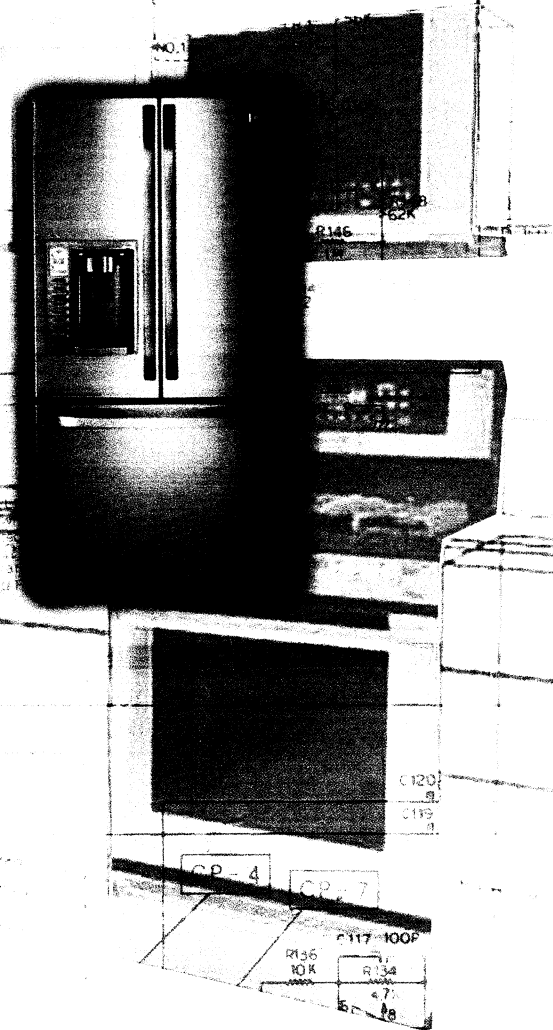


LG TRAINING MANUAL

French Door Refrigerator LFX25980ST

Spring 2008



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PHONE CONTACTS:

Contact	Number	Hours of Operation
Customer Service	(800) 243-0000	24 hours a day / 7 days a week
Technical Support	(800) 847-7597	7am-7pm Mon-Fri / Sat 8-2 CST
Parts Sales	(888) 393-6484	7am-7pm Mon-Sat CST
Training Center	(256) 774-4051	8am-5pm Mon-Fri CST

WEB CONTACTS:

Web Site	Address	Description
LG USA	www.lgusa.com	Product information
Customer Service	us.lgservice.com	User manuals, FAQs
GCSC	aic.lgservice.com	Service manuals, parts, bulletins
Customer Service Academy	www.lgcsacademy.com	Web training, discussion forum
Live Training	lge.webex.com	Live training

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IMPORTANT SAFETY NOTICE

The information in this training manual is intended for use by persons possessing an adequate background in electrical equipment, electronic devices, and mechanical systems. In any attempt to repair a major appliance, personal injury and property damage can result. The manufacturer or seller maintains no liability for the interpretation of this information, nor can it assume any liability in conjunction with its use. When servicing this product, under no circumstances should the original design be modified or altered without permission from LG Electronics. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury. If wires, screws, clips, straps, nuts, or washers used to complete a ground path are removed for service, they must be returned to their original positions and properly fastened.

CAUTION

To avoid personal injury, disconnect the power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks. Also be aware that many household appliances present a weight hazard. At least two people should be involved in the installation or servicing of such devices. Failure to consider the weight of an appliance could result in physical injury.

ESD NOTICE

Some of the electronics in appliances are electrostatic discharge (ESD) sensitive. ESD can weaken or damage the electronics in these appliances in a manner that renders them inoperative or reduces the time until their next failure. Connect an ESD wrist strap to a ground connection point or unpainted metal in the appliance. Alternatively, you can touch your finger repeatedly to a ground connection point or unpainted metal in the appliance. Before removing a replacement part from its package, touch the anti-static bag to a ground connection point or unpainted metal in the appliance. Handle the electronic control assembly by its edges only. When repackaging a failed electronic control assembly in an anti-static bag, observe these same precautions.

REGULATORY INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna; Increase the separation between the equipment and the receiver; Connect the equipment to an outlet on a different circuit than that to which the receiver is connected; or consult the dealer or an experienced radio/TV technician for help.

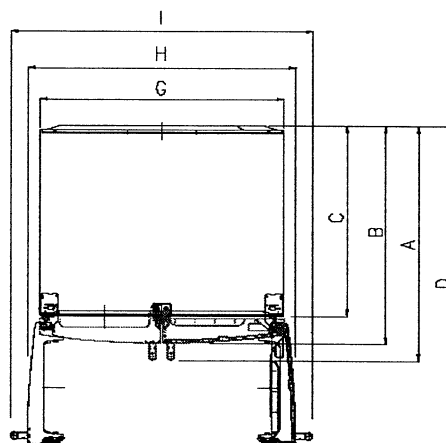
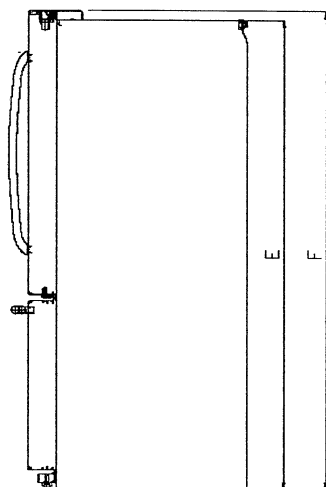
DISCLAIMER

The information in this training manual was accurate at the time of publication. Every effort has been made to ensure accuracy. Updates, changes, etc. are available via GCSC and LGCSacademy. The information in this manual is intended for persons with adequate backgrounds in electronics, mechanical, and electronic servicing. The manufacturer and seller are not to be held responsible for any liability incurred from its use.

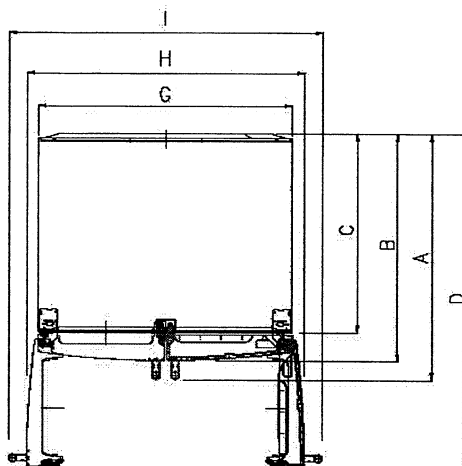
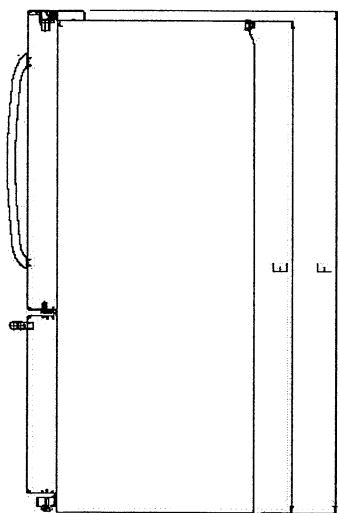
COMPLIANCE

The responsible party for this device's compliance is LG Electronics Alabama, Inc.; 201 James Record Road, Huntsville, AL, 35813.

SPECIFICATIONS



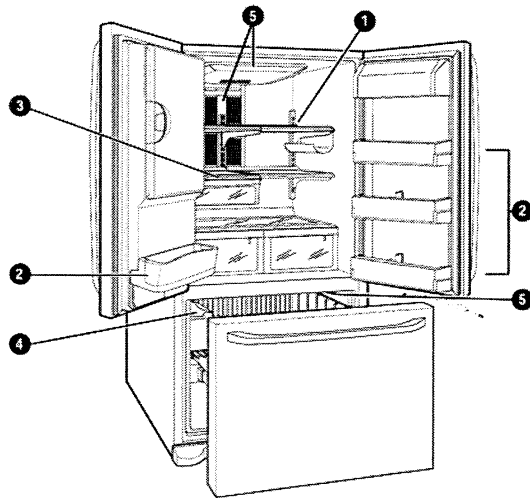
DESCRIPTION		LFX21980ST	LFX25980ST
Depth with handles	A	30"	34 $\frac{1}{4}$ "
Depth without handles	B	27 $\frac{1}{2}$ "	31 $\frac{3}{4}$ "
Depth without door	C	23 $\frac{5}{8}$ "	27 $\frac{7}{8}$ "
Depth (total, with door open)	D	42 $\frac{1}{4}$ "	46 $\frac{1}{2}$ "
Height to top of case	E	68 $\frac{3}{8}$ "	68 $\frac{3}{8}$ "
Height to top of door hinge	F	69 $\frac{3}{4}$ "	69 $\frac{3}{4}$ "
Width	G	35 $\frac{3}{4}$ "	35 $\frac{3}{4}$ "
Width (door open 90°, w/o handle)	H	39 $\frac{1}{4}$ "	39 $\frac{1}{4}$ "
Width (door open 90°, with handle)	I	44 $\frac{1}{4}$ "	44 $\frac{1}{4}$ "



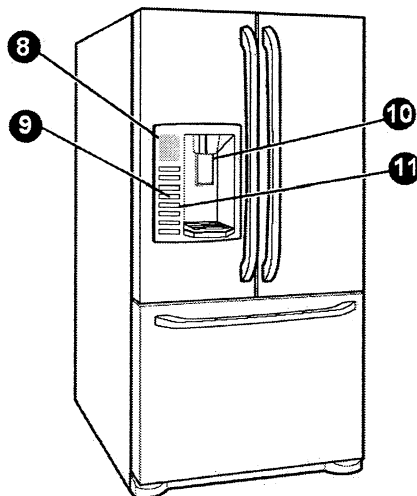
SPECIFICATIONS, continued

Door Design	Side Rounded
Dimensions (W x D H in inches)	35¾ x 30 x 69¾ (21 cu. ft.) 35¾ x 34 x 69¾ (25 cu. ft.)
Net Weight (pounds)	303 (21 cu. ft.) 325 (25 cu. ft.)
Cooling System	Fan cooling
Temperature Control	Microprocessor Control
Defrosting System	Full Automatic, Heater Defrost
Door Finish	Embossed metal, VCM, Stainless
Handle Type	Bar
Inner Case	ABS Resin
Insulation	Polyurethane Foam
Compressor	Reciprocating
Evaporator	Fin Tube Type
Condenser	Wire Condenser
Refrigerant	R-134a (125 g)
Lubricating Oil	ISO 10 (280 ml)
Defrosting Device	Sheath Heater
Lamp	Refrigerator – 12-LED Array Freezer – 3 LED Array

PARTS IDENTIFICATION



1. Adjustable refrigerator shelving
2. Modular door bins
3. Snack pan
4. Removable ice storage bin
5. Interior lamps (LED)
6. Ice door (reveals icemaker and ice bin)



8. Control Panel LCD
9. ICE PLUS Button
10. Dispenser (Ice and Water)
11. DOOR ALARM Button

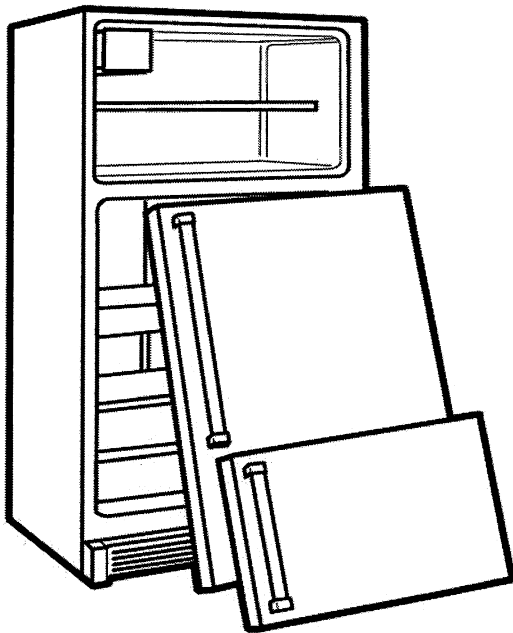
INTRODUCTION

The LFX2x980ST refrigerators are part of the **LG TOTAL KITCHEN PACKAGE** for 2008. They are designed to match the LMVM2277ST Over-The-Range microwave oven, the LDF9810ST Steam Dishwasher, and the LRE30955ST Electric Range.

The tall dispenser provides filtered water and cubed or crushed ice. It allows the filling of larger vessels, including big glasses and pitchers, directly from the dispenser.

The LED control panel displays the set temperatures of freezer and refrigerator sections as well as the ice dispenser settings and indicators to show ALARM ON/OFF, LOCK/UNLOCK, ICE PLUS, and FILTER CHANGE. The touch buttons allow adjusting of these options. Unpublished button combinations allow the refrigerator to be placed into DEMO mode or TEST mode for diagnosis and repair.

SAFETY



In the interest of the safety, remove the doors from your old refrigerator when it is stored or disposed.

Junked or abandoned refrigerators are dangerous. Children may be tempted to play in them, and the result can be fatal. Remove the doors and store them separately so children cannot become entrapped and suffocate. Leave the shelving in place so children cannot easily climb inside.

When the refrigerator reaches the end of its useful life, have the refrigerant recovered in accordance with EPA regulations and Federal laws. If you intentionally release the refrigerant, you may be subject to fines and imprisonment under the provisions of environmental legislation.

WARRANTY

LG ELECTRONICS, INC. LG BOTTOM-FREEZER REFRIGERATOR LIMITED WARRANTY – USA



Your LG Refrigerator will be repaired or replaced, at LG's option, if it proves to be defective in material or workmanship under normal use, during the warranty period ("Warranty Period") set forth below, effective from the date ("Date of Purchase") of original consumer purchase of the product. This warranty is good only to the original purchaser of the product and effective only when used in the United States, including Alaska, Hawaii, and U.S. Territories.

WARRANTY PERIOD:
REFRIGERATOR/FREEZER

LABOR: One Year from the Date of Purchase.

PARTS: One Year from the Date of Purchase.

SEALED SYSTEM

(Compressor, Condensor, and Evaporator)

LABOR: One Year from the Date of Purchase.

PARTS: Seven Years from the Date of Purchase.

Replacement Units and Repair Parts are warranted for the remaining portion of the original unit's warranty period.

HOW SERVICE IS HANDLED:
In-Home Service :

Please retain dealer's dated bill of sale or delivery ticket as evidence of the Date of Purchase for proof of warranty, and submit a copy of the bill of sale to the service person at the time warranty service is provided.

Please call 1-800-243-0000 and choose the appropriate option to locate your nearest LG Authorized Service Center.

Or visit our website at www.lgservice.com

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD ABOVE. NEITHER THE MANUFACTURER NOR ITS U.S. DISTRIBUTOR SHALL BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY NATURE, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR PROFITS, OR ANY OTHER DAMAGE WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

THIS LIMITED WARRANTY DOES NOT APPLY TO:

- Service trips to your home to deliver, pick up, and/or install the product, instruct, or replace house fuses or correct wiring, or correction of unauthorized repairs.
- Damages or operating problems that result from misuse, abuse, operation outside environmental specifications or contrary to the requirements of precautions in the Operating Guide, accident, vermin, fire, flood, improper installation, acts of God, unauthorized modification or alteration, incorrect electrical current or voltage, or commercial use, or use for other than intended purpose.
- Repairs when your LG refrigerator is used in other than normal, single-family household use.

The cost of repair or replacement under these excluded circumstances shall be borne by the consumer.

CUSTOMER INTERACTIVE CENTER NUMBERS

To obtain Customer Assistance, Product Information, or Dealer or Authorized Service Center location:

Call 1-800-243-0000 (24 hours a day, 365 days a year) and select the appropriate option from the menu.
Or visit our Web site at www.lgservice.com.

**TO CONTACT LG ELECTRONICS
BY MAIL:**

LG Customer Interactive Center
P. O. Box 240007
201 James Record Road
Huntsville, Alabama 35824
ATTN: CIC

Product Registration Information

Model:

Serial Number:

Date of Purchase:

The model and serial number can be located on the inner case or back of the refrigerator compartment.

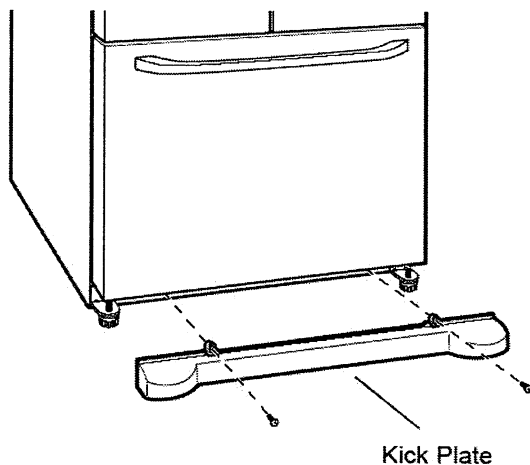
INSTALLATION

WEIGHT HAZARD!

The refrigerator weighs as much as 325 pounds (148 kg). We recommend a minimum of two people for moving and servicing this refrigerator.

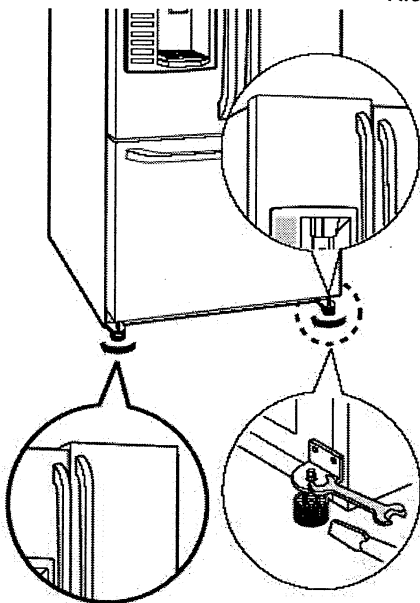
LEVELING

Be sure the floor is level and strong enough to support the refrigerator. Unstable installation or unlevel flooring may cause vibration, noise, and poor door operation. Be sure to level the refrigerator at installation using the height adjusting screws (leveling legs.)



If the base grille (kick plate) is installed, remove it by removing the two screws that hold it on.

When the refrigerator is in place, adjust the leveling legs by turning them counterclockwise to raise or clockwise to lower the refrigerator.

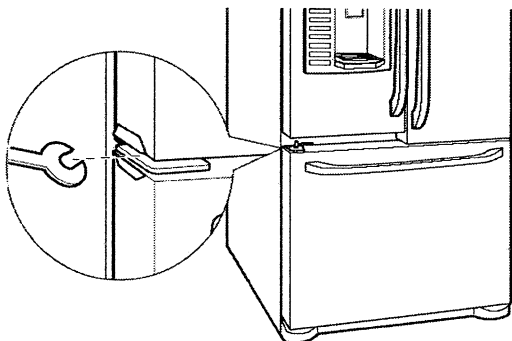


Use an $1\frac{1}{32}$ " (8 mm) wrench to turn the hex ends of the leveling bolts or stick a flat screwdriver in the slots to turn them. If you have a helper to push against the top of the refrigerator and take the weight off the leveling legs, you can turn them by hand.

Be sure to lower them enough to contact the floor and support some of the weight of the refrigerator. It will keep it from moving when you pull the doors open and from tipping forward when the freezer drawer is pulled out.

Replace the base grille.

DOOR ALIGNMENT



The doors can be adjusted to be exactly even. First, level the refrigerator as described on page 10. Then, use the small wrench (supplied with the owner's manual) to adjust the bolt in the door hinge. Turn it counter-clockwise to raise the door or clockwise to lower it.

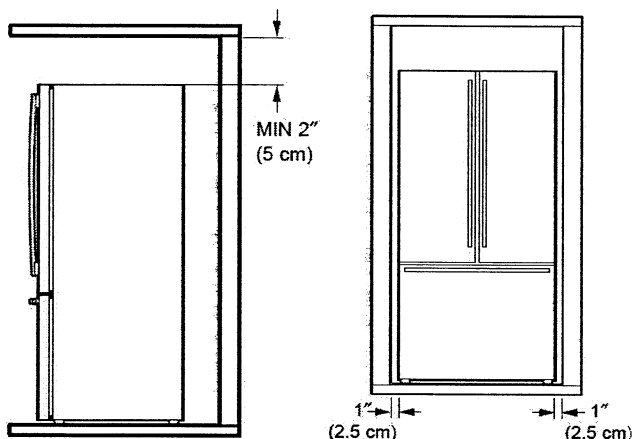
TEMPERATURE

Store and operate the refrigerator where it will not be exposed to outside weather conditions or extreme temperature conditions. It should be installed in an area where the temperature is between 55° and 110° F (13° ~43° C). If the temperature around the refrigerator is outside this range, the cooling ability may be affected adversely. If the refrigerator is installed where the ambient temperature is greater than 110° F (43° C), its performance will be affected negatively and its use of electricity increases exponentially.

WETNESS and DAMPNESS

Do not install the refrigerator in a wet or damp area to avoid the potential for electrical shock. Installation must conform to all governing codes and regulations.

CLEARANCE



Allow 1" (2.5 cm) clearance on both sides and 2" (5 cm) at the top for ventilation, better cooling efficiency, electrical and water connections, and ease of installation and cleaning. Too little clearance will result in lowered freezing capacity and increased use of electricity.

Allow 24" (61 cm) in front of the refrigerator so the doors can open properly.

FLOORING

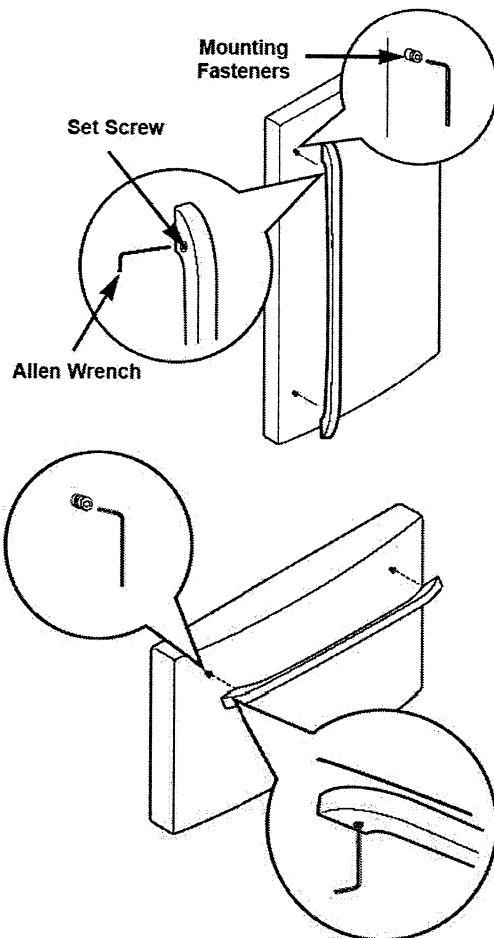
The refrigerator must be installed on a solidly constructed floor to minimize noise and vibration. The refrigerator must be level. If necessary, adjust the leveling legs under the front of the refrigerator to compensate for variations in the flooring. This is easier if the refrigerator is tipped slightly backward to take the weight off the legs. Turn them clockwise to raise the refrigerator or counterclockwise to lower it.

Carpet, soft tile, padded linoleum, and similar surfaces are not recommended.

Never install the refrigerator on a platform or a weakly supported structure.

When moving the refrigerator for cleaning or service, be sure to protect the floor. Pull the refrigerator straight out. Do not walk or wiggle it; floor damage or side panel damage may occur.

HANDLE REMOVAL



It may be necessary to remove the handles to get the refrigerator through a door.

Loosen the set screws with a $\frac{3}{32}$ " (2.5 mm) Allen wrench. Remove the handle.

If the mounting bolts require removal or adjustment, use a $\frac{1}{4}$ " Allen wrench.

Use extreme caution when removing the handles to avoid scratching the doors. When you remove or replace a handle, push (or pull) firmly but do not damage the handle or the door by using excessive force.

Replace the handles by placing the handles on the mounting bolts and tightening the set screws.

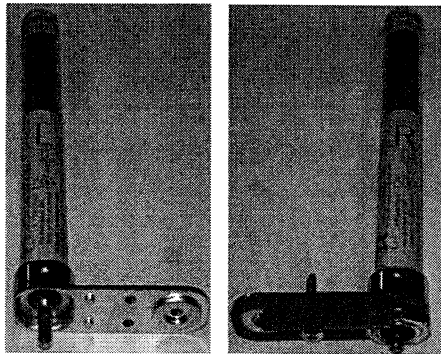
DOOR REMOVAL

Disconnect the electrical supply and shut off the water to the refrigerator before installing or servicing.

Do not put your hands, feet, fingers, or metal (conductive) items into the air vents, the base grille (kick plate), or bottom of the refrigerator. You could be injured or shocked.

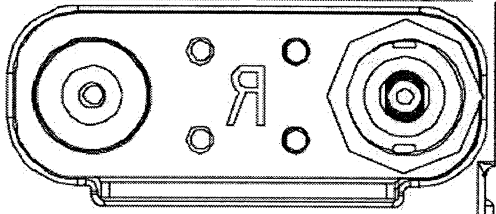
If the entrance door is too small to accommodate the refrigerator, you can remove the doors and pull the refrigerator into the room sideways.

SELF-CLOSING HINGES

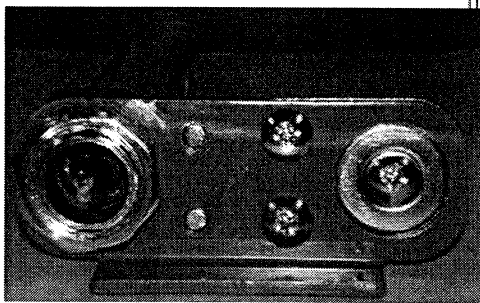


The hinge / closing mechanism is available as a left or right hinge, and they are not interchangeable.

The hinge bracket (gray) is shown attached to the right hinge.

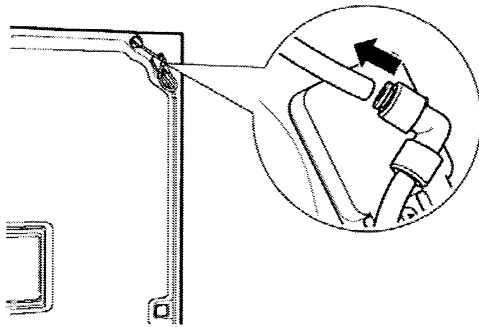


The hinge bracket is marked L (left) or R (right). As the door must be removed or replaced when open at 90°, the hinge cam must be in the correct position when it is installed.



This photo shows the hinge assembly mounted to the hinge bracket (gray).

The speed of closure can be adjusted by turning the small screw in the end of the hinge mechanism.

LEFT REFRIGERATOR DOOR

Disconnect the hose at the top right corner (facing the back) by removing the release clip and pressing the release ring. The tube will be pulled out with the door when it is removed.

Open the door to 90°. The door must be opened to 90° to be removed or reattached.

Remove the screw (1) securing the top hinge cover.

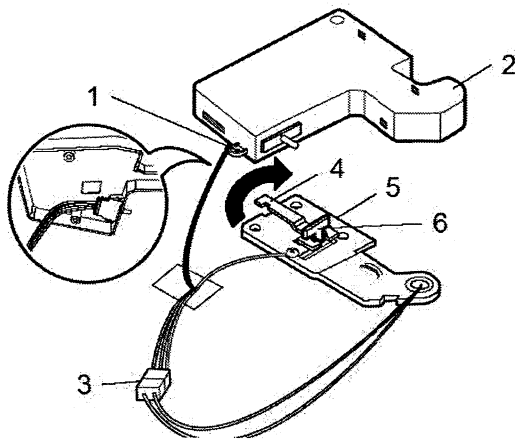
Use a flat screwdriver to pry off (2) the hinge cover. (Hooks not shown.)

Remove the cover and pull the water tube (3) through.

Disconnect all the wiring (4) harnesses. Remove the ground (5) screws.

Turn the hinge lever (6) counter-clockwise and remove it. Lift the top hinge (7) free of the latch lever (8). Be careful the door does not fall forward.

With the door open to 90°, lift it off the middle hinge pin.

RIGHT REFRIGERATOR DOOR

Open the door to 90°. Remove the top hinge cover (1) screw.

Lift the cover (2).

Disconnect the wire (3) harness.

Rotate the hinge lever (4) clockwise and remove it.

