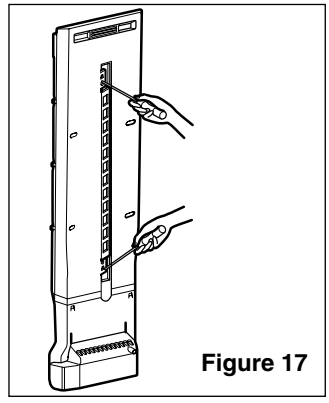


Figure 17

3-8 MAIN PWB

1) Loosen the 4 screws on the PWB cover.

2) Remove the PWB cover

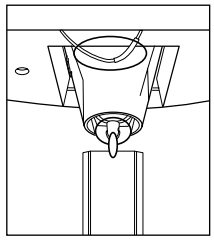
3) Disconnect wire harness and replace the main PWB in the reverse order of removal.

3-9 DISPENSER

1) Disconnect funnel and button assembly by pulling down and forward.

2) Hold the left and right side of the “Cover Assembly, dispenser” as shown in the picture, and pull and remove it. The cover dispenser is attached with a hook.

⚠ **CAUTION :** When replacing the dispenser cover in the reverse order of removal, be careful that the lead wire does not come out and the water tube is not pinched by the dispenser cover, as shown in the picture below.



3-10 DISPLAY PWB REPLACEMENT

1) Pull up and out on the dispenser cover to remove.

2) Follow the steps in the pictures

3-11 FUNNEL REPLACEMENT

1) Pull up and out on the dispenser cover to remove.
2) Disconnect the wire harness.
3) Replace in reverse order.

3-12 SUB PWB FOR WORKING DISPENSER

1) Loosen the screw on the sub PWB.

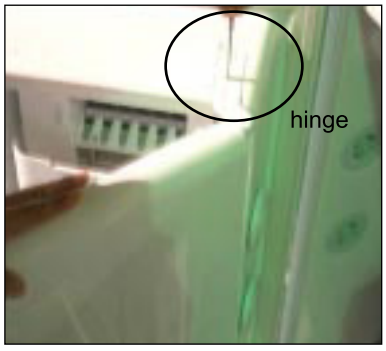
2) Pull the sub PWB down.
3) Disconnect the wire harness and replace the sub PWB in the reverse order of removal.

3-13 DUCT DOOR REPLACEMENT

1) Pull up and out on the dispenser cover to remove.
2) Disconnect the wire harness.
3) Remove the funnel
4) Replace in reverse order.

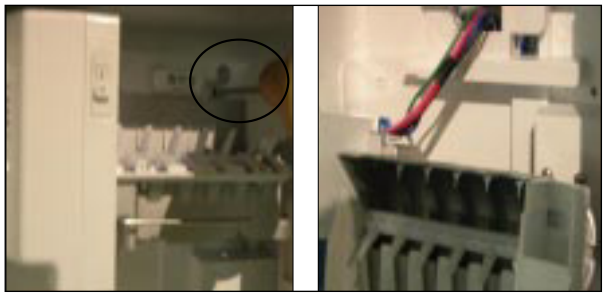
3-14 ICE CORNER DOOR REPLACEMENT

1) Loosen the front screw as shown in the picture.
2) Lift up the hinge with one hand.
3) Pull out the Ice Corner Door with the other hand.



3-15 ICEMAKER ASSEMBLY

1) Loosen two screws as shown in the first picture.



2) Disconnect the wire harness & ground screw replace theIcemaker assembly in the reverse order of removal.

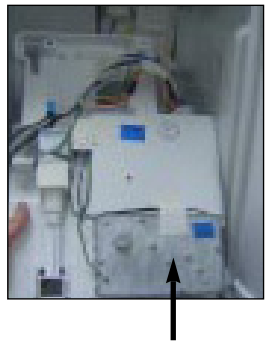
3) It separates a ground connection screw.

3-16 AUGER MOTOR COVER

1) After removing the icemaker remove the (5) stainless screws holding the auger motor cover, shown in the picutres below.

2) Grip the bottom of motor cover assembly and pull out it.

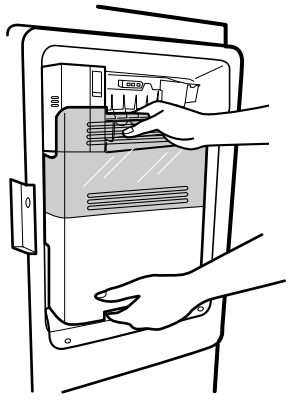
3) Disconnect wire harness of motor cover assembly. There is a auger motor on the back, as shown in the picture.



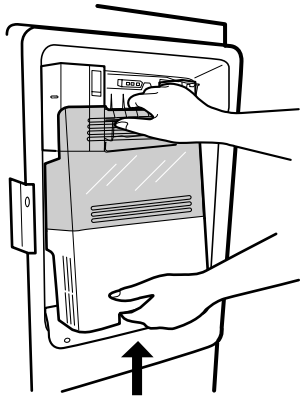
Auger Motor

3-17 HOW TO REMOVE A DOOR ICE BIN

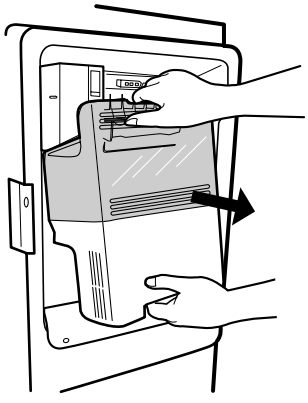
1) Grip the handles, as shown in the picture.



2) Lift the lower part slightly.

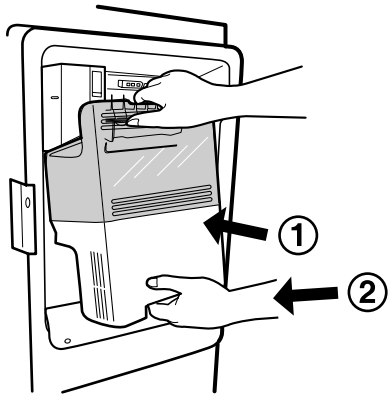


3) Take the Ice Bin out slowly.

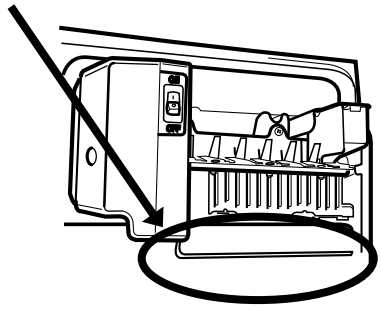


3-18 HOW TO INSERT A DOOR ICE BIN

1) Insert the Ice Bin, slightly tilting it to avoid touching the Icemaker. (especially, ice maker lever)



※ Insert the ice bucket carefully avoid contacing the automatic shut off arm.



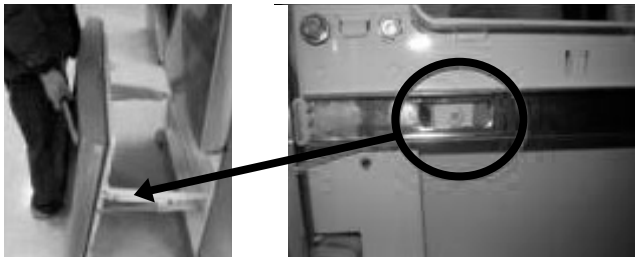
3-19 HOW TO REMOVE AND REINSTALL THE PULLOUT DRAWER

3-19-1 Follow Steps to Remove

Step 1) Open the freezer door.

Step 2) Remove the lower basket.

Step 3) Remove the two screws from the guide rails (one from each side).



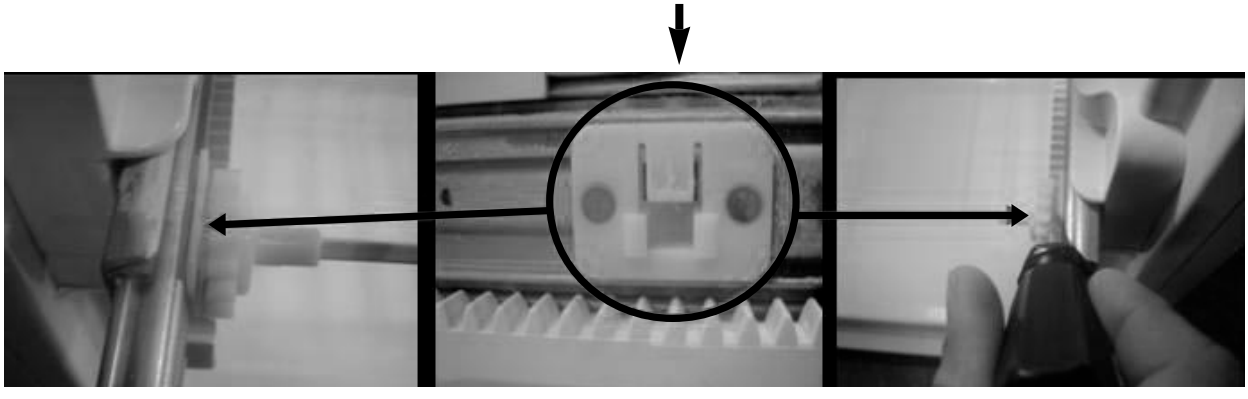
Step 4) Lift the freezer door up to unhook it from the rail support and remove.
Pull both rails to full extension.

Step 5) First : Remove the gear from the left side first by releasing the tab behind the gear, place a screwdriver between the gear and the tab and pull up on the gear.

Second : Remove the center rail.

Third : Remove the gear from the right side by following the same steps for the left side.

NOTE : THIS TAB MUST BE PUSHED IN TO RELEASE THE GEAR.



3-19-2 Follow Steps to Reinstall

Step 1) Reinstall the right side gear into the clip.



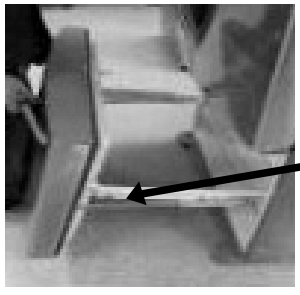
Step 2) Insert the rail into the right side gear. Gears do **not** need to be perpendicular to each other.

Step 3) Insert the rail into the left side gear, and insert the gear into the clip.

Step 4) The rail system will align itself by pushing the rails all the way into the freezer section.
Pull the rails back out to full extension.


Step 5) Reinstall the freezer door by inserting the rail tabs into the guide rail.

Step 6) Reinstall the two screws into the guide rails (one from each side).



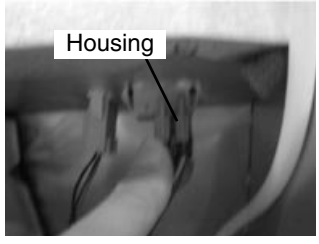

Step 7) Reinstall the lower basket, and close the freezer door.

3-20 WATER VALVE DISASSEMBLY METHOD

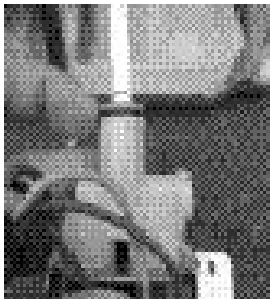
1) Turn off the water. Then separate the water line from the valve.

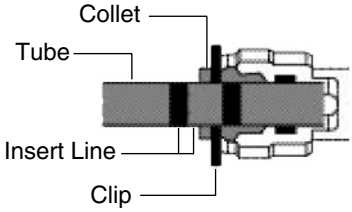
2) Separate the Mechanical Cover and Valve Screw.

3) Separate the housing and pull out the valve.



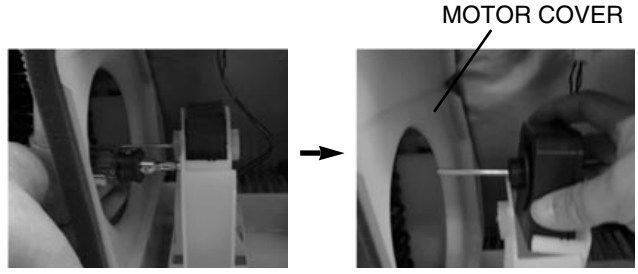
4) Lay a dry towel on the floor and get ready to spill water from the water filter. Pull out the Cilp. Then press te collet to separate the tube from the connector and pour out the water until emptied.



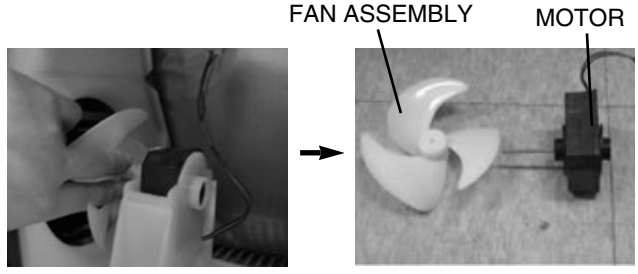


3-21 FAN AND FAN MOTOR DISASSEMBLY METHOD

1) Using a short screwdriver, loosen one SCREW in DRAIN PIPE ASSEMBLY and one connected to the MOTOR COVER.



2) Pull and separate the FAN ASSEMBLY and MOTOR turning counterclockwise based on the MOTOR SHAFT.

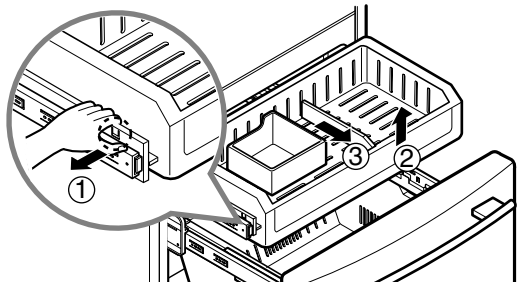


The assembly is in the reverse order of the disassembly and take special care for the following details.

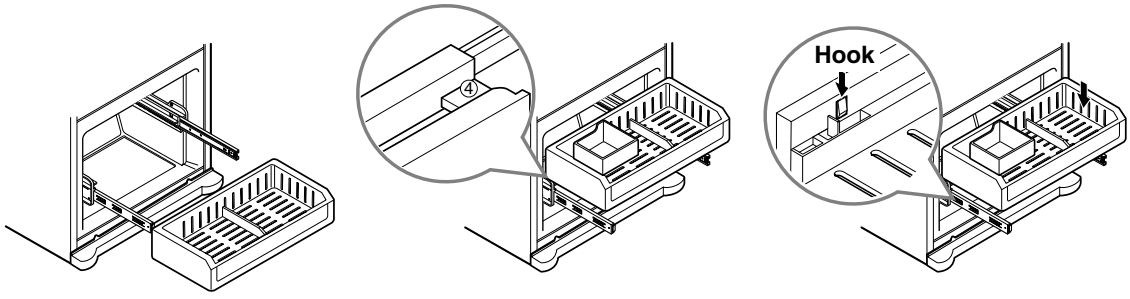
1. Be careful not to bend the tube during assembly.
2. Press the WATER DISPENSER button until water pours out and check for leakage in the CONNECTOR TUBE (It differs by the water pressure but usually takes about 2 minutes until water pours out.)

3-22 PULL OUT DRAWER

Separate the drawer, push the front left and right hooks in ① direction to pull up and remove.
Then gently lift and pull it out in ③ direction.



To install, After pulling out both rails as much as possible, and insert an end of rib to the bracket ④ at left and right then gently push down both left and right side while checking the hook on the front part.



4. ADJUSTMENT

4-1 COMPRESSOR

4-1-1 Role

The compressor intakes low temperature and low pressure gas from the evaporator of the refrigerator and compresses this gas to high-temperature and high-pressure gas. It then delivers the gas to the condenser.

4-1-2 Note for Usage

(1) Be careful not to allow over-voltage and over-current.
(2) Do not drop or handle carelessly.
(3) Keep away from any liquid.
If liquid such as oil or water enters the Cover PTC Compressor may fail due to breakdown of their insulating capabilities.
(4) Always use the Parts designed for the compressor and make sure it is properly attached to the compressor. Parts may appear physically identical but could have different electrical ratings. Replace parts by part number and model number. Use only approved substitute parts.

4-1-3 REMOVE THE COVER PTC

(1) Remove the Cover Back M/C

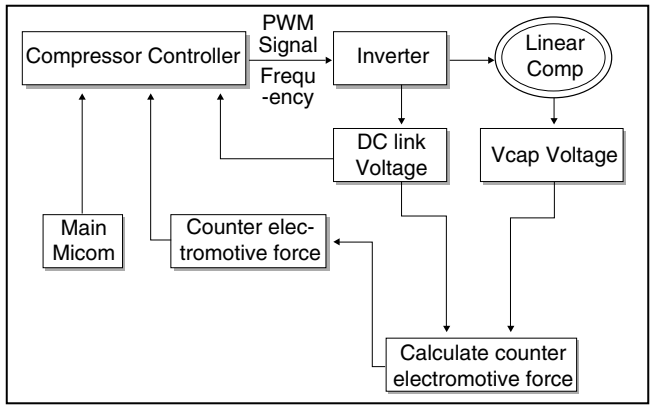
(2) Loosen two screws on comp base

(3) Use a L-shaped flap tooll to pry off the cover
(4) Assembly in reverse order of disassembly

4-2 Introduction of E-Linear Compressor

- E-Linear compressor is run by mechanical part design through automatically varying the cooling power. The main parts consist of compressor and Sub PCB which controls the compressor. PCB authorizes constant voltage and constant frequency to the compressor and protects it.

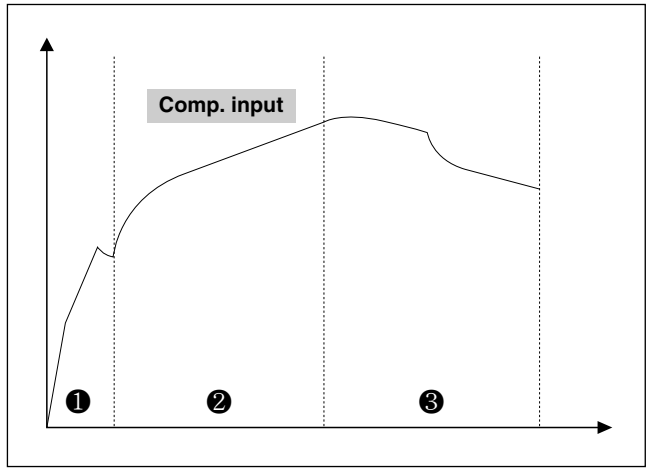
4-2-1 Control of Compressor Block Diagram



Control Block Diagram of Compressor

4-2-2 Compressor operating pattern

- Drive half stroke after turning on initial power for 30 seconds. Then, slowly increase stroke and reach target input. Once reaching the target input, input naturally changes according to refrigerator load without any special control.



Interval 1) Half stroke interval - after initial running, stay at the initial value for 30 seconds
Interval 2) Running interval - Increase at every 0.8 till it reaches the target input; it takes about 3 Minutes and 45 seconds.
Interval 3) CVCF interval - Run by target voltage and main operating frequency and the input naturally changes according to refrigerator load

4-2-3 Compressor protection logic

• Since linear Comp conducts linear reciprocating motion, we have protection logic for compressor, motor and PCB as the below.

- Stroke Trip
  During the operation, if stroke is above the target value, decrease the target volt by 3V.

- Current Trip
  Current trip is set in order to protect compressor mechanical part and drive from the overcurrent that might arise during the operation.
  Check the current for every 416.7us and if the Trip exceeds 1.86Arms more than three times at Comp ON, forcibly stop and restart six minutes later.

- Lock Piston Trip
  If stroke is under 5mm even if the current is more than 14Arms, Take it as 'piston lock' and restart after 2'30" of Comp OFF. Check the current and stroke for every 416.7us and if the condition fits more than three times at Comp ON, the Trip occurs.

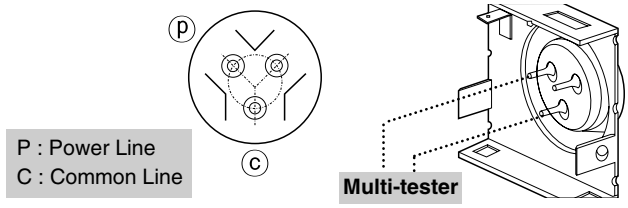
- IPM fault Trip
  It occurs if FO signal received from IPM is LOW. For every 416.7us, check whether FO signal is LOW. The trip occurs if it is found three times during the five periods(83ms).

4-2-4 Compressor problems diagnosis

• When there is a problem or failure with the `operation, you are kindly recommended to check it as follows ;

1) Check to normality by measurement of resistance

Measure the resistance between poles of the hermetic terminal (as shown picture) with a multi-tester.
(measurement several minutes after power off)



Case 1-1
If the measured values lie in the normal resistance range as in the table below,
➔ Compressor is normal.

Case 1-2
If the measured values are above several MΩ or a infinity,
➔ Wire is disconnected in the shell.

Case 1-3
If the measured values are excessively of small number,
➔ There is short somewhere in the shell.

■ Normal resistance range (measured at ambient temperature 23℃)

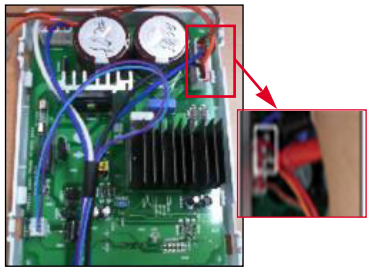
	Resistance
FC75LANE	**6~8** Ω

※ According to ambient temperature or operation situation, the values could show a little deviation.

2) Check to normality by measurement of Voltage

Measure the resistance between pin of the connector (as shown picture) with a multi-tester.

<Fig. 1>



<Fig. 1>

Standard for normality

- In order to decide whether compressor operating is normal or not, check the output transfer during the refrigerator operation.
- After input the initial power and compressor operates, wait for 10 minutes to estimate.
- Compressor operation may be diagnosed as normal if the voltage falls between 145V and 180V.

Warning

1. Please be cautious of electric shock and short (it is estimated after turning on initial power).
2. If the voltage is estimated less than 80V, it is diagnosed as bad.

3) Check problems by LED On & Off Count _ (Sub PCB)

If compressor protection logic is running, LED Lamp's blinking frequency of sub PCB, which takes in charge of control, can help estimate the protection logic's symptoms and the cause of its problems.

