Hisense

Refrigerator Service Manual

Model:
HRF266N6CSE

WARNING:

This service information is designed to be used ONLY by experienced repair technicians and is not designed for use by the general public. It does not include Warnings and Cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity and/or use gas refrigerant should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products covered in this service manual by anyone without this knowledge and experience could result in serious injury or death.

Table of Contents

1. Safety

Please read the following safety information before servicing this refrigerator.

General Service Precautions

- Disconnect power before handling any electrical components.
- Check the rated current, voltage, and capacity.
- Do NOT allow water to get near any electrical components.
- Use exact replacement parts.
- Remove any objects from the top of the cabinet before tilting the refrigerator.

Important Safety Instructions

WARNING: To reduce the risk of fire, electrical shock, injury to persons, or damage when using the refrigerator, follow basic precautions, including the following:

- Plug into a grounded 3 prong outlet.
- Do not remove ground prong.
- Do not use an adapter.
- Do not use an extension cord.
- Disconnect power before servicing.
- Disconnect power and wait a minimum of 3 minutes before replacing PCB parts.
- Wait a minimum of 5 minutes after unplugging power cord from electrical outlet before plugging the cord back into the electrical outlet.
- Make sure the electrical outlet is properly grounded, particularly in wet or damp locations.
- Replace all parts and panels before operating.
- Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing.
- Flammable refrigerant used. Dispose of properly in accordance with federal or local regulations.
- Flammable refrigerant used. Follow handling instructions carefully. Risk of fire or explosion due to puncture of refrigerant tubing.
- Flammable refrigerant used. Do not use a torch when servicing the refrigerator.
- Use nonflammable cleaner.
- Keep flammable materials and vapors, such as gasoline, away from refrigerator.
- Use two or more people to move and install refrigerator.
- If your refrigerator is not being used, remove the doors. This will reduce the possibility of danger to children.

Read and Save These Instructions

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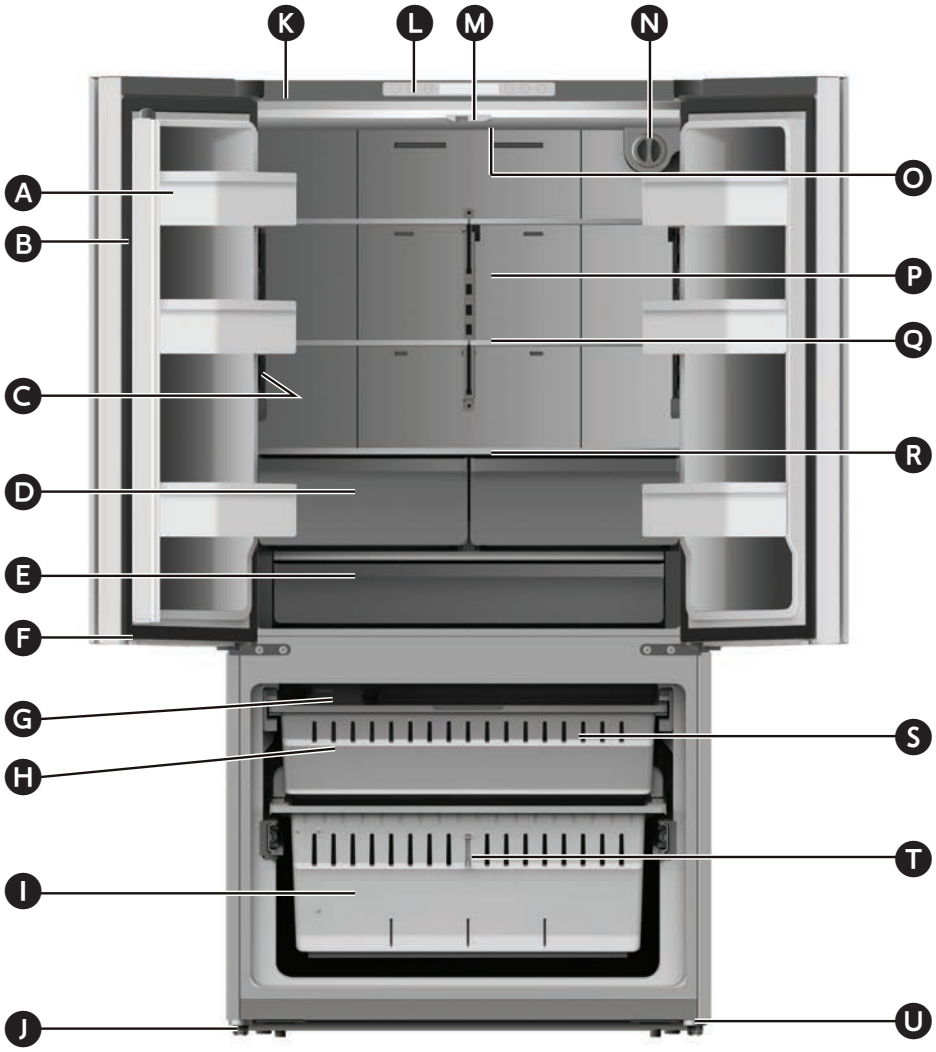
2. Model Specifications