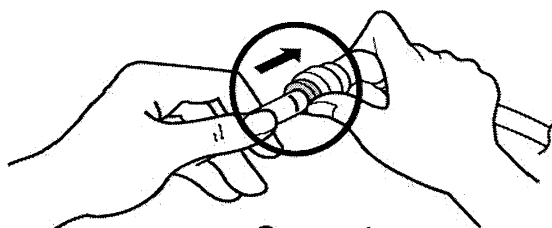
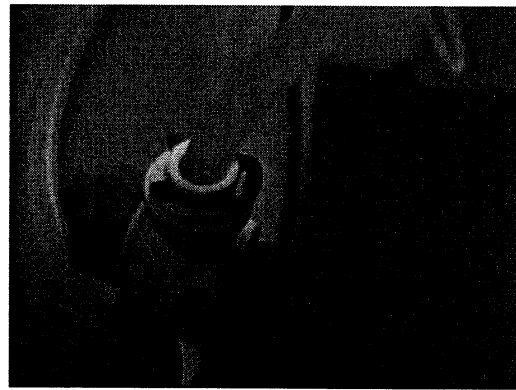
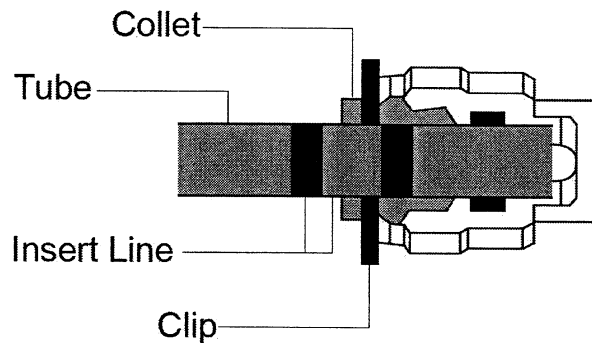
Lift the top hinge (5) clear of the hinge lever latch (6).

CAUTION!

- When lifting the hinge free of the latch, be careful the door does not fall forward.
- After removing the door, lay it on a blanket or other padded protective surface, with the inside facing up.
- Always remove or replace the doors when they are opened to 90°.
- Replacement of either door is the reverse of the way it was removed.

WATER TUBE CONNECTION

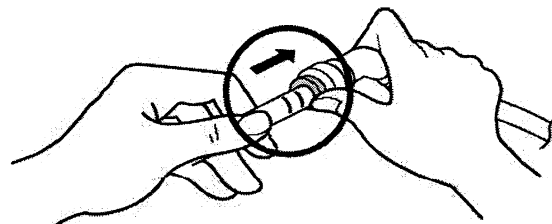
The water tube connections must be properly assembled to avoid leaking.

**Correct**

Insert the tube into the connector until only one of the printed lines is visible.

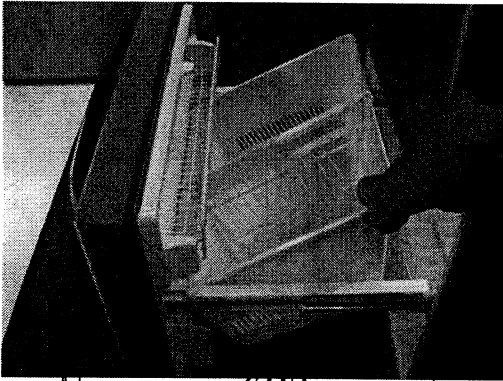
Pull on the tube slightly to ensure proper insertion and retention.

Insert the retainer clip under the release ring.

**Incorrect**

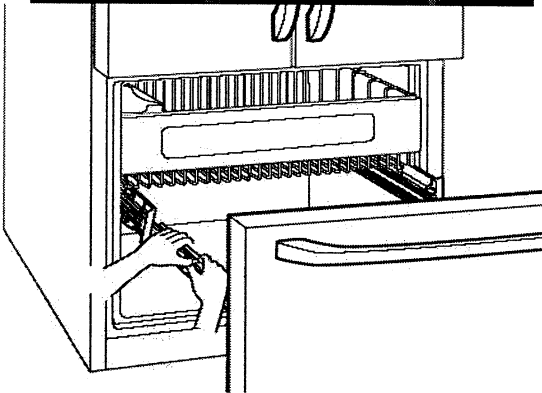
If you can see both rings, the tube is not inserted properly.

The tube end must be cut squarely.

FREEZER DOOR and DRAWER REMOVAL

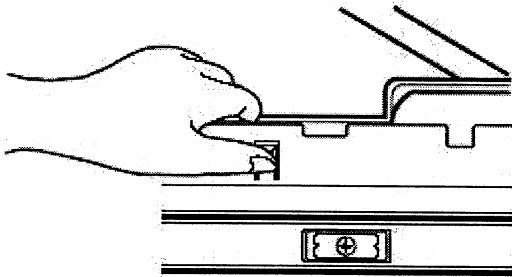
Open the freezer drawer to full extension. Unload the freezer before repairs begin.

Remove the Durabase® basket by lifting the back of the basket from the rail system and then lifting the entire basket. It is easier if you tilt the door forward.



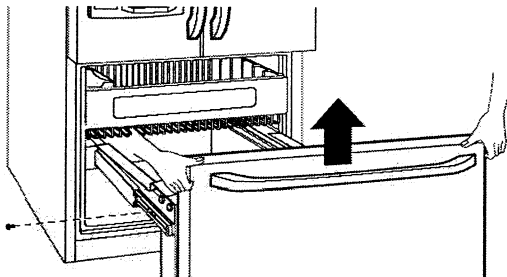
Remove the rail covers from the rails. As shown in the drawing, press the two tabs toward the middle of the drawer and roll the rail cover toward the middle of the drawer. (See next drawing.)

When replacing them, they must drop nearly vertically into place so the tabs will lock into position and the slots in the top of the rail (invisible) will snap into place.



The release tabs are shown here.

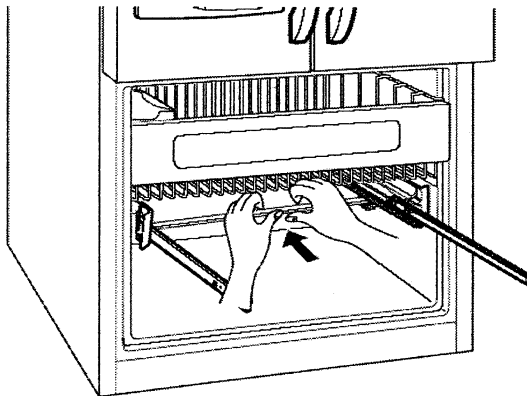
Remove the rail screws. (There is one on each rail. The screws are white.)



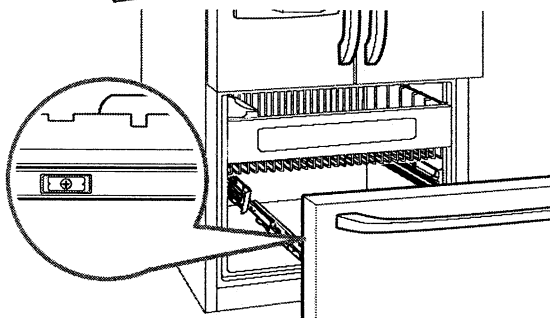
Using both hands, grasp the freezer door by both sides and lift it to separate it from the rails. Set it on a padded, protective surface, like a blanket, with the inside facing up.

Use caution, because the door is heavy! Do not drop it on your feet or on the floor.

continued on next page

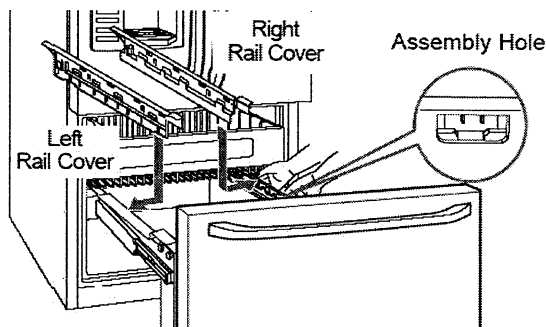
FREEZER DOOR and DRAWER REMOVAL, continued

To replace the door, first check to make certain the center bar is aligned. Hold it in the middle and push it all the way back. Then pull it out and it will center automatically.



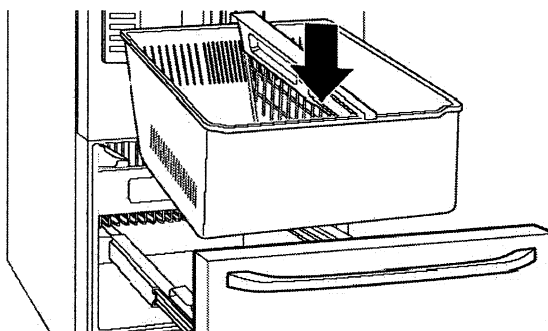
Holding the door with both hands, lower it into place on the rails.

Replace the rail screws, one on each rail. Then tighten the two hex-head bolts.



Pull the drawer out to full extension and tilt it forward.

Replace rail covers. (There are a left cover and a right cover.)



Replace the Durabase® basket in the drawer. Put the basket in with the back into the frame and guide the front of the drawer (by the freezer door) into place first. The back will follow.

ADDITIONAL WARNINGS

- To prevent accidental child and pet entrapment and suffocation risk, DO NOT allow pets and children to play inside the freezer drawer.
- DO NOT step or sit on the freezer door.
- Plug the refrigerator into a grounded outlet on a dedicated circuit.

WATER LINE CONNECTION

Read ALL the directions thoroughly before you begin. Be certain you understand all the requirements for installing and connecting a water connection for this refrigerator.

WARNING! Connect the water supply tube from the refrigerator to a potable water supply only.

- The water pressure requirement for this refrigerator is 43 ~ 121 psi (3 ~ 8.5 kgf/cm²). If the existing pressure is insufficient, the customer can purchase a separate pressure pump to provide normal icemaking and water dispensing operation.
- The total length of the water supply line should not be greater than 26 feet (8 meters).
- Use copper tubing or a braided, reinforced nylon supply line.
- Install the water line in an area where the temperature will not drop below freezing.
- It may take up to 24 hours for the icemaker to begin producing ice.
- The icemaker water valve includes a flow washer that is used as a water pressure regulator.

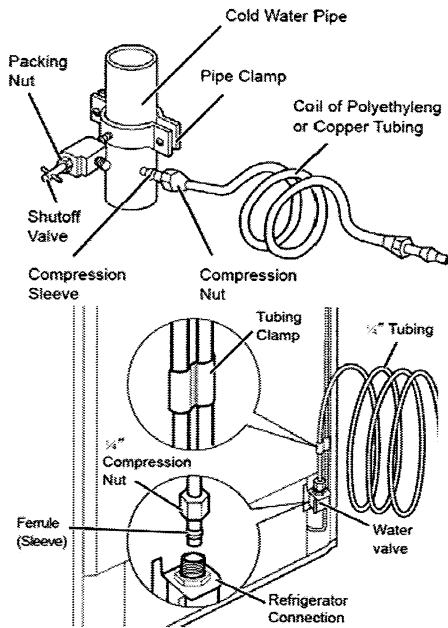
TOOLS REQUIRED

Standard screwdriver
 $\frac{7}{16}$ " open-end wrench
 $\frac{1}{4}$ " drill bit

$\frac{1}{4}$ " nut driver
 $\frac{1}{2}$ " open end wrench
drill (electric drills must be grounded)

WATER LINE INSTALLATION KIT

Some dealers sell an installation kit that includes all the parts necessary to connect the refrigerator to a water line. Often, these kits include a piercing saddle-type valve that allows connection to the water line without the need for plumbing skills. LG does not recommend the use of this type valve because it often fails to provide sufficient water flow for the icemaker and dispenser to function properly.



Various connector types are available.

These illustrations show a saddle valve with the water line connected using a compression fitting at each end.

The additional coil of tubing (approx. 7' or 2.1 m) is to allow pulling the refrigerator out for servicing or cleaning.

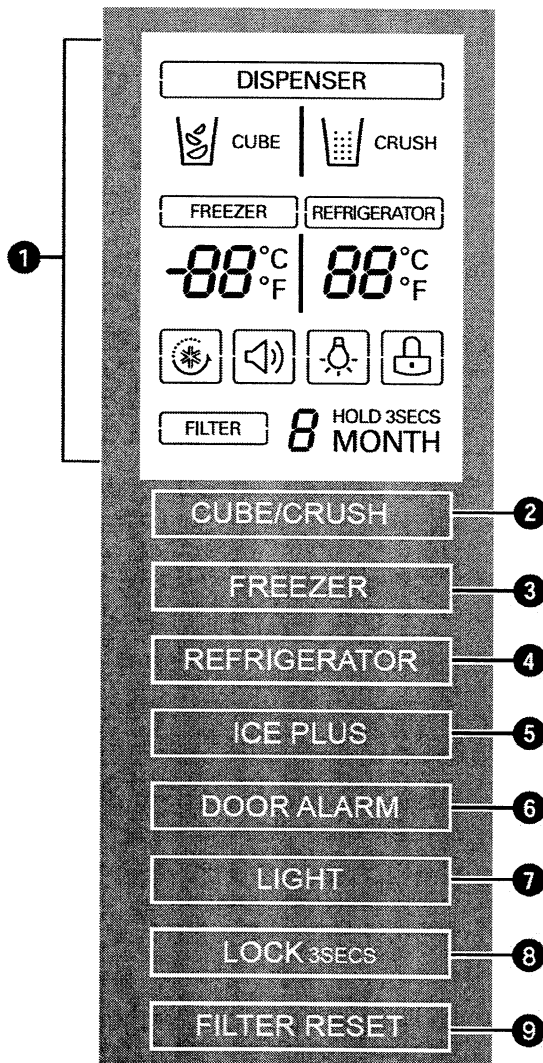
We recommend the use of a pre-assembled braided plastic or nylon line with threaded couplings on both ends to prevent leakage and popoffs.

CONNECTING THE WATER LINE

We recommend using a flare nut wrench to connect the water line fittings. After the valve has been installed on the water line, it must be flushed before connecting it to the refrigerator.

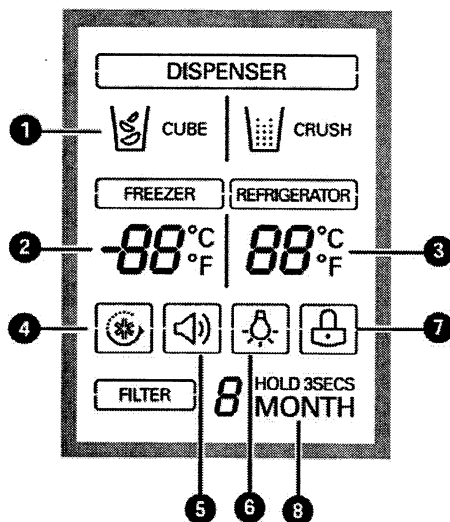
- Remove the plastic cap from the water valve on the back of the refrigerator.
- Attach the water supply line to the valve.
- Open the valve and flush out the supply line before attaching it to the refrigerator.
- Attach the supply line to the water valve on the back of the refrigerator.
- Tighten all connections. Turn on the water and check for leaks.
- Press the water dispenser button and bleed all the air through the system. When water begins coming out, run another quart to be sure all the air is out of the line.
- Turn the icemaker on and cycle it manually until water fills the tray to ensure all the air is out of the line.

OPERATION



CONTROL PANEL

1. **LCD DISPLAY** Shows status of refrigerator and options
2. **CRUSH / CUBE** Selects ice type
3. **FREEZER** Adjusts freezer temperature
4. **REFRIGERATION** Adjusts refrigerator temperature (Push and hold **FREEZER** and **REFRIGERATOR** for 5 seconds to switch display between °F and °C.
5. **ICE PLUS** Increases ice production by about 20%
6. **DOOR ALARM** Controls door alarm
7. **LIGHT** Controls dispenser light
8. **LOCK** Locks and unlocks the control panel
9. **FILTER RESET** Resets the filter indicator when the filter is changed.



LCD DISPLAY

1. DISPENSER SELECTOR
2. FREEZER TEMPERATURE
3. REFRIGERATOR TEMPERATURE
4. ICE PLUS
5. DOOR ALARM
6. DISPENSER LIGHT
7. LOCK STATUS
8. WATER FILTER STATUS

ADJUSTING TEMPERATURE and DISPLAY



0°F

Press **FREEZER** button to cycle through the range of available settings.



37°F

Press **REFRIGERATOR** to cycle through the range of available settings.



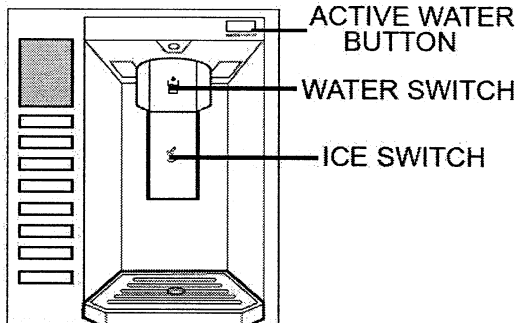
Press and hold **REFRIGERATOR** and **FREEZER** simultaneously for 5 seconds to change the display between ° Fahrenheit and ° Celsius.

The display shows the set temperature, not the actual temperature. When changing the settings, allow 24 hours for the refrigerator to stabilize before adjusting it further.

OPERATING THE DISPENSER



To dispense crushed or cubed ice, press **CUBE/CRUSH** to light the appropriate icon; then press the glass against the ice switch to receive ice.



To dispense chilled water, press the glass against the water switch. Alternatively, you can put the glass or other vessel in the dispenser area under the water spout and press the active **WATER** button.

DISPENSER LOCK



Press and hold the **LOCK** button to lock or unlock the dispenser and other control panel functions.

DOOR ALARM

Press the **ALARM** button to turn the door alarm ON or OFF. When the door alarm is ON, the alarm will sound three times at thirty-second intervals.

If the alarm cannot be stopped, call for service.

FILTER RESET

6 HOLD 3SECS
MONTH

Press and hold **FILTER RESET** to reset the filter indicator after the filter has been replaced. LG recommends replacing the filter every six months or when water taste and ice cube quality deteriorate.

ICE PLUS

Press **ICE PLUS** to turn the ICE PLUS function ON or OFF. The icon will illuminate and the controller will set the freezer at the coldest setting. After 24 hours, ICE PLUS turns off automatically.

DIAGNOSTIC CODE

If the main control board detects a failure, it will display a diagnostic code on the main display. The owner's manual asks the customer to make a note of the code and then call for service. Ask if he or she has seen any error codes.

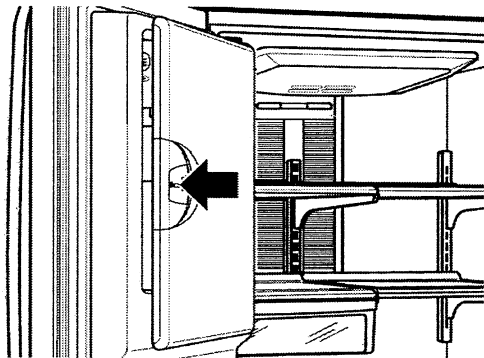
DEMO MODE

The DEMO MODE allows the refrigerator to be run without operating the compressor. Press and hold **ICE PLUS** and **REFRIGERATOR** with either refrigerator door open to turn DEMO MODE on or off.

NOTE: Unplugging the refrigerator will NOT disable the demo mode.

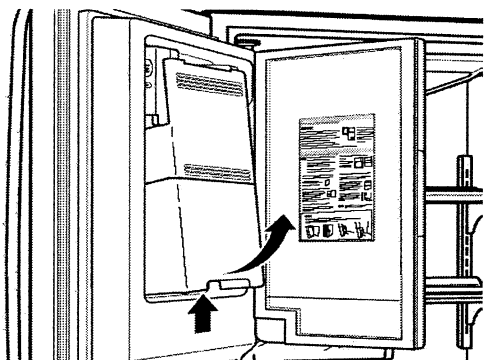
ICE-IN-DOOR

CAUTION! Keep hands, fingers, and tools out of the ice door and dispenser. You can break something or suffer serious personal injury.

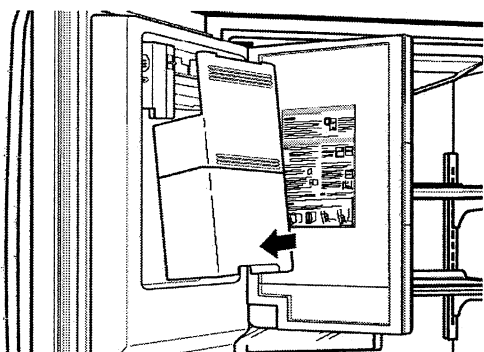


To view or service the icemaker, open the ICE DOOR on the inside of the left refrigerator door. Shake the ice bin occasionally to keep the ice from clumping and piling near the feeler arm, which causes the icemaker to misinterpret the level of ice and cease production prematurely.

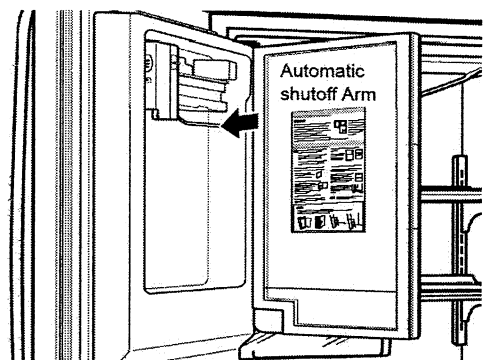
Press by the arrow to latch the door and be sure you hear the click.



Pull the ice bin out at the bottom and lift slightly to remove it. Be careful to avoid hitting the feeler arm (automatic shutoff arm) when handling the ice bin.

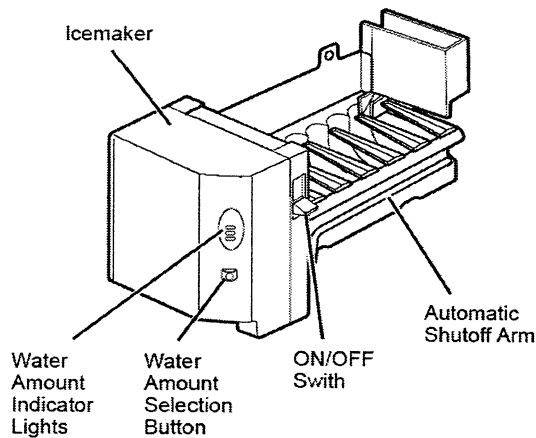


To replace the ice bin, insert the top first and then press the bottom of the bin into place.



Avoid touching the feeler arm (automatic shutoff arm) when removing or replacing the ice bin.

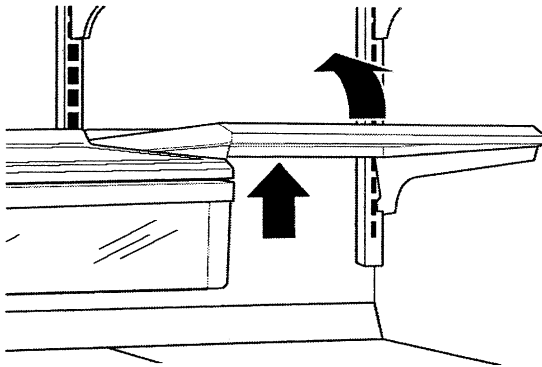
See the instruction label on the inside of the ice door for complete instruction.

AUTOMATIC ICEMAKER

Ice is made in the automatic icemaker and dropped into the ice bin, which allows stored ice to pass through the crusher and dispenser. The icemaker produces 100 ~ 130 cubes per day, depending upon freezer temperature, ambient temperature, freezer load, and several other factors.

- It takes 12 ~ 24 hours for the icemaker to begin producing ice.
- Use the icemaker switch to turn the icemaker ON or OFF.
- The icemaker stops producing ice if it detects the bin is full.
- You can regulate the cube size by pressing the Water Amount Selection Switch.
- The size of the cube can also vary depending upon the input water pressure.
- Raising the feeler arm (automatic shutoff arm) will not turn off the icemaker.
- It is normal to hear the noise that occurs when the ice cubes fall into the bin.
- If the water is not connected but the icemaker is turned on, the valve will make noise when it cycles. The icemaker is not defective.
- The first few batches of ice and glasses of water may contain particles, odor, or off-taste from the new supply line and other parts. Flush the system by purging all the air from it; then discard the first 9 glasses of water and the first full bin of ice cubes.
- Never store beverage cans, bottles, or other foods in the ice bin. They may burst or damage the icemaker.
- If discolored ice or water is dispensed, check the water supply and the filter. Do not use the ice of water until the problem is corrected.
- Do not use thin vessels, crystal, or delicate glassware to collect ice.
- Never remove the icemaker cover.

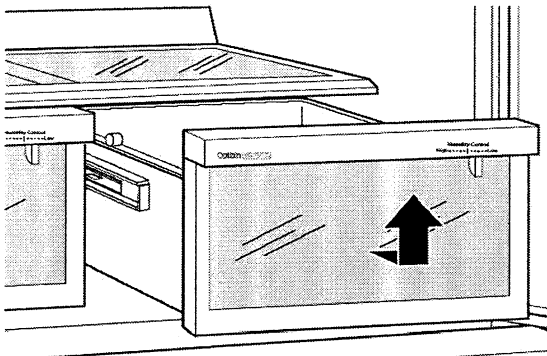
SHELVING



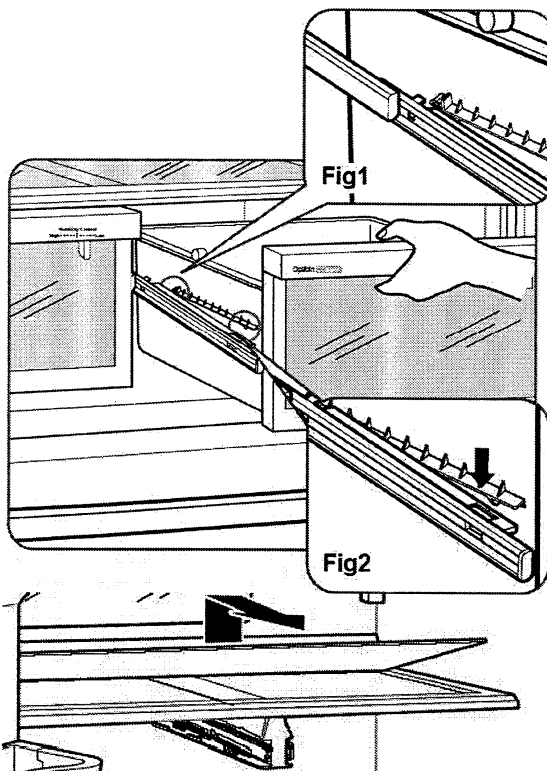
To remove a shelf, lift the front end to disengage the lower hooks. Then lift the shelf out of its place.

To replace it in any position, hold the shelf at an angle with the front higher and insert the top hooks at the desired level. Then lower the bracket into place so the lower hooks drop into the slots.

CRISPER DRAWERS



To remove the crisper drawer, pull it out to full extension, lift the front of the drawer slightly, and pull it forward.

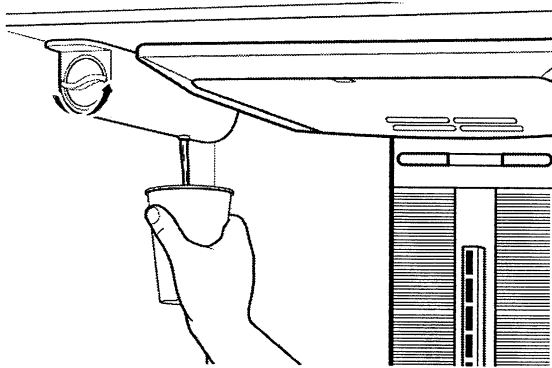


To replace the crisper drawer, pull the rails out to full extension. Insert the back of the drawer rails into the rear hooks on the rail. Lower the front of the drawer and see that the front tabs drop into the slots on the rail.

Pushing the drawer closed and then re-opening it may help seat everything.

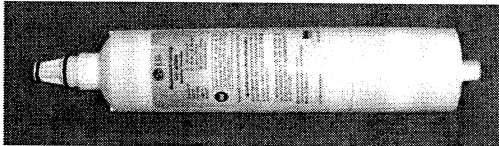
To remove the glass of the crisper cover, reach under the cover and lift the glass. Pull the glass up and turn it at a slight angle to remove it.