Trip name	Led Times	Comp Off Time
Stroke Trip	2	1min
Current Trip	6	6min
Lock Piston Trip	5	2min 30sec
IPM fault trip	7	20sec

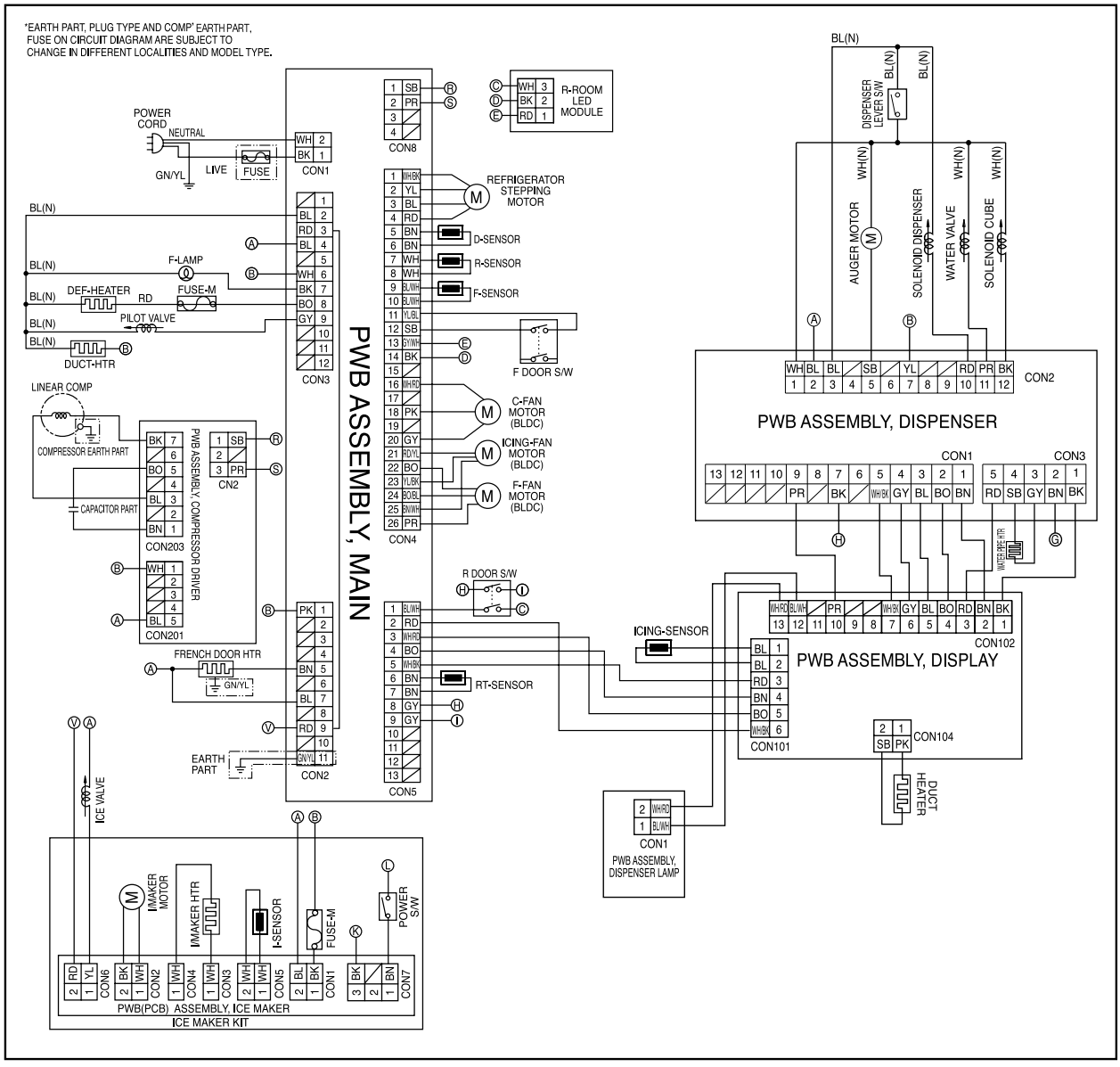
- Current Trip → PCB defects or Cycle clogging maybe the causes. After estimating winding resistance, estimate compressor operation voltage to check if there is any problem and take actions to repair cycle at replacement of compressor.

- Stroke Trip → can occur when the surrounding temperature is high, C-Fan, F-Fan and so on are constrained, or when cycle problems, such as moisture blocking or compressor defect, are related.

- Lock Piston Trip → Since compressor itself can be a potential cause of a defect, estimate the compressor resistance value according to #1's compressor winding value estimation method and estimate the #2's compressor operation voltage to decide whether it is defective or not
  (Before replacement of compressor, replace PCB and conduct the replacement of compressor during compressor replacement)

- IPM fault Trip → Replace sub PCB since there is high chance that it is caused by sub PCB's part defect.

5. CIRCUIT DIAGRAM



6. TROUBLESHOOTING

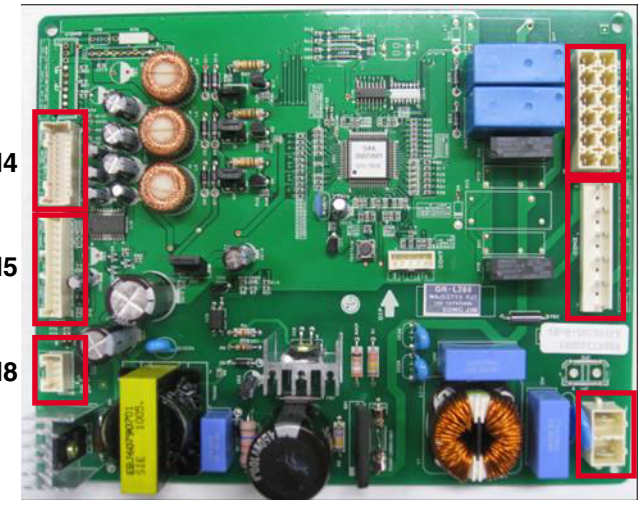
ERROR CODE on display panel

NO	Error Detection Category	Error Display		Error Generation Factors	Remark
		Freezer Temperature	Ref. Temperature		
1	Normality			None	Normal operation of Display
2	Freezer Sensor Error	Er	FS	Short or Disconnection of Freezer Sensor	Each Sensor have to check disconnection
3	Refrigerator Sensor Error	Er	rS	Short or Disconnection of Refrigerator Sensor	
4	Defrosting Sensor Error	Er	dS	Short or Disconnection of Defrosting Sensor	
5	Icing Sensor Error	Er	IS	Short or Disconnection of Icing Sensor	
6	Poor Defrosting	Er	dH	Even though it is passed 1hour since then Defrosting, if Defrosting sensor is not over 46°F(8°C), it is caused	Temperature Fuse Disconnection, Heater disconnection, DRAIN Jam, Poor Relay for Heater
7	Abnormality of Brushless DC FAN Motor for Ice Making	Er	IF	It is caused when F/B signal isn't over 65 seconds during Brushless DC FAN motor operating	Poor BLDC Motor connection, DRIVE IC, and TR
8	Abnormality of Brushless DC FAN Motor for Freezer	Er	FF	It is caused when F/B signal isn't over 65seconds during Brushless DC FAN motor operating	Poor BLDC Motor connection, DRIVE IC, and TR
9	Abnormality of Brushless DC FAN Motor for Mechanic Room	Er	CF	It is caused when F/B signal isn't over 65seconds during Brushless DC FAN motor operating	Poor BLDC Motor connection, DRIVE IC, and TR
10	Communication Error	Er	CO	Communication Error between Micom of Main PCB and Display Micom	Poor Communication connection, Poor TR of Transmitter and Receiver

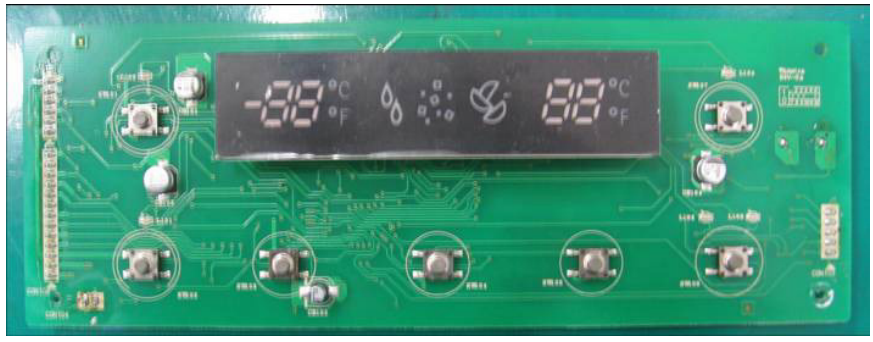
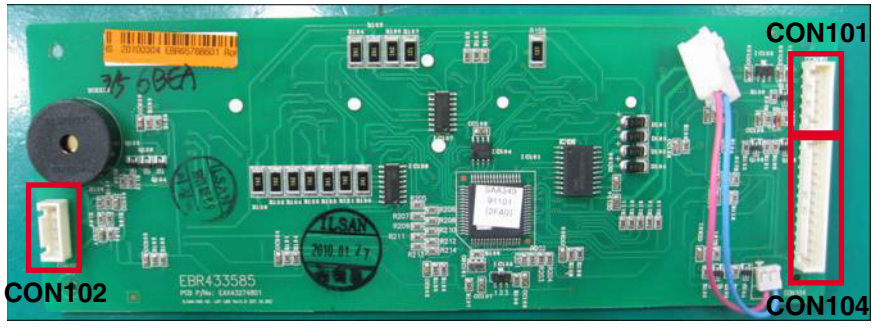
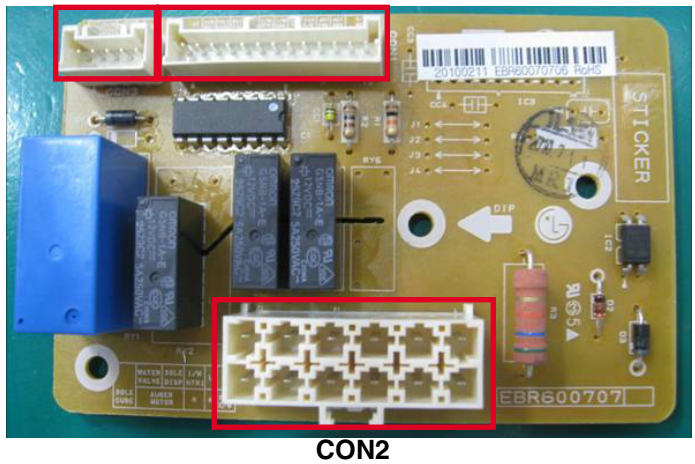
NOTE) In the case of Room Temperature Seneor Error, "Er rt" appears on the Display when Ultra Ice KEY and Freezer Temp' KEY pressed at the same time for one second.

7. PCB Picture

7-1 Main PCB

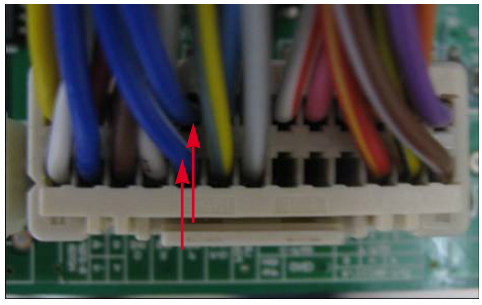
P/No & MFG	Picture
EBR67348003 (2010.02~)	

7-2 Display PCB & Sub PCB

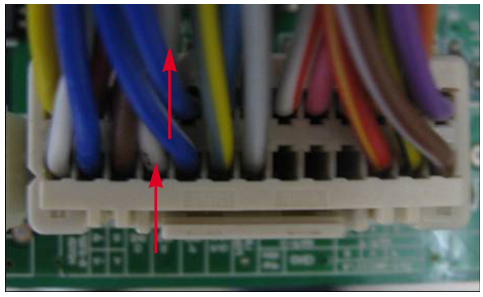
P/No	Picture
Display PCB EBR43358505 (2010.02~)	
	
Sub PCB EBR60070706 (2010.02~)	

8. Troubleshooting With Error Display

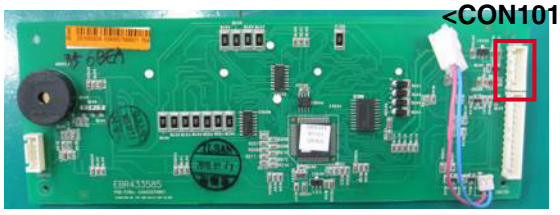
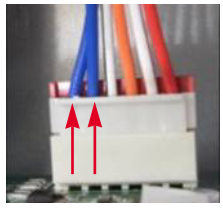
8-1 Freezer Sensor Error (Er FS)

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check for a loose connection.</td><td></td></tr>
<tr><td>2</td><td>Check the <u>Blue/White to Blue/White.</u>
 
<CON4></td><td>
<table>
<tr><th colspan="2">Result</th><th>SVC Action</th></tr>
<tr><td>0 Ω</td><td>Short</td><td>Change the sensor</td></tr>
<tr><td>Infinite ohms</td><td>Open</td><td>Replace the refrigerator</td></tr>
<tr><td>See resistance table</td><td>Normal</td><td>Check the Temp and resistance (Table-1)</td></tr>
</table>
<Temperature table-1>
<table>
<tr><th>(1) To (2)</th><th>Result</th></tr>
<tr><td>-22°F / -30°C</td><td>40 kΩ</td></tr>
<tr><td>-13°F / -25°C</td><td>30 kΩ</td></tr>
<tr><td>-4°F / -20°C</td><td>23 kΩ</td></tr>
<tr><td>5°F / -15°C</td><td>17 kΩ</td></tr>
<tr><td>14°F / -10°C</td><td>13 kΩ</td></tr>
<tr><td>23°F / -5°C</td><td>10 kΩ</td></tr>
<tr><td>32°F / 0°C</td><td>8 kΩ</td></tr>
</table>
※ The sensor is determined by the temperature.
For example, 23kΩ indicates -4°F.
</td></tr>
</table>

8-2 Refrigerator Sensor Error (Er rS)

No	Checking flow	Result & SVC Action
1	**Check for a loose connection.**	
2	**Check the White to White.**  **<CON4>**	<table><tr><th colspan="2">Result</th><th>SVC Action</th></tr><tr><td>0 Ω</td><td>Short</td><td>Change the sensor</td></tr><tr><td>Infinite ohms</td><td>Open</td><td>Replace the refrigerator</td></tr><tr><td>See resistance table</td><td>Normal</td><td>Check the Temp and resistance (Table-2)</td></tr></table> **<Temperature table-2>** <table><tr><th>(1) To (2)</th><th>Result</th></tr><tr><td>23°F / -5°C</td><td>38 kΩ</td></tr><tr><td>32°F / 0°C</td><td>30 kΩ</td></tr><tr><td>41°F / 5°C</td><td>24 kΩ</td></tr><tr><td>50°F / 10°C</td><td>19.5 kΩ</td></tr><tr><td>59°F / 15°C</td><td>16 kΩ</td></tr></table> **※ The sensor is determined by the temperature. For example, 30kΩ indicates 32°F.**

8-3 Icing Sensor Error (Er IS)

No	Checking flow	Result & SVC Action
1	**Check for a loose connection.**	
2	**Check the <u>Blue to Blue.</u>**  **<CON101>** **<Display>**  **<CON101>**	**Result & SVC Action** **<Temperature table-1>**

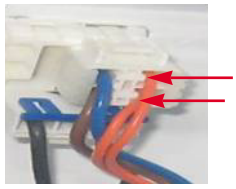
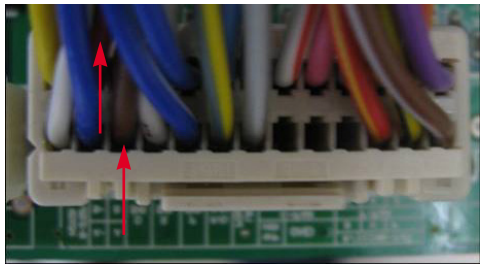
Result		SVC Action
0 Ω	Short	Change the sensor
Infinite ohms	Open	Check the resistance of the defrost sensor wires back to the main PCB. If they are open between the Main PCB and the connector for the icemaker it will be necessary to replace the refrigerator.
See resistance table	Normal	Check the Temp and resistance (Table-1)

<Temperature table-1>

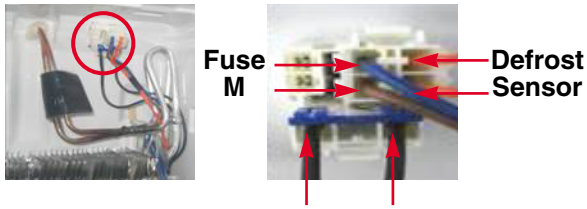
(1) To (2)	Result
-22°F / -30°C	40 kΩ
-13°F / -25°C	30 kΩ
-4°F / -20°C	23 kΩ
5°F / -15°C	17 kΩ
14°F / -10°C	13 kΩ
23°F / -5°C	10 kΩ
32°F / 0°C	8 kΩ

※ The sensor is determined by the temperature.
For example, 23kΩ indicates -4°F.

8-4 Defrost Sensor Error (F dS)

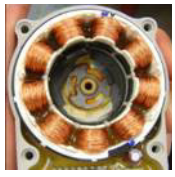
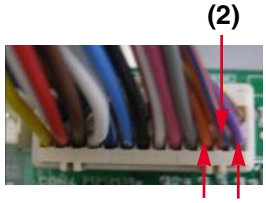
No	Checking flow	Result & SVC Action
1	**Check for a loose connection.**  	
2	**Check the <u>Orange to Orange.</u>**  **Check the <u>Brown to Brown.</u>**  **<CON4>**	**Result / SVC Action** 0 Ω — Short — Change the sensor Infinite ohms — Open — Replace the refrigerator See resistance table — Normal — Check the Temp and resistance (Table-3) **<Temperature table-3>** (1) To (2) — Result -22°F / -30°C — 40 kΩ -13°F / -25°C — 30 kΩ -4°F / -20°C — 23 kΩ 5°F / -15°C — 17 kΩ 14°F / -10°C — 13 kΩ 23°F / -5°C — 10 kΩ 32°F / 0°C — 8 kΩ **※ The sensor is determined by the temperature. For example, 23kΩ indicates -4°F.**

8-5 Defrost Heater Error (Er dH)

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the <u>Door gasket.</u></td><td rowspan="2"><table>
<tr><th>Part</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Fuse-M</td><td>0 Ω</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change Fuse-M</td></tr>
<tr><td rowspan="2">Defrost Heater</td><td>34~42 Ω</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change Fuse-M</td></tr>
<tr><td rowspan="2">Defrost Sensor</td><td>0 Ω</td><td>Go to the 3</td></tr>
<tr><td>Infinite ohms</td><td>Check the resistance of the defrost sensor wires back to the main PCB. If they are open between the Main PCB and the connector for the icemaker it will be necessary to replace the refrigerator.</td></tr>
</table></td></tr>
<tr><td>2</td><td>Check the <u>Defrost control part.</u>
 
</td></tr>
<tr><td>3</td><td>Input Test 3 Mode.
(Push the button 3 times)</td><td> 

</td></tr>
<tr><td>4</td><td>Check the <u>Blue to Orange.</u>
 
<CON3></td><td><table>
<tr><th>Result</th><th>SVC Action</th></tr>
<tr><td>112 ~ 116 V</td><td>Go to the 5</td></tr>
<tr><td>0 V</td><td>Replace Main PCB</td></tr>
</table></td></tr>
<tr><td>5</td><td>Release the test mode.
Push the button 1 times. (Normal)</td><td>  </td></tr>
<tr><td>6</td><td>Check the <u>Blue to Orange.</u>
 
<CON3></td><td><table>
<tr><th>Result</th><th>SVC Action</th></tr>
<tr><td>0 V</td><td>Normal</td></tr>
<tr><td>112 ~ 116 V</td><td>Replace Main PCB</td></tr>
</table></td></tr>
</table>

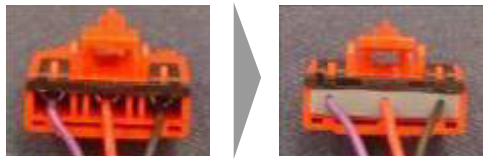
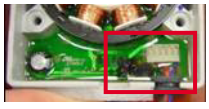
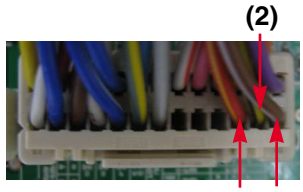
8-6 Freezer Fan Error (Er FF)

No	Checking flow	Result & SVC Action
1	**Reset the unit and Input Test 1 Mode. (Push the button 1 time)**	 
2	**Open the freezer door and Check the air flow. ※ While an error code is displayed, the fan is not working.**	
3	**Check the <u>Fan motor.</u>**   	**Rotate fan using your hand. It feel stuck or locked up, change the motor. (Cause of ice or rust inside of motor)**
4	**Check the <u>Fan motor voltage.</u>**   **<CON4>**	

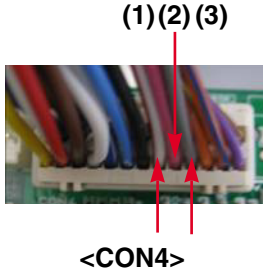
Status	SVC Action
No airflow	Go to 3
Airflow	Go to 4

Point	Result	SVC Action
(1) ~ (2)	Below 12 V	Change the PCB
(2) ~ (3)	0 or 5 V	Change the motor

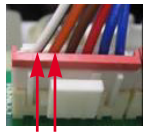
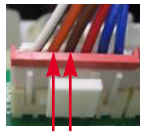
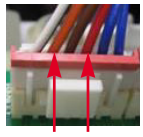
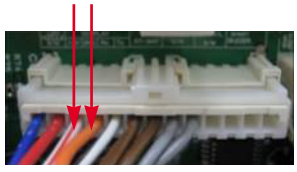
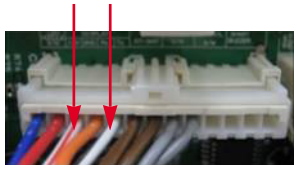
8-7 Icing Fan Error (Er IF)

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Reset the unit and
Input Test 1 Mode.
(Push the button 1 time)</td><td>   </td></tr>
<tr><td>2</td><td>Open the refrigerator door and Check the air flow.
※ While an error code is displayed, the fan is not working.</td><td> 
<table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>No airflow</td><td>Go to the 3,4</td></tr><tr><td>Airflow</td><td>Go to the 5</td></tr></table></td></tr>
<tr><td>3</td><td>Check the <u>Connector.</u>
(Frozen caused the PCB short)
    </td><td>※ Tip
To protect ice short, add wire seal in connector. We developed new type connector, so order the new type.
 
 
Wire seal (Silicon)
<table><tr><th>No</th><th>Part Name</th><th>Old P/No</th><th>New P/No</th></tr><tr><td rowspan="2">407A</td><td>Duct Asm,</td><td>5209JA</td><td>5209JA</td></tr><tr><td>Connector</td><td>1044A</td><td>1044A</td></tr></table></td></tr>
<tr><td>4</td><td>Check the <u>Fan motor.</u>
(Frozen, Lock, ect.)
   