SPECIFICATION	VALUE
Design Pressure	Below
High Side/Low Side	250 PSIG / 88 PSIG
Refrigerant/Amount	R600a/62G
Rated Voltage	115V
Rated Frequency	60Hz
Rated Current	2.8A
Defrost Heater	220W
Foaming Agent	Cyclopentane
Net Weight	273 lbs
W x D x H (with hinges)	36″ X 33.6″ X 69.9″
W x D x H (without hinges)	36″ X 28.75″ X 68.5″

3. Parts Identification

Refrigerator Parts

- A Door bins
- B Vertical baffle
- C Water dispenser (inside)
- D Crisper drawers
- E Full width pantry drawer
- F Freezer LED light
- G Ice maker (inside)
- H Ice bin (inside)
- I Lower freezer drawer
- J Adjustable bottom feet
- K Top cover
- L Control panel
- M Vertical baffle guide
- N Water filter
- O Refrigerator LED light (inside)
- P Air channel
- Q Glass shelf
- R Crisper cover
- S Upper freezer drawer
- T Lower drawer partition (inside)
- U Roller
- V Refrigerator door
- W Freezer door
- X Handles



Door Removal (only if needed)

Measure the refrigerator to make sure it will fit through the doorway. If the refrigerator cannot pass easily through the doorway, follow the instructions to remove the two refrigerator compartment doors and the front panel of the freezer drawer.

⚠ WARNING

Electrical Shock Hazard

Disconnect power before removing doors.

Reconnect ground wire before operating.

Failure to do so could result in death or electric shock.

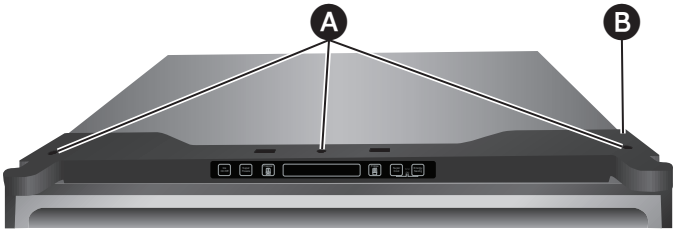
Tools needed

- Phillips Screwdriver
- 4 mm Hex-key wrench
- 8 mm Socket wrench

Remove the Doors

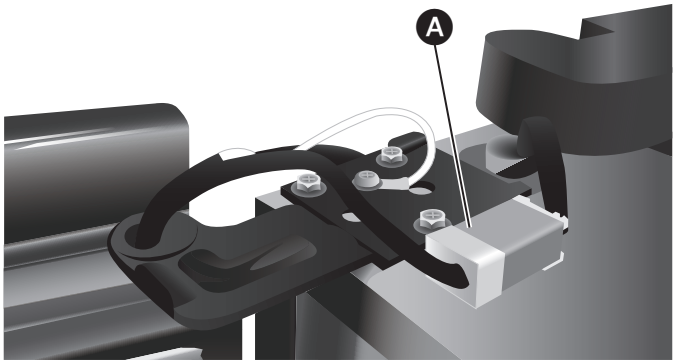
IMPORTANT: Keep the refrigerator doors closed until you are ready to lift them from the cabinet.