WATER FILTER

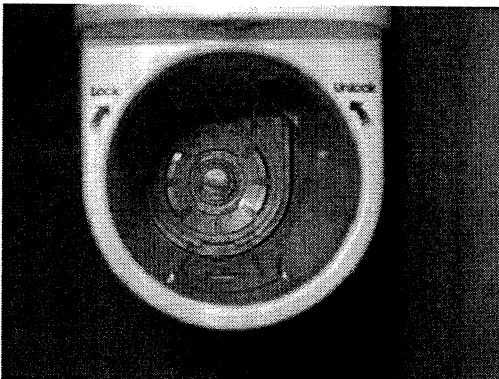


Replace the filter every 6 months or whenever taste and clarity deteriorate.

Hold a cup under the hole at the back of the filter holder to catch any spillage. Twist the filter counterclockwise until it clicks. Pull the filter out. Insert a new filter and twist it clockwise until it clicks. Dispense eight glasses of water to purge the line of air and particles.



Filter Part N^o. **5231JA2006A**.



Filter receptacle with filter removed.

Because of the valve built into the filter base, the water can still flow (unfiltered) to the icemaker and dispenser. We recommend using the refrigerator with the filter in place.

CLEANING – INTERIOR

Clean the inside of the refrigerator and freezer monthly to prevent odors and to ensure cleanliness. Unplug the refrigerator before cleaning. Unload all food items, shelves, and crispers. Use a sponge or a soft cloth and warm water with a solution of baking soda. Allow the soda to dissolve completely so it does not act as an abrasive. Wash, rinse, and dry all surfaces. Plug in the refrigerator. Do not use harsh cleansers. Do not use aerosol or spray cleaners. Be careful to avoid having damp items, including hands, to stick to the frozen surfaces.

CLEANING – EXTERIOR

Use a commercially available stainless steel cleaner and follow the manufacturer's directions. It is probably not necessary to unload the refrigerator to pull it out to clean behind it.

STORAGE – VACATION

For brief vacations, it is best to leave the refrigerator running. Dump the ice bin and turn off the icemaker.

STORAGE – INDEFINITE

To store the refrigerator indefinitely, unload it and unplug it. Dump the ice bin and turn off the icemaker. Allow the refrigerator to warm up to room temperature. Clean the interior, as described above. Block the doors open to prevent mold and mildew. Be certain that the refrigerator is stored in a position where it cannot encourage children to play in it and become entrapped.

POWER FAILURE

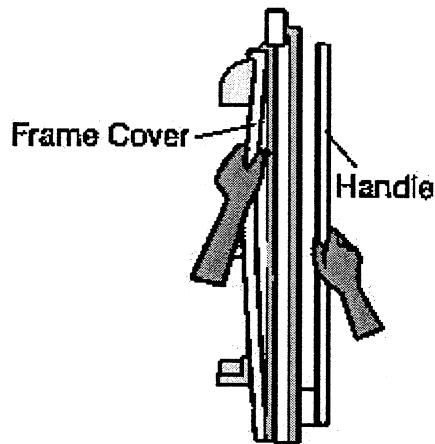
Most power failures that are corrected within a few hours' time will not affect the refrigerator or the food stored in it. Minimize the door openings while the power is off. If water drips from the ice bin, remove the bin, turn off the icemaker, and discard the ice. Turn the icemaker on again when the power is restored.

DISASSEMBLY

DOOR REMOVAL

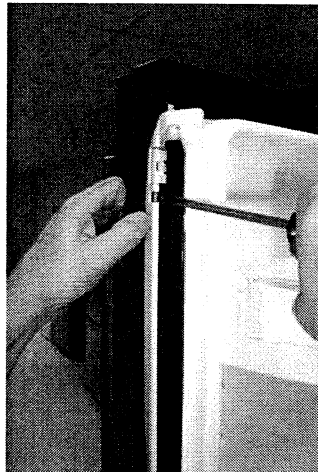
Removing, adjusting, and replacing the refrigerator doors are covered in another section of this manual. (See pages 13 ~ 14.)

DOOR GASKET REMOVAL



Remove the door frame cover.

Start at the top of the frame cover and work down. Gently pry the frame cover off the door. Be careful to avoid breaking the small plastic clips.



Remove the gasket bracket clips.

Pull the gasket back to expose the bracket clip and door frame. Insert a flat tip screwdriver into the seam between the gasket and the door frame and pry back until the clips snap out.

Continue along the seam until all the clips are released.

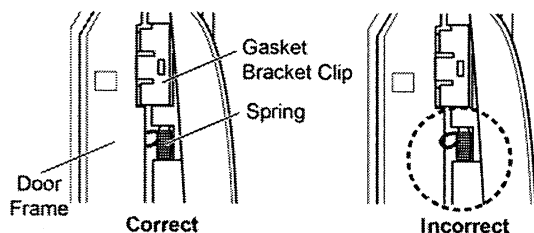


Remove the gasket.

Start at the top of the door and work down. Push the edge of the gasket aside and grasp the center portion. Pull it out of the channel and away from the door.

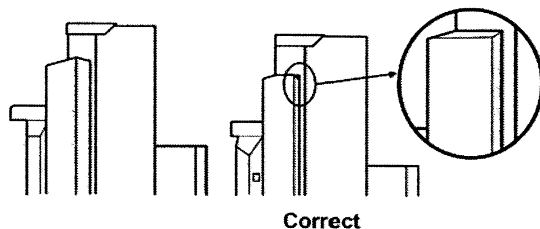
To replace the gasket, start at a top corner and work around the door, going across the top first.

DOOR GASKET REPLACEMENT

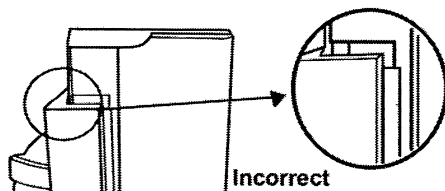


Insert the gasket bracket edge under the door frame. Turn the upper gasket spring so the ends are in the door channel.

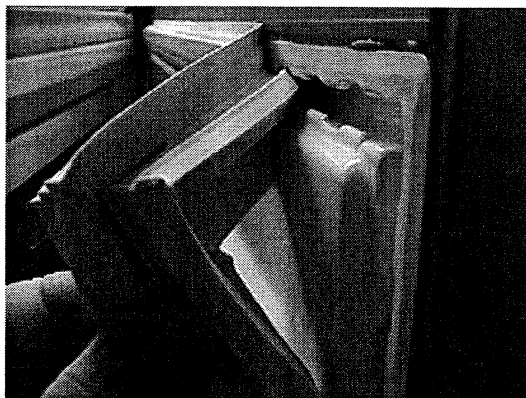
Push in the clip so it snaps into place.



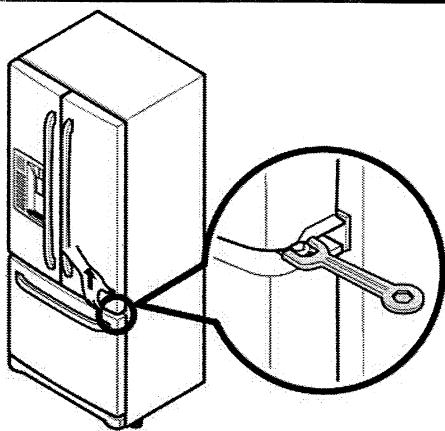
Replace the gasket in the door frame starting with the sealing edge.



Be sure no part of the gasket edge protrudes from under the edge of the door frame.

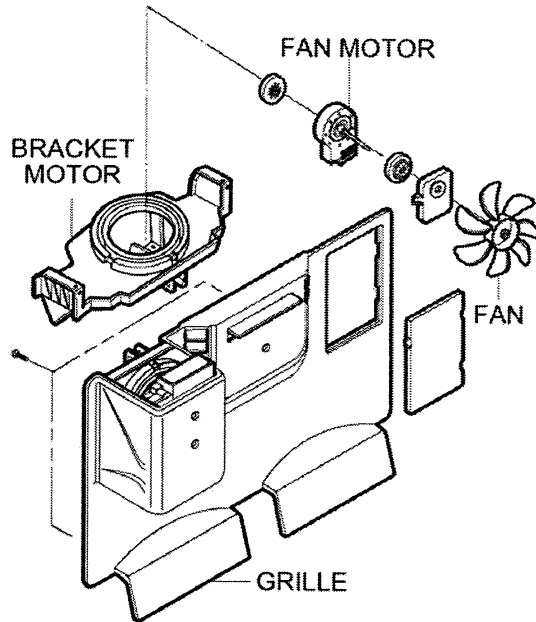


Push the rest of the gasket into place in the groove on the remaining three sides of the door. It is the opposite of removing the gasket.



If the refrigerator is level (see page 10) and the doors are still out of alignment, use the small wrench provided and adjust the bolt in the door hinge. (Counterclockwise to raise, clockwise to lower.)

FAN and FAN MOTOR



Empty the freezer and remove the drawer and shelf.

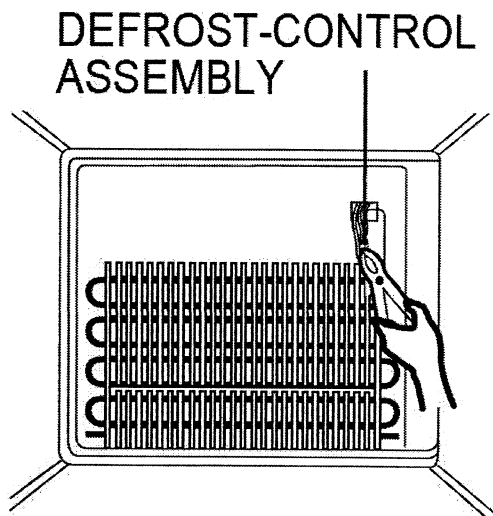
Remove the left drawer guide assembly.

Pull the grille forward gently.

Remove two screws to remove the ice scroll fan shroud. Separate the grille, bracket, and motor.

DEFROST CONTROL ASSEMBLY

The defrost sensor consists of a temperature sensor and a thermal fuse. This assembly is attached to the metal side of the evaporator and senses temperature. It turns off the defrost heater at 46 °F (8° C). The thermal fuse (Fuse-M) is for safety to prevent overheating during the defrost cycle. The thermal fuse is a single-use item; when it blows, it must be replaced as an assembly.



Remove the grille assembly in the freezer.

Unplug the defrost control assembly.

Cut the tie-wrap that holds it in place.

Remove and replace the assembly.

Secure it with a new tie-wrap.

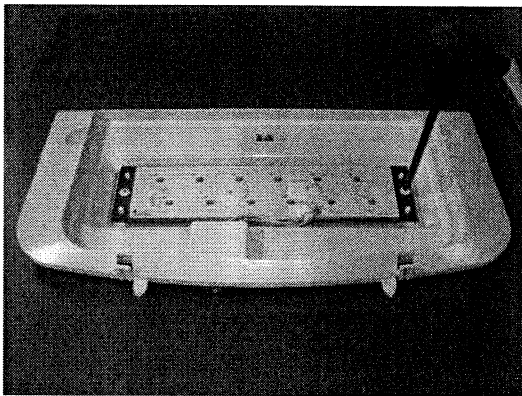
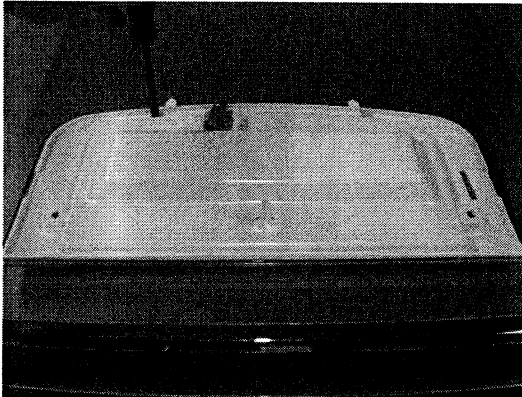
Plug in the new assembly and replace the grille.

LED REFRIGERATOR LAMP ASSEMBLY

If necessary, unload remove the top shelves.

Remove the two screws.

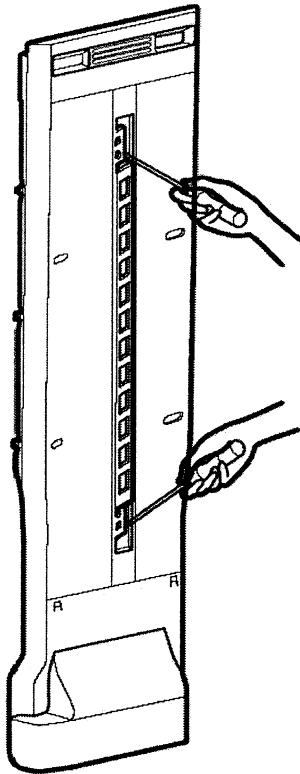
Grasp both ends of the lamp assembly and pull it down and out of the cavity. Use a flat screwdriver to remove the cover lamp.



Separate the LED assembly and the cover.

LED FREEZER LAMP ASSEMBLY

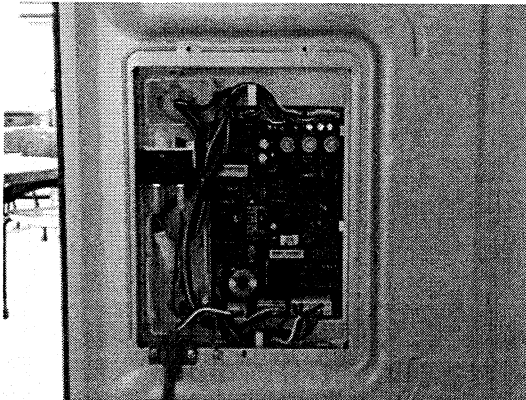
The freezer LED assembly is similar to that in the refrigerator, but smaller. The repair method is the same.

MULTI-DUCT

Pry out the upper and lower caps and remove the two screws.

Separate the connector at the bottom and remove the duct.

Store the duct where it will not be damaged or crushed during repairs. Replacement is the reverse of this procedure.

MAIN PCB

Remove the three screws on the PCB cover and take it off.

Disconnect the wire harness.

Remove and replace the board.

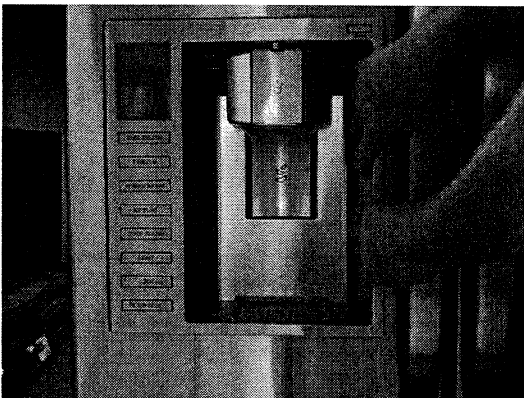
Reconnect the harness and replace the cover.

DISPENSER

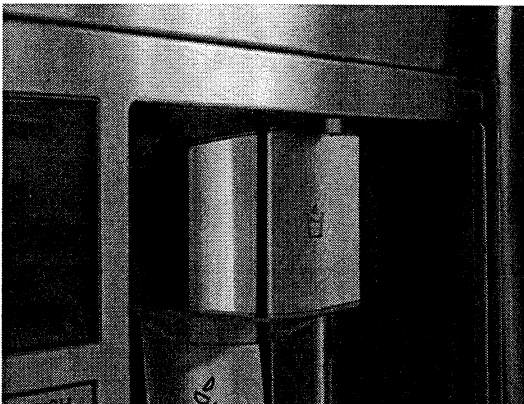
Remove the tray. Lift out the grate. Then pull the tray out past the stops without breaking it.



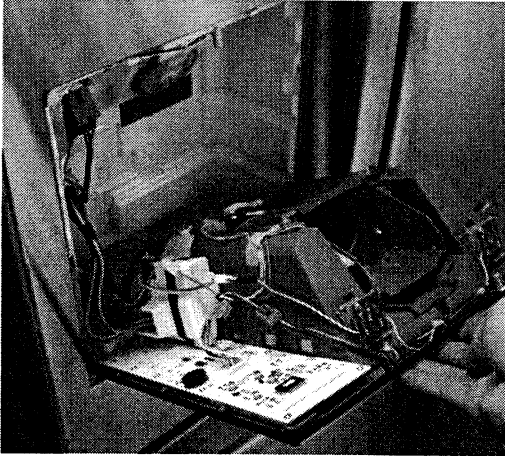
Grasp the lower part of the dispenser and pull it out.



Hold the right side of the dispenser with both hands. Pull it out and forward.

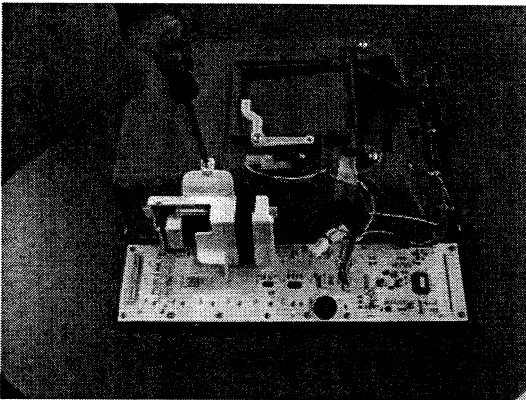


If the spout is in the way of removal, remove it.

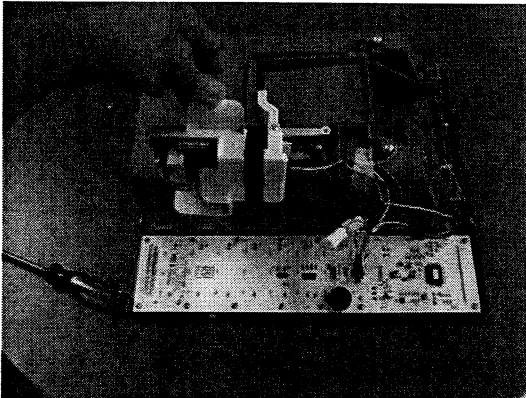


Fold the dispenser assembly down and disconnect the wiring harness.

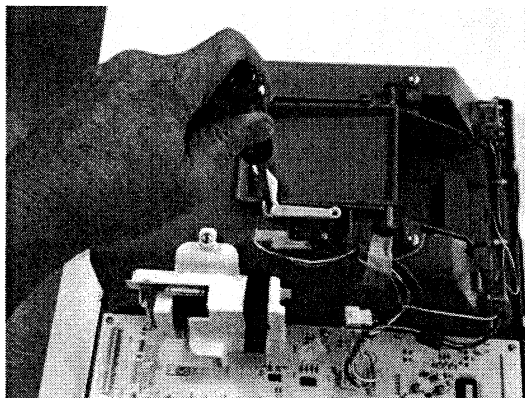
DISPLAY PCB



Remove the screw that attaches the case.



Remove the screw that attaches the display PCB to the case.

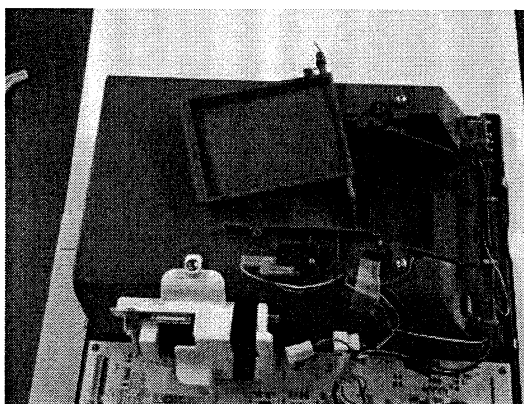
ICE BUTTON ASSEMBLY

Remove the screw attaching the button lever.

Push the spring from the hanging hook to remove it.

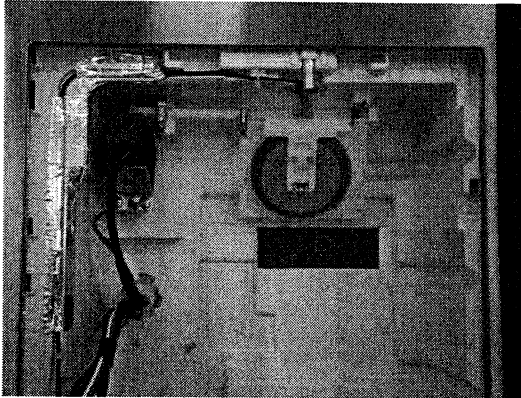
FUNNEL REPLACEMENT

Grasp the funnel firmly.
Pull it down and forward.

WATER BUTTON ASSEMBLY

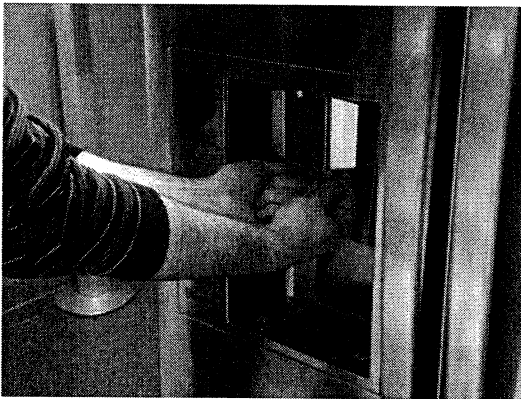
Remove the screws.

Lift the button assembly out of the holder.

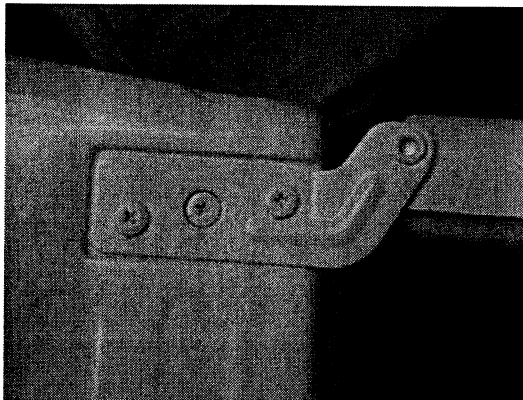
DUCT DOOR REPLACEMENT

Remove the dispenser cover.
(See page 33.)

Disconnect the wiring harness.



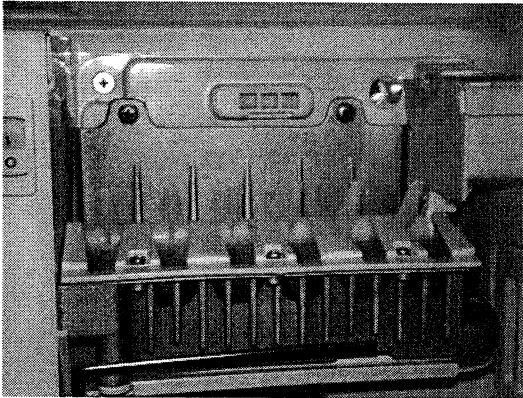
Remove the funnel. (See page 35.)

ICEMAKER DOOR COVER

Loosen the front screw (nearest the hinge) of the bracket.

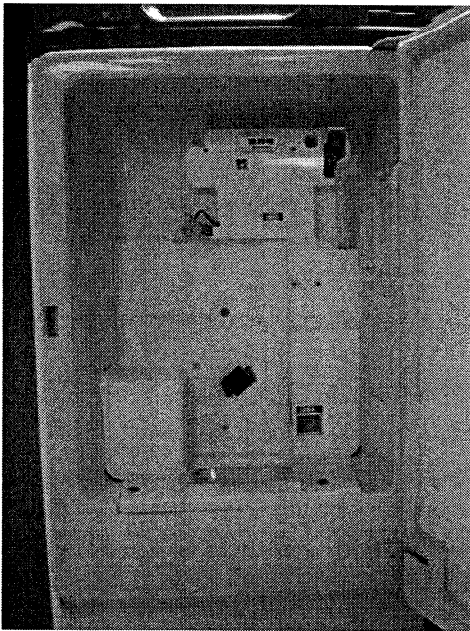
Lift the hinge with one hand. It might be necessary to loosen the rear screw slightly.

Lift the icemaker door out of the lower hinge with the other hand.

ICEMAKER

Loosen the two screws that support the icemaker mounts.

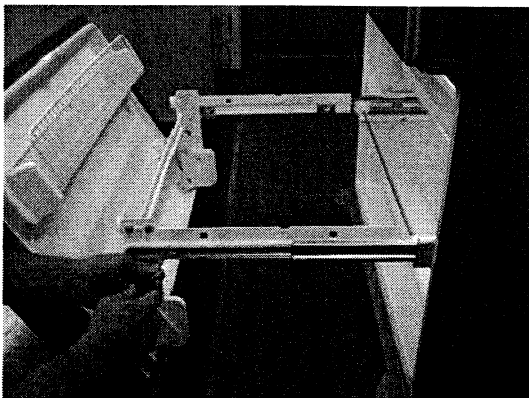
Roll the icemaker over to disconnect the wiring harness. Then use a Phillips driver to remove the ground screw and connection.

AUGER MOTOR COVER

With the icemaker removed, remove the five stainless steel screws that secure the auger motor and cover.

Grasp the bottom of the auger motor cover and pull it out.

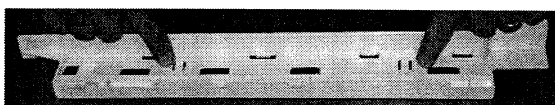
Disconnect the auger motor wiring harness.

FREEZER DOOR REMOVAL

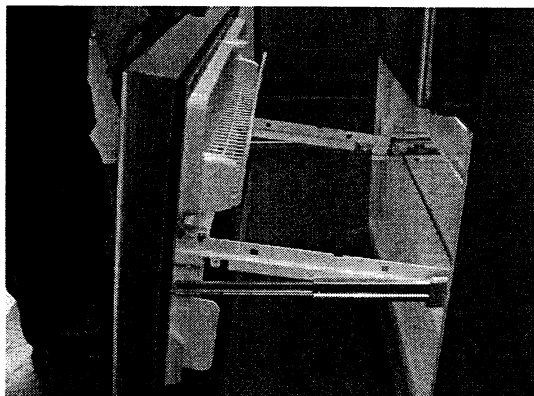
Pull the freezer door open to full extension and empty the freezer.

Remove the basket.

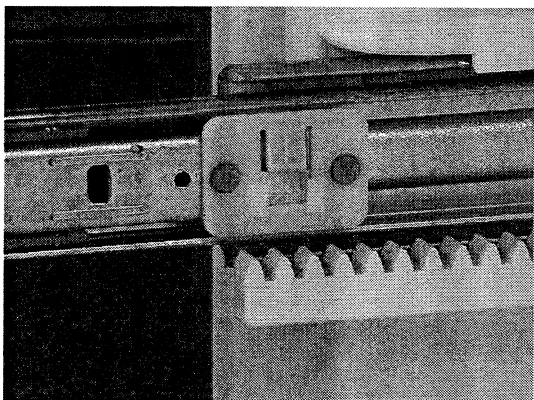
Remove the screws from the guide rails. (One from each side.)



Remove the rail covers. Press the tabs and lift them off the rails. When replacing them, set them on top and press them straight down. Be sure to avoid mixing up the right and the left covers.



Lift the freezer door to separate it from the rail and remove it.

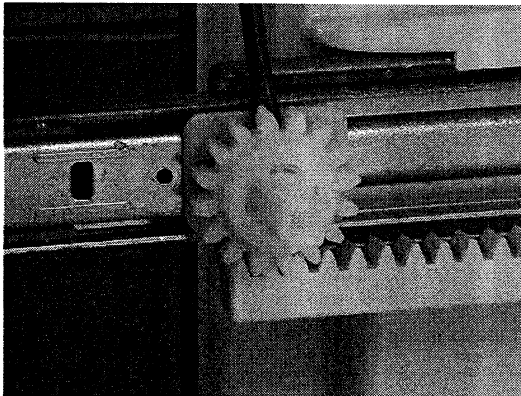


Remove the left gear first by releasing the tab behind the gear. Place a screwdriver between the gear and the tab, and pull up on the gear.

Remove the center rail.

Remove the right gear just like the left one.

FREEZER DOOR REPLACEMENT



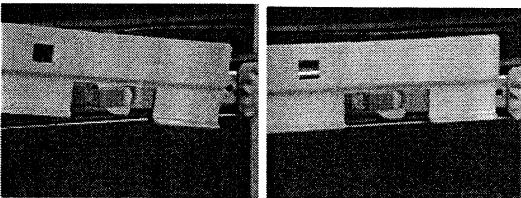
Replace the right gear into the clip.

Insert the rail into the right side gear. (The gears need not be perpendicular to each other.)