  </td><td></td></tr>
<tr><td>5</td><td>Check the <u>Fan motor voltage.</u>
  
(2)
(1) (3)
<CON4></td><td><table><tr><th></th><th>Result</th><th>SVC Action</th></tr><tr><td>(1) ~ (2)</td><td>Below 9 V</td><td>Change the PCB</td></tr><tr><td>(2) ~ (3)</td><td>0 or 5 V</td><td>Change the motor</td></tr></table></td></tr>
</table>

8-8 Condenser Fan Error (Er CF)

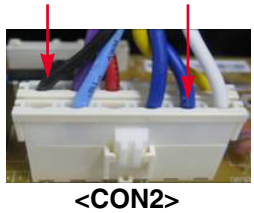
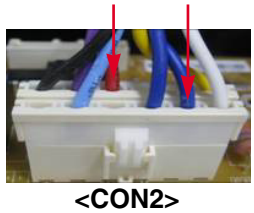
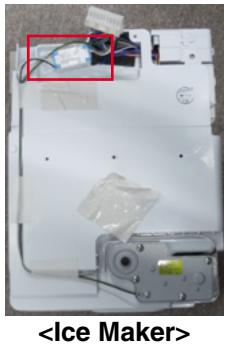
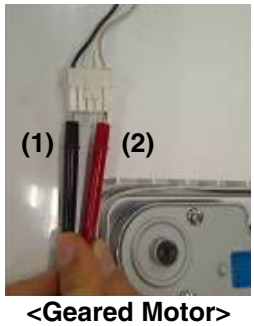
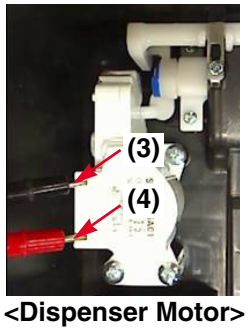
No	Checking flow	Result & SVC Action
1	**Reset the unit and Input Test 1 Mode. (Push the button 1 time)**	 
2	**Check the fan rotating.** **※ While an error code is displayed, the fan is not working.**	 **Status** / **SVC Action** No airflow / Check motor Airflow / Go to the 4
3	**Check the <u>Fan motor</u> and <u>surrounding.</u>** 	**Rotate fan using your hand. It feel stuck or locked up, change the motor.**
4	**Check the <u>Fan motor voltage.</u>**   **(1) (2) (3)** **<CON4>**	**Result** / **SVC Action** (1) ~ (2) / Below 10 V / Change the PCB (2) ~ (3) / 0 or 5 V / Change the motor

8-9 Communication Error (Er CO)

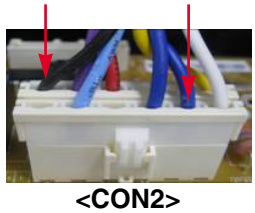
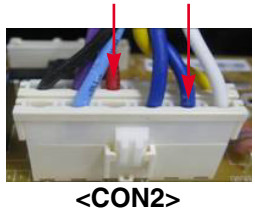
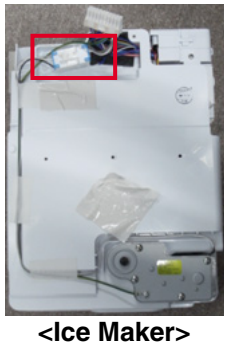
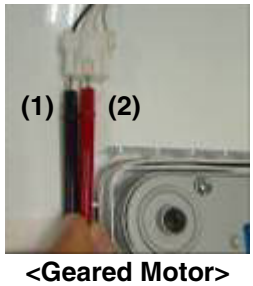
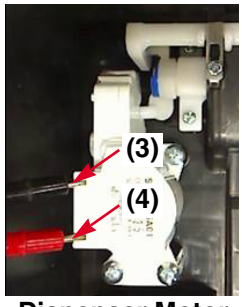
<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the loose connection.</td><td></td></tr>
<tr><td>2</td><td>Check the Red to White/Red.
 
CON0101
 
<Display> <CON101>
<table><tr><th>Result</th><th>SVC Action</th></tr><tr><td>12 V</td><td>Go to the 3</td></tr><tr><td>Other</td><td>Check the Hinge (loose connection)
Change the Main PCB</td></tr></table></td></tr>
<tr><td>3</td><td>Check the Orange to White/Red.
 
CON0101
 
<Display> <CON101>
<table><tr><th>Result</th><th>SVC Action</th></tr><tr><td>0 V or 5 V</td><td>Change the Display PCB</td></tr><tr><td>Other</td><td>Go to the 4</td></tr></table></td></tr>
<tr><td>4</td><td>Check the White/Black to White/Red.
 
CON0101
 
<Display> <CON101>
<table><tr><th>Result</th><th>SVC Action</th></tr><tr><td>0 V or 5 V</td><td>Change the Main PCB</td></tr><tr><td>Other</td><td>Go to the 5</td></tr></table></td></tr>
<tr><td>5</td><td>Check the White/Red to Orange.
 
 
<CON5>
<table><tr><th>Result</th><th>SVC Action</th></tr><tr><td>0 V or 5 V</td><td>Change the Display PCB</td></tr><tr><td>Other</td><td>Go to the 6</td></tr></table></td></tr>
<tr><td>6</td><td>Check the White/Red to White/Black.
 
 
<CON5>
<table><tr><th>Result</th><th>SVC Action</th></tr><tr><td>0 V or 5 V</td><td>Change the Main PCB</td></tr><tr><td>Other</td><td>Normal</td></tr></table></td></tr>
</table>

9. Troubleshooting Without Error Display

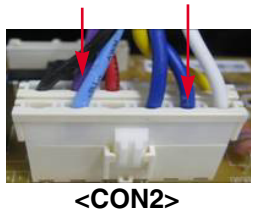
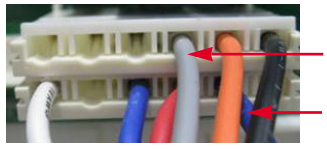
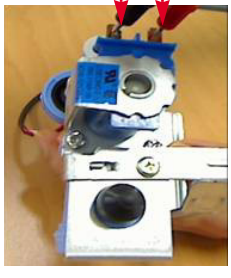
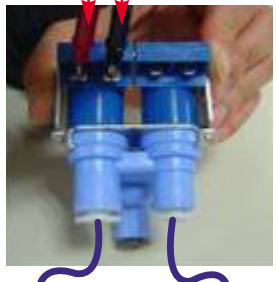
9-1 Cube mode doesn't work

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the loose connection.</td><td></td></tr>
<tr><td>2</td><td>Check the <u>Black to Blue.</u>
(While pushing the lever S/W)
  
<CON2></td><td>
<table>
<tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Activated</td><td>112 ~ 115 V</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
<tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Check the <u>Red to Blue.</u>
(While pushing the lever S/W)
  
<CON2></td><td>
<table>
<tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Activated</td><td>9 ~ 12 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
<tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Check the resistance value.
 
<Ice Maker>
  
<Geared Motor> <Dispenser Motor></td><td>
<table>
<tr><th>Point</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">(1) to (2)</td><td>31.1 ~ 42.1 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Replace Geared Motor</td></tr>
<tr><td rowspan="2">(3) to (4)</td><td>9.9 ~ 12.1 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Replace Geared Motor</td></tr>
</table>
</td></tr>
</table>

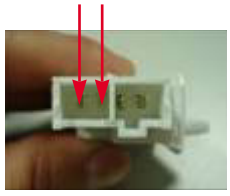
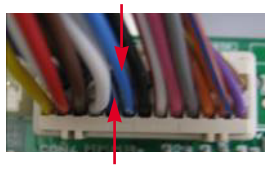
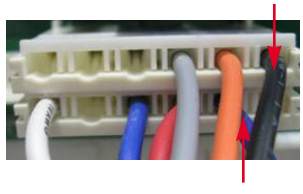
9-2 Crush mode doesn't work

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the loose connection.</td><td></td></tr>
<tr><td>2</td><td>Check the <u>Sky Blue to Blue.</u>
(While pushing the lever S/W)
  
<CON2></td><td>
<table>
<tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Activated</td><td>112 ~ 115 V</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
<tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Check the <u>Red to White Red.</u>
(While pushing the lever S/W)
  
<CON2></td><td>
<table>
<tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Activated</td><td>9 ~ 12 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
<tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change PCB</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Check the resistance value.
 
<Ice Maker>
 
<Geared Motor>
 
<Dispenser Motor></td><td>
<table>
<tr><th>Point</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">(1) to (2)</td><td>31.1 ~ 42.1 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Replace Geared Motor</td></tr>
<tr><td rowspan="2">(3) to (4)</td><td>9.9 ~ 12.1 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Replace Geared Motor</td></tr>
</table>
</td></tr>
</table>

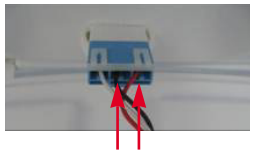
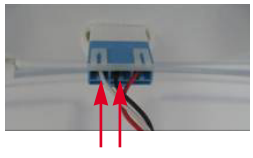
9-3 Water mode doesn't work

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the loose connection.</td><td></td></tr>
<tr><td>2</td><td>Check the <u>Purple to Blue.</u>
(While pushing the lever S/W)
 
 
<CON2>
<table><tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr><tr><td rowspan="2">Activated</td><td>112 ~ 115 V</td><td>Go to the 3</td></tr><tr><td>Other</td><td>Change PCB</td></tr><tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 3</td></tr><tr><td>Other</td><td>Change PCB</td></tr></table></td></tr>
<tr><td>3</td><td>Check the <u>Blue to Gray.</u>
(While pushing the lever S/W)
 
 
<CON3>
<table><tr><th>Lever s/w</th><th>Result</th><th>SVC Action</th></tr><tr><td rowspan="2">Activated</td><td>112 ~ 115 V</td><td>Go to the 4</td></tr><tr><td>Other</td><td>Change PCB</td></tr><tr><td rowspan="2">Not activated</td><td>0 ~ 2 V</td><td>Go to the 4</td></tr><tr><td>Other</td><td>Change PCB</td></tr></table></td></tr>
<tr><td>4</td><td>Check the resistance value.
(1) (2)
 
<Pilot Valve>
Machine Room
(3) (4)
 
Dispenser | Ice Maker
<Water Valve>
In door
<table><tr><th>Point</th><th>Result</th><th>SVC Action</th></tr><tr><td rowspan="2">(1) to (2)</td><td>360 ~ 420 Ω</td><td>Normal</td></tr><tr><td>Other</td><td>Replace Water Valve</td></tr><tr><td rowspan="2">(3) to (4)</td><td>360 ~ 420 Ω</td><td>Normal</td></tr><tr><td>Other</td><td>Replace Water Valve</td></tr></table></td></tr>
</table>

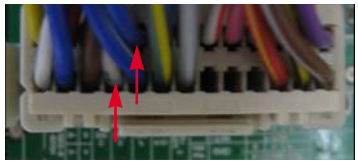
9-4 Freezer room AC Bulb Lamp doesn't work

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the Freezer door switch.
  </td><td>If feel sticky, Change the door s/w.</td></tr>
<tr><td>2</td><td>Check the door S/W resistance.
  </td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Normal</td><td>0 Ω</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change door S/W</td></tr>
<tr><td rowspan="2">Push S/W</td><td>Infinity</td><td>Go to the 3</td></tr>
<tr><td></td><td>Change door S/W</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Check the Yellow Blue to Sky blue.
 
 
<CON4></td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Closed</td><td>5 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change the Door S/W</td></tr>
<tr><td rowspan="2">Open</td><td>0 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change the Door S/W</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Check the Blue to Black.
 
 
<CON3></td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Closed</td><td>0 ~ 2 V</td><td>Normal</td></tr>
<tr><td>Other</td><td>Change the Main PCB</td></tr>
<tr><td rowspan="2">Open</td><td>115 V</td><td>Change the F Lamp</td></tr>
<tr><td>Other</td><td>Change the PCB</td></tr>
</table>
</td></tr>
</table>

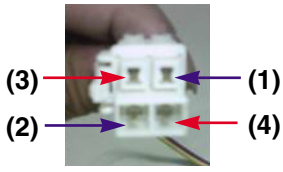
9-5 Refrigerator room lamp doesn't work

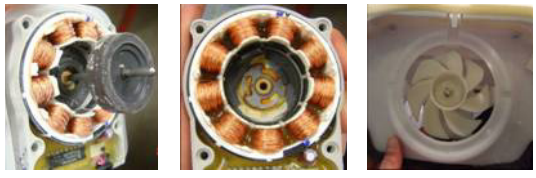
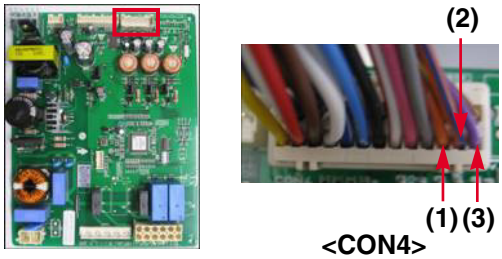
<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the Refrigerator door switch.
  </td><td>If feel sticky, Change the door s/w.</td></tr>
<tr><td>2</td><td>Check the door S/W resistance.
  </td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Normal</td><td>0 Ω</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change door S/W</td></tr>
<tr><td rowspan="2">Push S/W</td><td>Infinity</td><td>Go to the 3</td></tr>
<tr><td>Other</td><td>Change door S/W</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Check the Black to Gray White.
  
<CON4></td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Normal</td><td>12 V</td><td>Go to the 4</td></tr>
<tr><td>Other</td><td>Change the PCB</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Check the Red to Black.
   </td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Normal</td><td>12 V</td><td>Go to the 5</td></tr>
<tr><td>Other</td><td>Change the LED Lamp</td></tr>
</table>
</td></tr>
<tr><td>5</td><td>Check the Black to White.
   </td><td>
<table>
<tr><th>Status</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">Closed</td><td>0 ~ 2 V</td><td>Normal</td></tr>
<tr><td>Other</td><td>Change the Door S/W</td></tr>
<tr><td rowspan="2">Open</td><td>12 V</td><td>Normal</td></tr>
<tr><td>Other</td><td>Change the LED Lamp</td></tr>
</table>
</td></tr>
</table>

9-6 Poor cooling in Fresh food section

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the sensor resistance.
 
<CON4>
※ The sensor is determined by the temperature.
For example, 30kΩ indicates 32°F.</td><td><table><tr><th>Temperature</th><th>Result</th></tr><tr><td>23°F / -5°C</td><td>38 kΩ</td></tr><tr><td>32°F / 0°C</td><td>30 kΩ</td></tr><tr><td>41°F / 5°C</td><td>24 kΩ</td></tr><tr><td>50°F / 10°C</td><td>19.5 kΩ</td></tr><tr><td>59°F / 15°C</td><td>16 kΩ</td></tr></table></td></tr>
<tr><td>2</td><td>Reset the unit and
Input Test 1 Mode.
(Push the button 1 time)</td><td> 
  </td></tr>
<tr><td>3</td><td>Open the fresh food door and
Check the air flow.
  </td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Airflow</td><td>Go to the 4</td></tr><tr><td>No airflow</td><td>Check the R Fan motor
Check the damper
(Go to the 6)</td></tr></table></td></tr>
<tr><td>4</td><td>Check the air temperature.
Cold or not?</td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Cold</td><td>Normal</td></tr><tr><td>Not cold</td><td>Check the Compressor
And sealed system</td></tr></table></td></tr>
</table>

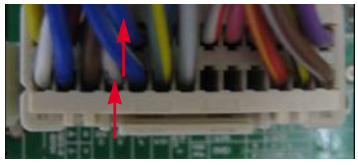
<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr>
<td>5</td>
<td>
Damper checking method.
Inputting TEST Mode,
Check the damper and PCB.



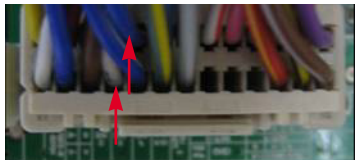
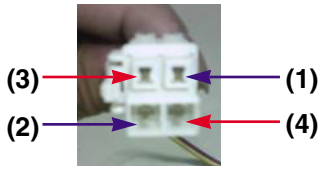
</td>
<td>
<table>
<tr><th>Test Mode</th><th>Damper State</th><th>SVC Action</th></tr>
<tr><td>1 Mode</td><td>Open</td><td rowspan="2">Damper is normal.
(Check the Damper)</td></tr>
<tr><td>2 Mode</td><td>Closed</td></tr>
<tr><td>1,2 mode</td><td>Not working</td><td>Change the damper</td></tr>
</table>
<table>
<tr><th>Test Point</th><th>Result</th><th>SVC Action</th></tr>
<tr><td rowspan="2">(1) to (2)</td><td>270 ~330 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Change damper</td></tr>
<tr><td rowspan="2">(3) to (4)</td><td>270 ~330 Ω</td><td>Normal</td></tr>
<tr><td>Other</td><td>Change damper</td></tr>
</table>
</td>
</tr>
<tr>
<td>6</td>
<td>
Check the <u>Fan motor.</u>
Rotate fan using your hand.
It feel stuck or locked up, change the motor.
(Cause of ice or rust inside of motor)

</td>
<td>
<table>
<tr><th>Point</th><th>Result</th><th>SVC Action</th></tr>
<tr><td>Motor</td><td>Stuck</td><td>Change the motor</td></tr>
</table>
</td>
</tr>
<tr>
<td>7</td>
<td>
Check the F <u>Fan motor voltage.</u>


<CON4>
</td>
<td>
<table>
<tr><th>Point</th><th>Result</th><th>SVC Action</th></tr>
<tr><td>(1) ~ (2)</td><td>Below 12 V</td><td>Change the PCB</td></tr>
<tr><td>(2) ~ (3)</td><td>0 or 5 V</td><td>Change the motor</td></tr>
</table>
</td>
</tr>
</table>

9-7 Poor cooling in Freezer compratment

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the sensor resistance.
 
<CON4>
※ The sensor is determined by the temperature.
For example, 23kΩ indicates -4°F.</td><td><table><tr><th>(1) To (2)</th><th>Result</th></tr><tr><td>-22°F / -30°C</td><td>40 kΩ</td></tr><tr><td>-13°F / -25°C</td><td>30 kΩ</td></tr><tr><td>-4°F / -20°C</td><td>23 kΩ</td></tr><tr><td>5°F / -15°C</td><td>17 kΩ</td></tr><tr><td>14°F / -10°C</td><td>13 kΩ</td></tr><tr><td>23°F / -5°C</td><td>10 kΩ</td></tr><tr><td>32°F / 0°C</td><td>8 kΩ</td></tr></table></td></tr>
<tr><td>2</td><td>Reset the unit and
Input Test 1 Mode.
(Push the button 1 time)</td><td> 
  </td></tr>
<tr><td>3</td><td>Open the freezer door and check the air flow.
  </td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Airflow</td><td>Go to the 4</td></tr><tr><td>No airflow</td><td>Check the F Fan motor</td></tr></table></td></tr>
<tr><td>4</td><td>Check the air temperature.
Cold or not ?</td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Cold</td><td>Normal</td></tr><tr><td>Not cold</td><td>Check the Compressor And sealed system</td></tr></table></td></tr>
</table>

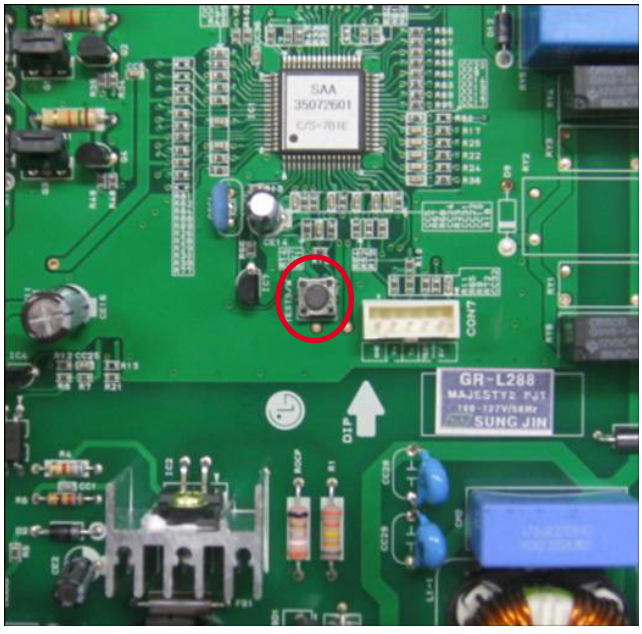
9-8 Over cooling in Fresh food compartment

<table>
<tr><th>No</th><th>Checking flow</th><th>Result & SVC Action</th></tr>
<tr><td>1</td><td>Check the sensor resistance.
 
<CON4>
※ The sensor is determined by the temperature.
For example, 30kΩ indicates 32°F.</td><td><table><tr><th>Temperature</th><th>Result</th></tr><tr><td>23°F / -5°C</td><td>38 kΩ</td></tr><tr><td>32°F / 0°C</td><td>30 kΩ</td></tr><tr><td>41°F / 5°C</td><td>24 kΩ</td></tr><tr><td>50°F / 10°C</td><td>19.5 kΩ</td></tr><tr><td>59°F / 15°C</td><td>16 kΩ</td></tr></table></td></tr>
<tr><td>2</td><td>Reset the unit and
Input Test 1 Mode.
(Push the button 1 time)</td><td> 
  </td></tr>
<tr><td>3</td><td>Open the refrigerator door and
Check the air flow.
  </td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Airflow</td><td>Go to the 4</td></tr><tr><td>No airflow</td><td>Check the R Fan
Check the damper
(Go to the 5)</td></tr></table></td></tr>
<tr><td>4</td><td>Input Test 2 Mode and
Check the air flow.
(Push the button 1 time)
 
  </td><td><table><tr><th>Status</th><th>SVC Action</th></tr><tr><td>Airflow</td><td>Go to the 5</td></tr><tr><td>No airflow</td><td>Normal</td></tr></table></td></tr>
<tr><td>5</td><td>Check the damper resistance.
 
(3) (1)
(2) (4)</td><td><table><tr><th>Point</th><th>Result</th><th>SVC Action</th></tr><tr><td rowspan="2">(1) to (2)</td><td>270 ~330 Ω</td><td>Normal</td></tr><tr><td>Other</td><td>Change damper</td></tr><tr><td rowspan="2">(3) to (4)</td><td>270 ~330 Ω</td><td>Normal</td></tr><tr><td>Other</td><td>Change damper</td></tr></table></td></tr>
</table>

10. Reference

10-1 TEST MODE and Removing TPA

1. How to enter the TEST MODE
   If you push the test button on the Main PCB, the refrigerator will be enter the TEST MODE.