1. Unplug refrigerator or disconnect power.
2. Using a Phillips screwdriver, remove the three screws attaching the hinge cover and control panel to the top of the cabinet.



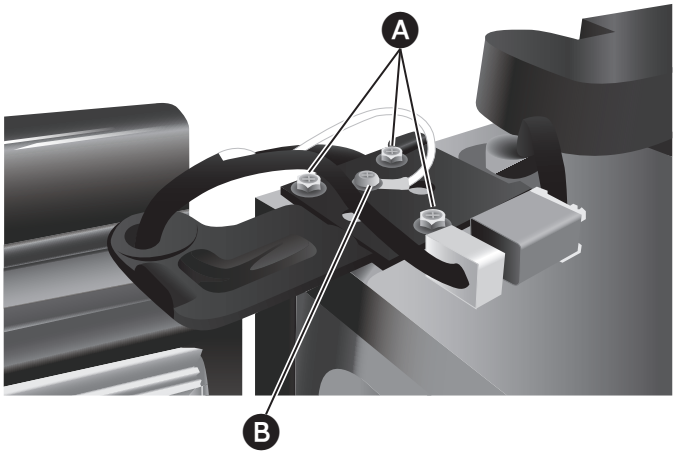
A Screws
B Hinge cover

3. Gently lift the hinge cover, keeping the wire harness attached, and move the cover/wire harness assembly behind the door hinges on the cabinet top.
4. Disconnect the wiring harness by pressing the release catch on the wire harness connector, and then pulling the ends apart (left-hand hinge only).



A Wiring harness

5. Using an 8 mm socket wrench, remove the three screws fastening the top hinge to the cabinet, and then remove the ground screw (left-hand hinge only).



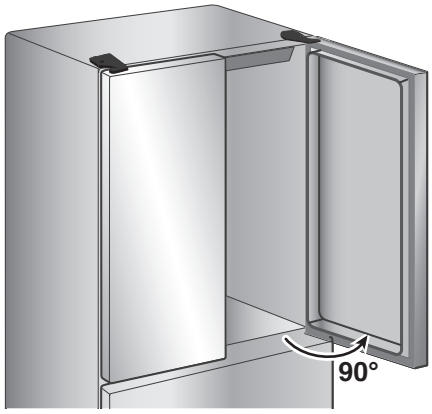
A Screws
B Ground screw

NOTE: Provide additional support for the door while the hinge is being removed. Do not depend on the door gasket magnets to hold the door in place while you are working.

6. Remove the top door hinge.

IMPORTANT: For the door to close properly in the future, DO NOT lift the door from the bottom hinge if it is open to an angle narrower than a 90° angle.

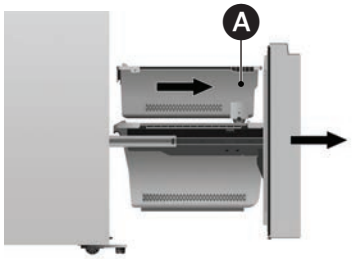
7. Open the door to a 90° or wider angle.



8. Using both hands, lift the door off the bottom hinge and set it onto a soft surface to protect the finish.
9. If necessary, use a hex-key wrench to remove the two bolts fastening the bottom hinge to the front of the cabinet, and then remove the hinge.
10. Repeat this procedure to remove the other door.