Repeat this process on the left side.

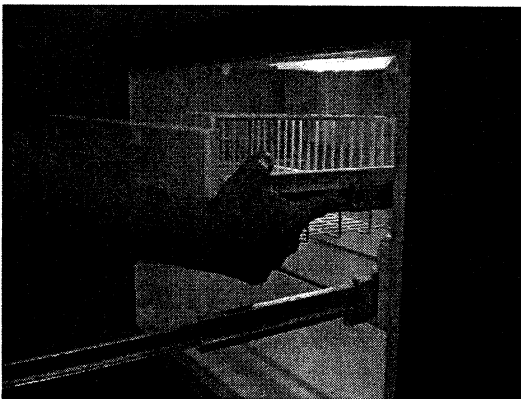
The rail system is self-aligning. Push the rails all the way in; then pull them out to full extension.

Reinstall the freezer door by inserting the rail tabs into the guide rail. Replace the two screws into the guide rails. (One on each side.)



Replace the basket and close the freezer door.

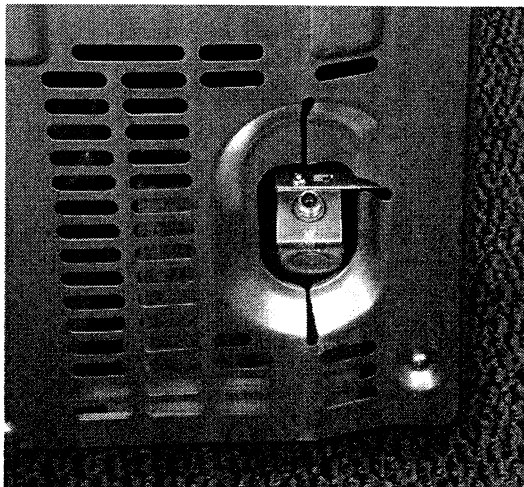
PULLOUT FREEZER DRAWER



To remove the drawer, push up the release tabs (left goes down, right goes up) and pull the drawer off the rails.

The large (main) drawer works the same way as shown in the photo.

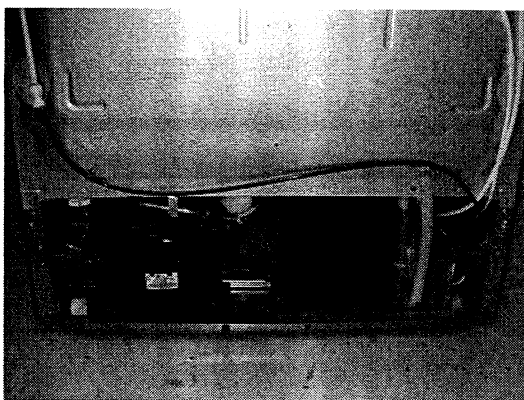
To replace the drawer, pull the rails out to full extension and put the drawer guides into the ends of the rails. Push the drawer closed. The gear mechanism is self-aligning and will right itself immediately.

WATER VALVE

Have a towel and a small container handy to absorb any spillage.

Turn off the water.

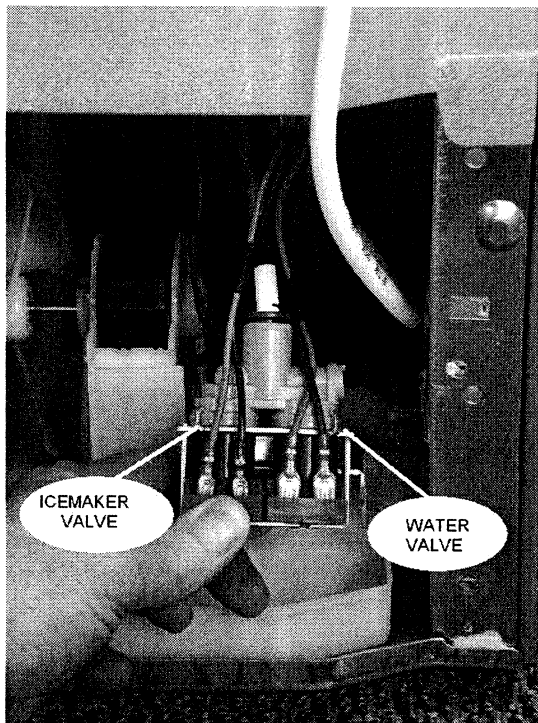
Disconnect the water input from the valve.



Remove the cover to the mechanical area.



Remove the screw that holds the valve assembly to the frame of the refrigerator.



Pull out the valve.

Remove and save the retainer clip.

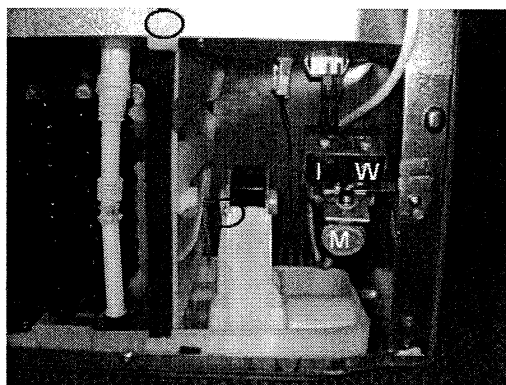
Press the collet to release the tension and pull the water tube out of the valve. Be ready for water leakage. Allow the tube to drain into the container.



Replacement is the reverse order of these steps.

Take extra care to avoid bending the water tube during assembly. Turn the water on and check for leaks. Purge the air from the system as described on page 19.

CONDENSER FAN and FAN MOTOR



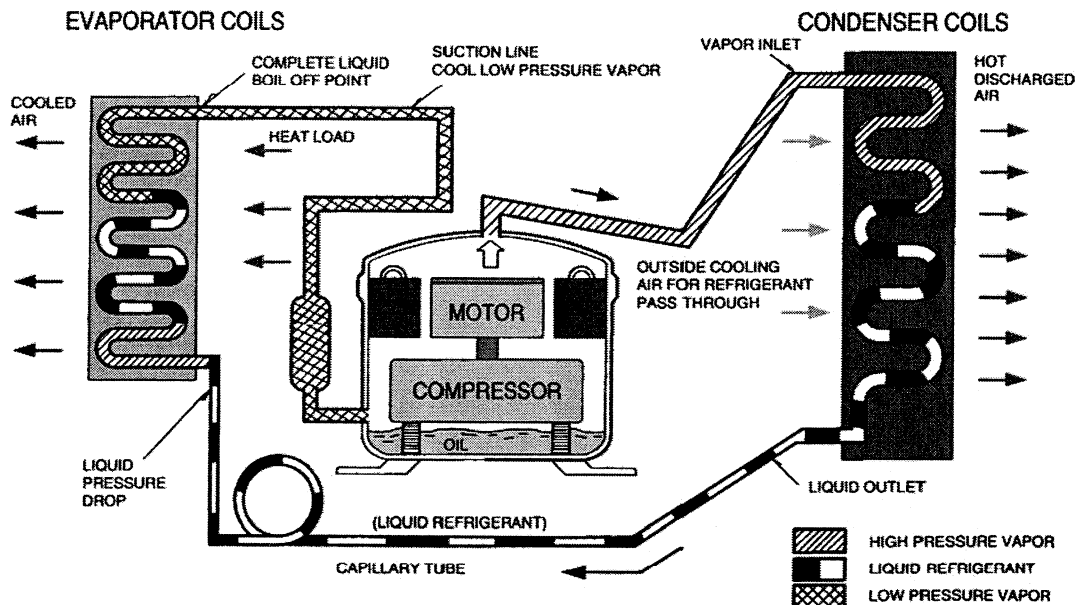
Remove the screw at the top of the fan housing. Remove two screws that attach the fan motor to the housing.

Remove the motor and fan assembly by twisting the motor counterclockwise out of the base.

The valves are labeled Icemaker, Water, and Main.

COMPRESSOR

The compressor intakes low-temperature, low-pressure refrigerant from the evaporator and compresses it to supply high-temperature, high-pressure refrigerant to the condenser.

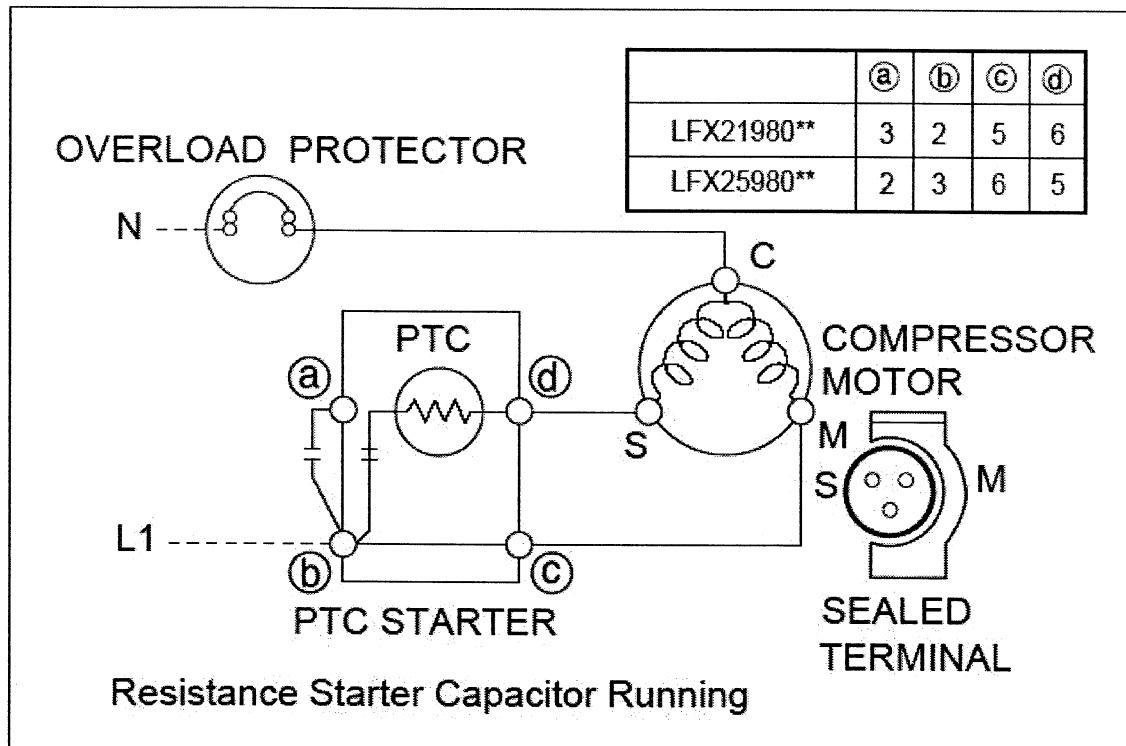


The compressor includes overload protection. The PTC (Positive Temperature Coefficient) starter and OLP (OverLoad Protector) are attached to the outside of the compressor. The compressor is manufactured to tolerances of 1 micron and is hermetically sealed in a dust- and moisture-free environment. Use extreme caution when repairing the compressor and sealed system to avoid introducing contamination to the system.

- Do not apply voltage other than that specified on the rating plate of the compressor.
- Do not drop, shock, or otherwise mishandle the compressor to avoid causing internal damage which would cause noisy operation and premature failure.
- Be sure the related replacement parts (OLP, PTC, starting capacitor, et al.) are exact replacements. They must be matched to the compressor.
- Keep the compressor dry. If it becomes wet, rust can form in the pins of the hermetic connector. Poor connections and refrigerant leaks can occur, causing faulty operation and product failure.

PTC – STARTER

The PTC (Positive Temperature Coefficient) is a non-contact ceramic semiconductor that uses BaTiO_3 . The resistance increases as the temperature increases. This part is attached to the compressor case and used to start the compressor and to prevent starting when conditions require. The compressor is a single-phase induction motor. The PTC allows current to energize both the start and main windings to start the motor.



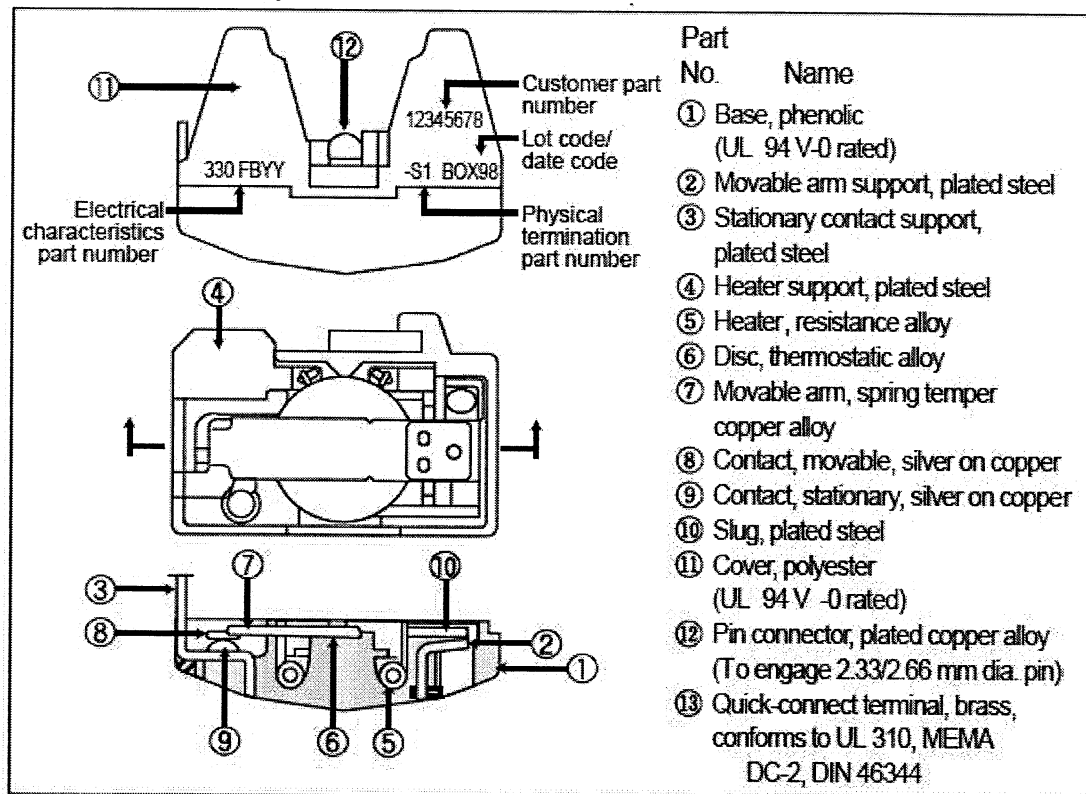
The PTC must be allowed to cool before the system can be restarted. Within the sealed system, it takes approximately 5 minutes for the pressure to equalize so the compressor can restart. When the PTC cools sufficiently, the compressor can start again. If the compressor attempts to restart before the PTC has cooled, the PTC will allow current to flow to only the main winding and the OLP will open because of the overcurrent condition. This process will repeat itself 3 to 5 times while the compressor tries to restart until the PTC cools sufficiently. It is critical to use the correct parts when replacing the OLP and PTC or the compressor will be damaged. Parts may appear physically identical but could have different electrical ratings. Order replacement parts by model number and serial number.

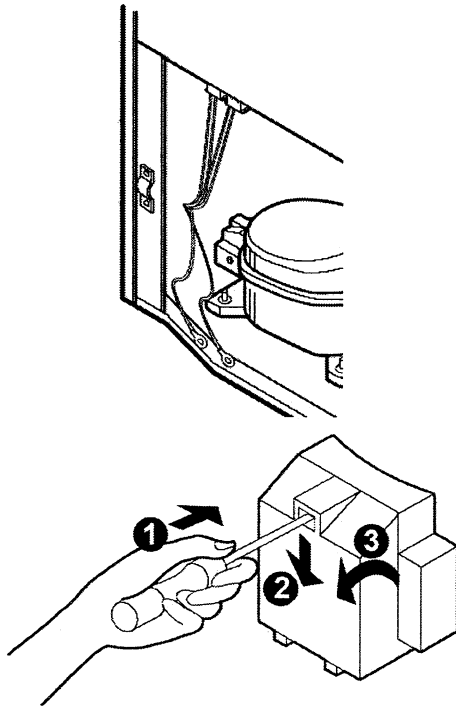
RULES FOR THE PTC – STARTER

- Avoid over-voltage and over-current.
- Do not drop or mishandle the parts.
- Keep the parts dry. If the PTC is contaminated by liquid, corrosion could result or the parts may fail due to the breakdown of their electrical and insulating capacities.
- If the exterior of the PTC is damaged, its resistance value could be altered. This could cause compressor damage or a no-start or hard-start condition.
- Always order parts by model number and serial number. Parts may appear physically identical but could have different electrical ratings.

OLP (OVERLOAD PROTECTOR)

The OLP (Over Load Protector) is attached to the outside of the compressor and protects it by opening the circuit if the temperature exceeds the operating limit. When high current flows to the compressor, the heater inside the OLP causes the bimetal spring to expand, interrupting the current to the compressor. Do not adjust the OLP in any manner.



REPLACING THE OLP and PTC

Remove the rear cover of the refrigerator to expose the compressor and mechanical area.

Remove the two screws on the retaining clamp of the compressor.

Loosen two screws on the compressor base.

Use a flat screwdriver to pry off the cover.

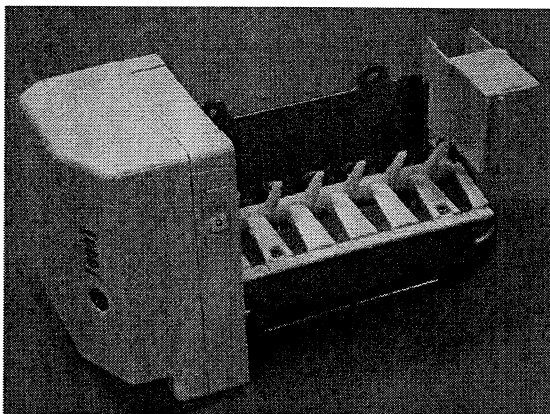
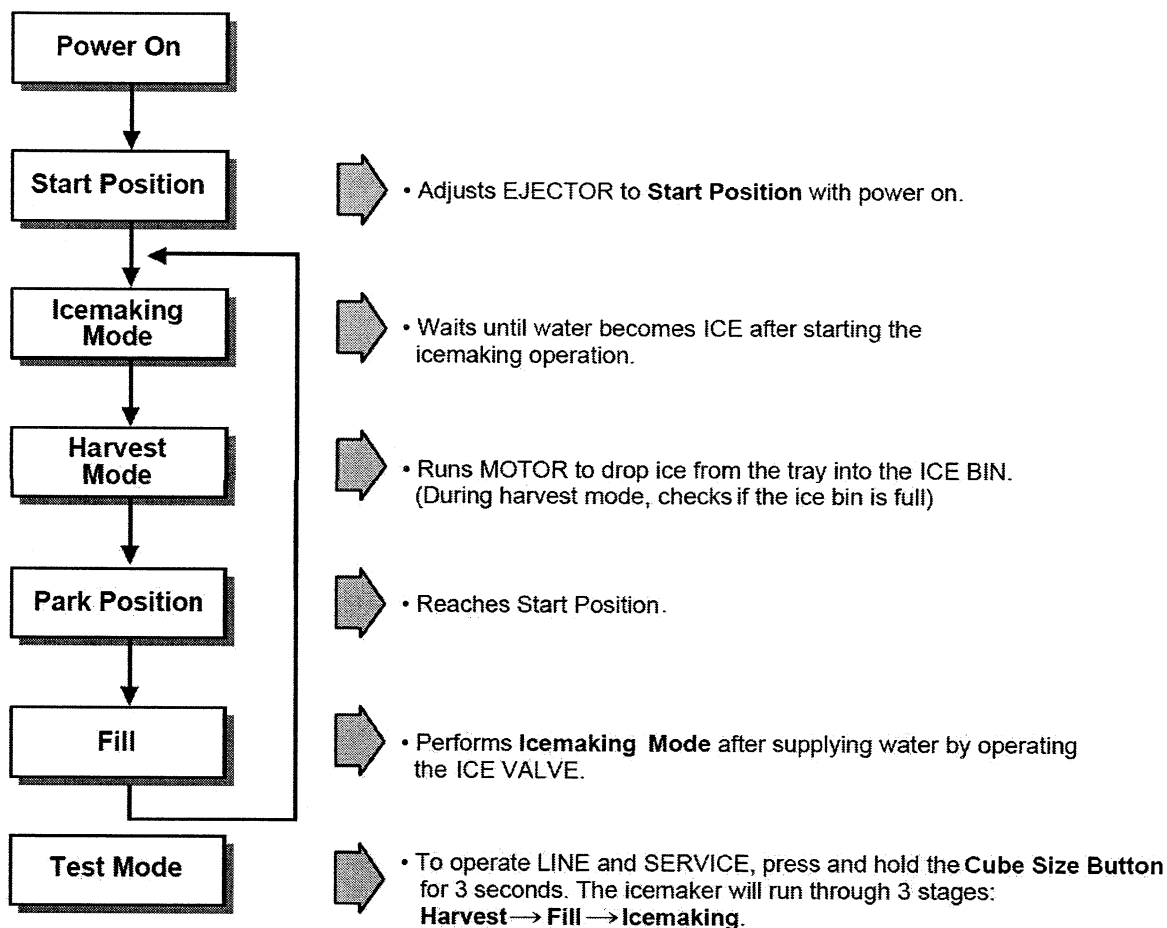
Remove and replace the OLP and/or the PLC. (Often these are replaced as a set.)

Replace the cover and tighten all screws loosened.

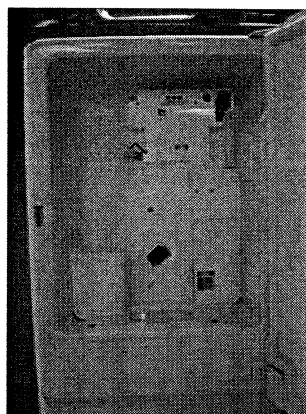
ICEMAKER

Turn the icemaker switch to **OFF (O)** to stop making ice.

Turn the switch **OFF** and then **ON** to reset the icemaker control.



ICEMAKER



ICEMAKER POSITION

ICEMAKING MODE




The icemaking cycle begins with the water fill operation. When the water is frozen, as determined by a sensor incorporated in the tray, the cubes are ejected and the process is repeated. The sensor triggers the cycle when it reaches 19° F (-7° C), approximately 55 minutes after the start of the cycle.

HARVEST (EJECTION) MODE

Harvest (ejection) occurs at the end of the cycle when the ice is released from the mold and pushed into the bin. When harvest mode begins, the mold heater operates for 30 seconds; then the motor starts. The feeler arm senses the amount of ice while the ejector rotates. If the bin is full, the heater is turned off and the ejector stops. If the bin is not full, the ejector rotates two turns to eject the ice and begin a new cycle. If the ejector does not rotate at least one full turn within five minutes, a separate heater control mode activates to prevent damage to the icemaker.

FILL / PARK POSITION

After the harvest mode is complete, the water valve is opened to fill the mold for the next cycle. The amount of water is related to the water pressure, but can be adjusted by changing the time for which the valve is opened. With the icemaker turned on, press the button to increase the size of the cubes to the next available size. Subsequent presses will cycle through all available sizes.

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.		

TEST MODE






Press and hold the cube size button for more than three seconds to put the icemaker into test mode. The test cycle can be used to diagnose icemaker issues and to clean it. The test mode can be started only in icemaking mode; it cannot be accessed while the icemaker is filling or ejecting.

CAUTION! If the icemaker is cycled through test mode before the water already in it has frozen, the ejector will pass through the water and any added water will cause the mold to overflow.


If the icemaker does not operate normally during test mode, turn it off. Check it and repair as necessary or replace.

When the test cycle is complete, the icemaker reverts to MICOM control and assumes the factory default fill setting.

DIAGNOSTIC CHART

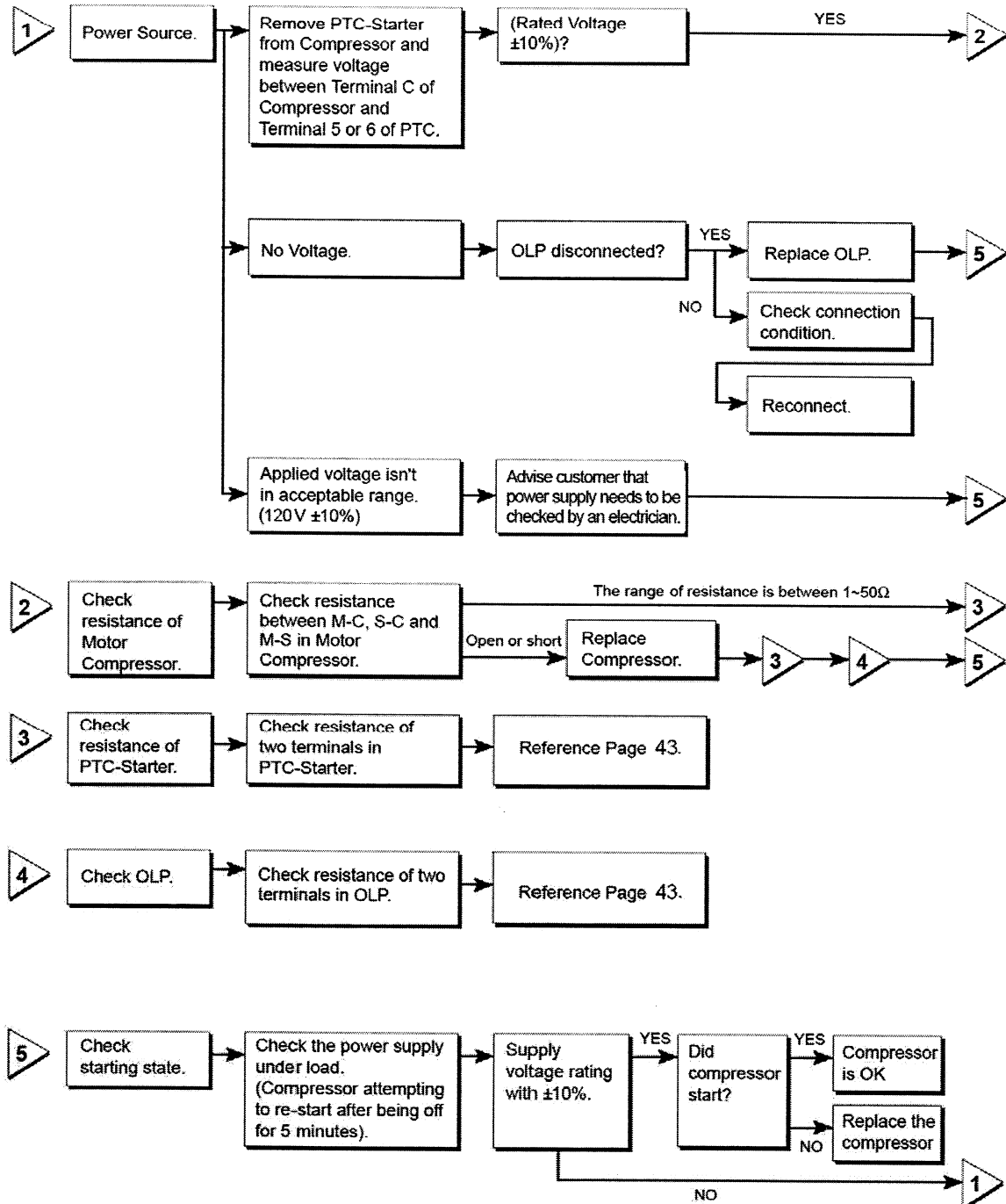
STAGE	ITEMS	INDICATOR	REMARKS
1	HEATER		Five seconds after heater starts, a heater will go off if the temperature by sensor is higher than 10°C
2	MOTOR		Five seconds after heater starts, you can confirm that a motor is moving.
3	HALL IC I		Check if Ice Bin is full or not. If Ice bin is full, the motor 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.