Main PWB

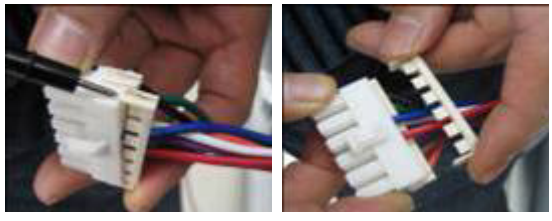
* 1 time : Comp / Damper / All FAN on
  (All things displayed)

* 2 times : Damper closed
  (22 22 displayed)

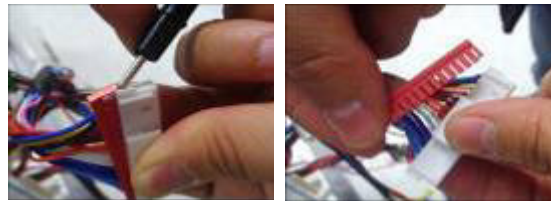
* 3 times : Forced defrost mode
  (33 33 displayed)

2. How to remove Terminal Position Assurance (TPA)

<AC TPA>



<DC TPA>



※ After measure the values, you should put in the TPA again.

10-2 TEMPERATURE CHART - FREEZER AND ICING SENSOR

TEMP	RESISTANCE	VOLTAGE
-39°F (-40°C)	73.29 kΩ	4.09 V
-30°F (-35°C)	53.63 kΩ	3.84 V
-21°F (-30°C)	39.66 kΩ	3.55 V
-13°F (-25°C)	29.62 kΩ	3.23 V
-4°F (-20°C)	22.33 kΩ	2.89 V
5°F (-15°C)	16.99 kΩ	2.56 V
14°F (-10°C)	13.05 kΩ	2.23 V
23°F (-5°C)	10.10 kΩ	1.92 V
32°F (0°C)	7.88 kΩ	1.63 V
41°F (5°C)	6.19 kΩ	1.38 V
50°F (10°C)	4.91 kΩ	1.16 V
59°F (15°C)	3.91 kΩ	0.97 V
68°F (20°C)	3.14 kΩ	0.81 V
77°F (25°C)	2.54 kΩ	0.67 V
86°F (30°C)	2.07 kΩ	0.56 V
95°F (35°C)	1.69 kΩ	0.47 V
104°F (40°C)	1.39 kΩ	0.39 V

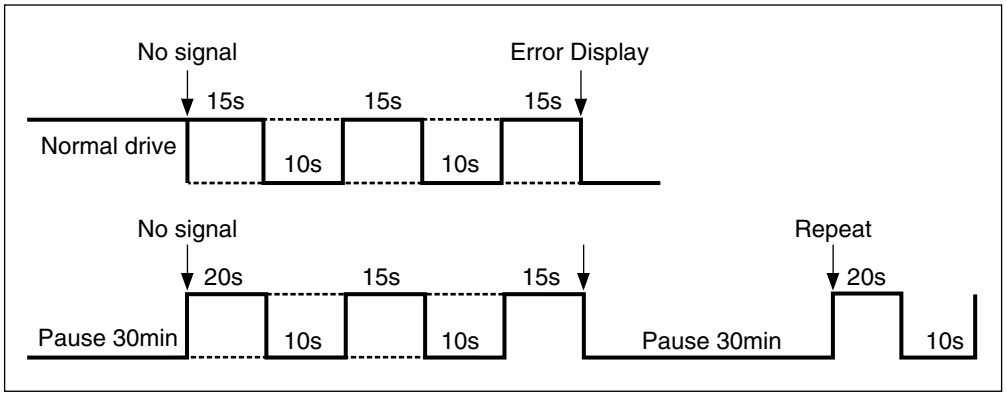
10-3 TEMPERATURE CHART - REFRIGERATOR AND DEFROST SENSOR

TEMP	RESISTANCE	VOLTAGE
-39°F (-40°C)	225.1 kΩ	4.48 V
-30°F (-35°C)	169.8 kΩ	4.33 V
-21°F (-30°C)	129.3 kΩ	4.16 V
-13°F (-25°C)	99.30 kΩ	3.95 V
-4°F (-20°C)	76.96 kΩ	3.734 V
5°F (-15°C)	60.13 kΩ	3.487 V
14°F (-10°C)	47.34 kΩ	3.22 V
23°F (-5°C)	37.55 kΩ	2.95 V
32°F (0°C)	30 kΩ	2.67 V
41°F (5°C)	24.13 kΩ	2.40 V
50°F (10°C)	19.53 kΩ	2.14 V
59°F (15°C)	15.91 kΩ	1.89 V
68°F (20°C)	13.03 kΩ	1.64 V
77°F (25°C)	10.74 kΩ	1.45 V
86°F (30°C)	8.89 kΩ	1.27 V
95°F (35°C)	7.40 kΩ	1.10 V
104°F (40°C)	6.20 kΩ	0.96 V

10-4 How to check the Fan-Error

(1) EBR673480

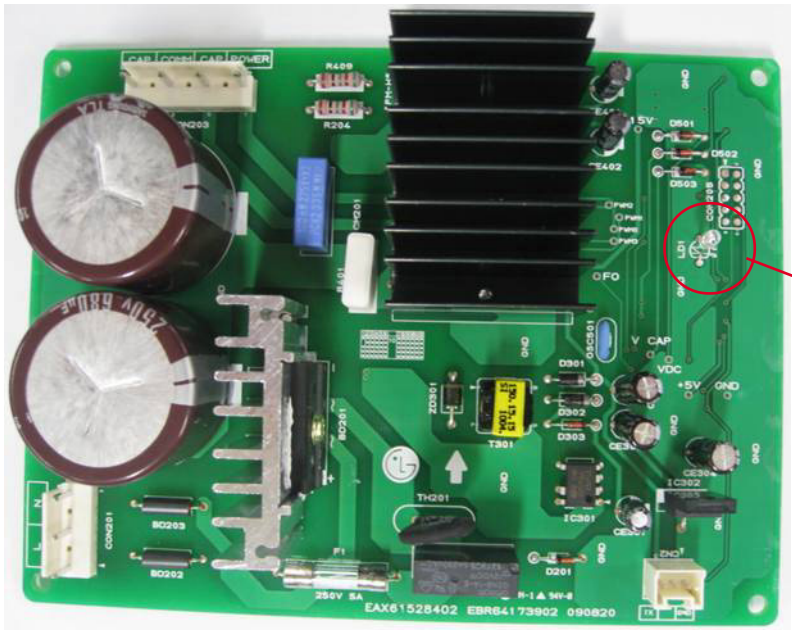
After sending a signal to the fan, the MICOM checks the BLDC fan motor s lock status. If there is no feedback signal from the BLDC fan, the fan motor stops for 10 seconds and then is powered again for 15 seconds. To determine that there is a fan motor malfunction, this process is repeated 3 times. If the fan motor is determined to be defective, the error code will be shown in the display for 30 minutes. At this point, the process will be repeated until the fan motor operates normally. If normal operation is achieved, the error display is erased and the MICOM is reset automatically.

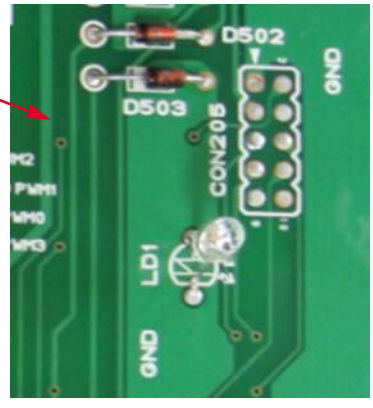


Compressor Troubleshooting

Step 1) Loosen up screw of Case Assembly PCB and open the Cover PCB

Step 2) Check for blinking frequency of LED, PWB





If compressor is normal, it does not blink

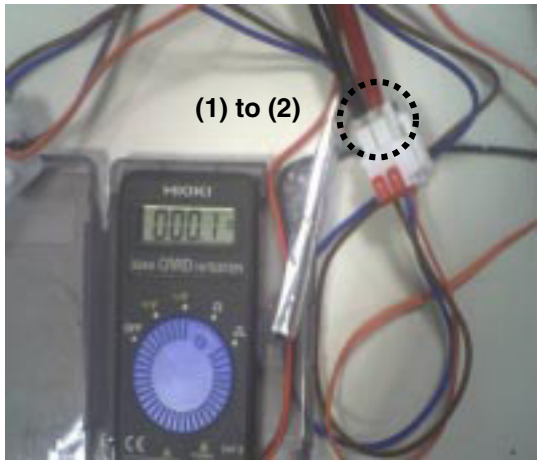
: Refer to the next page to find out what actions to take according to how many times LED blink

Actions to take according to Led blinking frequency

No	LED operating condition	Cause	Service guideline
1	**LED two - time repetiton (Stroke Trip)**  ··on - on - off - on - on - off - on - on - off ··repeating	PCB Parts defect or Compressor Connector miss connecting (Piston over run)	1. Please check, Whether connector of compressor is attached rightly or not. after power off 2. After the first action, You check on normal operation of compressor. 3. If the same symptom arises after the second action, replace PCB
2	**LED four - time repetiton (Overload Protect)**  ··on - on - on - on - off - on - on - on - on - off ··repeating	Outlet clogging	1. After resetting power, check if it is running normal 2. If the same symptom arises after the first action 3. If the same symptom arises after the second action, replace compressor
3	**LED five - time repetiton (Piston Lock Trip)**  ··on - on - on - on - on - off - on - on - on - on - on - off ··repeating	Piston constraint	1. After resetting power, check if it is running normal 2. If the same symptom arises after the first action 3. If the same symptom arises after the second action, replace compressor
4	**LED six - time repetiton (Current Trip)**  ··on - on - on - on - on - on - off - on - on - on - on - on - on - off ··repeating	Circuit over current error Or cycle error	1. After resetting power, check if it is running normal 2. If the same symptom arises after the first action 3. If the same symptom arises after the second action, replace compressor
5	**LED seven- time repetiton (IPM Fault Trip)**  ··on - on - on - on - on - on - on - off - on - on -on - on - on - on- on - off ··repeating	PCB parts defect (IPM)	1. After resetting power, check if it is running normal 2. If the same symptom arises after the first action, replace PCB

11. COMPONENT TESTING INFORMATION

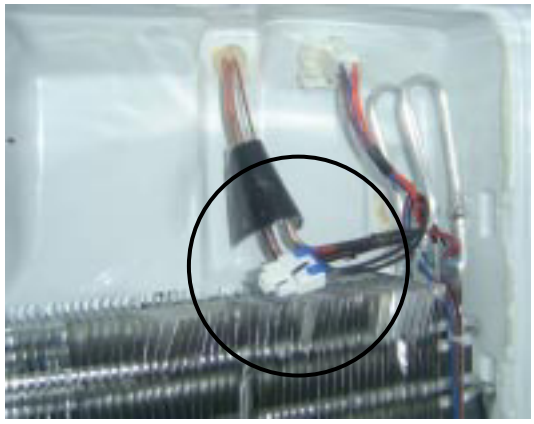
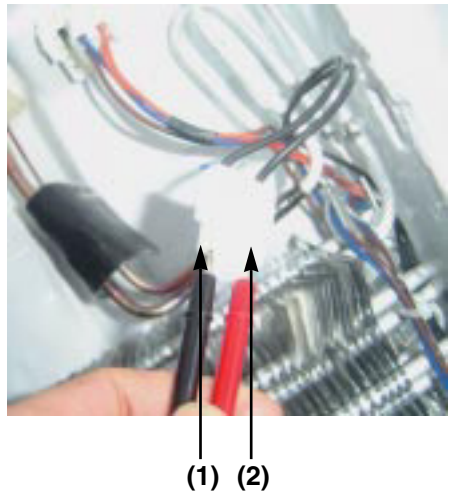
11-1 Defrost Controller Assembly

<table>
<tr><td>Function</td><td>- Controller assembly is consist of 2 kinds of part those are fuse-m and sensor. we can decide part is defect or not when we check the resistance.
- Fuse-M can cut off the source when defrost heater operate the unusual high temperature.
- Sensor give temperature information to Micom</td></tr>
<tr><td>How to Measure (Fuse-M)</td><td> 

Measure the 2 pin connected to Fuse-M.
If the ohmmeter indicate below 0.1ohm Fuse-M is good. If Fuse-M measures infinite ohms, it is open and needs to be replaced.</td></tr>
<tr><td>How to Measure (Sensor)</td><td> 

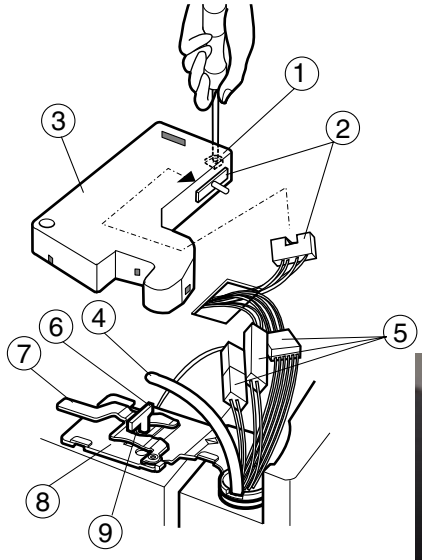
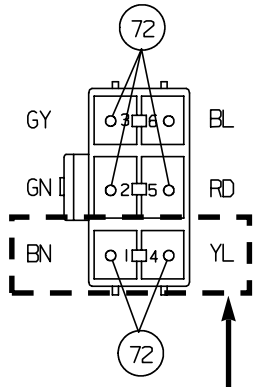
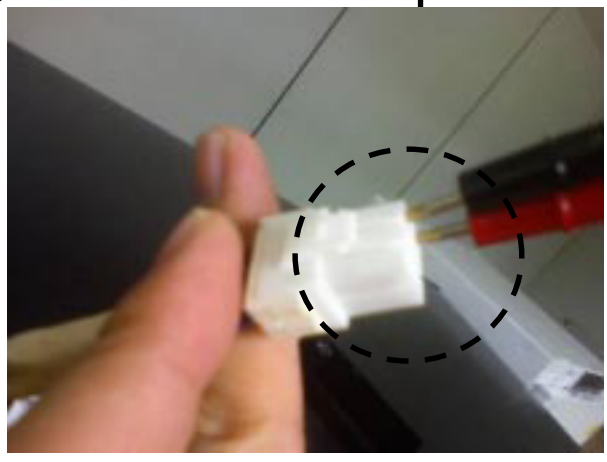
Measure the 2 pin connected to Sensor.
If the ohmmeter indicate 11㏀ (at room temperature) It is normal.
Checking the resistance at other temperatures, check the sensor resistance chart.</td></tr>
<tr><td>Standard</td><td>Fuse-M (at all temperature)
<table><tr><td>Test Point</td><td>Ressult</td></tr><tr><td>(1) to (2)</td><td>0 ~ 0.1 Ω</td></tr></table>
Sensor (at room temperature)
<table><tr><td>Test Point</td><td>Ressult</td></tr><tr><td>(1) to (2)</td><td>11 Ω</td></tr></table></td></tr>
</table>

11-2 Sheath Heater

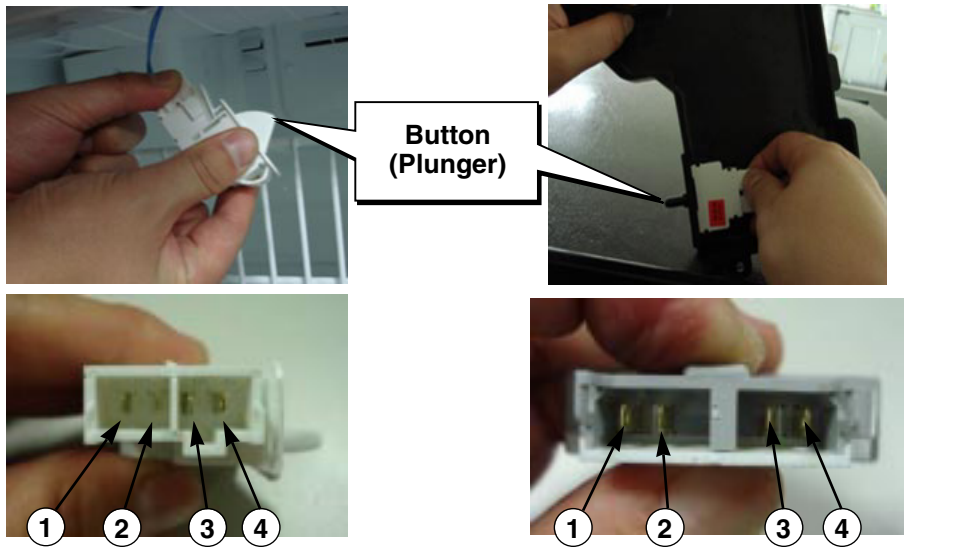
<table>
<tr><td>Function</td><td>Sheath heater is a part for defrost.</td></tr>
<tr><td>How to Measure</td><td>



Measure the 2 pin connected to Sheath Heater.
If resistance is between 34 ~ 42 ohms, the heater is normal.
If it measures infinite ohms the heater is open and needs to be replaced.
</td></tr>
<tr><td>Standard</td><td>
Sheath heater (at all temperature)
<table>
<tr><th>Test Point</th><th>Ressult</th></tr>
<tr><td>(1) to (2)</td><td>34 ~ 42 Ω</td></tr>
</table>
</td></tr>
</table>

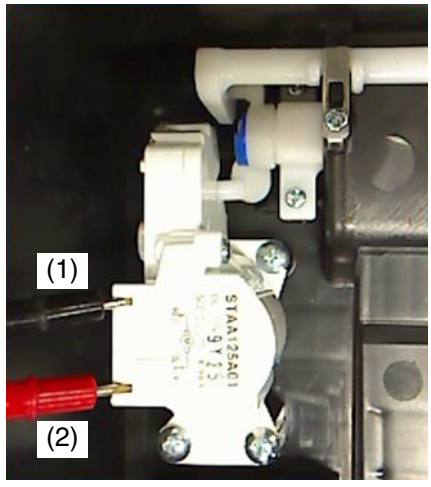
11-3 Door Heater Assembly

Function	The heater is designed to prevent the exterior moisture on the door.
How to Measure	  
Standard	Test Point: (1) to (2) — Ressult: 2.3 ~ 2.9 Ω

11-4 Door Switch

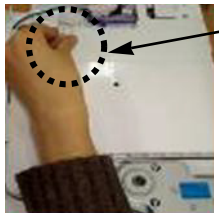
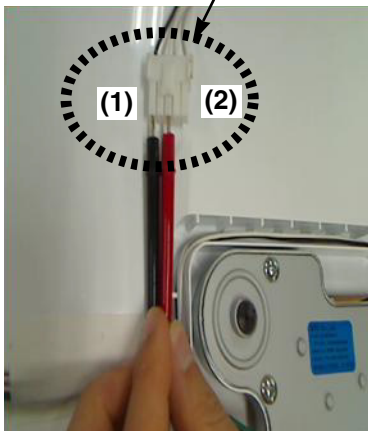
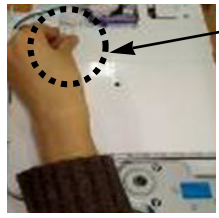
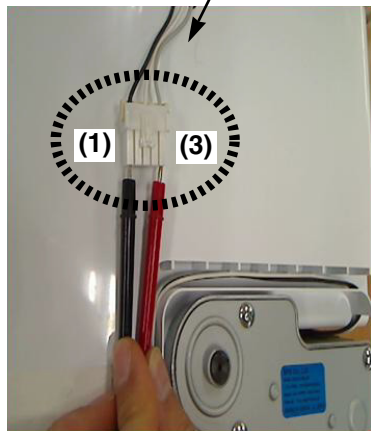
Function	Senses when the door is opened or closed by sending a signal to the Main PCB.
How to Measure	**<Switch, Freezer>** **<Switch, Refrigerator>**  **Beep** **Beep** Check the resistance between connectors 1, 2 and 3, 4.
Standard	**Multimeter beep – Switch F,R** Nomal: Push the button(Plunger) 0 Ω: None (∞ Ω)

11-5 Dispenser DC Motor

<table>
<tr><td>Function</td><td>- Dispenser DC Motor : Opens and closes the ice chute door.</td></tr>
<tr><td>How to Measure</td><td> 

Dispensor DC Motor</td></tr>
<tr><td>Standard</td><td>Dispenser DC Motor
<table>
<tr><th>Test Points</th><th>Result</th></tr>
<tr><td>(1) to (2)</td><td>9.9 ~ 12.1 Ω</td></tr>
</table></td></tr>
</table>

11-6 ICE AUGER Moter ASSEMBLY

Function	Activates to dispense ice.
How to Measure	**< In-door Motor >**  1 Take out the male housing from female housing 2 Measure the resistance between (1) and (2)  **< In-door Motor >**  1 Take out the male housing from female housing 2 Measure the resistance between (1) and (3)  Check the resistance between connectors (In-door motor 1, 2) and (In-door motor 1, 3).
Standard	**Geared Motor** Test Points: (1) to (2) — Result: 31.1 ~ 42.09 Ω **Cube Solenoid** Test Points: (1) to (3) — Result: 31.1 ~ 42.09 Ω

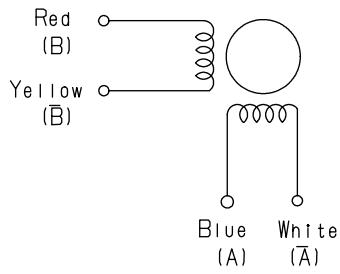
11-7 Damper

Function

The damper supplies the cold air from the freezer to the refrigerator section.

How to Measure

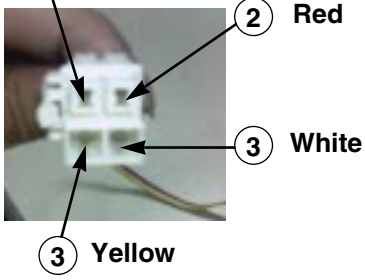
Table(1): 결선도(Wirering)



Table(2): 2-2상 여자순서(CW Rotation)

Housing No. & L/Wire Color	Step			
	1	2	3	4
1- Blue (A)	+	-	-	+
2- Red (B)	+	+	-	-
3- White(A)	-	+	+	-
4- Yellow(B)	-	-	+	+

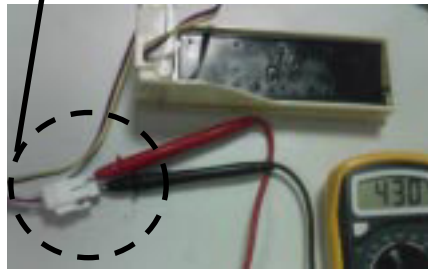
< Damper Circuit >



Check the (1), (3)

< extension >

Check the (2), (4)



Check the (1), (3)

Check the resistance between connectors 1,3 and 2,4.