Remove the Front of the Freezer Drawer

1. Slide open the freezer drawer to its full extension.
2. Slide open the upper storage drawer to its full extension.



A Upper storage drawer

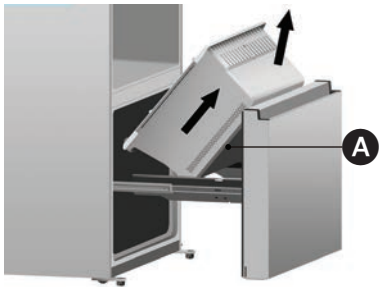
3. Remove the ice bin from the upper drawer by lifting up and pulling out at an angle.

A Ice bin

4. Remove the upper storage drawer from the glide rails by lifting up and pulling out at an angle.

A Upper storage drawer

5. Remove the lower storage compartment by lifting upward at an angle.



A Lower storage compartment

6. Using an 8 mm socket wrench, remove the 4 screws (2 on each side) attaching the supporting frame to the brackets on the interior panel of the drawer front.

A Supporting frame

7. Using both hands, grasp the bottom of the drawer front. Pull the bottom of the drawer front toward you while lifting up to remove.

8. Set the drawer front on a soft surface to protect the finish.
9. Slide the drawer glide rails into the cabinet.
10. Move the refrigerator through the doorway and into the room near the water and electrical connections.

Replace the Freezer Drawer

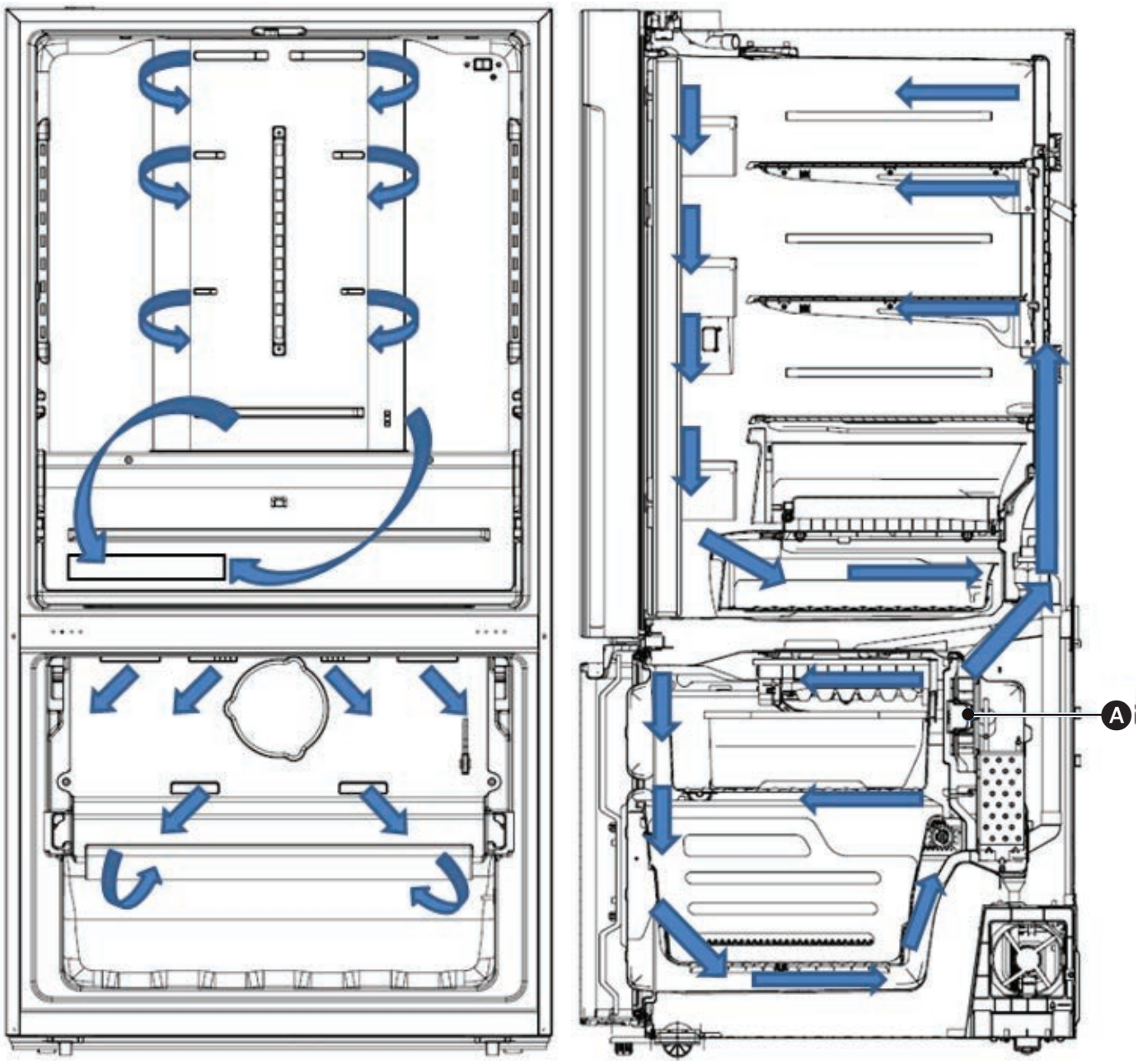
To reinstall the drawer after moving the appliance to its final location, assemble the parts in reverse order.