ERROR CODES

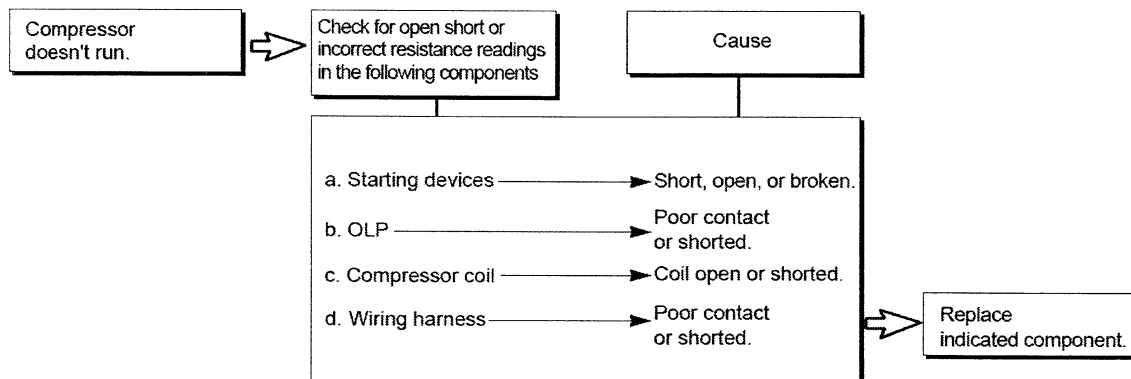
NO	DIVISION	INDICATOR	CONTENTS	REMARKS
1	Normal	Mark time to supply	None	Display switch operates properly
2	Icemaking Sensor malfunction		Open or short-circuited wire	Make sure that the wire on each sensor is connected.

TROUBLESHOOTING

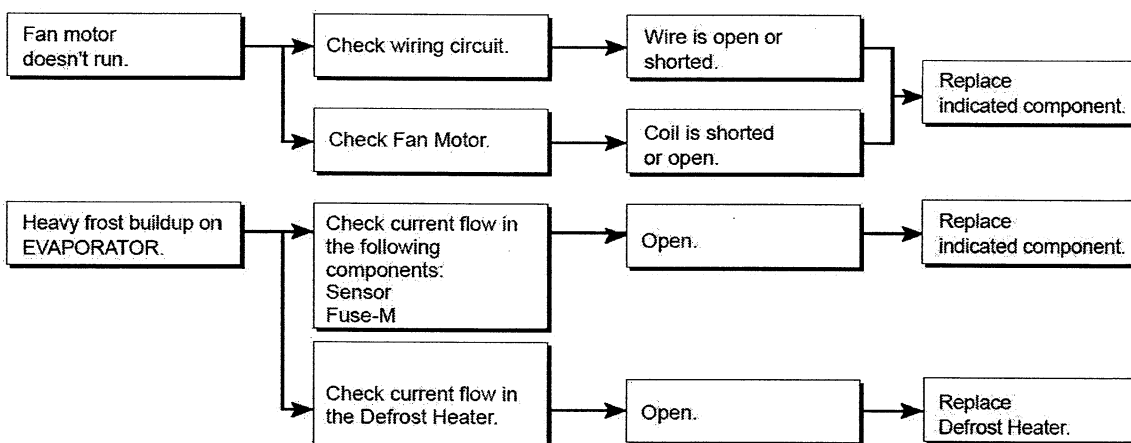
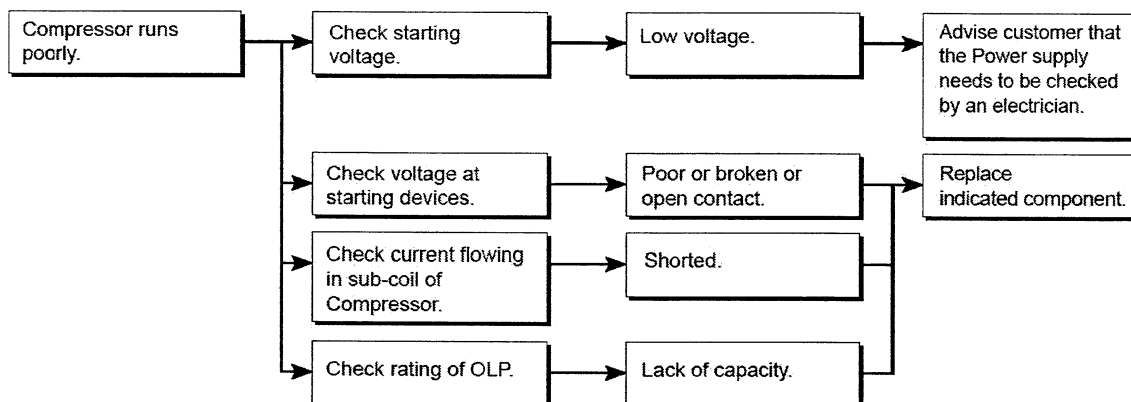
COMPRESOR and RELATED ELECTRICAL COMPONENTS



OTHER ELECTRICAL COMPONENTS



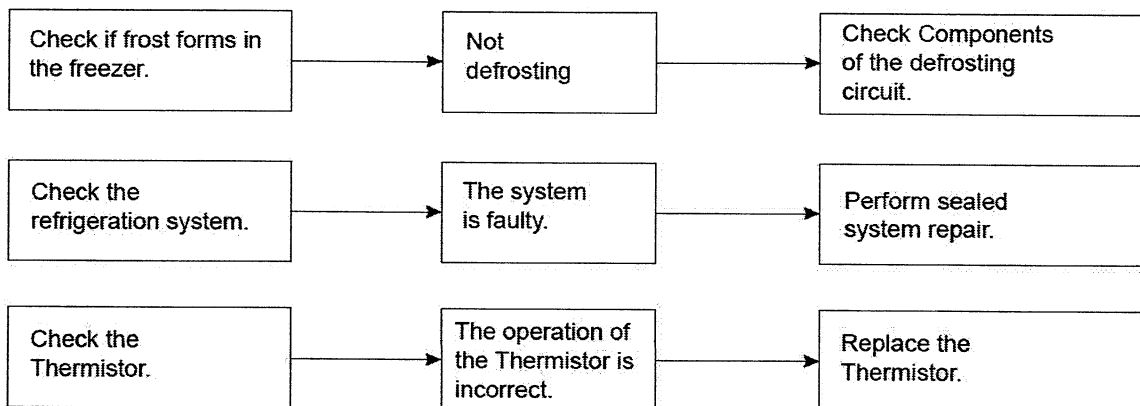
▼ Poor cooling performance



SERVICE DIAGNOSIS CHART

COMPLAINT	POINTS TO BE CHECKED	REMEDY
No Cooling.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Plug into the outlet. Set the switch to ON. Replace the fuse. If the voltage is low, correct the wiring.
Cools poorly.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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)? 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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? 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Check if the ambient temperature and humidity of the surrounding air are high. Is there a gap in the door gasket? 	<ul style="list-style-type: none"> Wipe moisture with a dry cloth. It will disappear in low temperature and humidity. Fill up the gap.
There is abnormal noise.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Check if the door gasket is dirty with an item like juice. Is the refrigerator level? Is there too much food in the refrigerator? 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Check if the inside of the unit is dirty. Are foods with a strong odor unwrapped? The unit smells of plastic. 	<ul style="list-style-type: none"> 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.

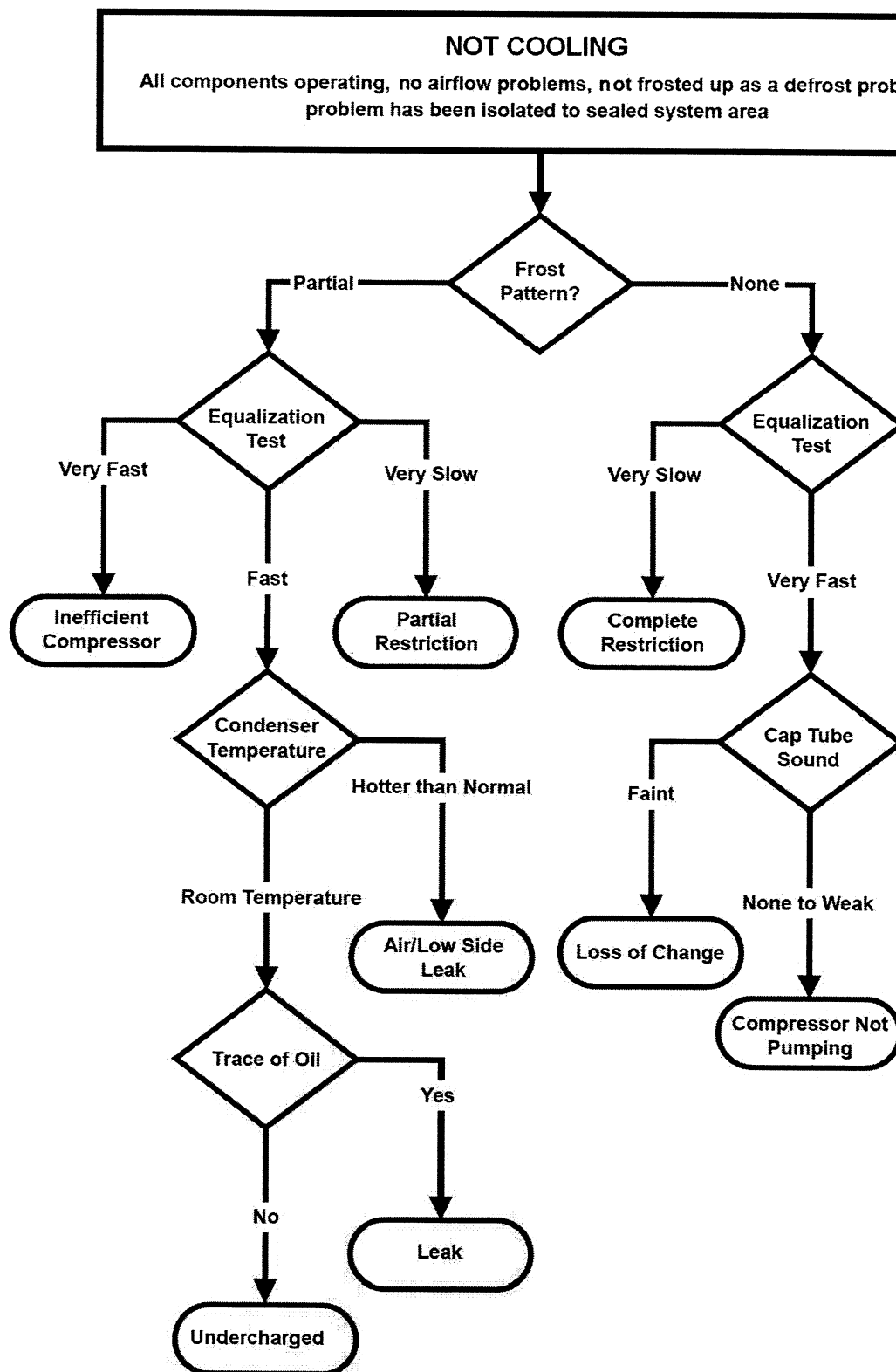
OTHER POSSIBILITIES



REFRIGERATION CYCLE

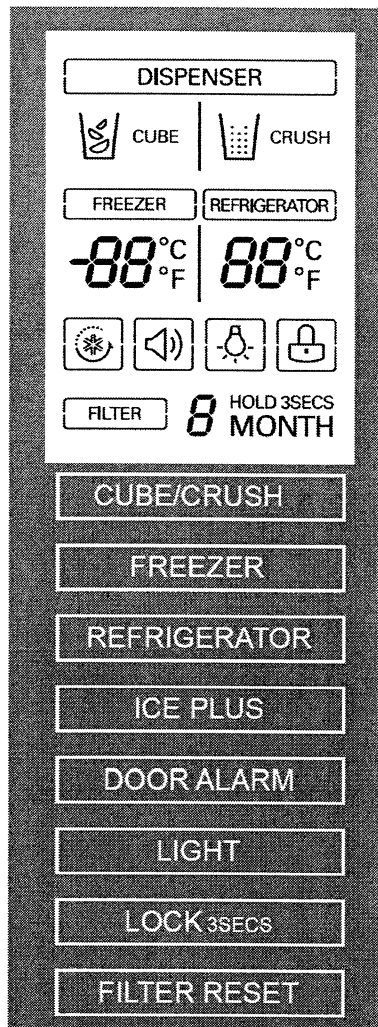
CAUSE		STATE OF THE UNIT	STATE OF THE EVAPORATOR	TEMPERATURE OF THE COMPRESSOR	REMARKS
LEAKAGE	PARTIAL LEAKAGE	Freezer compartment and Refrigerator don't cool normally.	Low flowing sound of Refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> No pressure in the high pressure part of the compressor.

SEALED SYSTEM DIAGNOSIS



CONTROL OPERATIONS

TEMPERATURE



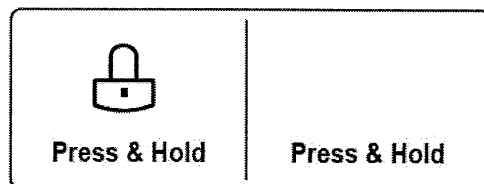
When the refrigerator is plugged in, the set temperatures are defaulted to 37° F (3° C) for the refrigerator and 0° F (-17 C) for the freezer.

Press **REF TEMP** repeatedly to cycle through the available settings for the refrigerator. Allow the refrigerator 24 hours to stabilize at the set temperature before attempting further adjustments.

Press **FRZ TEMP** repeatedly to cycle through the available settings for the freezer. Allow the freezer 24 hours to stabilize at the set temperature before attempting further adjustments.



Press and hold **FRZ TEMP** and **REF TEMP** to toggle between Fahrenheit and Celsius.

LOCK

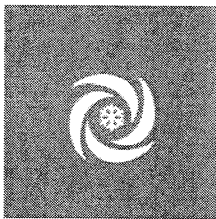


When the refrigerator is powered up, the controls default to UNLOCKED. Press and hold **LOCK** to toggle between LOCKED and UNLOCKED. The LOCK icon will show whether the refrigerator controls are locked.

FILTER

In initial Power On / Filter RESET	Replace indicator light on
 HOLD 3 SECS MONTH	 MONTH

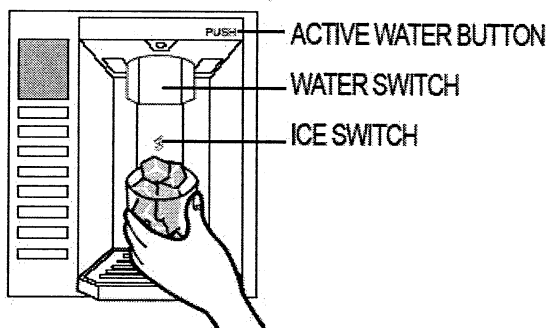
LG recommends changing the filter at least every six months. The number in the icon counts down based on a signal from the microprocessor and clock. When the filter is replaced, press and hold **FILTER RESET** to reset the counter.

ICE PLUS

Press **ICE PLUS** to cause the freezer to run at its coldest setting for 24 hours, after which it will revert to its usual setting. If ICE PLUS is operating, press ICE PLUS to turn it off before the end of the 24-hour period.

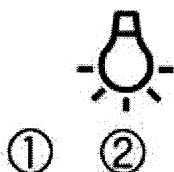
DISPENSER SELECTOR

For crushed or cubed ice, press the appropriate icon.



For water, press the water switch with the glass, or hold the glass in place and press the **WATER** button.

Hold the glass under the dispenser for a few seconds after dispensing is complete to catch the last few pieces of ice and drops of water.

DISPENSER LIGHT

Pressing the **LIGHT** button toggles between the settings. In setting ① the light operates when the dispenser is in use. In setting ②, the light remains on all the time.

CIRCUIT DESCRIPTIONS

FREEZER FAN MOTOR

The freezer fan operates at two speeds, high (2,700 rpm) and regular (2,400 rpm). The fan remains on whenever the freezer door is opened, but the speed is reduced from high to regular when the door is opened.

High speed is used at power-up, for ICE PLUS, to improve the cooling speed, and when the refrigerator is overloaded. Standard speed is for general usage.

COOLING (CONDENSER) FAN

The cooling (condenser) fan is a single-speed motor that is switched on and off in conjunction with the compressor.

ICE ROOM FAN

The ice room fan is controlled by a sensor on the top of the ice compartment.

ICE PLUS

ICE PLUS intensifies the cooling speed of the freezer and increases ice production. Press ICE PLUS to turn this function on or off. In the event of a power outage, ICE PLUS is cancelled.

During the first three hours when ICE PLUS is activated, the compressor and freezer fan run continuously for three hours. If a defrost cycle is triggered during this time, the ICE PLUS cycle will resume at the end of the defrost cycle. If ICE PLUS is pressed while the refrigerator is defrosting, the ICE PLUS icon will light but the cycle will not begin until seven minutes past the defrost cycle is completed. If ICE PLUS is pressed during the seven-minute delay for compressor restarting, the ICE PLUS cycle will not begin until the remainder of the seven-minute delay has expired.

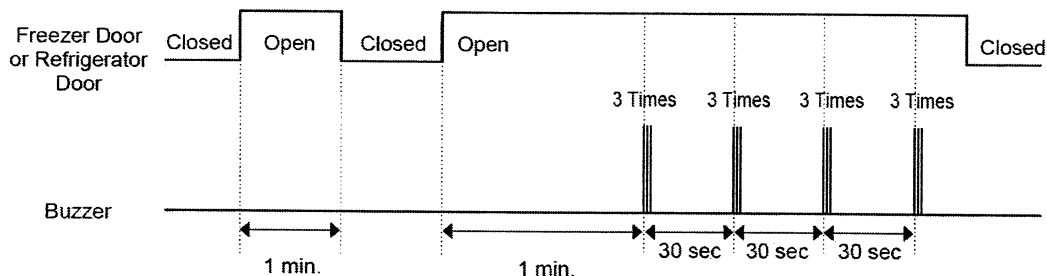
During ICE PLUS, the freezer fan runs at high speed and the freezer is set to its lowest temperature setting. At the end of the 24-hour ICE PLUS cycle, the freezer reverts to its normal setting.

DEFROST CYCLE

A defrost cycle is triggered every time the compressor accumulates 7 hours' run time. When the refrigerator is powered up initially, the first defrost cycle is triggered at 4 hours' run time. The defrost cycle stops if the temperature sensor reaches 46° F (8° C) or higher. If the sensor does not reach 46° F (8° C) within one hour, the defrost mode is malfunctioning. Additionally, the defrost mode will not operate if the sensor is defective (open or shorted).

DOOR ALARM

The alarm sounds whenever a door has been left open for longer than one minute. After the initial one-minute period, the alarm sounds three times for one half second each and repeats these three tones at 30-second intervals until the door is closed.



TEST MODE

The TEST MODE allows the servicer to check the PCB and the product functions and to diagnose a failed part when an error code may not display. Press the TEST button on the main board (see page 67) to start the test. When in test mode, the buttons may activate the tone, but they do not function. To exit the test mode, unplug the refrigerator for 7½ seconds and restart it. If a sensor failure is discovered during TEST mode, an error code will be displayed and the test mode will be aborted. If an error code is displayed, TEST mode will not be activated.

MODE	OPERATION	FUNCTION	REMARKS
TEST1	Push the TEST button on the main PCB to enter the TEST MODE.	1. Continuous operation of compressor 2. Continuous operation of freezer fan 3. Stepping damper is OPEN 4. Defrost heater is OFF 5. All LEDs in display are ON	
TEST2	Push the TEST button again to advance to TEST MODE 2.	1. Continuous operation of compressor 2. Continuous operation of freezer fan 3. Stepping damper is CLOSED 4. Defrost heater is OFF 5. LED display shows the number 2	
TEST3	Push the TEST button again to advance to TEST MODE 3	1. Compressor is OFF 2. Freezer fan is OFF 3. Stepping damper is CLOSED 4. Defrosting heater is ON 5. Display shows the number 3	Reset if the temperature of the defrosting sensor is over 46° F (8° C).
RESET	Push the TEST button again to EXIT the TEST PROGRAM.	Resets to pre-test conditions.	The compressor will restart after the usual 7-minute delay.

ERROR CODES

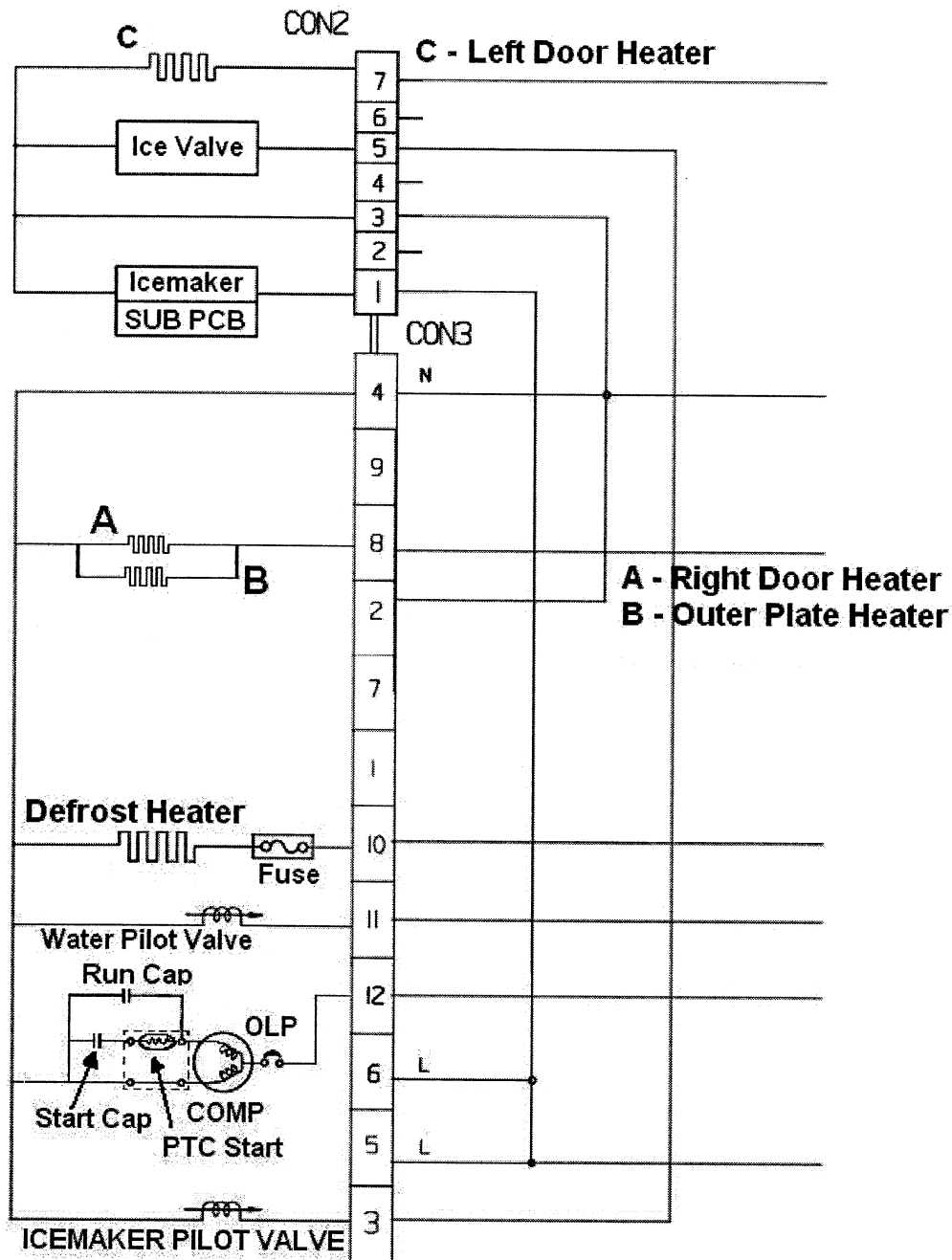
If an error code is shown on the display (in the temperature windows,) look it up on this chart.

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	Check the connection at each sensor.
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	If 1 hour has passed since defrosting began but the sensor is not above 46° F (8° C), the defrost mode has failed.	Temperature Fuse Disconnection, Heater disconnection, DRAIN Jam, Poor Relay for Heater
7	Abnormality of BLDC FAN Motor for Ice Making	Er	IF	No feedback signal for more than 65 seconds during fan motor operation	Defective BLDC fan motor connection, drive IC, or data transmission.
8	Abnormality of BLDC FAN Motor for Freezer	Er	FF	No feedback signal for more than 65 seconds during fan motor operation	Defective BLDC fan motor connection, drive IC, or data transmission.
9	Abnormality of BLDC FAN Motor for Mechanic Room	Er	CF	No feedback signal for more than 65 seconds during fan motor operation	Defective BLDC fan motor connection, drive IC, or data transmission.
10	Communication Error	Er	CO	Communication Error between Micom of Main PCB and Display Micom	Poor communication, faulty transmission or reception of data
11	Room Temperature Sensor Error	Er	rt	ICE PLUS and FREEZER keys pressed together	Not a defect.

CIRCUIT DIAGRAMS and EXPLANATIONS

LOAD, FAN, and OPEN DOOR DETECTION

To measure the control board outputs, check the voltages between the pins of these two connectors to test the following components.



See chart on next page.

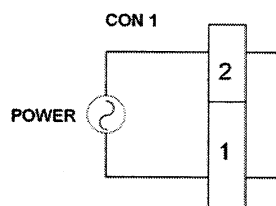
TEST POINT CHART

CIRCUIT	CONN/PIN NUMBER	CONN/PIN NUMBER	OUTPUT VOLTAGE
Icemaker Valve	Con 3 / Pin 3	Con 3 / Pin 4	120 V _{AC}
Right Door Heater	Con 3 / Pin 8	Con 3 / Pin 4	120 V _{AC}
Defrost Heater	Con 3 / Pin 10	Con 3 / Pin 4	120 V _{AC}
Water Valve	Con 3 / Pin 11	Con 3 / Pin 4	120 V _{AC}
Compressor	Con 3 Pin 12	Con 3 / Pin 4	120 V _{AC}
Left Door Heater	Con 2 / Pin 7	Con 2 / Pin 3	120 V _{AC}

FREEZER FAN

Measure the voltage across Pins 1 and 2 of Connector 4 to determine if the freezer fan is receiving sufficient voltage for proper operation.

	VOLTAGE
Motor ON	7 ~ 15 V _{DC}
Motor OFF	2 V _{DC} or less

PCB POWER

Check across Pins 1 and 2 to verify the main board has power. (120 V_{AC})

MECHANICAL AREA (CONDENSER) FAN

Measure the voltage across Pins 7 and 8 of Connector 4 to determine if the condenser fan is receiving sufficient voltage for proper operation.

	VOLTAGE
Motor ON	7 ~ 15 V _{DC}
Motor OFF	2 V _{DC} or less

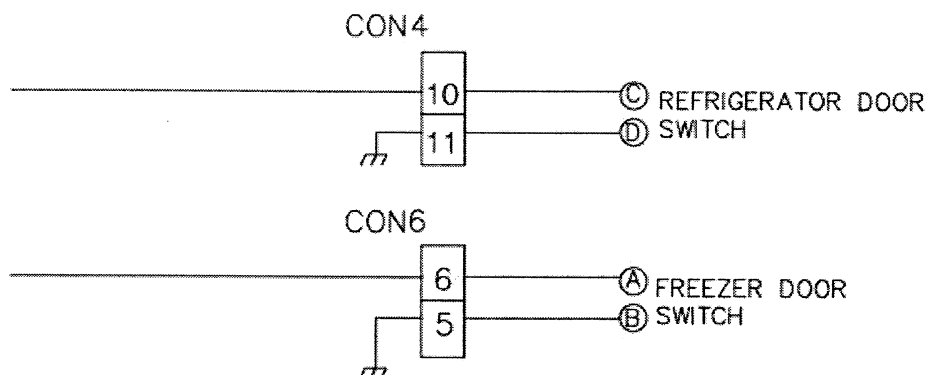
ICE COMPARTMENT FAN

Measure the voltage across Pins 4 and 5 of Connector 4 to determine if the icemaker fan is receiving sufficient voltage for proper operation

	VOLTAGE
Motor ON	7 ~ 15 V _{DC}
Motor OFF	2 V _{DC} or less

OPEN DOOR DETECTION CIRCUIT

Check the indicated pins to determine whether the open door detection is working properly.



	CONNECTOR and PINS	VOLTAGE
Freezer Door OPEN	Con 6 / Pins 5 and 6	0 V _{DC}
Freezer Door CLOSED	Con 6 / Pins 5 and 6	5 V _{DC}
Refrigerator Door OPEN	Con 4 / Pins 10 and 11	0 V _{DC}
Refrigerator Door CLOSED	Con 4 / Pins 10 and 11	5 V _{DC}

TEMPERATURE SENSOR CIRCUIT

Measure the resistance of the sensors (five) to determine whether they are providing correct data to the microprocessor. Using a calibrated thermometer, place it next to the sensor in question. Allow it five minutes to stabilize before taking a reading. Readings are $\pm 5\%$.