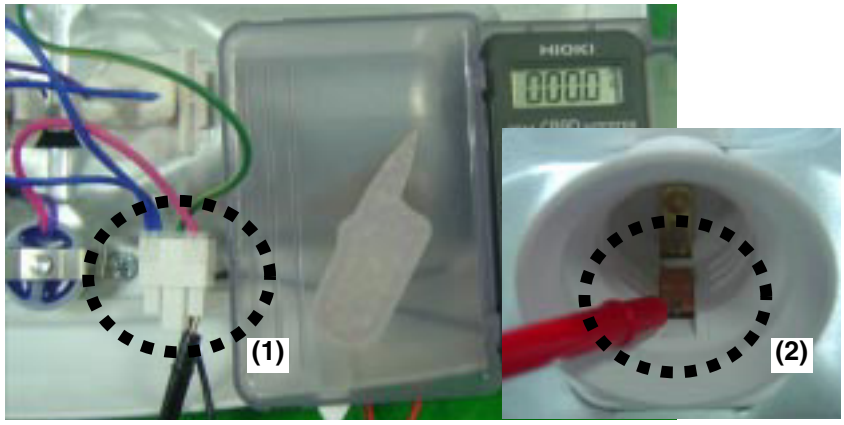
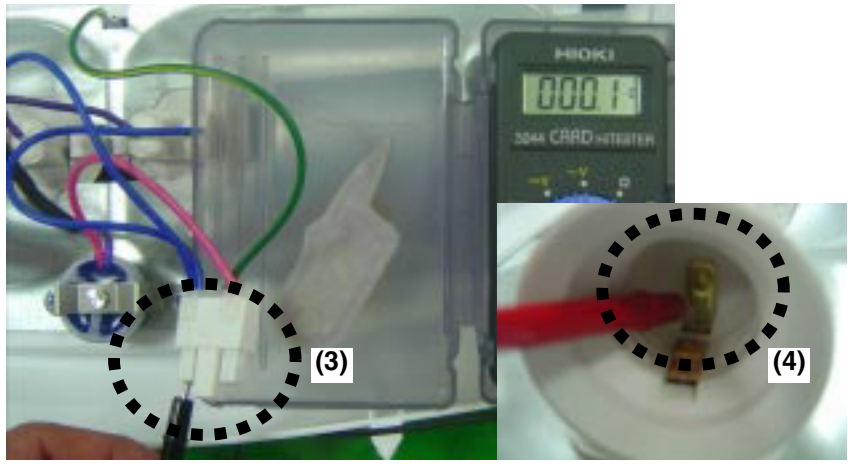
Standard

Damper

Test Points	Result
Red and Yellow	373 ~ 456 Ω

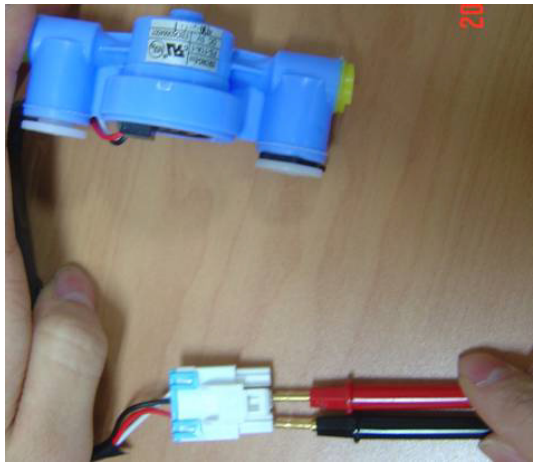
Test Points	Result
Blue and White	373 ~ 456 Ω

11-8 Light Bulb Socket

Function	Make sure the light bulb is screwed in tight to the light socket.
How to Measure	  Check the resistance between connector of housing and connector of lamp socket.
Standard	

Test Points	Result
(1) to (2) and (3) to (4)	0 Ω

11-9 Flow Sensor

<table>
<tr><td>Function</td><td>Flow Sensor (in machine room)
Count the water quantity from city water to water filter in refrigerator</td></tr>
<tr><td>How to Measure</td><td> 
Flow Sensor
(in machine room)
 
</td></tr>
<tr><td>Standard</td><td><table><tr><th>Test Points</th><th>Result</th></tr><tr><td>Red wire to Black wire</td><td>4 ~ 30 Ω</td></tr></table></td></tr>
</table>

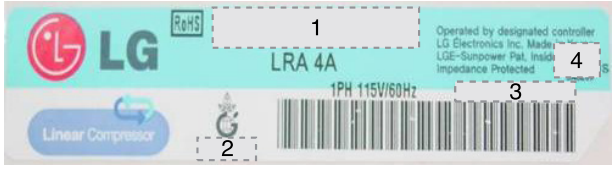
12. TROUBLESHOOTING

12-1 INFORMATION OF LINEAR COMPRESSOR

• The information tag provides compressor model, refrigerant, serial number and safety approval

Name Plate

Size : 90mm X 20mm



Compressor Label

1. Compressor Model

F C 7 5 L A N E

- Series name: DLF/FA/FB
- Displacement: ex)90=9.0cm³/stroke
- Application Category
  - L : LBP with R134a
  - H : HBP with R134a
  - N : LBP with R600a
- Operating Type
  A : A-Inverter
  E : E-Inverter
- Rated Voltage & Frequency
  - M : 220V 50/60Hz
  - N : 115V 50/60Hz
- Efficiency version
  A : 1st generation
  B : 2nd generation

2. Refrigerant

3. Serial Number

00 00 9 2003 5 13 0012

Buyer Code
Model Code
Line
Year
Month
Date
Serial No.

Month		
1 : January	~	O : October
9 : September		N : November
		D : December

4. Safety Approval

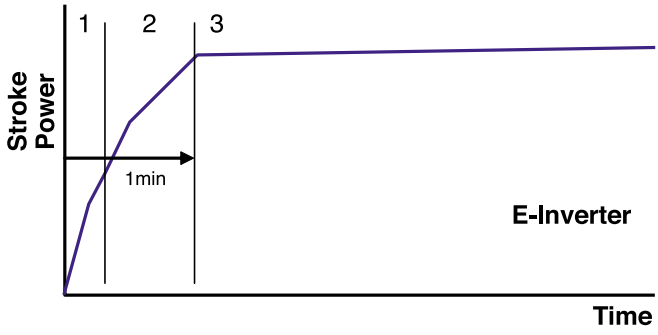
Ex)

• There are two types of controllers used in the linear compressor system.
  - The “E”-inverter system is used with the FC75LANE compressor.
  - The “A”-inverter system is used with the FC90LANA compressor.

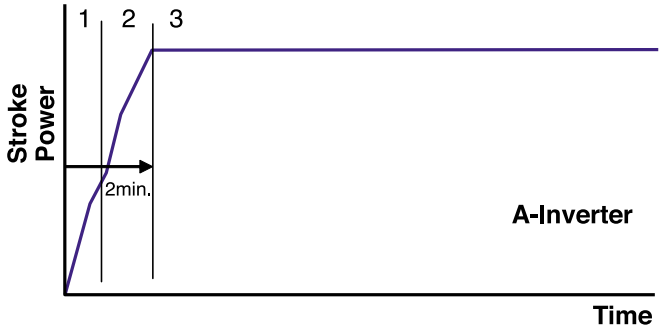
	Refrigerator		Comp Drive		Compressor
FC75LANE E-Inverter System	Comp On/Off	→	**Inverter CVCF**	→	**Self Modulation**
FC90LANA A-Inverter System	Controls the algorithm according to various conditions	→	**Inverter VVVF**	→	**Stroke Modulation**

*VVVF : Variable Voltage Variable Frequency
**CVCF : Constant Voltage Constant Frequency

- To reduce noise level, the piston stroke is slowly increased to full power during start up.



Step 1) Start up - Half stroke interval for first 1 second.
Step 2) Ramp up - Stroke increases every 0.8sec until maximum stroke length is reached (about 1 min)
Step 3) CVCF interval - 180V / 60Hz



Step 1) Start up - Half stroke interval for first 20 seconds.
Step 2) Ramp up - Stroke increases until maximum stroke length is reached (about 1 min, 40 sec)
Step 3) VVVF interval - target voltage and frequency controlled by Control Board signals

- There are 6 protection logics designed to protect the linear compressor system. When a failure is detected, the compressor will shut and will try to restart after a set period of time for each type of failure. The LED located on the inverter drive PCB will flash the appropriate code to indicate the detected failure. This code will continue to flash until the unit is disconnected from the power source.

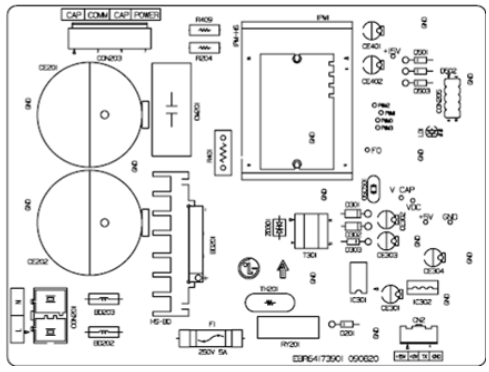
Inverter Error Codes

	App.	Requirement	Waiting Time	The number of LED flashes
FCT0	A-Inv.	Compressor current and voltage error.	20 sec.	1
Stroke Trip	E-Inv. A-Inv.	Piston stroke overrun detected.	1 min.	2
Locked Piston Trip	E-Inv. A-Inv.	Piston is locked.	2 min. 30 sec.	5
Current Trip	E-Inv. A-Inv.	Current overload detected.	6 min.	6
IPM Fault	E-Inv. A-Inv.	High current detected due to IPM failure.	20 sec.	7
Communication Error	A-Inv.	Miscommunication with Refrigerator	0	8

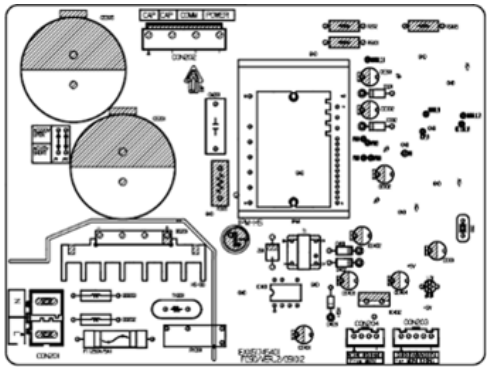
- Bridge Diodes converts 115V AC (Alternating current) to 115V DC (Direct current)
  The Voltage Multiplying circuit then increases the 115V DC to 230V DC.
  Then the IPM (Intelligent Power Module) converts the 230V DC to 230V AC.
  The converted AC power can be regulated to any required voltage and frequency.

- There is a PCB located in the PCB case next to the compressor. That is the driver PCB, the linear compressor.

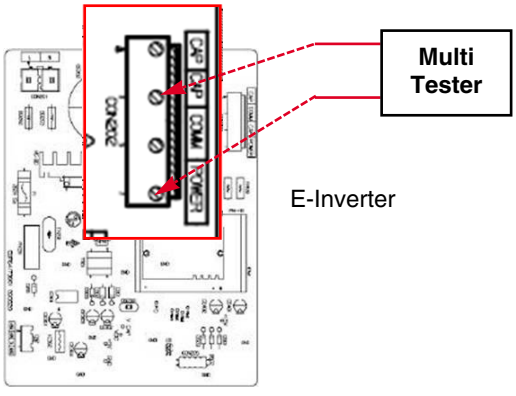
E-Inverter
FC75LANE

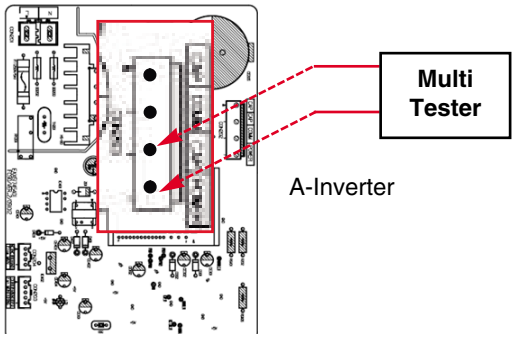


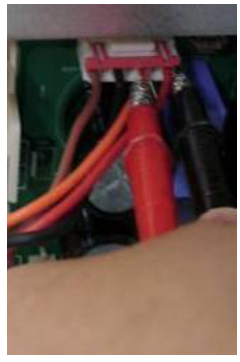
A-Inverter
FC90LANA



- Measure the voltage at locations on the connector (as shown picture) with a multi-tester.







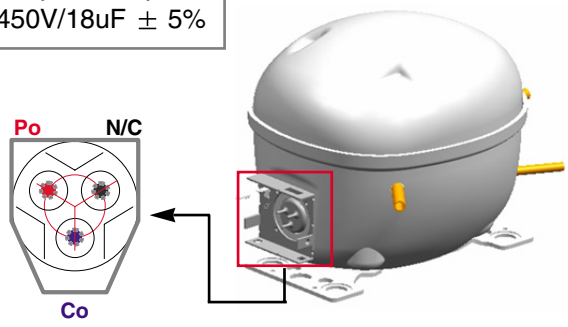
IPM Voltage Check

- To ensure proper diagnosis, make sure that the unit has been plugged in for at least 10 min.
- To determine if the compressor is receiving the proper voltage, check the PCB output voltage during operation.
- Normal operating voltage will be between 80V AC and 180V AC.
  Note : Higher voltage readings may occur under "heavy" load conditions.

• Insulation check : Check for infinite Ohms between all compressor terminal and ground.

FC90LANA

Capacitor Spec.
450V/18uF ± 5%

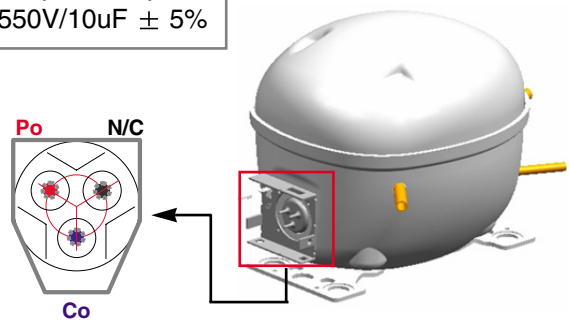


Po : Power
Co : Common
N/C : No Connecting

Compressor Winding Resistance Check
6 ~ 8 Ω Between Po and Co

FC75LANE

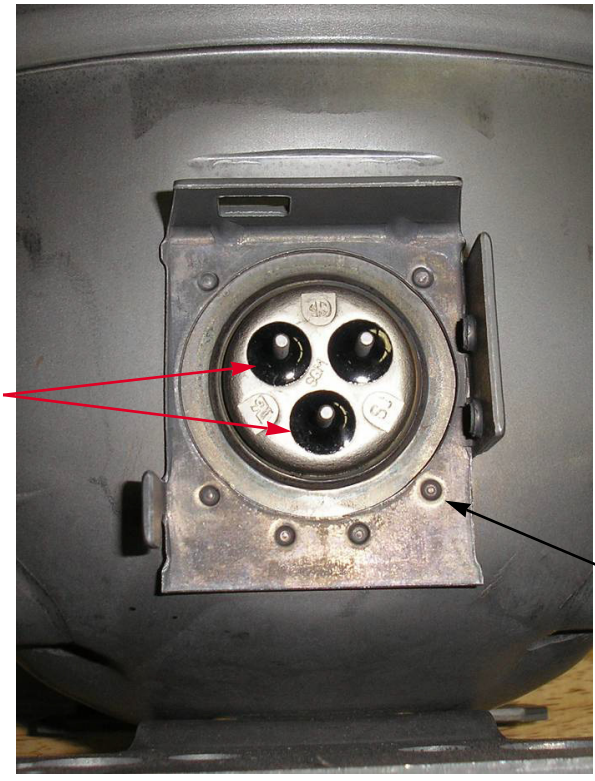
Capacitor Spec.
550V/10uF ± 5%



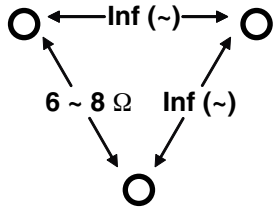
Po : Power
Co : Common
N/C : No Connecting

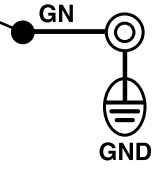
Compressor Winding Resistance Check
6 ~ 8 Ω Between Po and Co

LG Linear Compressor



NOTE : Any Terminal to Ground should read Inf (~)

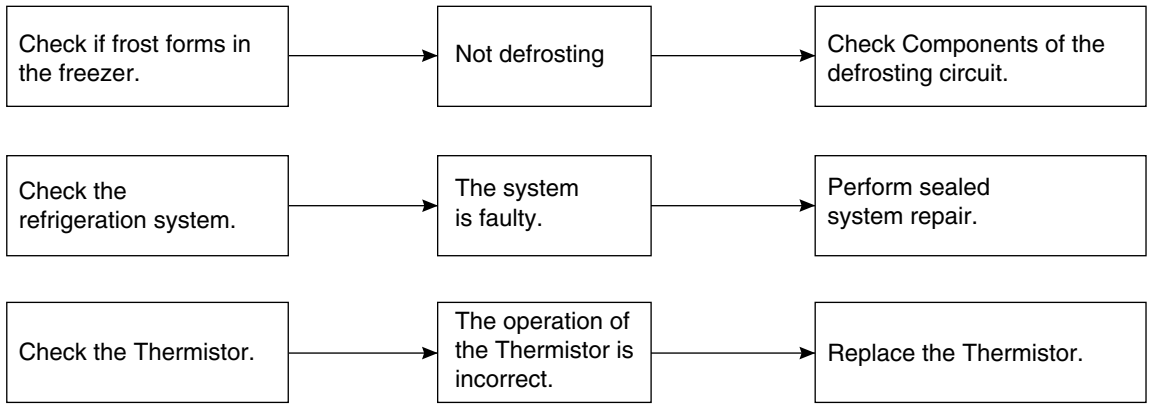




12-2 SERVICE DIAGNOSIS CHART

COMPLAINT	POINTS TO BE CHECKED	REMEDY
No Cooling.	• Is the power cord unplugged from the outlet? • Check if the power switch is set to OFF. • Check if the fuse of the power switch is shorted. • Measure the voltage of the power outlet.	• Plug into the outlet. • Set the switch to ON. • Replace the fuse. • If the voltage is low, correct the wiring.
Cools poorly.	• Check if the unit is placed too close to the wall. • Check if the unit is placed too close to the stove, gas cooker, or in direct sunlight. • Is the ambient temperature too high or the room door closed? • Check if food put in the refrigerator is hot. • Did you open the door of the unit too often or check if the door is sealed properly? • Check if the Control is set to **Warm position**.	• Place the unit about 4 inches (10 cm) from the wall. • Place the unit away from these heat sources. • Lower the ambient temperature. • Put in foods after they have cooled down. • Don't open the door too often and close it firmly. • Set the control to **Recommended position**.
Food in the Refrigerator is frozen.	• Is food placed in the cooling air outlet? • Check if the control is set to **colder position**. • Is the ambient temperature below 41°F(5°C)?	• Place foods in the high-temperature section. (front part) • Set the control to **Recommended position**. • Set the control to **Warm position**.
Condensation or ice forms inside the unit.	• Is liquid food sealed? • Check if food put in the refrigerator is hot. • Did you open the door of the unit too often or check if the door is sealed properly?	• Seal liquid foods with wrap. • Put in foods after they have cooled down. • Don't open the door too often and close it firmly.
Condensation forms in the Exterior Case.	• Check if the ambient temperature and humidity of the surrounding air are high. • Is there a gap in the door gasket?	• Wipe moisture with a dry cloth. It will disappear in low temperature and humidity. • Fill up the gap.
There is abnormal noise.	• Is the unit positioned in a firm and even place? • Are any unnecessary objects placed in the back side of the unit? • Check if the Drip Tray is not firmly fixed. • Check if the cover of the compressor enclosure in the lower front side is taken out.	• Adjust the Leveling Screw, and position the refrigerator in a firm place. • Remove the objects. • Fix the Drip Tray firmly in the original position. • Place the cover in its original position.
Door does not close well.	• Check if the door gasket is dirty with an item like juice. • Is the refrigerator level? • Is there too much food in the refrigerator?	• Clean the door gasket. • Position in a firm place and level the Leveling Screw. • Make sure food stored in shelves does not prevent the door from closing.
Ice and foods smell unpleasant.	• Check if the inside of the unit is dirty. • Are foods with a strong odor unwrapped? • The unit smells of plastic.	• Clean the inside of the unit. • Wrap foods that have a strong odor. • New products smell of plastic, but this will go away after 1-2 weeks.