Replace the Doors

1. If removed, reinstall the bottom hinge.
2. Using two or more people, set the refrigerator door onto the bottom hinge.
3. Insert the top hinge into the top of the door.
4. Using the three screws removed earlier, fasten the top hinge to the top of the cabinet.

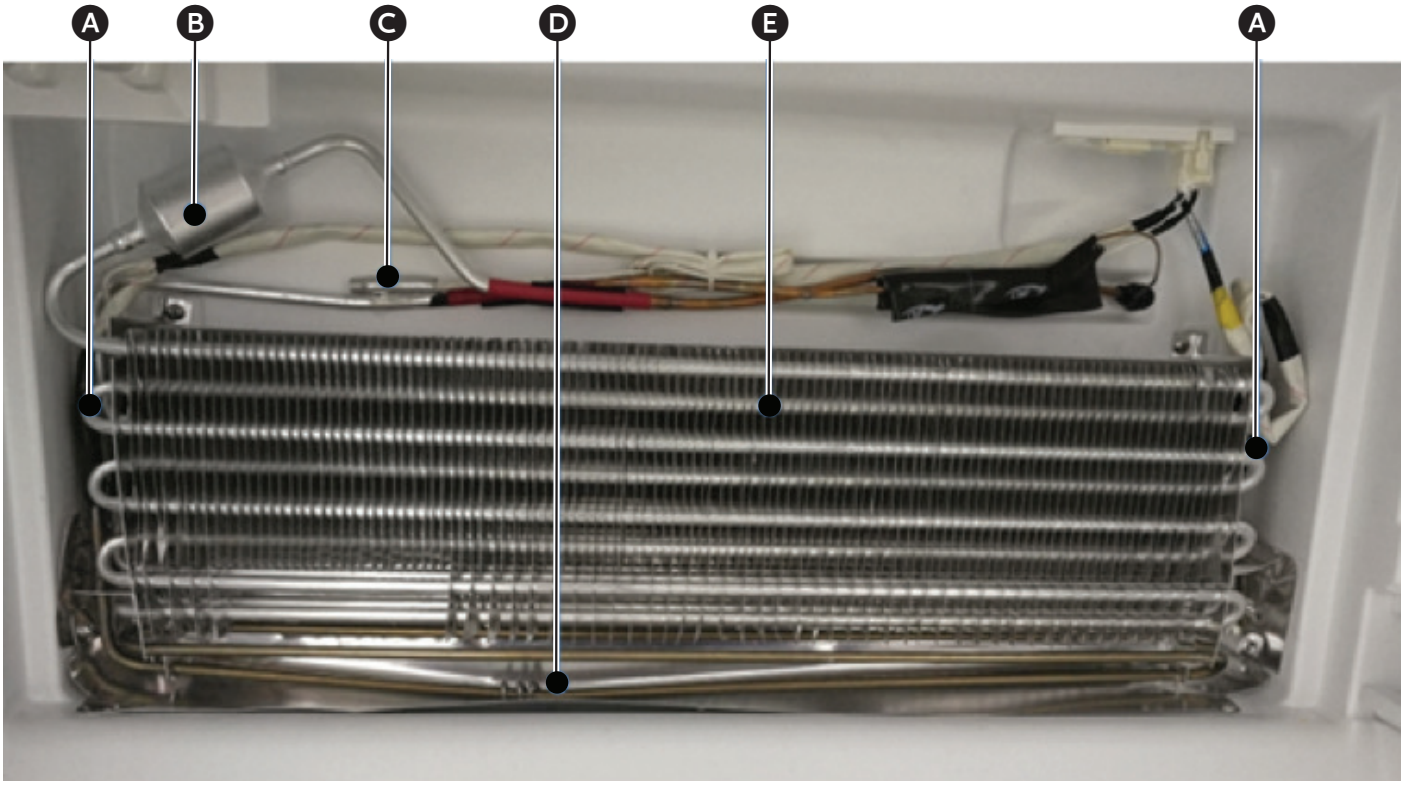
   NOTE: Left-hand door only, replace the ground screw into the top hinge, and then reconnect the wiring harness.
5. Repeat steps 1 through 4 to replace the opposite door.
6. Using the three screws removed earlier, reinstall the top hinge cover and control panel to the top of the cabinet.