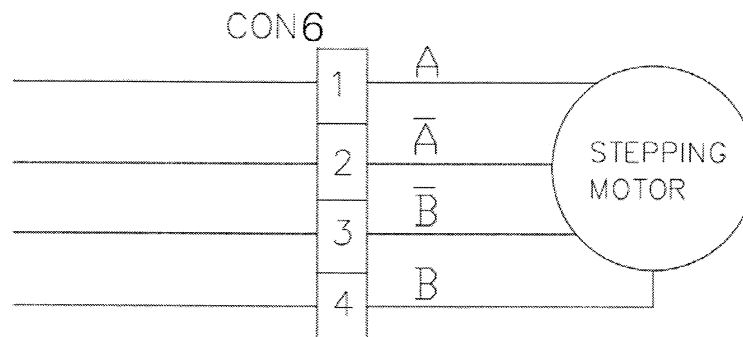
TEMPERATURE	FREEZER ICE ROOM	REFRIGERATOR DEFROST ROOM TEMP
-20° C (-4° F)	22.3k Ω	77 k Ω
-15° C (5° F)	16.9 k Ω	60 k Ω
-10° C (14° F)	13.0 k Ω	47.3 k Ω
-5° C (23° F)	10.1 k Ω	38.4 k Ω
0° C (32° F)	7.8 k Ω	30 k Ω
+5° C (41° F)	6.2 k Ω	24.1 k Ω
+10° C (50° F)	4.9 k Ω	19.5 k Ω
+15° C (59° F)	3.9 k Ω	15.9 k Ω
+20° C (68° F)	3.1 k Ω	13 k Ω
+25° C (77° F)	2.5 k Ω	11 k Ω
+30° C (86° F)	2.0 k Ω	8.9 k Ω
+40° C (104° F)	1.4 k Ω	6.2 k Ω
+50° C (122° F)	0.8 k Ω	4.3 k Ω

POWER TO LED PANELS

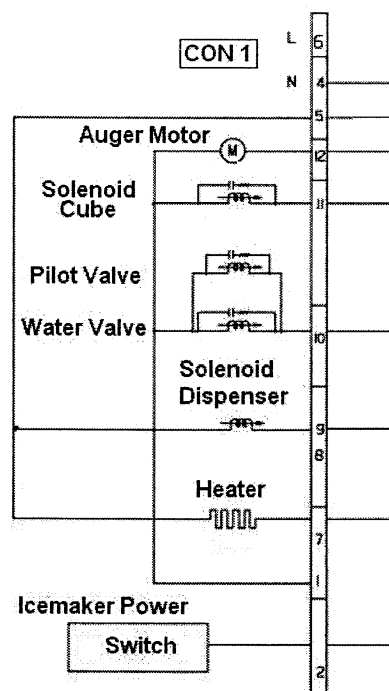
Check across Pins 1 and 2 of connector 1 to verify 120 V_{AC}.
Check across Pins 1 and 2 of connector 2 to verify 12 V_{DC}.

DAMPER MOTOR CIRCUIT

A reversible DC motor is used to open and close the damper. Test it using the TEST button on the main board. Press the TEST button once to open the damper, and again to close it. Be certain to unplug the refrigerator to exit the test mode upon completion.



DISPENSER DRIVE CIRCUIT



DISPENSER DRIVE CIRCUIT, continued

CIRCUIT	CONNECTOR and PINS	VOLTAGE
Auger Motor	Con 1 / Pins 12 and 4	120 V _{AC}
Solenoid – Cubes	Con 1 / Pins 11 and 4	120 V _{AC}
Pilot – Water Valve	Con 1 / Pins 10 and 4	120 V _{AC}
Solenoid – Dispenser	Con 1 / Pins 9 and 4	120 V _{AC}
Heater	Con 1 / Pins 7 and 4	120 V _{AC}

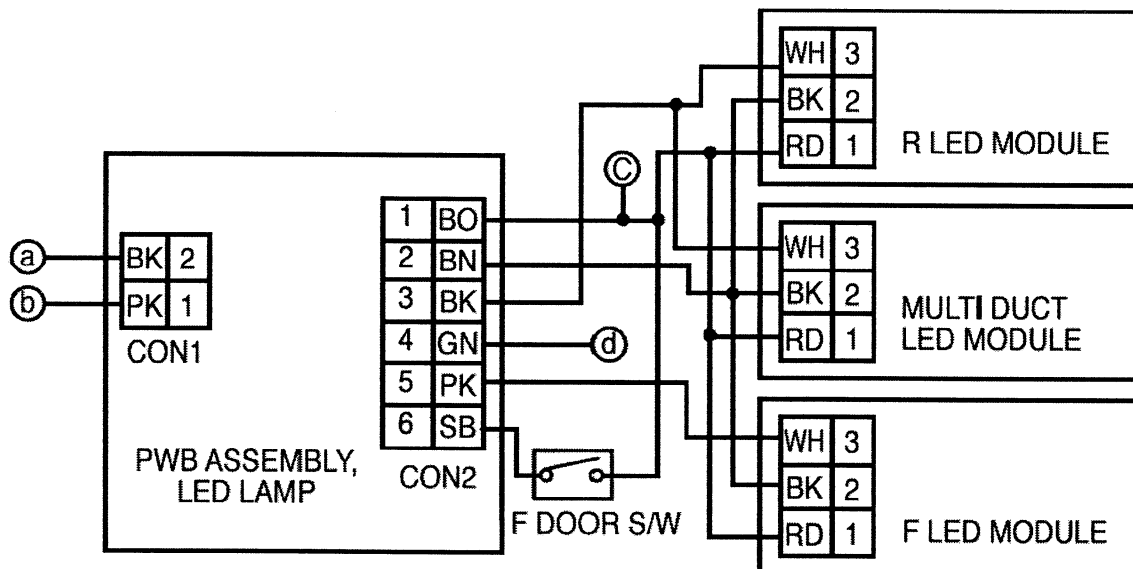
TROUBLESHOOTING CHART

PROBLEM	INDICATED BY	CHECK	CHECKING METHOD	CAUSE	SOLUTION
POWER SOURCE is poor.	1. In general	1. FREEZER/ REFRIGERATOR.	Check if FREEZER/REFRIGERATOR DOOR IS OPEN and check display.	Low input voltage Bad power board	Check or replace main PWB.
	2. Display LED	2. LAMP is dim.	Check visually.	Low input voltage	Check or replace main PWB.
		3. MAIN PWB CONNECTOR	Check connection	Connector loose or corroded	Reconnect, clean if necessary.
				Transformer fuse has blown	Replace main board
COOLING is poor.	NO COOLING.	1. If the COMPRESSOR operate.	USE TEST MODE1 (forced COOLING). If less than 7 minutes pass after compressor shuts off, don't press the KEY and wait.	COMPRESSOR locked or blocked.	Replace OLP, PTC.
				OLP, PTC is poor. COMPRESSOR RELAY is poor.	Replace MAIN PWB.
				Bad or loose connection	Check the connection of the black wire of the MAIN PWB CONNECTOR (CON3).
		2. If refrigerant is leaking.	Measure the amount of frost sticking on EVAPORATOR and the surface temperature of the condenser pipe.	Refrigerant leakage.	Replace the leaking part and replace any lost refrigerant.
	FREEZER TEMPERATURE is incorrect	1. If FAN MOTOR operates.	USE TEST MODE1 (forced COOLING).	FAN MOTOR is poor.	Replace the FAN MOTOR.
				CONNECTING WIRE is poor.	Check the motor. Check the black wire at the MAIN PCB. (CON 4)
		2. If DEFROSTING is normal.	Check for frost on the evaporator.	Failed defrost heater.	Check wiring and connections before replacing heater assembly.
		3. If SENSOR is normal.	of the Refrigerator SENSOR.	SENSOR RESISTANCE is poor.	Replace SENSOR.
		4. Door Line contact.	Check the seal when the door is closed.	Door liner damaged.	Replace door.

TROUBLESHOOTING CHART, continued

PROBLEM	INDICATED BY	CHECK	CHECKING METHOD	CAUSE	SOLUTION
COOLING is poor.	If REFRIGERATOR TEMPERATURE is too low.	1. If FREEZER TEMPERATURE is normal.	Check is FREEZER TEMPERATURE is too low.		Make sure the DOOR is attached.
		2. If amount of cool air from FAN MOTOR is sufficient.	Make sure that the amount and speed of cool air are sufficient by touching the check supplied on the REFRIGERATOR.	FAN MOTOR is poor.	Replace FAN MOTOR.
				Passage of cool air is blocked.	Remove impurities.
				EVA frozen.	See DEFROSTING is poor.
		3. Door Line contact.	Check door seal when door is closed.	Door liner damaged.	Replace Door liner.
DEFROSTING is poor.	NO DEFROSTING.	1. If HEATER emits heat.	USE TEST MODE3 (forced DEFROSTING).	HEATER disconnection.	Replace HEATER.
				TEMPERATURE FUSE disconnection.	Replace TEMPERATURE FUSE.
				Connection is poor.	Check EVAPORATOR connection and wire of MAIN PWB CONNECTOR.
				DEFROST-SENSOR is poor.	Replace DEFROST-SENSOR.
				HEATER RELAY is poor.	Replace RY1 of MAIN PWB.
		2. If DRAIN PIPE is blocked.	Check DRAIN PIPE.	DRAIN PIPE is blocked.	Remove ice and impurities.
					Check HEATER PLATE resistance.
		3. If ice remains after DEFROSTING.	Make sure that DEFROST SENSOR is connected.	Connection is poor.	Reassemble the DEFROST-SENSOR.
			Make sure that FREEZER /REFRIGERATOR DOOR is closed.	DOOR does not close properly.	Reassemble DOOR.
					Replace GASKET.

LED POWER BOARD ASSEMBLY and LED MODULES



TERMINAL IDENTIFICATION / LED LAMP PWB ASSEMBLY

CON 1

Pin 2 BK – L1

Pin 1 PK – N

CON 2

Pin 1 BO – 12 V_{DC} (B+)

Pin 2 BN – Ref Line (-)

Pin 3 BK – 5 V_{DC} Refrigerator & Multiduct PWM PCB LED Output

Pin 4 GN – 12 V_{DC} Refrigerator Door Switch Input

Pin 5 PK – 5 V_{DC} Freezer PWM PWB LED Output

Pin 6 SB – 12 V_{DC} Freezer Door Switch Input

TESTING

CON 1 Pin 1 to Pin 2 - 120 V_{AC} AC Line Input

CON 2 Pin 1 to Pin 2 – 12 V_{DC} DC Output

REFRIGERATOR DOOR OPEN CON2

Pin 2 to Pin 4 – 12 V_{DC} Door Switch Input (Door Switch Closed)

Pin 2 to Pin 3 – 0 V_{DC} PWM R & M LED Module Output Closed to Ground

TESTING (Continued)**REFRIGERATOR DOOR CLOSED CON2**

Pin 2 to Pin 4 – 0 V_{DC} Door Switch Input (Door Switch Open)

Pin 2 to Pin 3 – 5 V_{DC} PWM R & M LED Module Output Open to Ground

FREEZER DOOR OPEN CON 2

Pin 2 to Pin 6 – 12 V_{DC} Door Switch Input (Door Switch Closed)

Pin 2 to Pin 5 – 0 V_{DC} PWM F LED Module Output Closed to Ground

FREEZER DOOR CLOSED CON 2

Pin 2 to Pin 6 – 0 V_{DC} Door Switch Input (Door Switch Open)

Pin 2 to Pin 5 – 5 V_{DC} PWM F LED Module Output Open to Ground

TERMINAL IDENTIFICATION / LED MODULES

(R and M Modules- Refrigerator & F Module - Freezer)

Pin 1 RD – 12 V_{DC}

Pin 2 BK – Ref Line (-)

Pin 3 WH - 5 V_{DC} PWM Input from LED PWB Assembly

LED MODULE TESTING (See diagram)

Pin1 to Pin 2 – 12 V_{DC}

Pin 2 to Pin 3 – 5 V_{DC} Door Closed / 0 V_{DC} Door Open

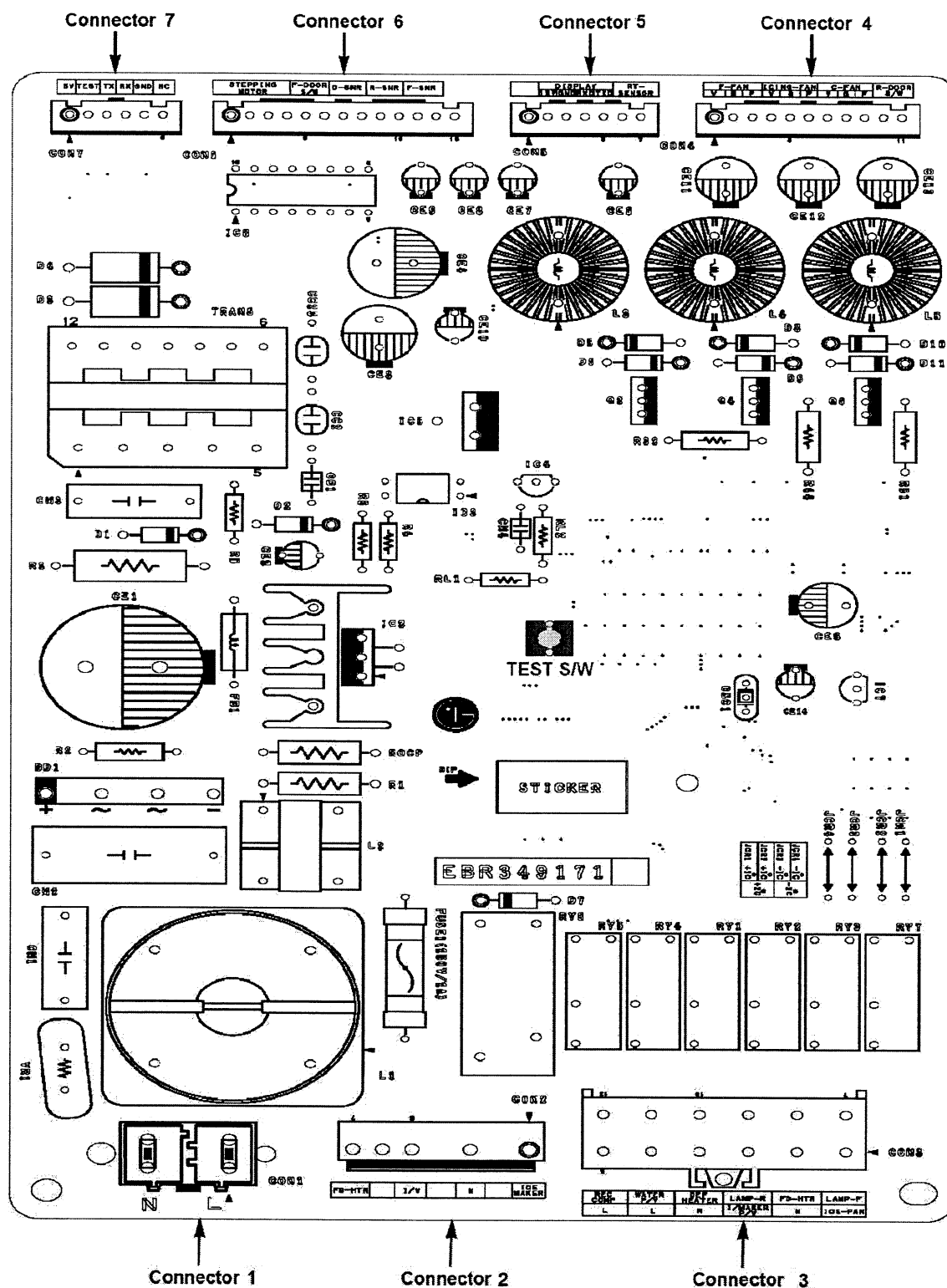
HOW IT WORKS

Each of the 3 LED modules receives 12 V_{DC} from the LED Lamp PWB Assembly at all times between pins 1 RD & 2 BK. When the refrigerator & freezer doors are closed 5 V_{DC} will be measured between pins 2 BK & pins 3 WH on each LED Module.

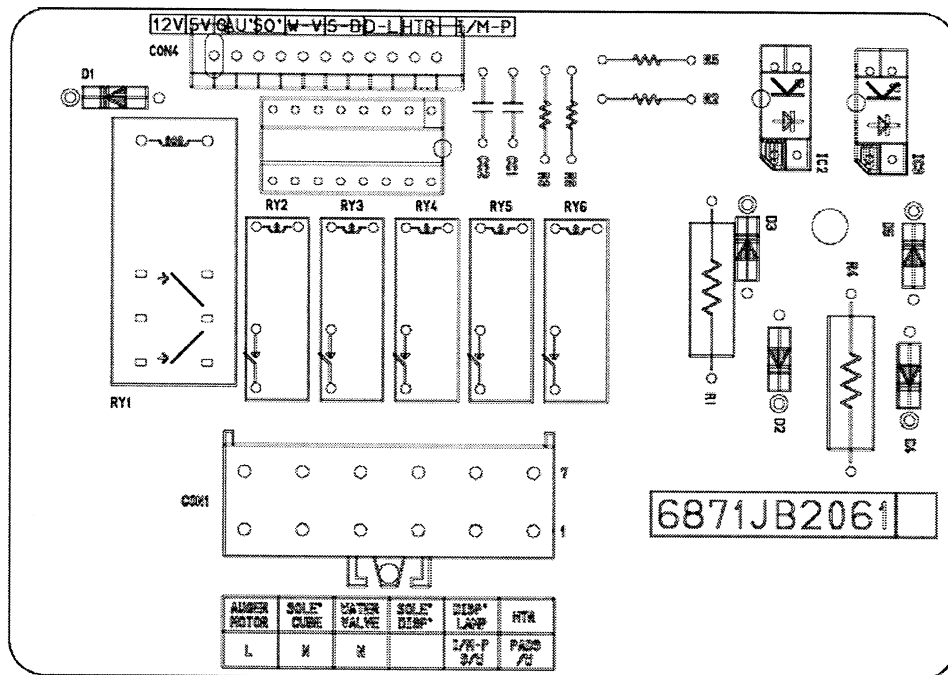
When the refrigerator door opens, the 12 V_{DC} input from the refrigerator door switch on pin 4 of the PWB causes the LED PWB circuitry to ground the 5 V_{DC} on pin 3 BK on the PWB & pin 3 WH on the LED R & M modules. With this voltage dropping to zero (0), the LED module will turn on the LED's to illuminate the refrigerator. The opposite occurs when the refrigerator door is closed!

Likewise, when the freezer door opens, the 12 V_{DC} input from the freezer door switch on pin 6 of the PWB causes the LED PWB circuitry to ground the 5 V_{DC} on pin 5 PK on the PWB & pin 3 WH on the LED F module. With this voltage dropping to zero (0), the LED module will turn on the LED's to illuminate the freezer. The opposite occurs when the freezer door is closed.