● Other possible problems:

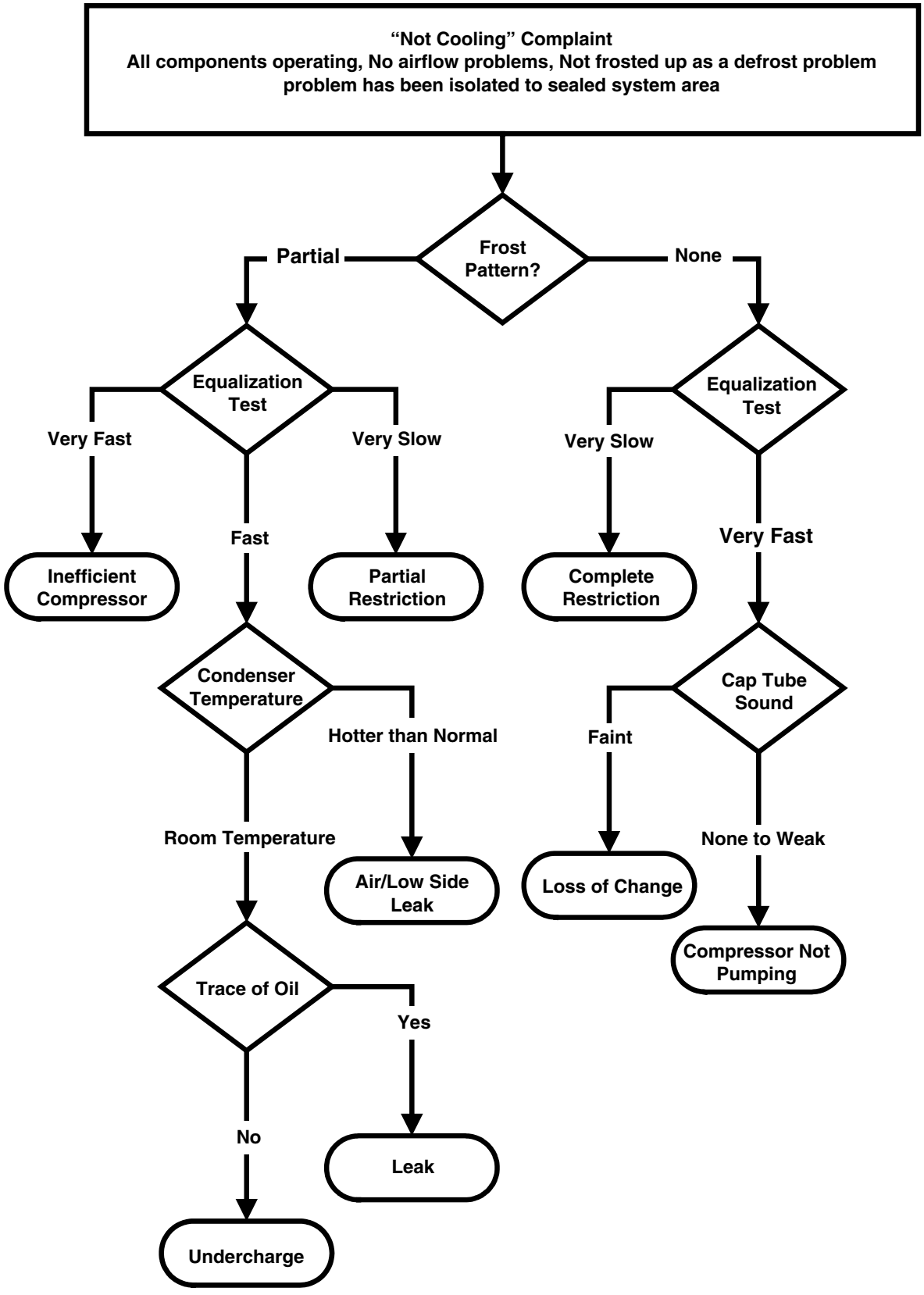


12-3 REFRIGERATION CYCLE

▼ Troubleshooting Chart

CAUSE		STATE OF THE UNIT	STATE OF THE EVAPORATOR	TEMPERATURE OF THE COMPRESSOR	REMARKS
LEAKAGE	PARTIAL LEAKAGE	Freezer compartment and Refrigerator don't cool normally.	Low flowing sound of Refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Refrigerant level is low due to a leak. • Normal cooling is possible by restoring the normal amount of refrigerant and repairing the leak.
	COMPLETE LEAKAGE	Freezer compartment and Refrigerator don't cool normally.	Flowing sound of refrigerant is not heard and frost isn't formed.	Equal to ambient temperature.	• No discharging of Refrigerant. • Normal cooling is possible by restoring the normal amount of refrigerant and repairing the leak.
CLOGGED BY DUST	PARTIAL CLOG	Freezer compartment and Refrigerator don't cool normally.	Flowing sound of refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Normal discharging of the refrigerant. • The capillary tube is faulty.
	WHOLE CLOG	Freezer compartment and Refrigerator don't cool.	Flowing sound of refrigerant is not heard and frost isn't formed.	Equal to ambient temperature.	• Normal discharging of the Refrigerant.
MOISTURE CLOG		Cooling operation stops periodically.	Flowing sound of refrigerant is not heard and frost melts.	Lower than ambient temperature.	• Cooling operation restarts when heating the inlet of the capillary tube.
DEFECTIVE COMPRESSION	COMP-RESSION	Freezer and Refrigerator don't cool.	Low flowing sound of refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Low pressure at high side of compressor due to low refrigerant level.
	NO COMP-RESSION	No compressing operation.	Flowing sound of refrigerant is not heard and there is no frost.	Equal to ambient temperature.	• No pressure in the high pressure part of the compressor.

12-3-1 SEALED SYSTEM DIAGNOSIS

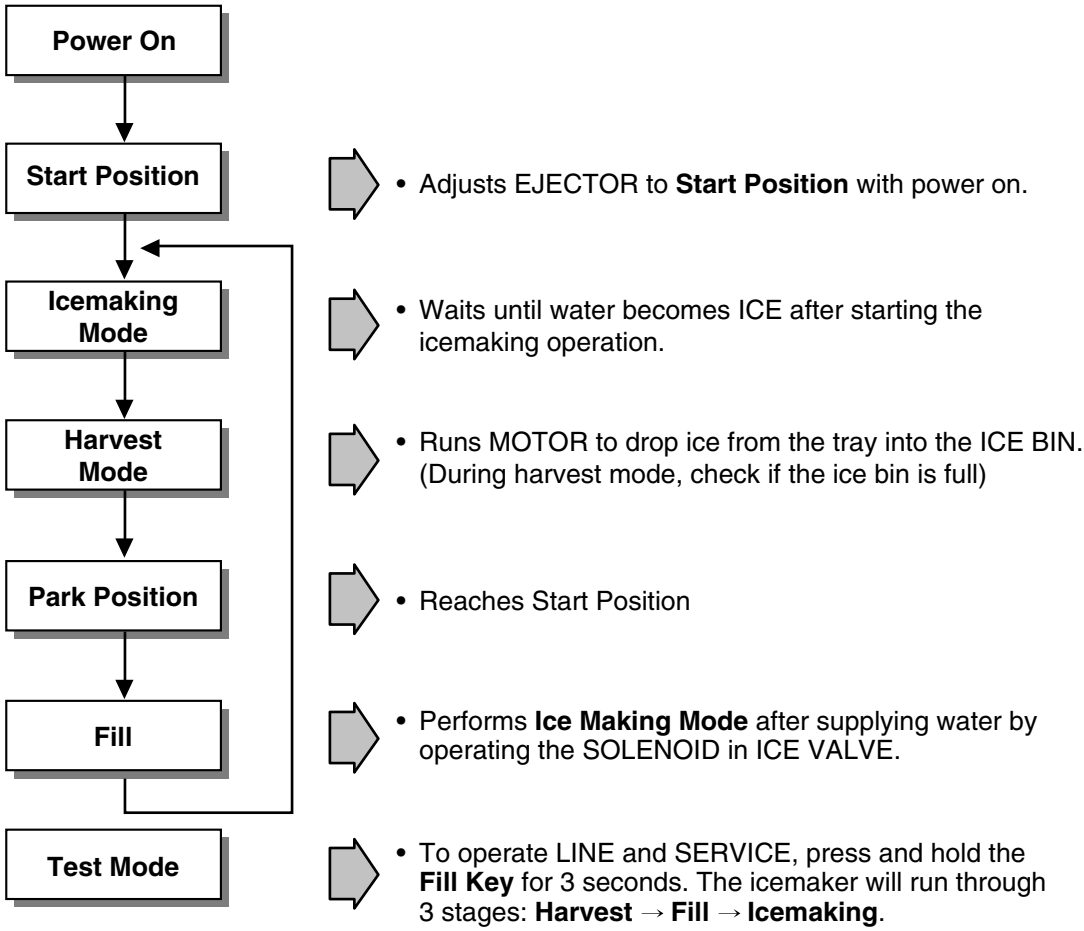


(The equalization test is trying to restart a compressor using a start kit after it has been operating.)

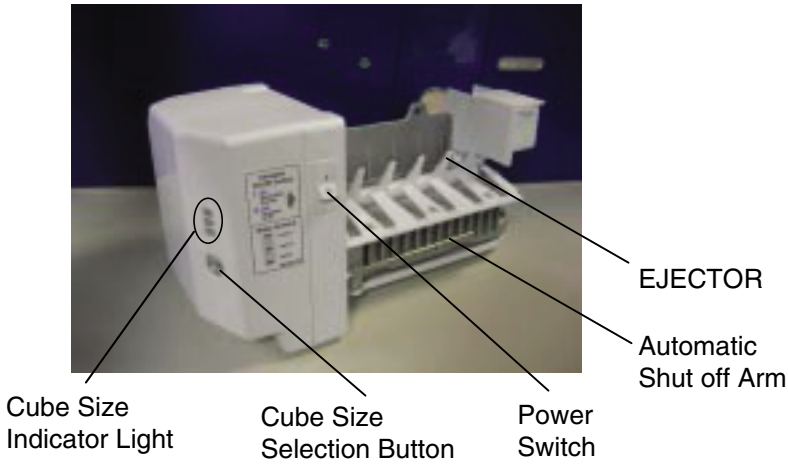
13. OPERATION PRINCIPLE AND REPAIR METHOD OF ICEMAKER

13-1 OPERATION PRINCIPLE

13-1-1 Operation Principle of IceMaker



1. Turning the Icemaker stop switch off (O) stops the ice making function.
2. Setting the Icemaker switch to OFF and then turning it back on will reset the icemaker control.



13-2 ICE MAKER FUNCTIONS

13-2-1 Icemaking Mode

1. Icemaking refers to the freezing of supplied water in the ice tray. Complete freezing is assured by measuring the temperature of the Tray with Icemaking SENSOR.
2. Icemaking starts after completion of the water fill operation.
3. The Ice Making function is completed when the sensor reaches 19°F (-7°C), 55 minutes after starting.

NOTE : After Icemaker Power is ON, the Icemaker heater will be on for test for 6 sec.

13-2-2 Harvest Mode

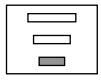
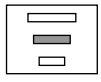
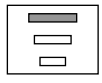
1. Harvest (Ice removing) refers to the operation of dropping ices into the ice bin from the tray when icemaking has completed.
2. Harvest mode:
   (1)The Heater is ON for 30 seconds, then the motor starts.
   (2)The feeler arm senses the quantity of ice in the ice storage bin while rotating with the EJECTOR.
      A. Ice storage bin is full : The EJECTOR stops (heater off).
      B. Ice storage bin is not full : The EJECTOR rotates twice to open for ice.

※ If the EJECTOR does not rotate once within 5 minutes in B mode, separate heater control mode starts operating to prevent the EJECTOR from being constrained. (It is recommended that the user open for ice to return to normal mode.)

13-2-3 Fill/Park Position

1. Once a normal harvest mode has been completed, the water solenoid will be activated.
2. The amount of water is adjusted by pressing the Fill Key repeatedly. This changes the time allowed for fill as illustrated in the table below.

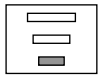
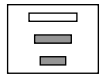
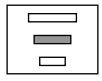
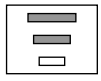
Water supply amount TABLE

STAGE	TIME TO SUPPLY	INDICATIONS	REMARKS
1	5 sec.		The water amount will vary depending on the water control Switch setting, as well as the water pressure of the connected water line.
2	5.5 sec. (FIRST STAGE)		
3	6 sec.		

13-2-5 Function TEST

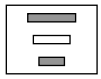
1. This is a forced operation for TEST, Service, cleaning, etc. It is operated by pressing and holding the Fill Key for 3seconds.
2. The test works only in the Icemaking Mode. It cannot be entered from the Harvest or Fill mode.
3. **Caution!** If the test is performed before water in the icemaker is frozen, the ejector will pass through the water. When the Fill mode begins (Stage 4), unless the water supply has been shut off, added water will overflow into the ice bin. If the control doesn't operate normally in the TEST mode, check and repair as needed.
4. After water is supplied, the normal CYCLE is followed : **icemaking → Harvest → Park Position → Fill**.
5. Five seconds after Stage 5 is completed, the Ice Maker returns to MICOM control. The time needed to supply water resets to the pre- test setting.

Diagnosis TABLE

STAGE	ITEMS	INDICATOR	REMARKS
1	HEATER		Five seconds after heater starts, a heater will go off if the temperature by sensor is higher than 10°C
2	MOTOR		Five seconds after heater starts, you can confirm that a motor is moving.
3	HALL IC I		Check if Ice Bin is full or not. If Ice bin is full, the motor and heater are off and on stand by until Ice bin is empty.
4	HALL IC II		You can confirm HALL IC detection of start position.
5	VALVE		Two seconds after detection of start position, you can confirm that valve is on.
6	Reset	Return to Status prior to TEST MODE	Five seconds after fifth stage is completed, The icemaker resets to initial status.

13-3 DEFECT DIAGNOSIS FUNCTION

13-3-1 ERROR CODES shown on Ice Maker water supply control panel

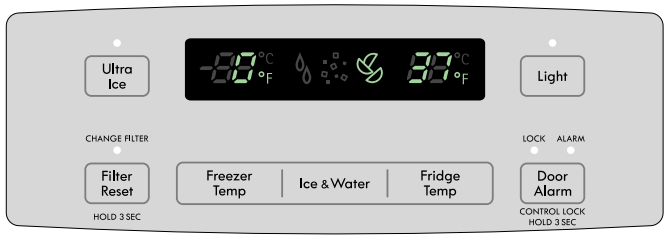
NO	DIVISION	INDICATOR	CONTENTS	REMARKS
1	Normal	Mark time to supply	None	Display switch operates properly
2	Icemaking Sensor malfunction		Open or short-circuited wire	Make sure that the wire on each sensor is connected.

14. DESCRIPTION OF FUNCTION & CIRCUIT OF MICOM

14-1 FUNCTION

14-1-1 Function

1. When the appliance is plugged in, it is set to 37°F for Refrigerator and 0°F for freezer.
   You can adjust the Refrigerator and the Freezer control temperature by pressing the ADJUST button.
2. When the power is initially applied or restored after a power failure, it is set to Control temperature Previously.

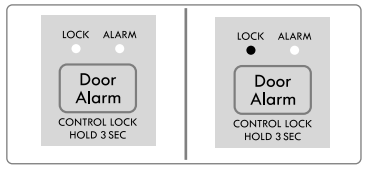


14-1-2 How to Toggle the Display between °F & °C

1. The initial setting is °F and the display temperature mode can be changed from °F to °C or °C to °F by pressing and holding the Freezer Temp and the Fridge Temp keys at the same time for over 5 seconds.

14-1-3 Lock function (dispenser and display button lock)

1. When the refrigerator is first turned on, the buttons are not locked.
   The display panel shows the padlock unlocked icon.
2. To lock the display, the dispenser, and the control panel, press and hold the LOCK button for 3 seconds. The locked pad lock icon is displayed.
3. The LOCK button is the only control feature that remains active in the locked state. The buzzer sound, other control buttons, and the dispenser are deactivated.
4. To release from the locked state, press and hold the LOCK button again for 3 seconds.



Ex) In selecting "LOCK"

Ex) In selecting "LOCK" again

14-1-4 Filter condition display function

1. There is a replacement indicator light for the filter cartridge on the dispenser.
2. Water filter needs replacement once six months or of using water filter.
3. Water Filter icon turn on to tell you need to replace the filter soon.
4. After replacing the filter, press and hold the lock button more than 3 seconds.
   Water Filter icon turn off with reset status.

Classification	In initial Power On / Filter RESET	Replace indicator light on
Filter Status Display		

14-1-5 Ultra Ice selection

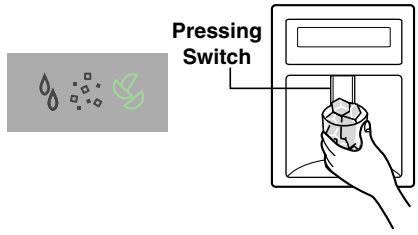
Please select this function for quick freezing.

- Function is repeat Ultra Ice Icon whenever pressing Ultra Ice button.
- Ultra Ice function automatically turns off after a fixed time passes.

14-1-6 Dispenser use selection

You can select water or ice.

* Select water, crushed ice, or ice cubes by cycling through the selections when pressing the DISPENSER button,
* Hold your cup in the dispenser for a few seconds after dispensing ice or water to allow the last pieoes of ice or drops of water to fall into the cup.
* When after initially establ ishing the water comes out, the water tank inside fills and until at the time of quality the hour is caught.



14-1-7 DISPENSER LIGHT

- Whenever pressed the LIGHT button, DISPLAY is changed as belows.

① ② ③

① Normal status : When dispenser is operated, DISPENSER LIGHT is ON.
② AUTO status : Detecting the lighting of room by LIGHT SENSOR, DISPENSER LIGHT is on and off automatically.
③ ON status : DISPENSER LIGHT is on continuously.

14-1-8 CONTROL OF FREEZER FAN MOTOR

1. Freezer fan motor has high and standard speeds.
2. High speed is used at power-up, for Ultra Ice, and when refrigerator is overloaded.
   Standard speeds is used for general purposes.
3. To improve cooling speed, the RPM of the freezer fan motor change from normal speed to high.
4. High speed (2700RPM) : Initial power on or load corresponding operation, Ultra Ice.
   Normal speed (2400RPM) : General working conditions.
5. Fan motor stops when refrigerator or freezer door opens.

14-1-9 Cooling Fan Motor

1. The cooling fan is switched ON and OFF in conjunction with the compressor.
2. The cooling fan Motor has high and standard speeds. (When room temper rapture more high then 38°C speed is high)
3. The Failure sensing method is the same as in the fan motor of the freezing fan motor(refer to failure diagnosis function table for failure display).

14-1-10 Ice Compartment Fan

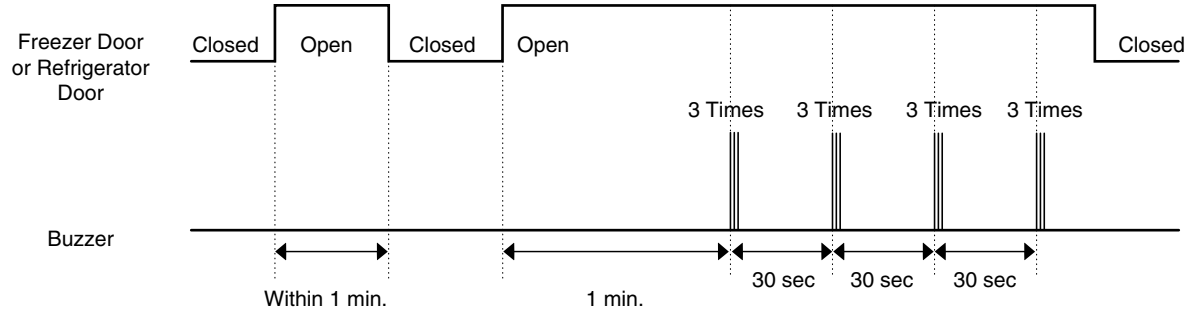
1. The Icing Fan is controlled by the the sensor on the top of the ice compartment.
2. The Failure sensing method is the same as in the fan motor of the freezer
   (refer to failure diagnosis function table for failure display)

14-1-11 Ultra Ice

1. The purpose of this function is to intensify the cooling speed of freezer and to increase the amount of ice.
2. Whenever selection switch is pressed, selection/release, the LCD will turn ON or OFF.
3. If there is a power outage and the refrigerator is powered on again, Ultra Ice will be canceled.
4. To activate this function, press the Ultra Ice key and the LCD will turn ON. This function will remain activated for 24 hrs. The first three hours the compressor and Freezer Fan will be ON. The next 21 hours the freezer will be controlled at the lowest temperature. After 24 hours or if the Ultra Ice key is pressed again, the freezer will return to its previous temperature.
5. During the first 3 hours:
   (1) Compressor and freezer fan (HIGH RPM) run continuously.
   (2) If a defrost cycle begins during the first 90 minutes of Ultra Ice , the Ultra Ice cycle will complete its cycle after defrosting has ended.
   If the defrost cycle begins when Ultra Ice has run for more than 90 minutes, Ultra Ice will run for two hours after the defrost is completed.
   (3) If Ultra Ice is pressed during defrost, Ultra Ice LCD is on but this function will start seven minutes after defrost is completed and it shall operate for three hours.
   (4) If Ultra Ice is selected within seven minutes after compressor has stopped, the compressor (compressor delays seven minutes) shall start after the balance of the delay time.
   (5) The fan motor in the freezer compartment runs at high speed during Ultra Ice.
6. For the rest of the 21 hours, the freezer will be controlled at the lowest temperature.

14-1-12 Alarm for Open Door

1. This feature sounds a buzzer when the freezer or refrigerator door is not closed within 1 minute after it is opened.
2. One minute after the door is opened, the buzzer sounds three times each for 1/2 seconds. These tones repeat every 30seconds.
3. The alarm is cancelled when the freezer or the refrigerator is closed while the buzzer sounds.



14-1-13 How to set the display mode and cancel It

1. With the refrigerator door open, keep pressing the Refrigerator Temp Button and ULTRA ICE Button more than 5 seconds, then it goes to the display mode with Special Beep Sound.
2. Perform the same way agin to cancel the display mode.
3. All freezing units do not work at the display mode. (Exceptions : Display, Lamp)

14-1-14 Defrosting (removing frost)

1. Defrosting starts each time the COMPRESSOR running time Betwee 7~50 hours.
2. For initial power on or for restoring power, defrosting starts when the compressor running time reaches 4 hours.
3. Defrosting stops if the sensor temperature reaches 46.4°F(8°C) or more. If the sensor doesn't reach 46.4°F(8°C) in 1hours, the defrost mode is malfunctioning. (Refer to the defect diagnosis function, 8-1-15.)
4. Defrosting won't function if its sensor is defective (wires are cut or short circuited)

14-1-15 Defect Diagnosis Function

1. Automatic diagnosis makes servicing the refrigerator easy.
2. When a defect occurs, the buttons will not operate; but the tones. such as ding. will sound.
3. When the defect CODE removes the sign, it returns to normal operation (RESET).
4. The defect CODE shows on the Refrigerator and Freezer Display.

* LED check function: If simultaneously pressing Ultra Ice button and freezing temperature adjustment button for a second, display LED graphics on. If releasing the button, the LED graphic displays the previous status.

REPAIR
PARTS
LIST

MODELS No.