Air Flow Path



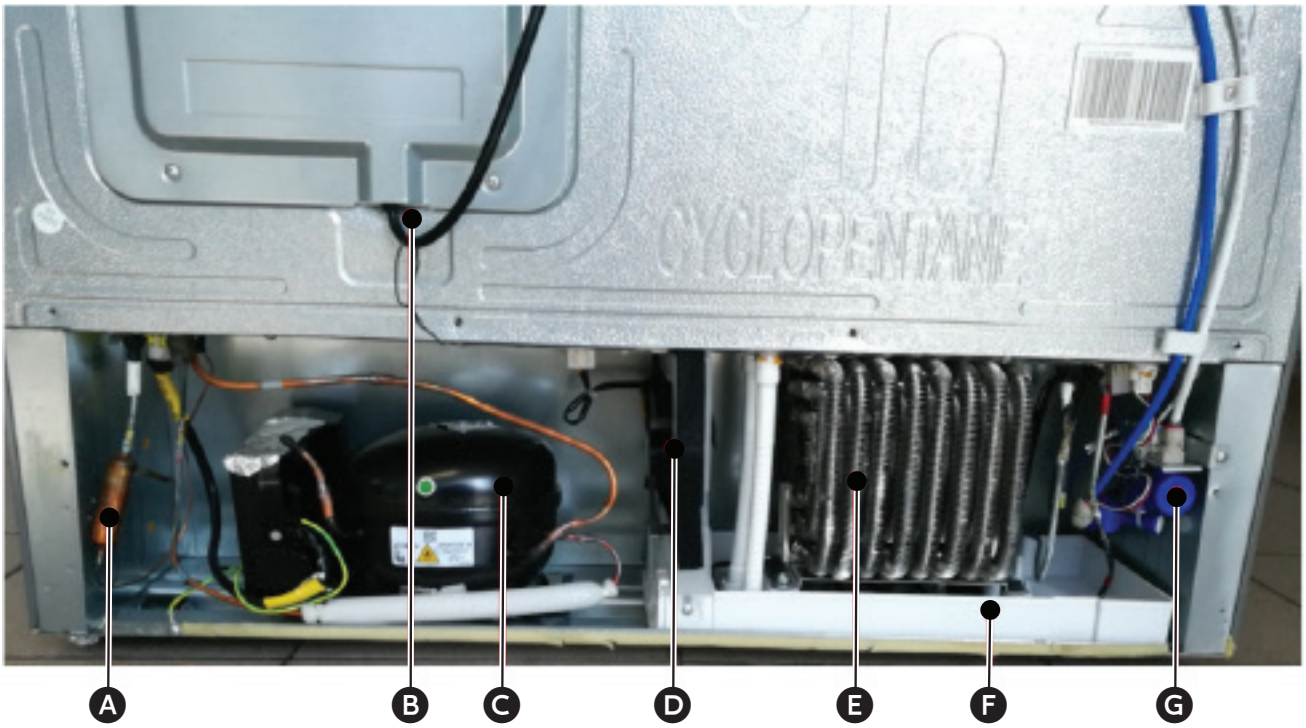
A Fan

Evaporator Structure



- A Fuse
- B Accumulator
- C Sensor
- D Heater
- E Evaporator

Compressor Compartment Structure

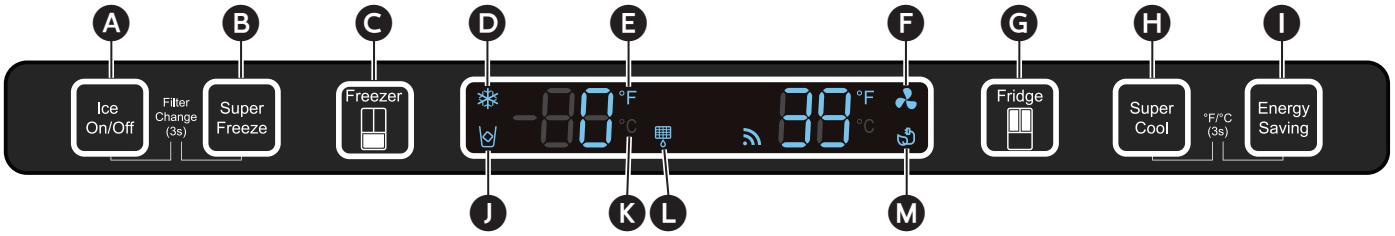


A Filter dryer
B Power cord
C Compressor
D Condenser fan motor
E Bottom condenser
F Evaporation tray
G Fill valve

4. Operation

Display Controls

NOTE: The controls on your model may look different from this and other images in this manual, depending on your model's features.



- **A** Ice maker control
- **B** Super freeze control
- **C** Freezer compartment temp control
- **D** Super freeze icon
- **E** Fahrenheit indicator
- **F** Super cool icon
- **G** Refrigerator compartment temp control
- **H** Super cool control
- **I** Energy saving control
- **J** Ice maker icon
- **K** Celsius indicator
- **L** Filter icon
- **M** Energy saving icon

Control Panel

The display will illuminate when the refrigerator is first plugged in, a control is pressed, or a door is opened. However the lights will automatically turn off after 60 seconds.

Setting Compartment Temperatures

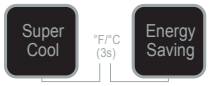
When you set a temperature, you are setting an average temperature for the entire compartment. The actual compartment temperatures may vary from the temperatures displayed depending on the amount and placement of stored food, and the surrounding room temperature.

Recommended Temperature Settings

- Refrigerator Compartment: 38°F (3°C)
- Freezer Compartment: 0°F (-18°C)

Display Temperatures in Degrees Fahrenheit or Celsius

- Press and hold SUPER COOL and ENERGY SAVING at the same time for 3 seconds.



NOTE: Either the °F or °C icon will illuminate to indicate in which scale (Fahrenheit or Celsius) the temperature is being displayed.

- Press SUPER COOL and ENERGY SAVING again, to change the temperature scale.

Refrigerator (Fridge) Compartment Temperature

1. Press FRIDGE once to turn on the temperature control.

2. Press FRIDGE repeatedly to cycle through the available temperature settings, from 47°F to 35°F or from 8°C to 2°C.

   NOTE: Each press advances the setting by one degree.

3. Release FRIDGE when the desired temperature setting appears.

Freezer Compartment Temperature

1. Press FREEZER once to turn on the temperature control.

2. Press FREEZER repeatedly to cycle through the available temperature settings, from 6°F to -12°F or from -14°C to -24°C.