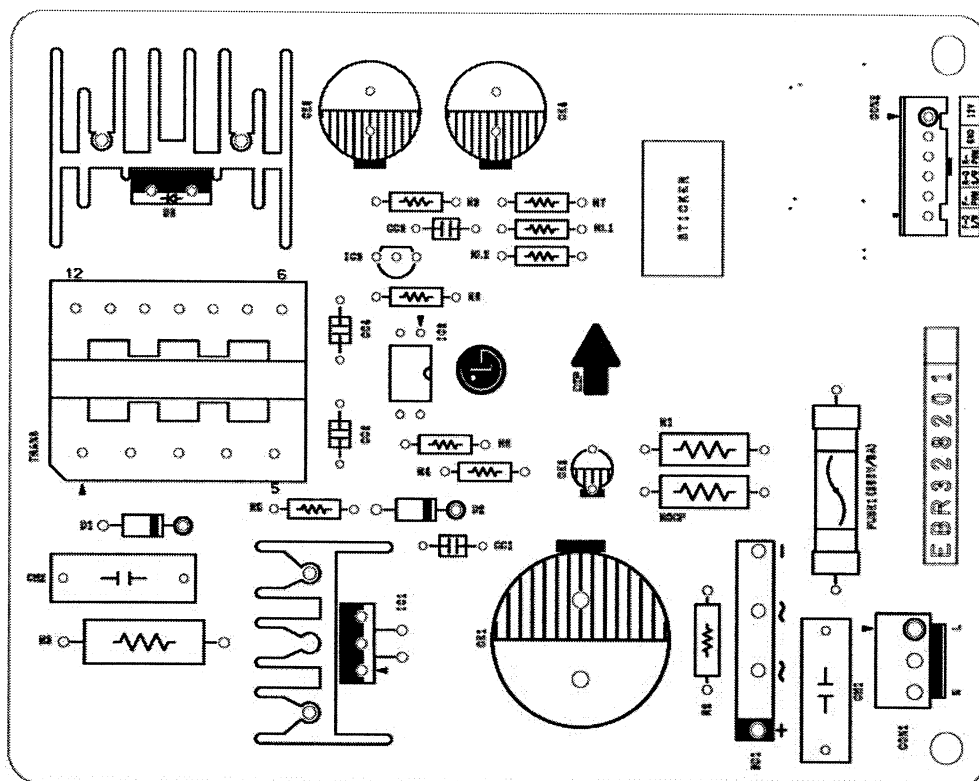
MAIN PCB



DISPLAY PCB

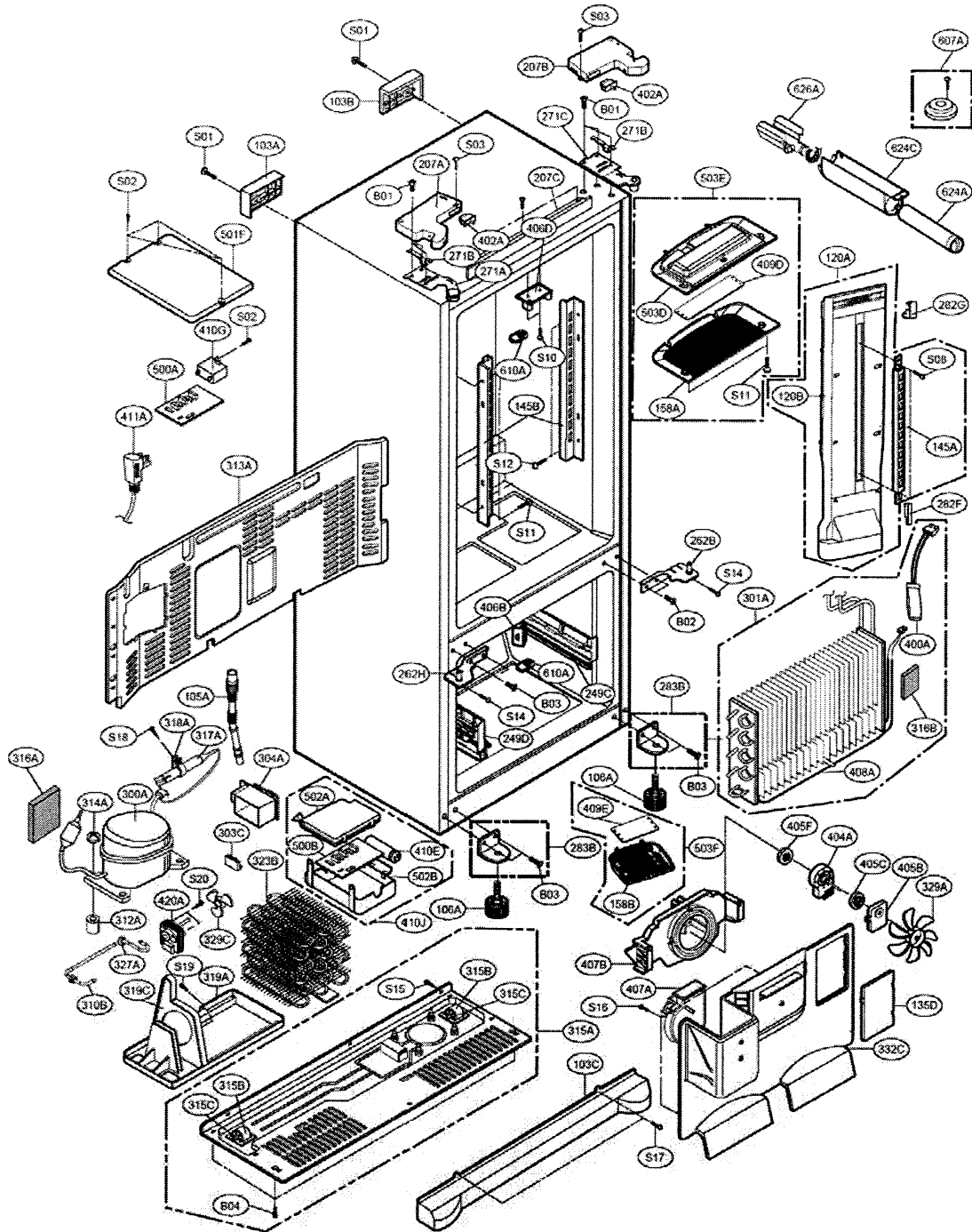


POWER LED DRIVE PCB



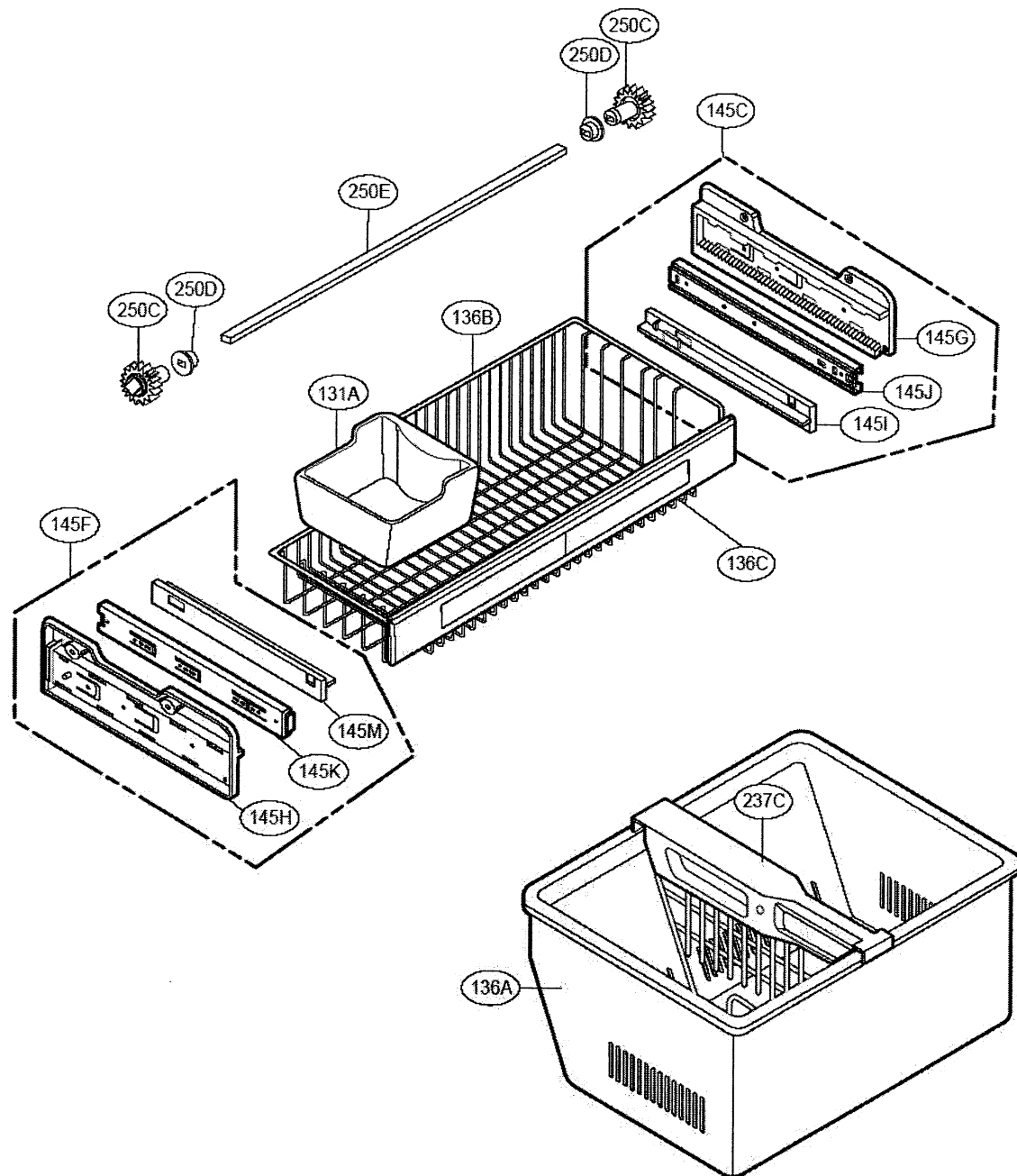
EXPLODED VIEW

CASE PARTS



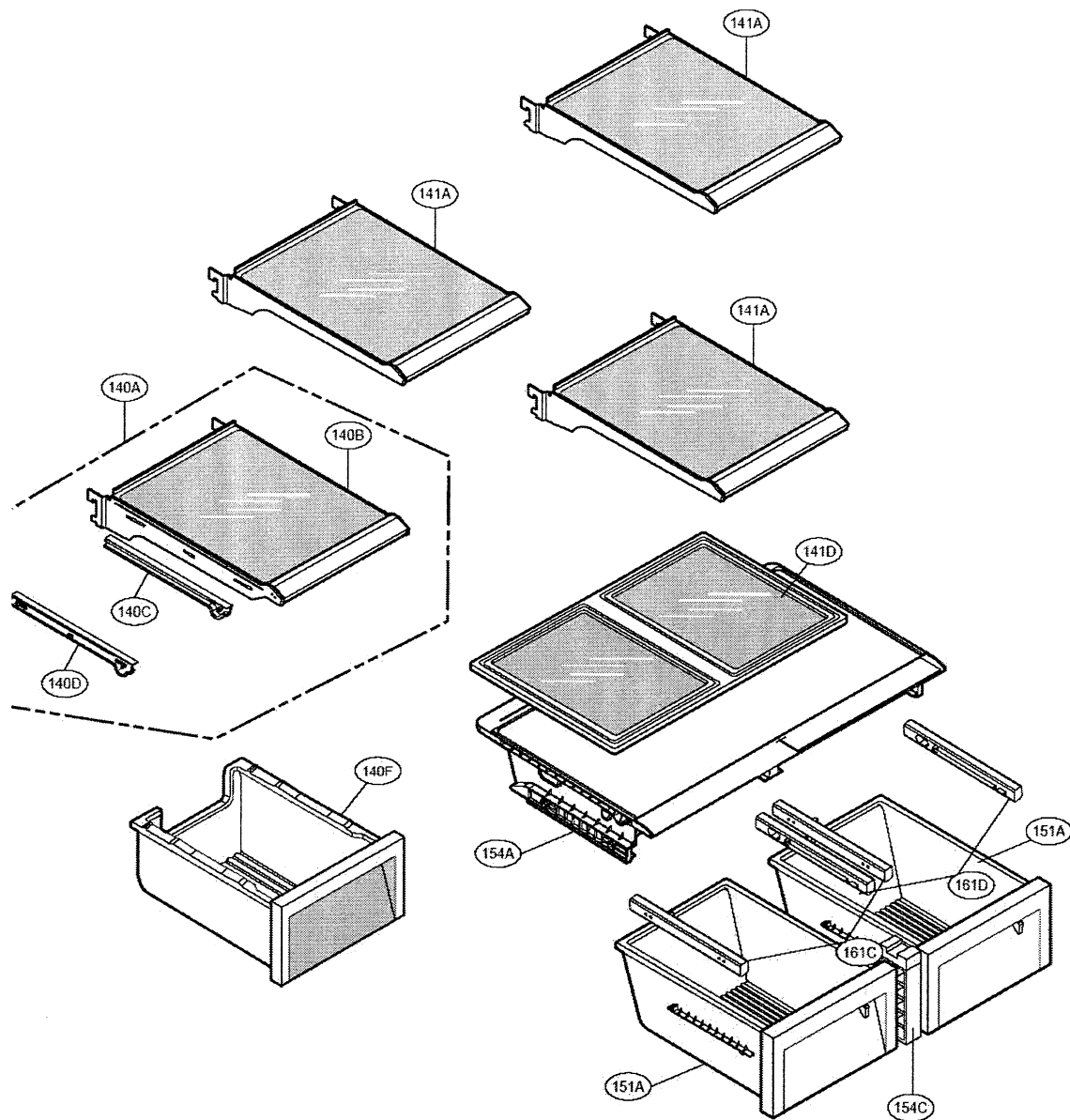
EXPLODED VIEW, continued

FREEZER PARTS



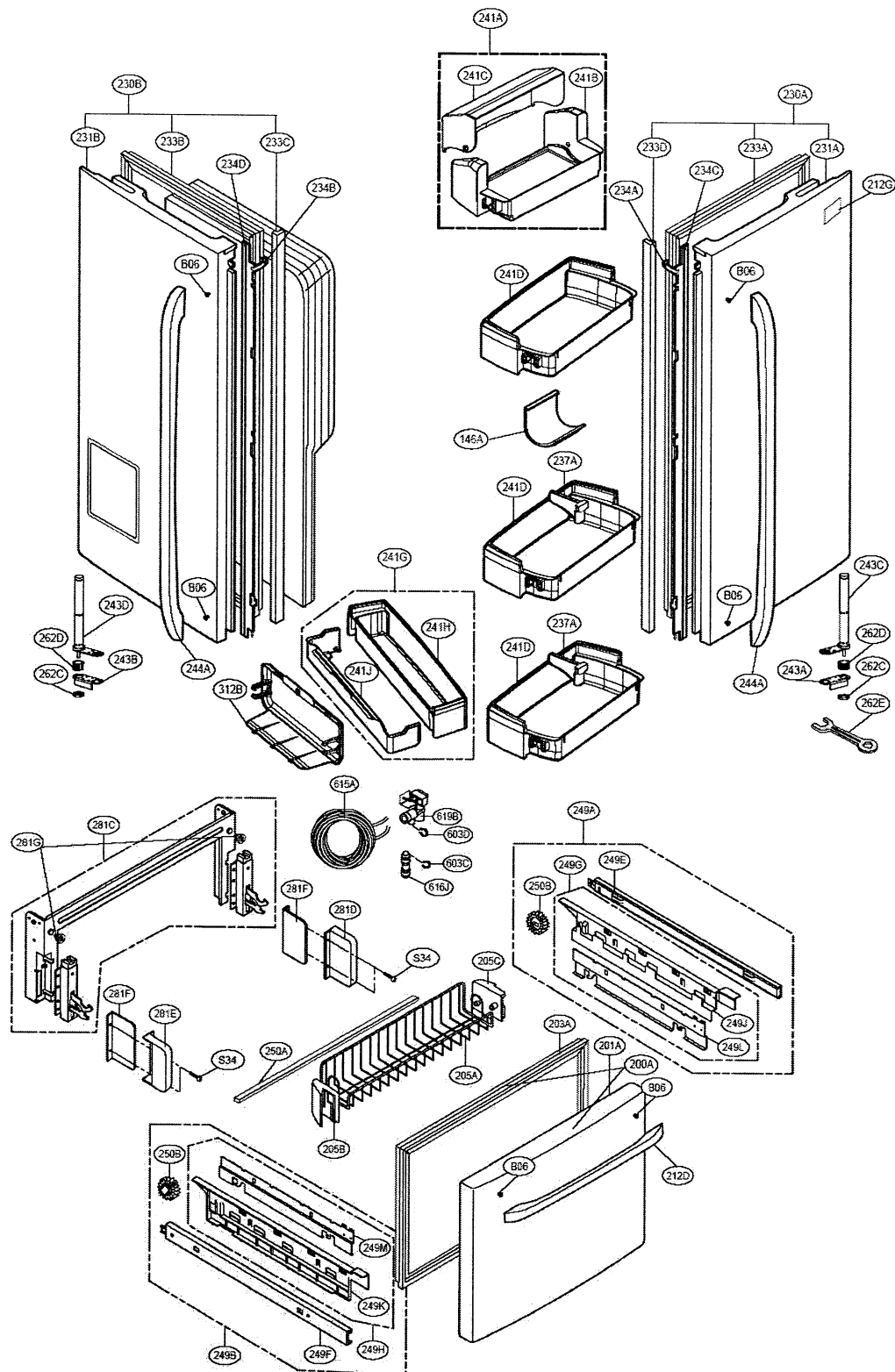
EXPLODED VIEW, continued

REFRIGERATOR PARTS



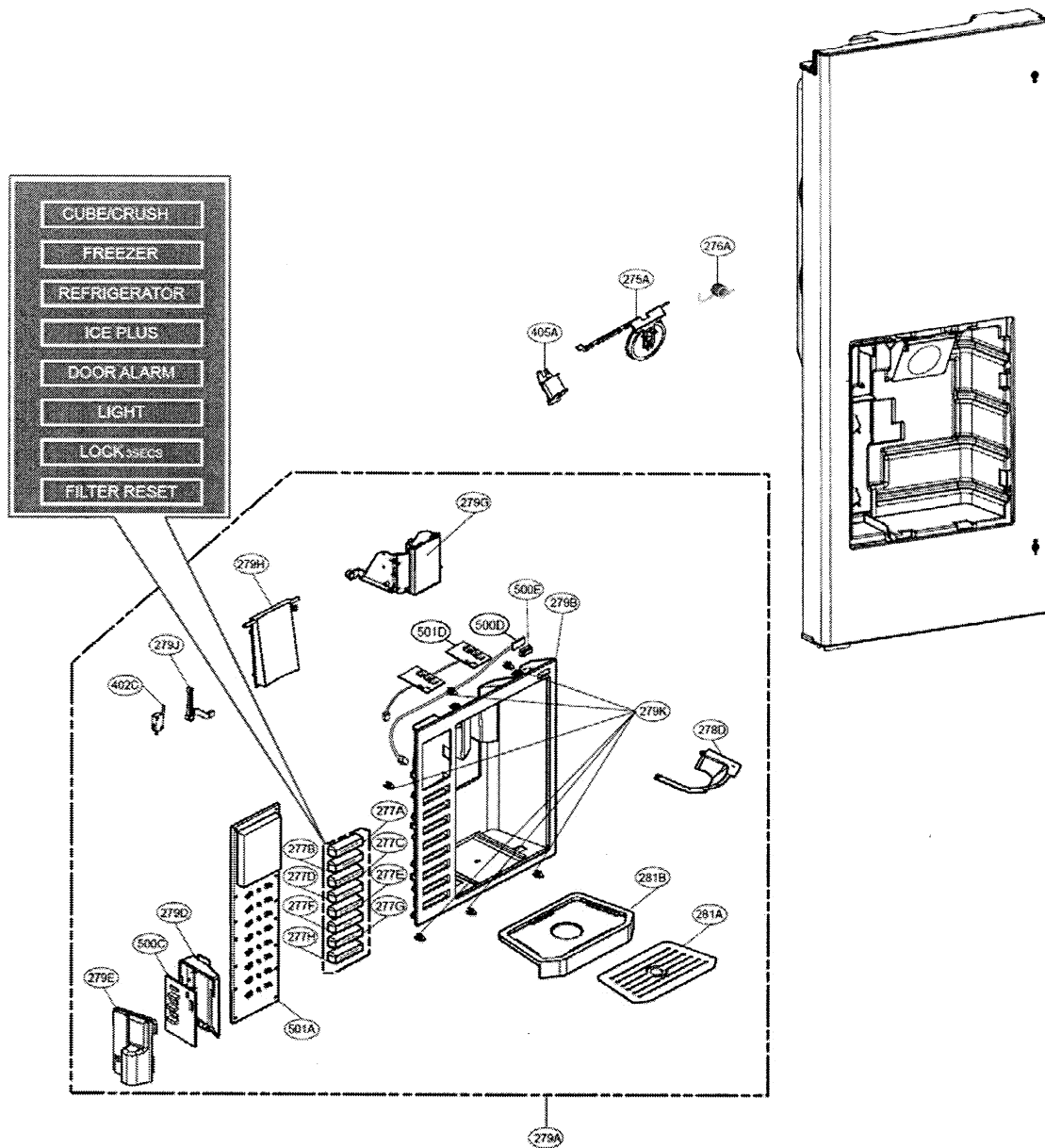
EXPLODED VIEW, continued

DOOR PARTS



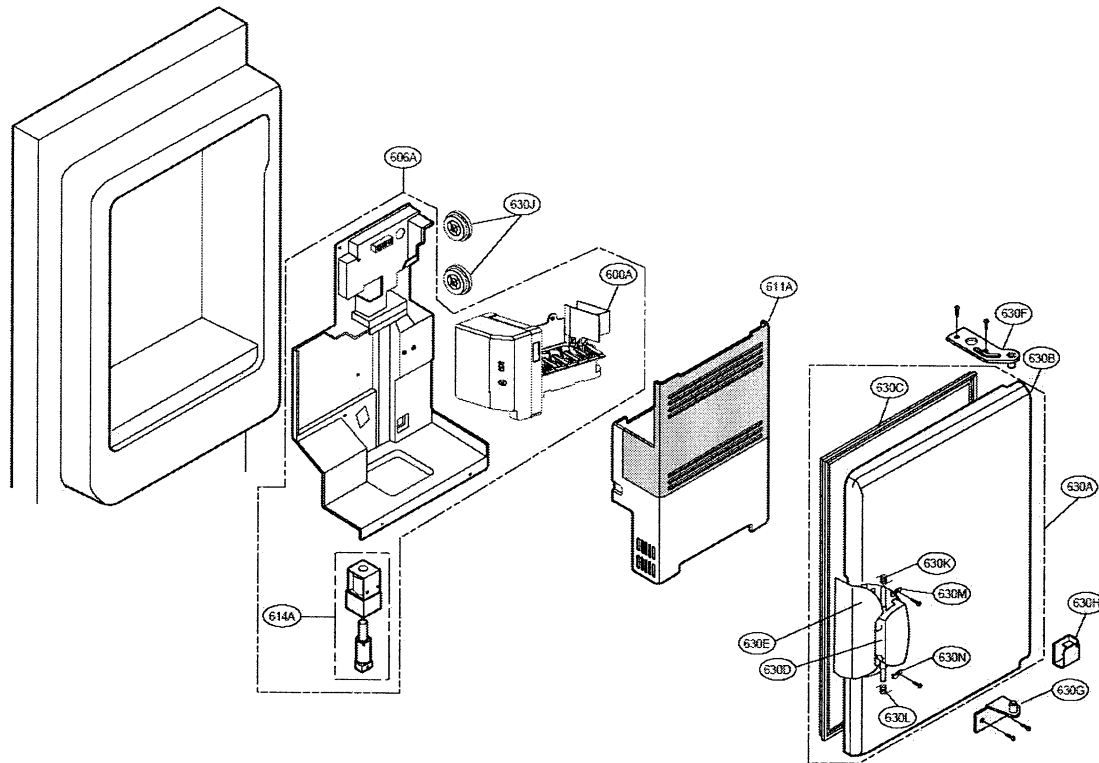
EXPLODED VIEW, continued

DISPENSER PARTS



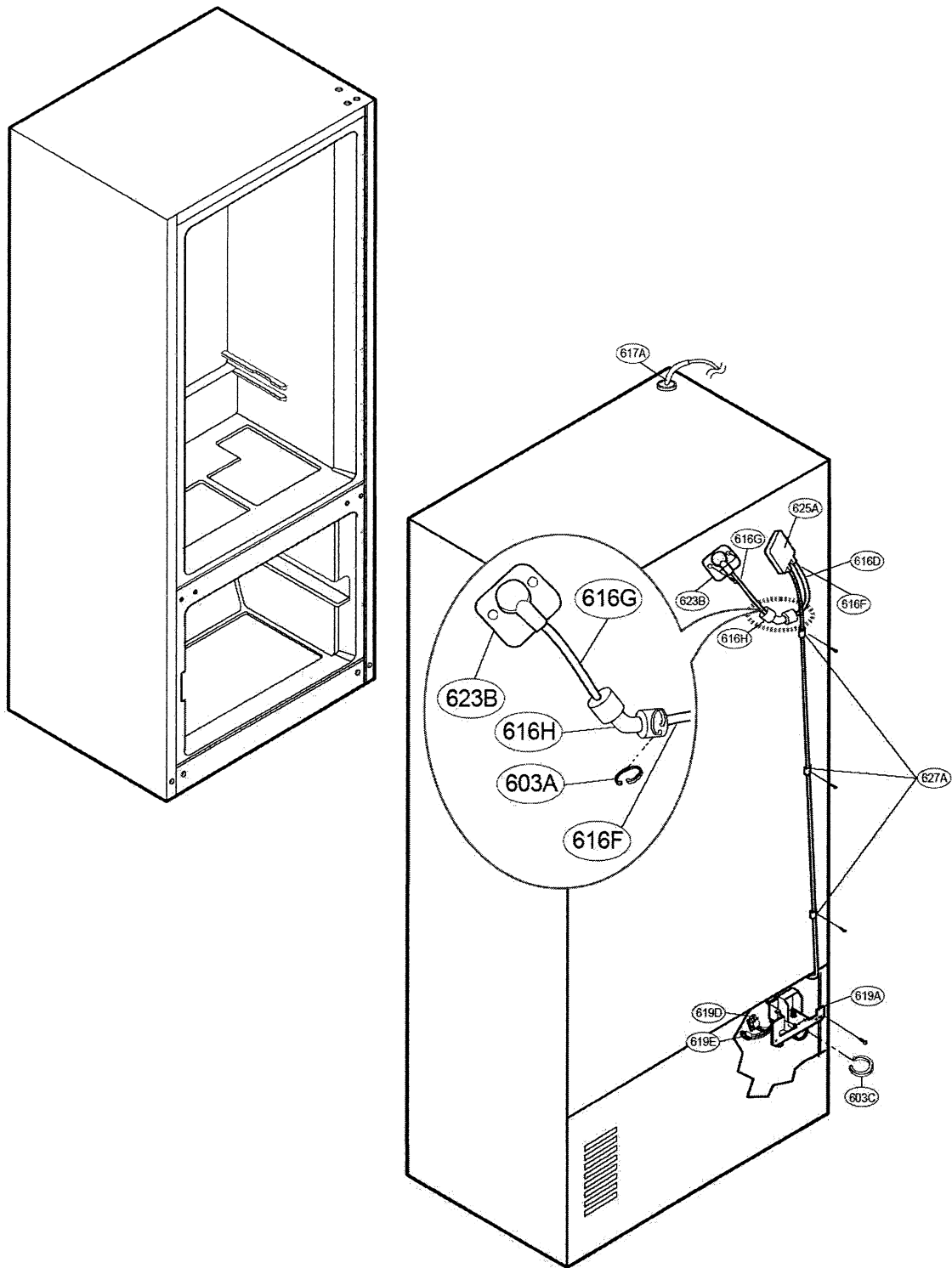
EXPLODED VIEW, continued

ICEMAKER PARTS

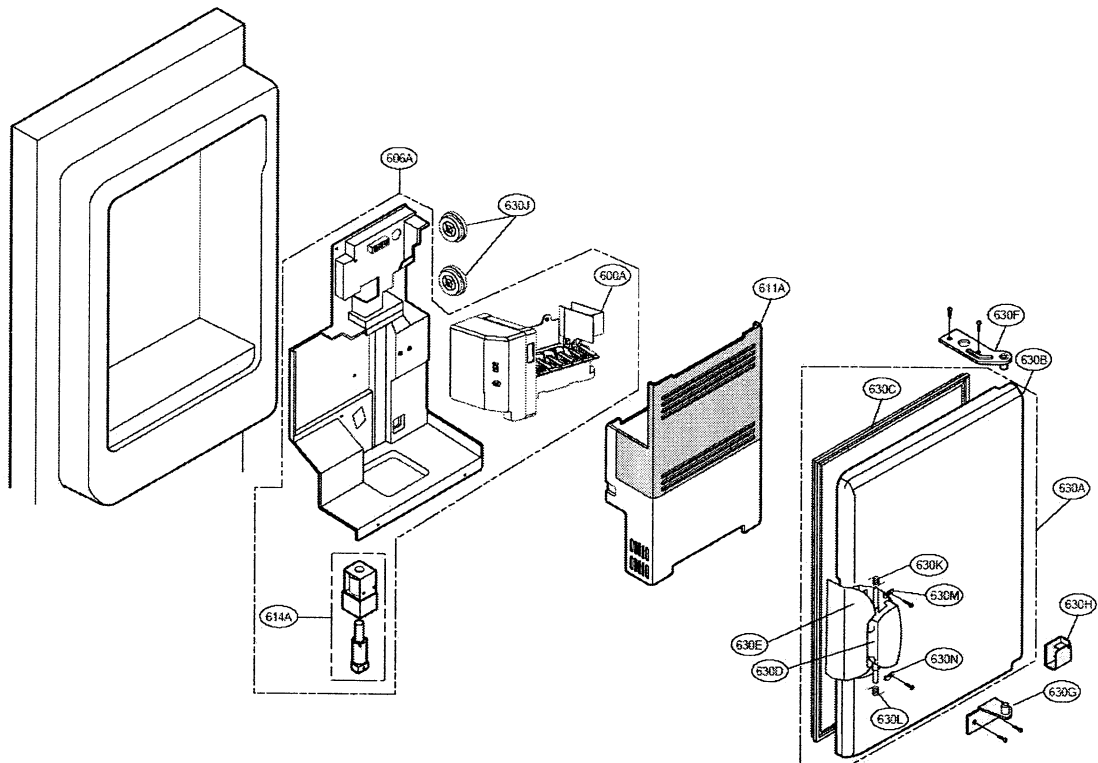


EXPLODED VIEW, continued

ICE BIN PARTS



EXPLODED VIEW, continued



PARTS LIST

Loc #	Part No	Description
103A	3650JA2061W	Handle, Rear (right, facing it)
103B	3650JA2061X	Handle, Rear (left, facing it)
103C	3550JJ0008L	Grille, Lower (Kick plate)
105A	5251JA3003B	Tube Assembly, Drain
106A	4779JJ2001B	Leg Assembly, Adjust
120A	ADJ33675301	Duct Assembly, Multi
120B	ADJ33675302	Duct, Multi (no aux. parts)
131A	5074JA2004A	Bucket, Ice
135D	3551JJ2028A	Cover Assembly, Grille Fan
136A	3390JJ1072A	Tray, Drawer
136B	3391JA2054G	Wire Drawer, Freezer
136C	ACW33739001	Decor Assembly, Tray
140A	AHT33676301	Shelf Assembly, Ref, with rails
140B	AHT33676302	Shelf Assembly, Ref, shelf only
140C	AEC34652101	Guide Assembly, Rail
140D	AEC34652102	Guide Assembly, Rail
140F	AJP33676001	Tray Assembly, Snack
141A	AHT33676201	Shelf Assembly, Refrigerator
141D	MCK39813801	Cover, Glass
145A	4930JA2080C	Holder, Shelf
145B	4930JA2081C	Holder, Shelf
145C	4975JA1040F	Guide Assembly, Rail, Right
145F	4975JA1040E	Guide Assembly, Rail, Left
145G	4974JA1154B	Guide, Rail, Gear, Right
145H	4974JA1154A	Guide, Rail, Gear, Left
145J	5218JA1008B	Rail, Slide
145K	5218JA1008B	Rail, Slide
145L	4932JA1009B	Connector, Rail, Gear, Right
145M	4932JA1009A	Connector, Rail, Gear, Left
146A	J469-00030B	Rack
151A	AJP33740401	Tray Assembly, Vegetable
152B	MCK39131501	Cover, Sensor
154A	ACQ34639401	Cover Assembly, TV
154C	MJH38067301	Supporter, Cover TV
158A	MCK38019301	Cover, Lamp, Refrigerator

Loc #	Part No	Description
158B	MCK38015101	Cover, Lamp, Freezer
161C	MGT39306302	Rail, Slide, Left
161D	MGT39306301	Rail, Slide, Right
200A	3581JA8820S	Door Assembly, Freezer
201A	ADD33201001	Door Foam Assembly, Freezer
203A	MDS38201406	Gasket, Door
205A	5004JJ1061B	Basket, Door
205B	5004JA2017A	Basket, Tilt
205C	5004JA2017B	Basket, Tilt
207A	3550JJ1097Q	Cover, Hinge, Upper Left
207B	3550JJ1097R	Cover, Hinge, Upper Right
207C	3806JA2146E	Decor Assembly, Case
212D	AED33208201	Handle Assembly, Freezer
212G	AFZ34128801	Name Plate Assembly
230A	3581JA8814Q	Door Assembly, Refrigerator (Right)
230B	3581JA8815V	Door Assembly, Refrigerator (Left)
231A	ADD33201201	Door Foam Assembly, Ref (Right)
231B	ADD33201401	Door Foam Assembly, Ref (Left)
233A	4987JJ2002E	Gasket Assembly, Door (Right)
233B	4987JJ1005F	Gasket Assembly, Door (Left)
233D	3551JJ2030A	Cover Assembly, Front (Right)
234A	4430JJ2004A	Cam, Shaft (Right)
234B	4430JJ2004B	Cam, Shaft (Left)
234C	4931JJ2002E	Holder Assembly, Gasket Ref (Right)
234D	4931JJ2002F	Holder Assembly, Gasket Ref (Left)
237A	4974JA2055A	Guide, Pitcher
237C		Drawer Divider
241A	AAP33686301	Basket Assembly, Door
241B	MAN38142901	Basket, Door
241C	MAN39723201	Basket, Window
241D	AAP33751401	Basket Assembly, Door
241G	AAP33726602	Basket Assembly, Door
241H	AAP33726601	Basket Assembly, Door
241J	MAN38154501	Basket, Door
243A	MJB38054102	Stopper, Door (Right)
243B	MJB38054101	Stopper, Door (Left)
243C	AEH34570002	Hinge Assembly (Right)

Loc #	Part No	Description
243D	AEH34570001	Hinge Assembly, (Left)
244A	3651JA2281A	Handle Assembly, Refrigerator
249A	5098JJ2002T	Freezer Rail Assembly (Right)
249B	5098JJ2002S	Freezer Rail Assembly (Left)
249C	4930JA1066A	Holder, Rail (Right)
249D	4930JA1066B	Holder, Rail (Left)
249E	5218JA1010E	Rail, Slide (Right)
249F	5218JA1010F	Rail, Slide (Left)
249G	5098JA2001H	Connector Assembly (Right)
249H	5098JA2001G	Connector Assembly (Left)
249J	3550JA1455A	Cover, Connector (Right)
249K	3550JA1455B	Cover, Connector (Left)
249L	4932JA1005D	Connector, Rail (Right)
249M	4932JA1005C	Connector, Rail (Left)
250A	MAK39123901	Bar
250B	4403JA3005A	Freezer Rail Gear (Right and Left)
250C	4470JA2008A	Gear, Ice
250D	5006JA2069A	Cap, Cover
250E	MAK36519001	Bar
262B	AEH33724102	Hinge Assembly (Right)
262C	MBJ38219001	Cam, Locker (Left and Right)
262D	MFA40012801	Leg, Adjust (Left and Right)
262E	MHU38218901	Wrench (for adjusting doors)
262H	AEH33724104	Hinge Assembly (Left)
271A	4775JJ2014B	Hinge Assembly (Left)
271B	4510JA3004A	Lever, Hinge (Left and Right)
271C	4775JJ2014A	Hinge Assembly (Right)
275A	5007JA3006T	Cap Assembly, Duct
276A	4970JA3011C	Spring, Lever
277A	ABH34641101	Button Assembly, CUBE/CRUSH
277B	ABH34641102	Button Assembly, FREEZER
277C	ABH34641103	Button Assembly, REFRIGERATOR
277D	ABH34641104	Button Assembly, ICE PLUS
277E	ABH34641105	Button Assembly, DOOR ALARM
277F	ABH34641106	Button Assembly, LIGHT
277G	ABH34641107	Button Assembly, LOCK 3 SECS
277H	ABH34641108	Button Assembly, FILTER RESET