795.71022.010
795.71023.010
795.71024.010
795.71026.010
795.71029.010

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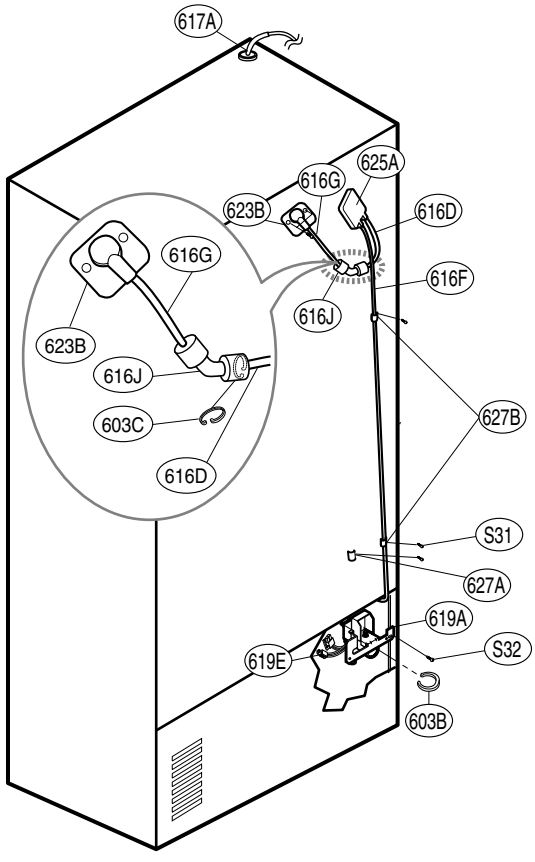
VALVE & WATER TUBE PARTS

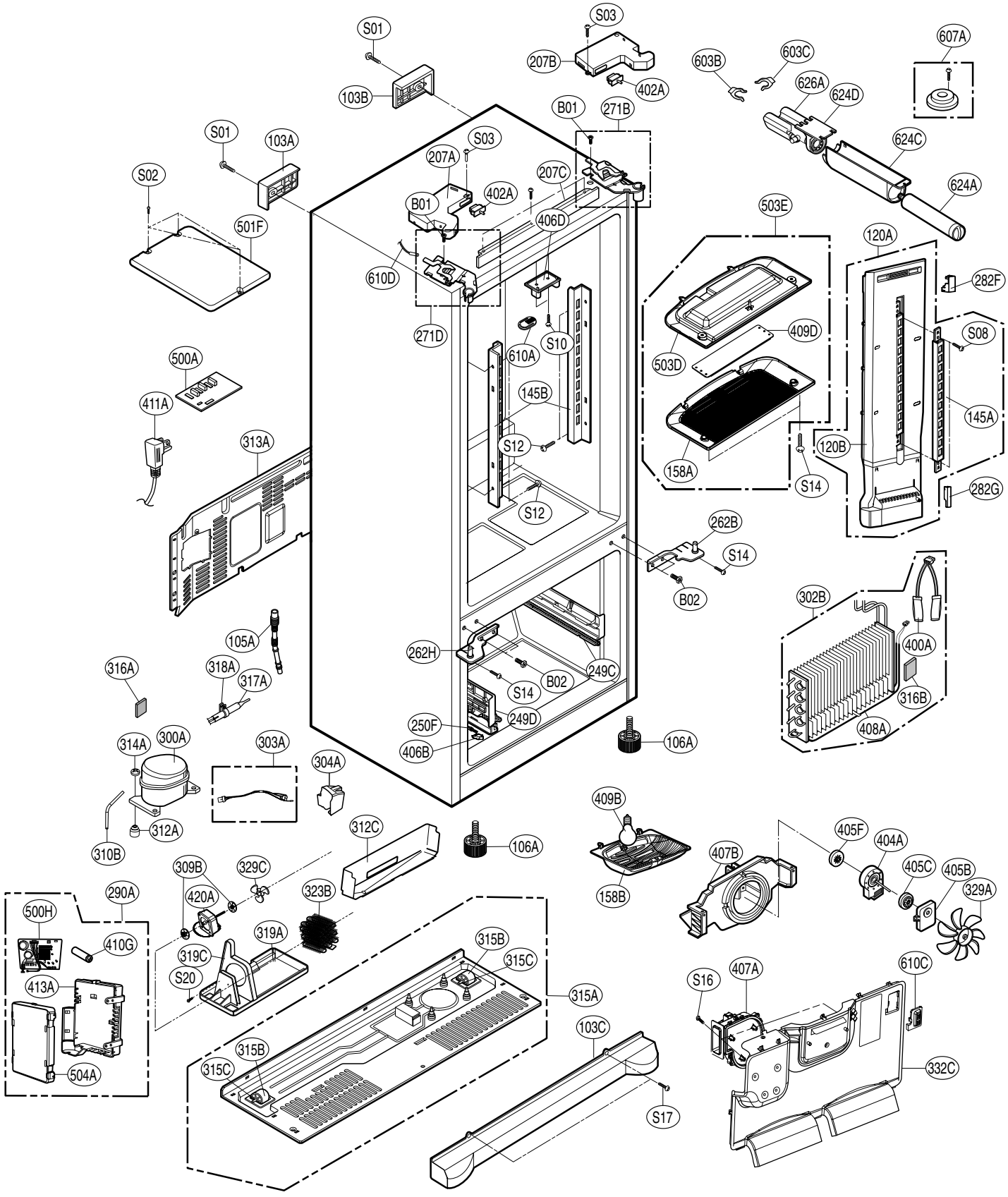


Loc NO.	710**	Desc
603B	4930JA3091A	Holder, Bracket
603C	4004JA3002A	Clip
616D	5210JA3005Q	Tube, Plastic
616F	5210JA3004U	Tube, Plastic
616G	AJR56656501	Tube Assembly, Ice Water
616J	4932JA3009A	Connector, Tube
617A	4970JA3004N	Spring
619A	5221JA2011J	Valve Assembly, Water
619E	6877JB3036V	Harness, Assembly
623B	5006JJ2009A	Cap, Cover
625A	3550JA2184B	Cover, Tube
627A	4930JA3054A	Holder, Pipe
627B	MEG42758601	Holder, Pipe

Part No. MFL63273701

CASE PARTS

CAUTION : Use the part number to order part, not the position number.



CASE PARTS

Loc No.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Des
103A	3650JA2061X	3650JA2061A	3650JA2113N	3650JA2061V	3650JA2061X	Handle, Rear
103B	3650JA2061W	3650JA2061B	3650JA2113P	3650JA2061U	3650JA2061W	Handle, Rear
103C	ACQ55957509	ACQ55957510	ACQ55957510	ACQ55957512	ACQ55957509	Cover Assembly, Lower
105A	5251JA3003D	5251JA3003D	5251JA3003D	5251JA3003D	5251JA3003D	Tube Assembly, Drain
106A	AFC72909201	AFC72909201	AFC72909201	AFC72909201	AFC72909201	Leg Assembly, Adjust
120A	ADJ36702012	ADJ36702012	ADJ36702012	ADJ36702012	ADJ36702012	Duct Assembly multy
120B	MCZ42230901	MCZ42230901	MCZ42230901	MCZ42230901	MCZ42230901	Duct, Multi
145A	4930JA2080C	4930JA2080C	4930JA2080C	4930JA2080C	4930JA2080C	Holder, Shelf
145B	4930JA2081C	4930JA2081C	4930JA2081C	4930JA2081C	4930JA2081C	Holder, Shelf
158A	MCK38019301	MCK38019301	MCK38019301	MCK38019301	MCK38019301	Cover, Lamp
158B	MCK62375001	MCK62375001	MCK62375001	MCK62375001	MCK62375001	Cover, Lamp
207A	3550JJ1097Q	3550JJ1097A	3550JJ1097E	3550JJ1097C	3550JJ1097Q	Cover, Hinge
207B	3550JJ1097R	3550JJ1097B	3550JJ1097F	3550JJ1097D	3550JJ1097R	Cover, Hinge
207C	3806JA2146E	3806JA2146A	3806JA2146C	3806JA2146D	3806JA2146E	Decor Assembly, Case
249C	MEG61878302	MEG61878302	MEG61878302	MEG61878302	MEG61878302	Holder, Rail
249D	MEG61878301	MEG61878301	MEG61878301	MEG61878301	MEG61878301	Guide Assembly, Rail
250F	EAD60704101	EAD60704101	EAD60704101	EAD60704101	EAD60704101	Harness Assembly
262B	AEH71135346	AEH71135346	AEH71135350	AEH71135346	AEH71135346	Hinge Assembly, Center
262H	AEH71135348	AEH71135348	AEH71135352	AEH71135348	AEH71135348	Hinge Assembly, Center
271B	AEH60614102	AEH60614102	AEH60614102	AEH60614102	AEH60614102	Hinge Assembly, Upper
271D	AEH60614101	AEH60614101	AEH60614101	AEH60614101	AEH60614101	Hinge Assembly, Upper
282F	MBL38019501	MBL38019501	MBL38019501	MBL38019501	MBL38019501	Cap, Duct
282G	5006JA3111A	5006JA3111A	5006JA3111A	5006JA3111A	5006JA3111A	Cap, Duct
300A	TCA34649901	TCA34649901	TCA34649901	TCA34649901	TCA34649901	Compressor, Set Assembly
302B	5421JJ1003B	5421JJ1003B	5421JJ1003B	5421JJ1003B	5421JJ1003B	Evaporator Assembly
303A	6631JB2001P	6631JB2001P	6631JB2001P	6631JB2001P	6631JB2001P	Thermistor Assembly, PTC
304A	3550JA2284A	3550JA2284A	3550JA2284A	3550JA2284A	3550JA2284A	Cover, Relay
309B	5040JJ2001A	5040JJ2001A	5040JJ2001A	5040JJ2001A	5040JJ2001A	Damper, Motor Support
310B	4J00977P	4J00977P	4J00977P	4J00977P	4J00977P	Pipe, Compressor Sealing
312A	5041JA3001B	5041JA3001B	5041JA3001B	5041JA3001B	5041JA3001B	Damper, Compressor
312C	3391JJ2013B	3391JJ2013B	3391JJ2013B	3391JJ2013B	3391JJ2013B	Tray Assembly,Drain
313A	3551JJ2018A	3551JJ2018A	3551JJ2018A	3551JJ2018A	3551JJ2018A	Cover Assembly, Machinery(Rear)
314A	4620JA3015A	4620JA3015A	4620JA3015A	4620JA3015A	4620JA3015A	Stopper, Compressor
315A	3103JJ1001Q	3103JJ1001Q	3103JJ1001Q	3103JJ1001Q	3103JJ1001Q	Base Assembly, Compressor
315B	4580JJ3001A	4580JJ3001A	4580JJ3001A	4580JJ3001A	4580JJ3001A	Roller
315C	1PZZJA3013B	1PZZJA3013B	1PZZJA3013B	1PZZJA3013B	1PZZJA3013B	Pin, Common
316A	5072JA3003F	5072JA3003F	5072JA3003F	5072JA3003F	5072JA3003F	Damper, Noise
316B	5072JA3003G	5072JA3003G	5072JA3003G	5072JA3003G	5072JA3003G	Damper, Noise
317A	5851JA2007E	5851JA2007E	5851JA2007E	5851JA2007E	5851JA2007E	Drier Assembly
318A	4930JA3034A	4930JA3034A	4930JA3034A	4930JA3034A	4930JA3034A	Holder, Drier
319A	MJS61845701	MJS61845701	MJS61845701	MJS61845701	MJS61845701	Tray, Drip
319C	MEA42257901	MEA42257901	MEA42257901	MEA42257901	MEA42257901	Guide, Fan

CAUTION : Use the part number to order part, not the position number.

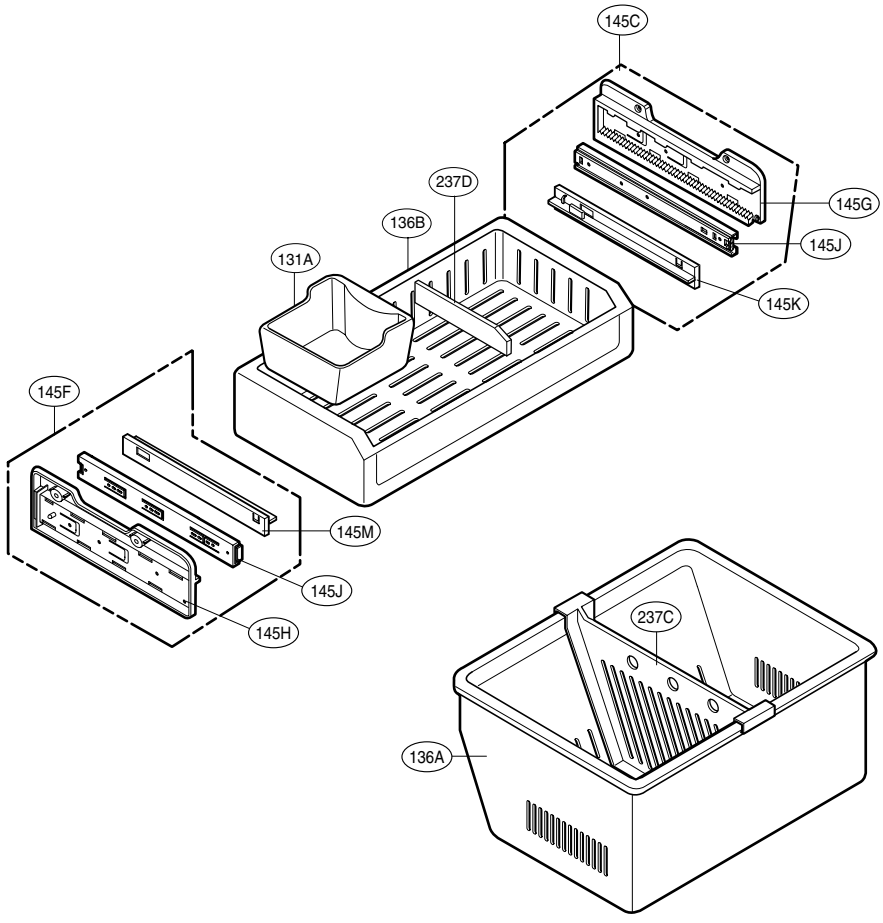
CASE PARTS

Loc No.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
323B	ACG72915205	ACG72915205	ACG72915205	ACG72915205	ACG72915205	Condenser Assembly, Wire
329A	5901JA1021A	5901JA1021A	5901JA1021A	5901JA1021A	5901JA1021A	Fan Assembly
329C	ADP36665701	ADP36665701	ADP36665701	ADP36665701	ADP36665701	Fan Assembly
332C	AEB36999402	AEB36999402	AEB36999402	AEB36999402	AEB36999402	Grille Assembly, Fan
400A	6615JB2005H	6615JB2005H	6615JB2005H	6615JB2005H	6615JB2005H	Controller Assembly
402A	EBF60755004	EBF60755005	6600JB3007J	EBF60755005	EBF60755004	Switch, Push Button
404A	4681JB1027C	4681JB1027C	4681JB1027C	4681JB1027C	4681JB1027C	Motor, DC
405B	4810JA2129B	4810JA2129B	4810JA2129B	4810JA2129B	4810JA2129B	Bracket, Motor
405C	5040JA2009B	5040JA2009B	5040JA2009B	5040JA2009B	5040JA2009B	Damper, Motor Support
405F	5040JA2004B	5040JA2004B	5040JA2004B	5040JA2004B	5040JA2004B	Harness, Single
406B	6600JB1010K	6600JB1010K	6600JB1010K	6600JB1010K	6600JB1010K	Switch,Push Button
406D	4931JA3006A	4931JA3006A	4931JA3006A	4931JA3006A	4931JA3006A	Holder Assembly, Gasket
407A	ADJ72911301	ADJ72911303	ADJ72911303	ADJ72911303	ADJ72911303	Duct Assembly, Connector
407B	4810JJ0003B	4810JJ0003B	4810JJ0003B	4810JJ0003B	4810JJ0003B	Bracket, Motor
408A	5300JK1005D	5300JK1005D	5300JK1005D	5300JK1005D	5300JK1005D	Heater, Sheath
409B	6912JB2004K	6912JB2004K	6912JB2004K	6912JB2004K	6912JB2004K	Lamp, Incandescent
409D	EAV43060804	EAV43060804	EAV43060804	EAV43060804	EAV43060804	Reflector, Lamp
410G	EAE58905701	EAE58905701	EAE58905701	EAE58905701	EAE58905701	Capacitor, Electric Appliance Film, Box
411A	6411JB1042W	6411JB1042W	6411JB1042W	6411JB1042W	6411JB1042W	Power Cord Assembly
413A	MBN61884601	MBN61884601	MBN61884601	MBN61884601	MBN61884601	Case,PCB
420A	4681JB1029D	4681JB1029D	4681JB1029D	4681JB1029D	4681JB1029D	Motot, DC
500H	EBR64173903	EBR64173903	EBR64173903	EBR64173903	EBR64173903	PCB Assembly,Sub
5001F	3551JA2144C	3551JA2144C	3551JA2144C	3551JA2144C	3551JA2144C	Cover Assembly,PCB
503D	MBN38018601	MBN38018601	MBN38018601	MBN38018601	MBN38018601	Case, Lamp
503E	ACQ33676502	ACQ33676502	ACQ33676502	ACQ33676502	ACQ33676502	Cover Assembly,Lamp
504A	MCK62887801	MCK62887801	MCK62887801	MCK62887801	MCK62887801	Cover,PCB
603B	4930JA3091A	4930JA3091A	4930JA3091A	4930JA3091A	4930JA3091A	Holder, Bracket
603C	4004JA3002A	4004JA3002A	4004JA3002A	4004JA3002A	4004JA3002A	Clip
607A	4931JA3005B	4931JA3005B	4931JA3005B	4931JA3005B	4931JA3005B	Holder Assembly, Bracket
610A	3550JA2247A	3550JA2247A	3550JA2247A	3550JA2247A	3550JA2247A	Cover, Sensor
610C	ACQ73244001	ACQ73244001	ACQ73244001	ACQ73244001	ACQ73244001	Cover Assembly, Sensor
610D	6500JB2001B	6500JB2001B	6500JB2001B	6500JB2001B	6500JB2001B	Sensor
624A	5231JA2006A	5231JA2006A	5231JA2006A	5231JA2006A	5231JA2006A	Filter Assembly, Water
624C	3550JD1128E	3550JD1128E	3550JD1128E	3550JD1128E	3550JD1128E	Cover, Filer
624D	5230JA2003A	5230JA2003A	5230JA2003A	5230JA2003A	5230JA2003A	Filer,Head
626A	3550JA2279A	3550JA2279A	3550JA2279A	3550JA2279A	3550JA2279A	Cover, Filer
S20	1SZZJA3016A	1SZZJA3016A	1SZZJA3016A	1SZZJA3016A	1SZZJA3016A	Screw, Customized

CAUTION : Use the part number to order part, not the position number.

FREEZER PARTS

CAUTION : Use the part number to order part, not the position number.

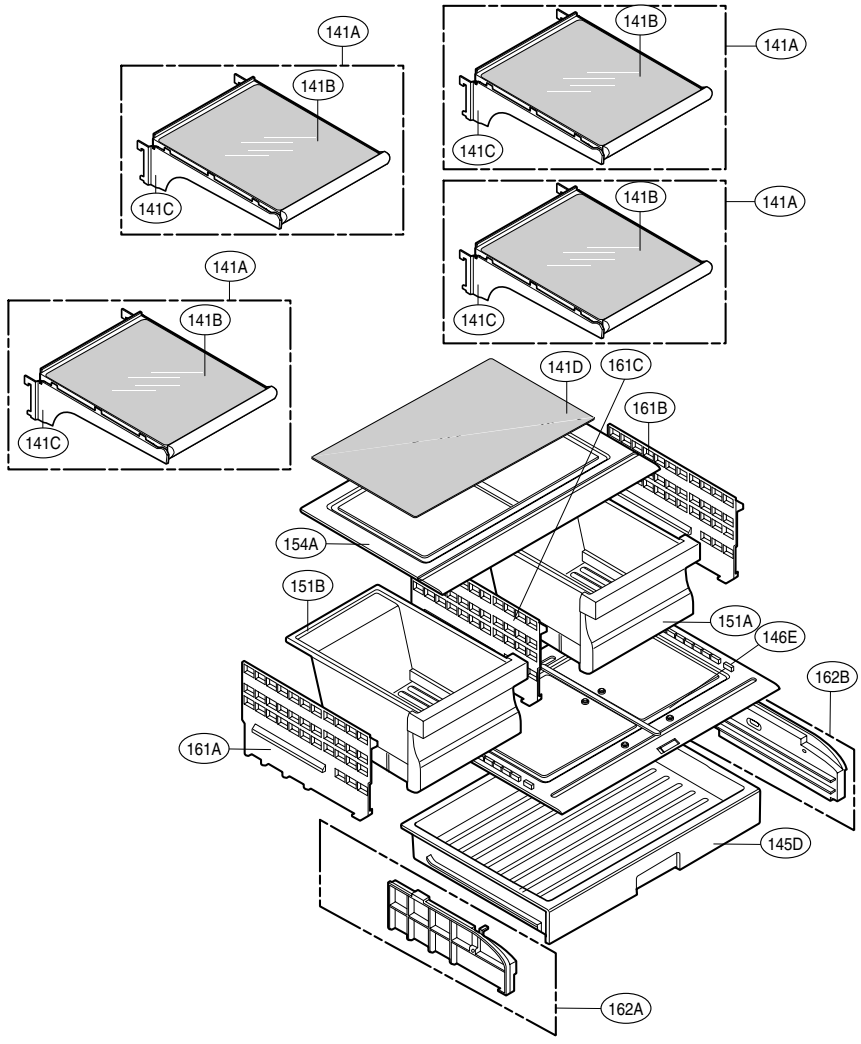


Loc No.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
131A	5074JA2004A	5074JA2004A	5074JA2004A	5074JA2004A	5074JA2004A	Bucket, Ice
136A	3391J J 2011M	3391J J 2011M	3391J J 2011M	3391J J 2011M	3391JJ2011M	Tray Assembly, Drawer
136B	AJP33050203	AJP33050203	AJP33050203	AJP33050203	AJP33050203	Tray Assembly, Drawer
145C	4975JA1040H	4975JA1040H	4975JA1040H	4975JA1040H	4975JA1040H	Guide Assembly, Rail
145F	4975JA1040G	4975JA1040G	4975JA1040G	4975JA1040G	4975JA1040G	Guide Assembly, Rail
145G	4930JA1065B	4930JA1065B	4930JA1065B	4930JA1065B	4930JA1065B	Guide, Rail
145H	4930JA1065A	4930JA1065A	4930JA1065A	4930JA1065A	4930JA1065A	Guide Assembly, Rail
145J	5218JA1007C	5218JA1007C	5218JA1007C	5218JA1007C	5218JA1007C	Rail Slide
145K	4932JA1010B	4932JA1010B	4932JA1010B	4932JA1010B	4932JA1010B	Connector, Rail
145M	4932JA1010A	4932JA1010A	4932JA1010A	4932JA1010A	4932JA1010A	Connector, Rail
237C	4974JJ1031A	4974JJ1031A	4974JJ1031A	4974JJ1031A	4974JJ1031A	Guide, Drawer
237D	MEA36888801	MEA36888801	MEA36888801	MEA36888801	MEA36888801	Guide,Drawer

CAUTION : Use the part number to order part, not the position number.

REFRIGERATOR PARTS

CAUTION : Use the part number to order part, not the position number.

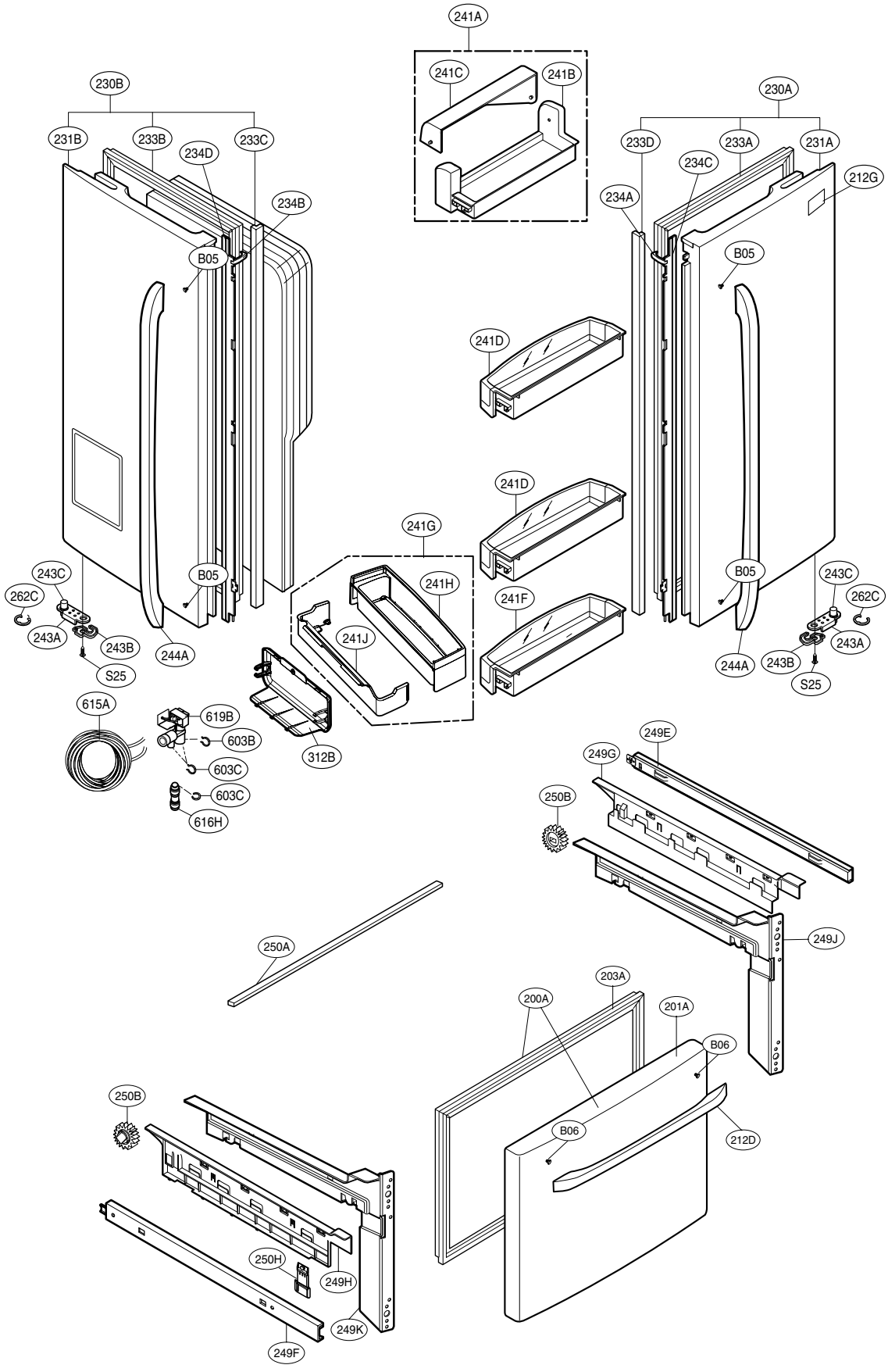


Loc No.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
141A	AHT36764313	AHT36764313	AHT36764313	AHT36764313	AHT36764313	Shelf Assembly, Refrigerator
141B	AHT36968110	AHT36968110	AHT36968110	AHT36968110	AHT36968110	Shelf Assembly, Refrigerator
141C	5027JJ2012T	5027JJ2012T	5027JJ2012T	5027JJ2012T	5027JJ2012T	Shelf Assembly, Net
141D	4890JJ1007Y	4890JJ1007Y	4890JJ1007Y	4890JJ1007Y	4890JJ1007Y	Shelf, Glass
145D	AJP36700901	AJP36700901	AJP36700901	AJP36700901	AJP36700901	Tray, Fresh Room
146E	ACQ36701710	ACQ36701710	ACQ36701710	ACQ36701710	ACQ36701710	Cover Assembly, Tray
151A	AJP36702121	AJP36702121	AJP36702121	AJP36702121	AJP36702121	Tray Assembly, Vegetable
151B	AJP36702122	AJP36702122	AJP36702122	AJP36702122	AJP36702122	Tray Assembly, Vegetable
154A	ACQ36701111	ACQ36701111	ACQ36701111	ACQ36701111	ACQ36701111	Cover Assembly, TV
161A	AEC36906401	AEC36906401	AEC36906401	AEC36906401	AEC36906401	Guide Assembly, TV
161B	AEC36906402	AEC36906402	AEC36906402	AEC36906402	AEC36906402	Guide Assembly, TV
161C	AEC36702202	AEC36702202	AEC36702202	AEC36702202	AEC36702202	Guide Assembly, Rail
162A	AEC36702301	AEC36702301	AEC36702301	AEC36702301	AEC36702301	Guide Assembly, Rail
162B	AEC36702302	AEC36702302	AEC36702302	AEC36702302	AEC36702302	Guide Assembly, Rail

CAUTION : Use the part number to order part, not the position number.

DOOR PARTS

CAUTION : Use the part number to order part, not the position number.

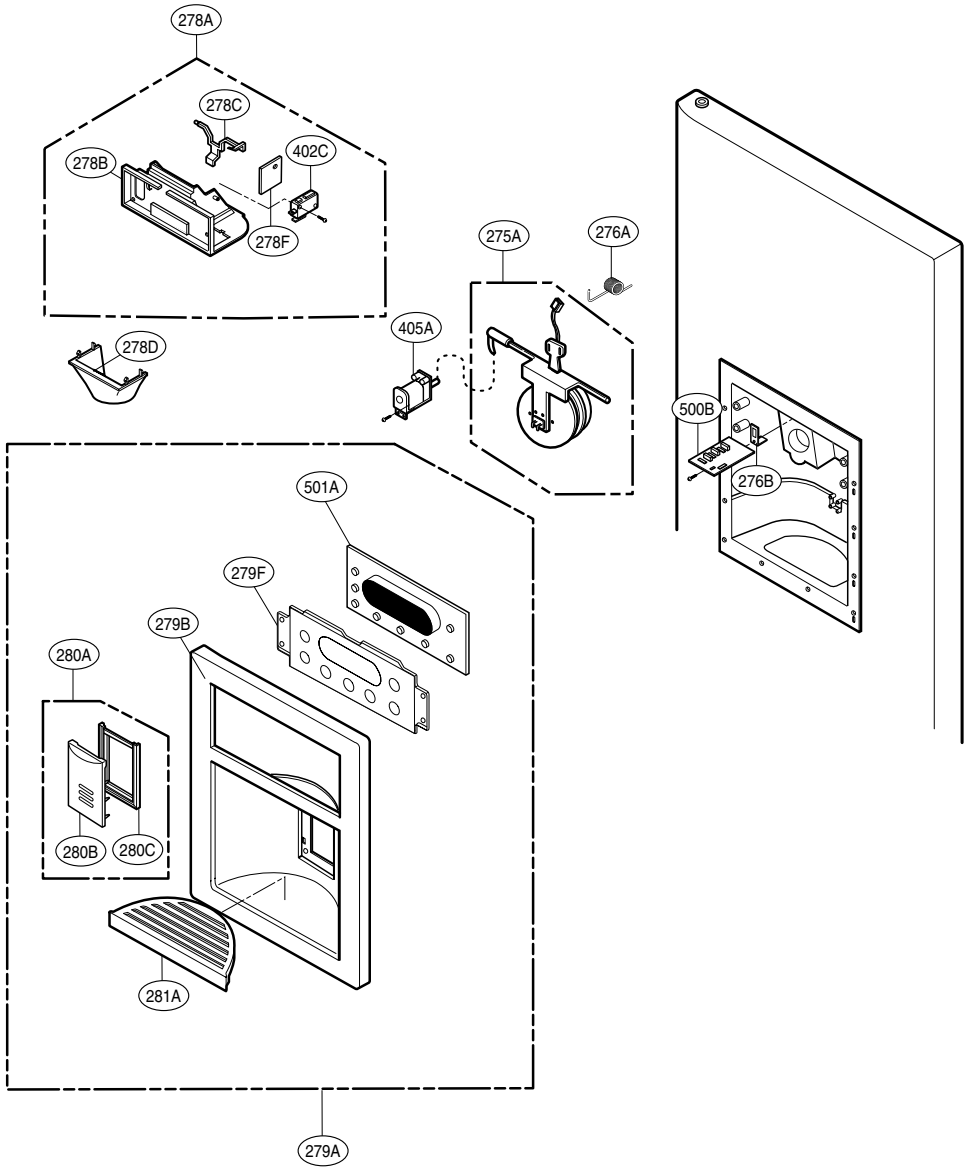


DOOR PARTS

Loc NO.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
200A	ADC57728016	ADC57728014	ADC57728015	ADC57728017	ADC57728019	Door Assembly, Freezer
201A	ADD57728207	ADD57728202	ADD57728208	ADD57728209	ADD57728210	Door Foam Assembly,Freezer
203A	MDS38201406	MDS38201401	MDS38201402	MDS38201401	MDS38201406	Gasket, Door
212D	AED37133214	AED37133216	AED37133215	AED37133217	AED37133214	Handle Assembly, Freezer
212G	MFT61866204	MFT61866203	MFT61866206	MFT61866204	MFT61866204	Name Plate
230A	ADC57728330	ADC57016913	ADC57728329	ADC57728331	ADC57728332	Door Assembly, Refrigerator(Right)
230B	ADC36697490	ADC57017317	ADC36697489	ADC36697491	ADC36697493	Door Assembly, Refrigerator(Left)
231A	ADD57728517	ADD57017106	ADD57728518	ADD57728519	ADD57728520	Door Foam Assembly,Refrigerator
231B	ADD57728927	ADD57728928	ADD57728930	ADD57728931	ADD57728933	Door Foam Assembly,Refrigerator
233A	4987JJ2002S	4987JJ2002N	4987JJ2002Q	4987JJ2002N	4987JJ2002S	Gasket Assembly, Door
233B	4987JJ2002T	4987JJ2002P	4987JJ2002R	4987JJ2002P	4987JJ2002T	Gasket Assembly, Door
233C	MCK59045801	MCK59045801	MCK59045801	MCK59045801	MCK59045801	Cover, Frame
233D	MCK59045802	MCK59045802	MCK59045802	MCK59045802	MCK59045802	Cover, Frame
234A	4430JJ2004A	4430JJ2004A	4430JJ2004A	4430JJ2004A	4430JJ2004A	Cam, Shaft
234B	4430JJ2004B	4430JJ2004B	4430JJ2004B	4430JJ2004B	4430JJ2004B	Cam, Shaft
234C	4931JJ2002E	4931JJ2002A	4931JJ2002C	4931JJ2002A	4931JJ2002E	Holder Assembly, Gasket
234D	4931JJ2002F	4931JJ2002B	4931JJ2002D	4931JJ2002B	4931JJ2002F	Holder Assembly, Gasket
241A	AAP33686302	AAP33686302	AAP33686302	AAP33686302	AAP33686302	Basket Assembly, Door
241B	MAN38142901	MAN38142901	MAN38142901	MAN38142901	MAN38142901	Basket, Door
241C	MAN38143001	MAN38143001	MAN38143001	MAN38143001	MAN38143001	Basket, Window
241D	AAP36817401	AAP36817401	AAP36817401	AAP36817401	AAP36817401	Basket Assembly, Door
241F	AAP36817601	AAP36817601	AAP36817601	AAP36817601	AAP36817601	Basket Assembly, Door
241G	AAP33726606	AAP33726606	AAP33726606	AAP33726606	AAP33726606	Basket Assembly, Door
241H	AAP33726605	AAP33726605	AAP33726605	AAP33726605	AAP33726605	Basket Assembly, Door
241J	MAN38154501	MAN38154501	MAN38154501	MAN38154501	MAN38154501	Basket, Door
243A	4620JJ3006N	4620JJ3006N	4620JJ3006P	4620JJ3006N	4620JJ3006N	Stopper, Door
243B	4620JJ2009A	4620JJ2009A	4620JJ2009A	4620JJ2009A	4620JJ2009A	Stopper, Door
243C	J326-00012A	J326-00012A	J326-00012A	J326-00012A	J326-00012A	Bush
244A	AED37083010	AED37083012	AED37083011	AED37083013	AED37083010	Handle Assembly, Refrigerator
249E	5218JA1010E	5218JA1010E	5218JA1010E	5218JA1010E	5218JA1010E	Rail,Slide
249F	5218JA1010F	5218JA1010F	5218JA1010F	5218JA1010F	5218JA1010F	Rail,Slide
249G	3550JA1455C	3550JA1455C	3550JA1455C	3550JA1455C	3550JA1455C	Cover,Connector
249H	3550JA1455D	3550JA1455D	3550JA1455D	3550JA1455D	3550JA1455D	Cover,Connector
249J	MCD36888904	MCD36888904	MCD36888904	MCD36888904	MCD36888904	Connector,Rail
249K	MCD36888903	MCD36888903	MCD36888903	MCD36888903	MCD36888903	Connector,Rail
250A	MAK39123901	MAK39123901	MAK39123901	MAK39123901	MAK39123901	Bar
250B	4403JA3005A	4403JA3005A	4403JA3005A	4403JA3005A	4403JA3005A	Connector,Assembly
250H	MBG62013801	MBG62013801	MBG62013801	MBG62013801	MBG62013801	Button,Lever
262C	4350JA3005B	4350JA3005B	4350JA3005B	4350JA3005B	4350JA3005B	Ring
312B	MCK42342101	MCK42342101	MCK42342101	MCK42342101	MCK42342101	Cover, Front
603B	4930JA3091A	4930JA3091A	4930JA3091A	4930JA3091A	4930JA3091A	Holder, Bracket
603C	4004JA3002A	4004JA3002A	4004JA3002A	4004JA3002A	4004JA3002A	Clip
615A	4838JA2003B	4838JA2003B	4838JA2003B	4838JA2003B	4838JA2003B	Tank, Water
616H	MCD61866805	MCD61866805	MCD61866805	MCD61866805	MCD61866805	Connector, Tube
619B	5221JB2010G	5221JB2010G	5221JB2010G	5221JB2010G	5221JB2010G	Valve, Assembly, Water

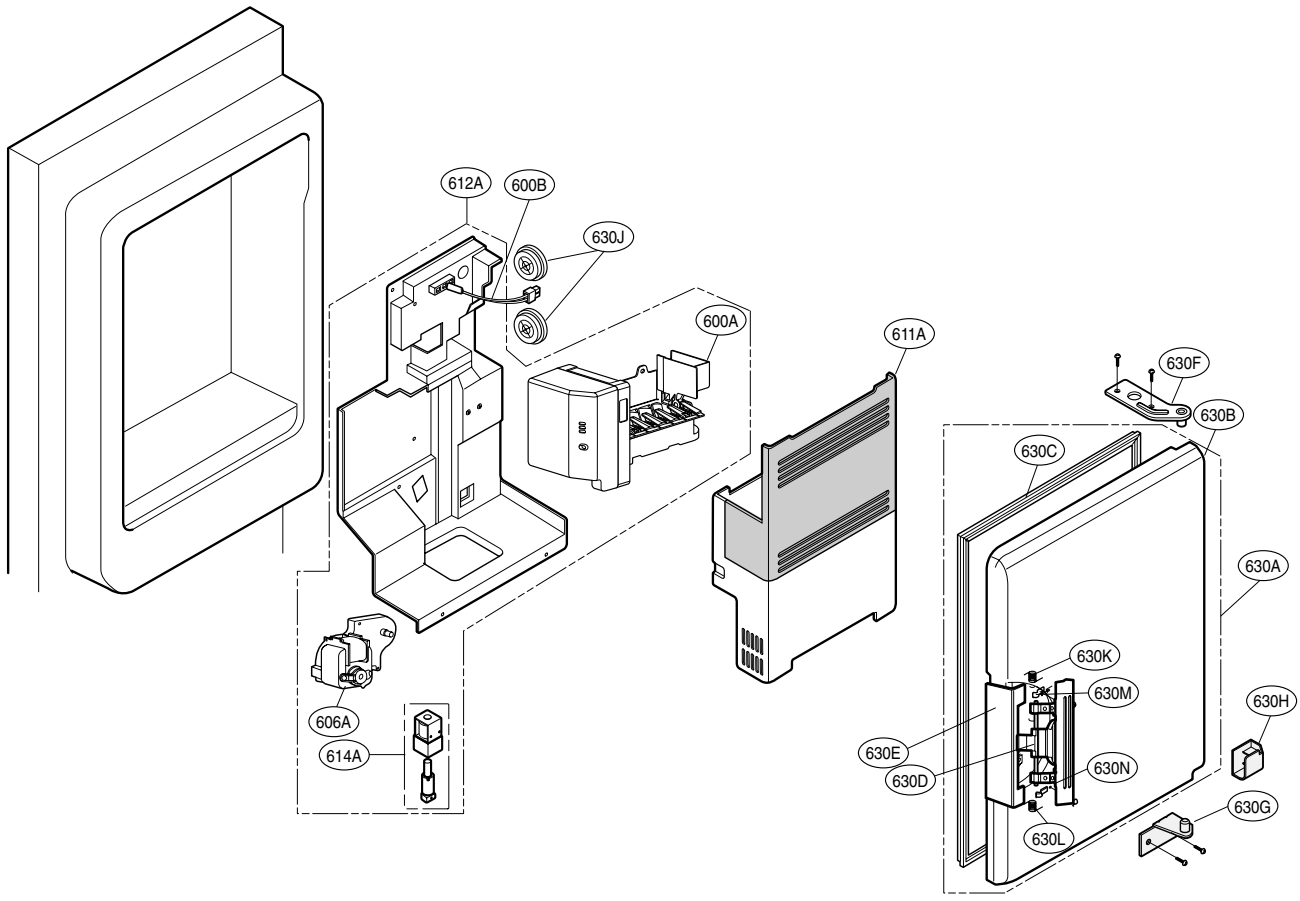
CAUTION : Use the part number to order part, not the position number.

DISPENSER PARTS



Loc NO.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
275A	ABN72909903	ABN72909903	ABN72909903	ABN72909903	ABN72909903	Cap Assembly, Duct
276A	4970JA3011C	4970JA3011C	4970JA3011C	4970JA3011C	4970JA3011C	Spring, Lever
276B	4930JA3043A	4930JA3043A	4930JA3043A	4930JA3043A	4930JA3043A	Holder, Lever
278A	3017JA2008H	3017JA2008G	3017JA2008J	3017JA2008K	3017JA2008H	Frame, Funnel
278B	MDQ42340402	MDQ42340401	MDQ42340403	MDQ42340404	MDQ42340402	Frame, Funnel
278C	4510JA2022A	4510JA2022A	4510JA2022A	4510JA2022A	4510JA2022A	Lever, Dispenser
278D	MDR42340501	MDR42340502	MDR42340503	MDR42340504	MDR42340501	
278F	6871JB2074A	6871JB2074A	6871JB2074A	6871JB2074A	6871JB2074A	PCB Assembly, Display
279A	ACQ36820517	ACQ36820516	ACQ36820519	ACQ36820520	ACQ36820518	Cover Assembly, Dispenser
279B	MCK42340102	MCK42340101	MCK42340103	MCK42340104	MCK42340102	Cover, Dispenser
279F	ACQ80790003	ACQ80790001	ACQ80790002	ACQ80790004	ACQ80790005	Cover Assembly,Display
280A	5021JA3015B	5021JA3015A	5021JA3015C	5021JA3015E	5021JA3015B	Button Assembly
280B	4930JA2074B	4930JA2074B	4930JA2074B	4930JA2074B	4930JA2074B	Holder, Button
280C	5020JA2040E	5020JA2040F	5020JA2040K	5020JA2040D	5020JA2040E	Button, Lever
281A	MCR42338202	MCR42338201	MCR42338203	MCR42338204	MCR42338202	Decor, Drain
290A	ABQ73004302	ABQ73004302	ABQ73004302	ABQ73004302	ABQ73004302	Case Assembly,PCB
402C	6600JB3001E	6600JB3001E	6600JB3001E	6600JB3001E	6600JB3001E	Switch, Micro
405A	6421JB2002L	6421JB2002L	6421JB2002L	6421JB2002L	6421JB2002L	Solenoid, Reversing Valve
500B	EBR60070706	EBR60070706	EBR60070706	EBR60070706	EBR60070706	PCB Assembly, Sub
501A	EBR43358505	EBR43358505	EBR43358505	EBR43358505	EBR43358505	PCB Assembly, Display

ICE MAKER & ICE BANK PARTS



Loc NO.	710*3(ST)	710*2(SW)	710*9(WB)	710*4(BI)	710*6(TI)	Desc
600A	AEQ36756914	AEQ36756914	AEQ36756914	AEQ36756914	AEQ36756914	Ice Maker Assembly, Kit
600B	6500JB1008A	6500JB1008A	6500JB1008A	6500JB1008A	6500JB1008A	Sensor, Temperature
606A	EAU35872004	EAU35872004	EAU35872004	EAU35872004	EAU35872004	Motor, AC Auger
611A	5075JA1044L	5075JA1044L	5075JA1044L	5075JA1044L	5075JA1044L	Bucket Assembly, Ice
612A	EAU60943404	EAU60943404	EAU60943404	EAU60943404	EAU60943404	Motor, AC
614A	6421JA3001N	6421JA3001N	6421JA3001N	6421JA3001N	6421JA3001N	Solenoid Assembly
630A	ADC33751114	ADC33751114	ADC33751114	ADC33751114	ADC33751114	Door Assembly, Freeze Room
630B	ADD33178706	ADD33178706	ADD33178706	ADD33178706	ADD33178706	Door Foam Assembly
630C	ADX72909701	ADX72909701	ADX72909701	ADX72909701	ADX72909701	Gasket Assembly, Door
630D	MEB49049004	MEB49049004	MEB49049004	MEB49049004	MEB49049004	Handle, Home Bar
630E	MCR42600501	MCR42600501	MCR42600501	MCR42600501	MCR42600501	Decor, Handle
630F	4775JA2101A	4775JA2101A	4775JA2101A	4775JA2101A	4775JA2101A	Hinge Assembly, Upper
630G	4775JA2102A	4775JA2102A	4775JA2102A	4775JA2102A	4775JA2102A	Hinge Assembly, Lower
630H	MCK38202501	MCK38202501	MCK38202501	MCK38202501	MCK38202501	Cover, Home Bar
630J	4987JA3025K	4987JA3025K	4987JA3025K	4987JA3025K	4987JA3025K	Gasket Assembly, Door
630K	4970JA3044A	4970JA3044A	4970JA3044A	4970JA3044A	4970JA3044A	Spring
630L	4970JA3045A	4970JA3045A	4970JA3045A	4970JA3045A	4970JA3045A	Spring
630M	4860JA3010B	4860JA3010B	4860JA3010B	4860JA3010B	4860JA3010B	Clamp
630N	4860JA3010A	4860JA3010A	4860JA3010A	4860JA3010A	4860JA3010A	Clamp

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to Work Safely.'