Loc #	Part No	Description
278D	MDR38029101	Funnel
279A	ACQ33752601	Cover Assembly, Display, Button
279B	ACQ33229601	Cover Assembly, Dispenser
279D	MBN38026801	Case, Display PCB
279E	MCK38209801	Cover, Display PCB
279G	ABH33777901	Button Assembly, WATER
279H	ABH33740301	Button Assembly, ICE PLUS
279J	MBG38252601	Button, Lever
279K	MEG38133301	Holder, Cover
281A	MCR38009801	Decorative Trim
281B	MJS38017701	Dispenser Tray
281C	4811JJ2015A	Bracket Assembly, Door
281D	3550JA2267B	Cover, Hinge
281E	3550JA2267A	Cover, Hinge (Left)
281F	3550JA2264A	Cover, Hinge (Right)
281G	5040JA3075A	Damper
282F	MBL38019501	Cap, Duct
282G	MBL38019801	Cap, Duct
283B	4774JJ3002A	Leg Bracket (No leg)
300A	2521C-A7256	Compressor
301A	5421JJ1003B	Evaporator Assembly
303C	6750C-0004R	Overload Protect
304A	3550JA2042C	Cover, PTC
310B	4J00977N	Pipe, Compressor Sealing
312A	5040JA3071A	Damper, Compressor
312B	MCK38163201	Cover, Front (Water tank)
313A	3551JJ2018A	Cover Assembly, Machinery (Rear)
313B	3550JJ0015A	Cover, Machinery (Rear)
314A	4620JA3015A	Stopper, Compressor
315A	3103JJ1001H	Base Assembly, Compressor
315B	4580JJ3001A	Roller (Wheel)
315C	1PZZJA3013B	Pin, Common 6 mm X 45 mm
316A	5072JA3003F	Damper, Noise (Adhesive pad)
316B	5072JA3003B	Damper, Noise
317A	5851JA2008U	Drier Assembly
318A	4930JA3034B	Holder, Drier

Loc #	Part No	Description
319A	3390JA0040A	Tray, Drip
319C	4974JJ1036A	Guide, Fan
323B	5403JJ1004B	Condenser Assembly, Wire
327A	4J03020A	Damper, Pipe
328A	5040JJ2001A	Damper, Motor Support
329A	5901JA1021A	Fan Assembly (Ice fan)
329C	5901JA1013A	Fan Blade (Condenser fan)
332C	AEB34270101	Back Panel; Freezer
400A	6615JB2005H	Controller Assembly, Defrost
400A	6615JB2005H	Controller Assembly, Defrost
402A	6600JB3007K	Switch, Push Button
402C	6600JB3001E	Switch, Micro
404A	4681JK1004E	Motor, DC, Freezer Fan
405A	6421JB2002D	Solenoid, Reversing, Valve
405B	4810JJ2005A	Bracket, Motor
405C	5040JA2009B	Damper, Motor Support
405F	5040JA2004B	Damper, Motor Support
406B	6600JB1010K	Switch, Push Button
406D	4931JA3006A	Holder Assembly, Gasket
406E	4986JA2062A	Gasket, Door
407A	5209JA1044A	Duct Assembly, Connector
407B	4810JJ0003A	Bracket, Motor
408A	5300JK1005D	Heater, Sheath
409D	EAV33421101	LED Assembly, Refrigerator 12-LED
409E	EAV33421102	LED Assembly, FREEZER 3-LED
410F	AEB34270101	Capacitor
410G	0CZZJB2012K	Capacitor, Electric Appliance Film, Box
410J	3111JB1017M	Case Assembly, PCB
411A	6411JB1042L	Power Cord Assembly 6 ft / 2 m
420A	4681JB1029D	Motor, DC, Condenser Fan
500A	EBR34917101	PCB Assembly, Main
500B	EBR32820101	PCB Assembly, Sub
500C	6871JB2061C	PCB Assembly, Sub (Dispenser)
500D	EBR36498901	PCB Assembly, Timer/Key
500E	ABH34641201	Button Assembly, WATER
501A	EBR35287601	PCB Assembly, Display

Loc #	Part No	Description
501D	6871JB2074D	PCB Assembly, Display
501F	3551JA2144B	Cover Assembly, Main PCB
502A	3550JA1405A	Cover, PCB
502B	3110JA1108A	Case, PCB
503D	MBN38018601	Case, Lamp
503E	ACQ33676501	Whole Assembly, Lamp
503F	ACQ33751001	Whole Assembly, Lamp
600A	5989JB0001A	Ice Maker Assembly, Kit
603A	4004JA3002A	Clip
603C	4004JA3002A	Clip
603D	4930JA3091A	Holder, Bracket
606A	4681JA1006D	Motor, AC
607A	4930JA3091A	Holder, Bracket
610A	3550JA2247A	Cover, Sensor
611A	5075JA1044C	Bucket Assembly, Ice
614A	6421JA3001N	Solenoid Assembly
615A	4838JA2003A	Tank, Water
616D	5210JA3005L	Tube, Plastic
616F	5210JA3004U	Tube, Plastic
616G	5210JA3005W	Tube, Plastic
616H	4932JA3009A	Connector, Tube
616J		Connector
617A	4970JA3004N	Spring
619A	5220JB2009A	Valve Assembly, Water
619B	AJU33843201	Valve Assembly, Water
623B	5006JJ2009A	Cap, Cover
624A	5231JA2006A	Filter Assembly, Water
624C	3550JD1128C	Cover, Filter
625A	3550JA2184B	Cover, Tube
626A	3550JA2279A	Cover, Filter
627A	4930JA3054A	Holder, Pipe
630L	4970JA3045A	Spring
630M	4860JA3010A	Clamp
630N	4860JA3010B	Clamp
B01	4000W4A003A	Screw, Customized 4 mm X 10 mm
B02	1STZJA3004G	Screw, Customized 6 mm X 20 mm

Loc #	Part No	Description
B03	1STZJA3004F	Screw, Customized 6 mm X 20 mm
B04	1BZZJA2002A	Bolt, Common 6 mm X 15 mm
B06	4620JJ2010B	Stopper, Handle
S01	4J00415D	Screw, Customized 4 mm X 121 mm
S02		Screw
S03	4J01424B	Screw, Customized 4 mm X 12 mm
S08	1SZZJJ3005E	Screw, Customized 12 mm X 18 mm
S10	1SBZJA3004L	Screw, Customized 4 mm X 14 mm
S11	3J05696W	Screw, Customized 4 mm X 14 mm
S12	1SZZJJ3005E	Screw, Customized 12 mm X 18 mm
S14	1SZZJJ3010C	Screw, Customized 4 mm X 20 mm
S15	4000W4A003A	Screw, Customized 4 mm X 10 mm
S16	4J00415D	Screw, Customized 4 mm X 121 mm
S17	4J00415D	Screw, Customized 4 mm X 121 mm
S18	4J00415D	Screw, Customized 4 mm X 121 mm
S19	4J00415D	Screw, Customized 4 mm X 121 mm
S20	1SZZJA3016A	Screw, Customized 4 mm X 22 mm
S34	1SZZJA3011B	Screw, Customized 4 mm X 8 mm
S34	1SZZJA3011B	Screw, Customized 4 mm X 8 mm

OHM'S LAW and WATT'S LAW

P = WATTS

Watts = Volts² x Ohms

Watts = Amperes² x Ohms

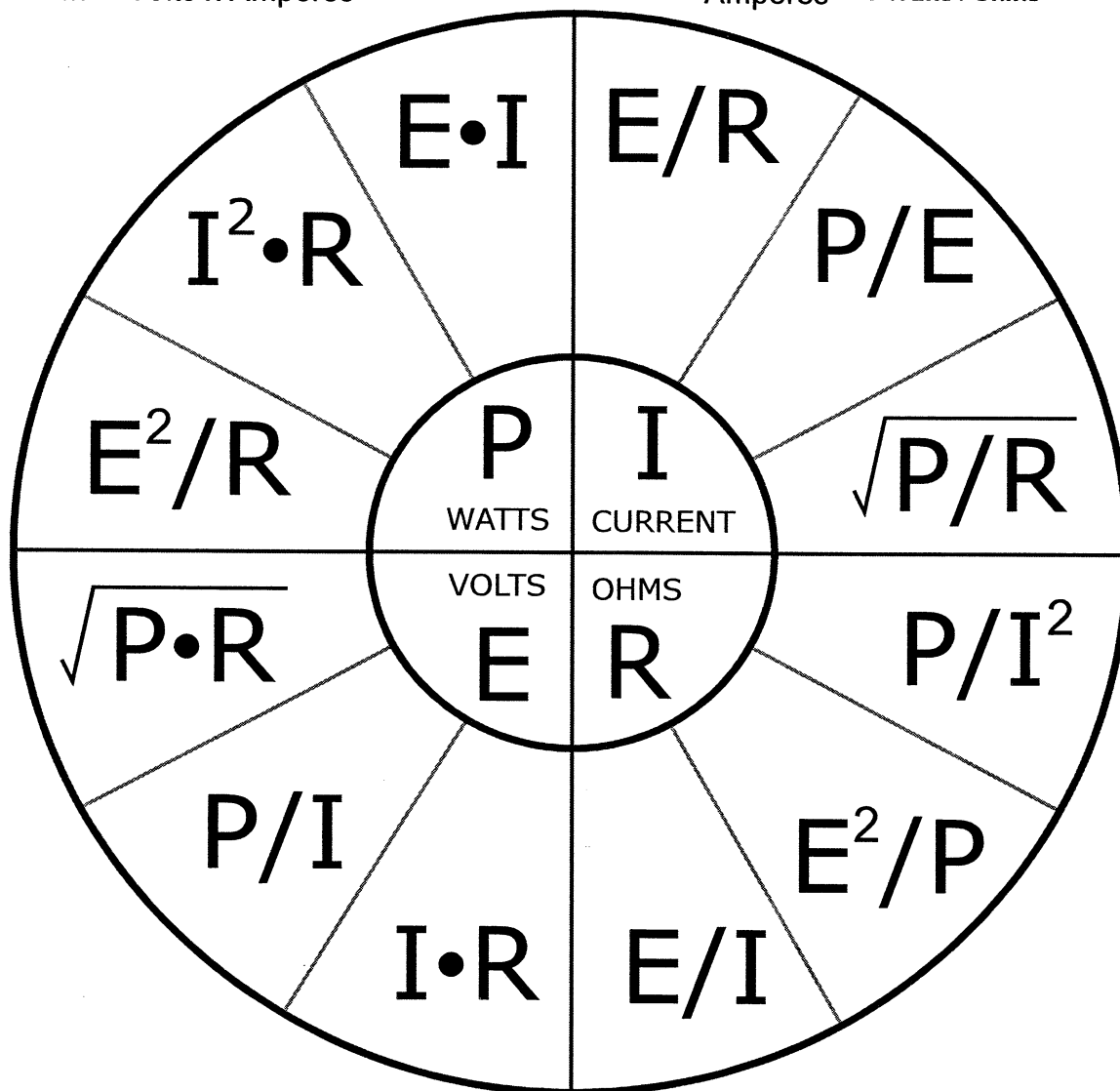
Watts = Volts x Amperes

I = AMPERES

Amperes = Volts / Ohms

Amperes = Watts / Volts

Amperes = $\sqrt{\text{Watts} / \text{Ohms}}$



E = VOLTS

Volts = $\sqrt{\text{Watts} \times \text{Ohms}}$

Volts = Watts / Amperes

Volts = Amperes x Ohms

R = OHMS

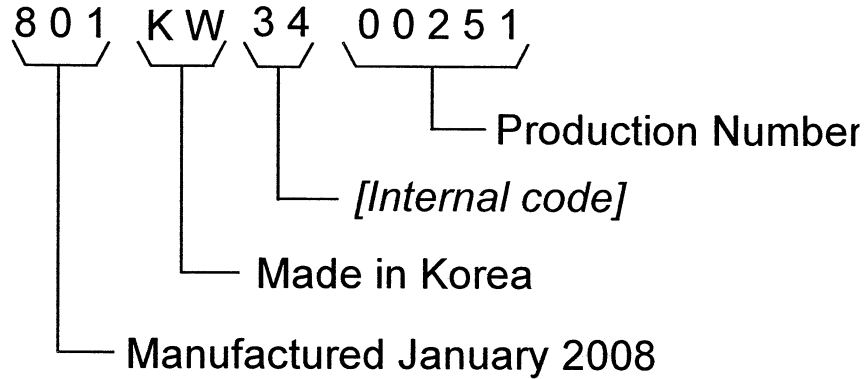
Ohms = Volts / Amperes

Ohms = Volts² / Watts

Ohms = Watts / Amperes²

MODEL AND SERIAL NUMBERS

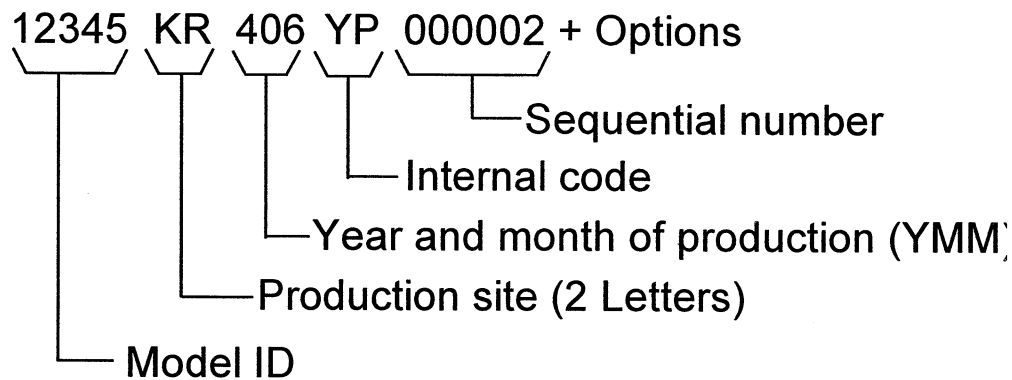
[Example] 801KW3400251



Newer Style With Barcode



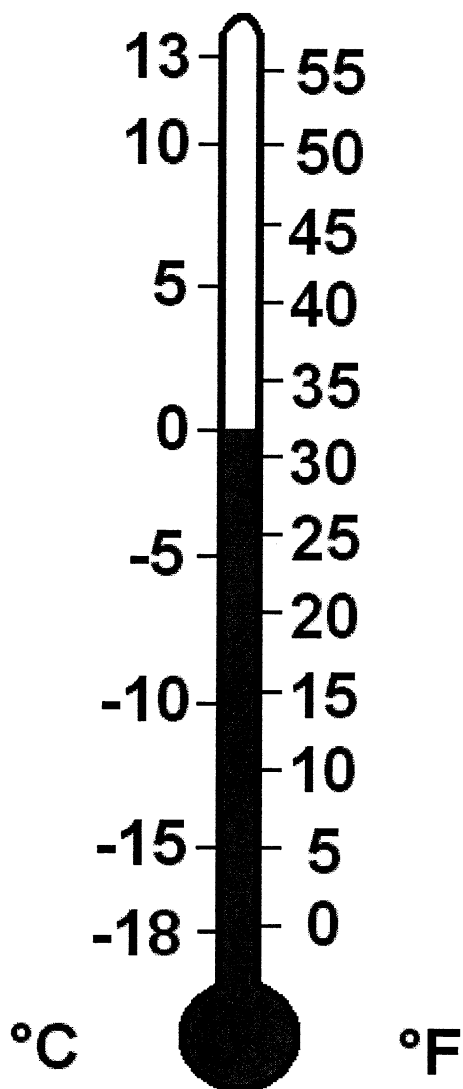
New Serial Code (ETA Mid 2008)



CONVERSION INFORMATION**FORMULAE**

$$^{\circ}\text{F} = (9/5) ^{\circ}\text{C} + 32$$



$$^{\circ}\text{C} = (5/9) \times (^{\circ}\text{F} - 32)$$



SERVICE BULLETINS

REF. SVC Technical Guide

2007.03.16

1. Title: SVC Technical Info. for DRIER ASSEMBLY Individual Evacuated Packaging	
2. Model: GR-00	3. S/NO: 2007.03.28
4. Info: Modification, Quality Improvement, Temporary Countermeasure, etc.	
5. Modification Summary: DRIER 25 ea. in use (SVC 2 types), Separate Evacuated Packaging.	
6. Modification Reason: Improve SVC DRIER by Evacuated Packaging, Classify into 2 types to avoid varied types	
7. Modification (Improvement) Detail:	
<p>Before</p>  <p>1. Model: GR-197~277** GR-332~712 GR-122, 142, 182</p> <p>2. P/NO: 5851JA2002M, P, R, U 5851JA2006G, L 5851JA2007E,F,J,K,L,W,X 5851JA2008A → Interior diameter in outlet (Φ2.2)</p>	<p>After</p>  <p>P/NO: 5851JA2008R (for 1-EVA) → Interior diameter in outlet (Φ2.2)</p>
8. SVC Solution (in agreement with existing one): XH-9, Inlet 4.9, desiccant amount: 12 grams, Outlet 2.2 → 1-EVA (1 type in use)	
9. Action Before Modification (<input type="checkbox"/> Discard all <input type="checkbox"/> Use without Modification <input type="checkbox"/> Use with Modification <input checked="" type="radio"/> Others: No action) ☞ No modification	
10. Action for Products Sold Out (<input type="checkbox"/> Recycling <input type="checkbox"/> 1:1 Exchange with the Modified <input type="checkbox"/> Recall and Repair <input checked="" type="radio"/> Others) ☞ No Change	
11. Issuer: H. Yang	
12. Info. Provider:	GSC

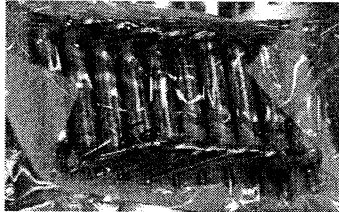
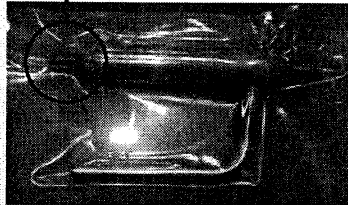
LG (61) 024 A4 (950225)

1/1

LG

REF. SVC Technical Guide

2007.03.16

1. Title: SVC Technical Info. for DRIER ASSEMBLY Separate Evacuated Packaging	
2. Model: GR-00	3. S/NO: 2007.03.28
4. Info: Modification, Quality Improvement, Temporary Countermeasure, etc.	
5. Modification Summary: DRIER 25 ea. in use (SVC 2 types), Separate Evacuated Packaging.	
6. Modification Reason: Improve SVC DRIER by Evacuated Package, Classify into 2 types to avoid varied types	
7. Modification (Improvement) Detail:	
<p>Before</p>  <p>1. Model: R-B39~R-B73 R-U(F)71**, R-T(S)68*~ T(S)77*</p> <p>2. P/NO: 5851JA2002T 5851JA2007N, R, S, T → Interior diameter in outlet (Φ4.2)</p>	<p>After</p>  <p>P/NO: 5851JA2008S (for 2-EVA) → Interior diameter in outlet (Φ4.2)</p>
8. SVC Solution (in agreement with existing one): XH-9, Inlet 4.9, desiccant amount: 12 grams, Outlet 4.2 → 2-EVA (2 types in use)	
9. Action Before Modification (<input type="checkbox"/> Discard all <input type="checkbox"/> Use without modification <input type="checkbox"/> Use with modification <input checked="" type="radio"/> Others: No action) ☞ No modification	
10. Action for Products Sold Out (<input type="checkbox"/> Recycling <input type="checkbox"/> 1:1 Exchange with the Modified <input type="checkbox"/> Recall and Repair <input checked="" type="radio"/> Others) ☞ No Change	
11. Issuer: H. Yang	
12. Info. Provider: GSC	

LG (61) 024 A4 (950225)

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LG

SERVICE BULLETIN





LG Electronics

No. : CREF20070530

Date : 2007-09-05

Model	Factory	Factory Model	Suffix	Model No.	Factory	Factory Model	Suffix	Model No.
	EKHQ	GR-L218DSVA	ASTCLGA	LFX21980ST	EKHQ	GR-L258DSVA	ASTCLGA	LFX25980ST
	EKHQ	GR-L258SQJ	ASWCLGA	LFX25960SW	EKHQ	GR-L258SQLA	ABICSER	77564
	EKHQ	GR-L258SQLA	ASWCSEF	77572	EKHQ	GR-L258SQLA	ASWCSEF	77562
	EKHQ	GR-L258SQLA	AWBCSEF	77579	EKHQ	GR-L258SQLA	AWBCSER	77569
	EKHQ	GR-L258SSJ	ASTCLGA	LFX25960ST	EKHQ	GR-L258SSLA	ASTCSEF	77573
	EKHQ	GR-L258SSLA	ASTCSER	77563				
Buyer	Buyer Name	Buyer Code	Buyer Name	Buyer Code	Buyer Name	Buyer Code		
	LGEUS	US000001	LGEAI	US000002				
EFFECTIVE DATE	2007-09-03		EFFECTIVE FROM (SERIAL NO.)			709KR0001		
Subject	Change of compressor (LD72LACH to LD72LACM) on 21 & 25 cu. ft. French Door refrigerators							
No.	Loc No.	Before Change		After Change		Note	K-Code	Remark
		Part No	DESC./SPEC.	Part No	DESC./SPEC.			
1	300A	2521C-A7256	Compressor, Set Assembly / 2521C-A7256 LD72LACH AR1COIL COMPOBU	TCA31748001	Compressor, Set Assembly / LD72LACM AR1COIL	D	1	
2	303B	6748C-	Thermistor Assembly, PTC /	6748C-0004D	Thermistor Assembly, PTC /	D	1	
		0002C	P6R8MB P6R8MB LUCON PX9001F #250 MURATA MURATA		P6R8MD- P6R8MD LUCON PX9001F #250 MURATA MURATA MANUFACTURING CO., LTD.			
Reason Of Change								
- Change of compressor LD72LACH to LD72LACM. - Deletion of the running capacitor formerly required with compressor LD72LACH.								

** FILE THIS SERVICE BULLETIN WITH YOUR SERVICE MANUAL

NOTE(**) : INTERCHANGEABILITY CODE					KEY-WORD CODE
	Parts	Set			
A	Original	Early		Original or new parts may be used in early or late production sets. Use original parts until exhausted, then stock new parts.	1. To improve performance 2. To improve productivity
	New	Late			
B	Original	Early		Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.	3. To improve reliability 4. Change of material or dimension
	New	Late			
C	Original	Early		New parts only may be used in early or late production sets. Stock new parts.	5. Addition 6. Deletion
	New	Late			
D	Original	Early		Original parts only may be used in early production sets. New parts may be used in late production sets only. Stock original and new parts.	7. Correction
	New	Late			

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Stepping Motor Info

BL to BK / $400\Omega \pm 10\%$
YL to RD / $400\Omega \pm 10\%$
Ohm Tests performed with
connector disconnected!!
(Both Stators Get Variable +/-
DCmv @ 75Hz in Test Mode)

**CON1 PWB
Dispenser Board**

**All Wire Colors are L1
Outputs to 120 V_{AC} Loads
Exception – BL & WH
Neutral
PK & YL – L1 Inputs**

Fans 13-15V_{dc} Motor ON

F-Fan Pins 1 & 2
Icing Fan Pins 4 & 5
C-Fan Pins 7 & 8
(Pins 3, 6, & 9 Feedback
Ref lines 2, 5, & 8)

a – WH & BL = Neutral
b – BK, YL, & BO = L1

120 V_{AC}
BK - L1
WH - N

BL - N

PWB ASSEMBLY

CON2 & CON3
All Wire Colors are
L1 Outputs to 120
V_{AC} Loads
Exception – BL (N)
& BO (L1 Output to
LED PWB L1 Input
BK)

13

CON 5 COM Lines
Pin 2 – 12 V_{DC}
Pin 3 – Grd Ref
Pin 4 – RX
Pin 5 – TX

a – BK = L1 120 V_{AC}
b – PK = Neutral

b - PK = Neutral

BK 2	PK 1
a	b

PK 1

LED Door Switches (N.C.)
R-BL to GN 12Vdc SW Open
F-SB to RD 12Vdc SW Open

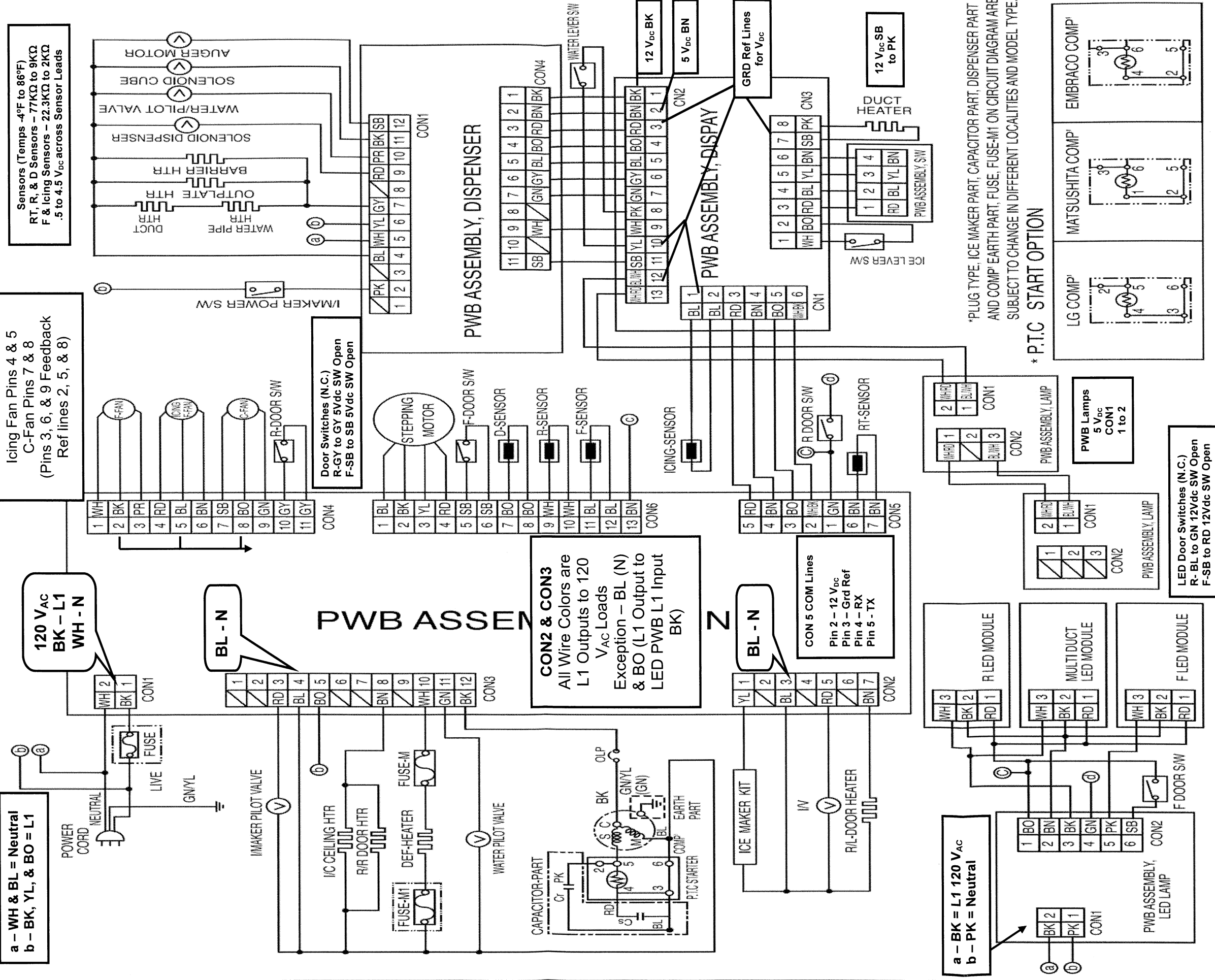
BK : BLACK
YL : YELLOW
SB : SKY BLUE

BO : BRIGHT ORANGE
PR : PURPLE
GN/YN : GREEN/YELLOW

GY : GRAY
WH : WHITE
BLWH : BLU

RD : RED
WH/BK : WHITE/BLACK
RD/WH : RED/WHITE

GRD



*PLUG TYPE, ICE MAKER PART, CAPACITOR PART, DISPENSER PART AND COMP EARTH PART, FUSE, FUSE-M1 ON CIRCUIT DIAGRAM ARE SUBJECT TO CHANGE IN DIFFERENT LOCALITIES AND MODEL TYPE.

* P.T.C. START OPTION

GRD