   NOTE: Each press of the button advances the setting by one degree.

3. Release FREEZER to select the desired temperature setting.

Ice Maker Control

- Press ICE ON/OFF to turn On/Off the ice maker.

NOTE: When the ice maker is on, the Ice Maker icon is illuminated.

Additional Features

Super Freeze

The Super Freeze feature rapidly lowers the freezer compartment temperature to freeze fresh food faster and maintain the temperature of the frozen food during periods of high usage, full grocery loads, or temporarily warm room temperatures.

The Super Freeze feature lowers the temperature in the freezer compartment to -13°F (-25°C).

- Press SUPER FREEZE once to turn On the Super Freeze feature.

NOTE: When Super Freeze is on, ❄ is illuminated and -13°F or -25°C appears in the temperature display.

- Press SUPER FREEZE to manually turn off Super Freeze and return to the previously set temperature.

NOTE: Super Freeze will automatically turn off after several hours, and the freezer will revert to its previous temperature setting.

Super Cool

The Super Cool feature rapidly lowers the refrigerator compartment temperature to maintain the temperature of the chilled food during periods of high usage, full grocery loads, or temporarily warm room temperatures.

The Super Cool feature lowers the temperature in the refrigerator compartment to 35°F (2°C).

- Press SUPER COOL once to turn On/Off the Super Cool feature.

NOTES:

- When the refrigerator is in Super Cool mode, appears in the display.
- If not manually turned off, the Super Cool feature will automatically turn off after 3 hours.

Energy Saving

The Energy Saving feature reduces energy use by raising the Refrigerator Compartment temperature to 42°F (6°C) and the Freezer Compartment temperature to 2°F (-17°C).

IMPORTANT: The compartment temperatures in Energy Saving mode are not suitable for the storage of certain food items.

- Press ENERGY SAVING once to turn On/Off this feature.

NOTE: When the refrigerator is in Energy Saving mode, is illuminated.

Water Filter

Replace the water filter every 6 months to ensure the highest possible water quality.

After about 300 gallons of water has been dispensed, the filter icon will blink to indicate it is time to purchase a replacement water filter.

A new filter can be purchased from the retailer where you purchased the refrigerator or from Hisense after-sales service system.

NOTE: Make sure to purchase the correct water filter for your refrigerator model.

After replacing the water filter, press and hold both the ICE ON/OFF and the SUPER FREEZE controls at the same time for 3 seconds to reset the filter status clock.

NOTE: The blinking will stop when the clock is reset.

When you replace the water filter, it is normal for a small amount of water to leak from the filter and water line.

Demo Mode

Demo Mode is used when the refrigerator is displayed in the store. The controls will function however the refrigerator will not cool.

To Activate Demo Mode:

- Press and hold both the ICE ON/OFF and the ENERGY SAVING controls at the same time for 3 seconds.

NOTE: To indicate the refrigerator is in Demo mode, “OF” will appear in both the Fridge and Freezer temperature displays.

To Cancel Demo Mode:

- Press and hold both the Ice On/Off and the Energy Saving controls at the same time for 3 seconds.

NOTE: To indicate the refrigerator is no longer in Demo mode, the display panel will illuminate for 3 seconds and a beep will sound 3 times.

Water and Ice

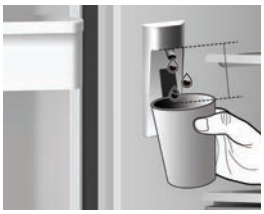
Water Clouding Phenomenon

Water coming into the refrigerator flows through an alkaline water filter. In the filtering process the water pressure increases, and the water becomes saturated with oxygen and nitrogen as it flows from the filter. When this water flows out into the air the pressure plummets and the oxygen and nitrogen get supersaturated which results in gas bubbles. The water may temporarily look misty or cloudy due to these oxygen bubbles. After a few seconds the water will look clear.

Water Dispenser

The water dispenser is located in the left side of the refrigerator.

1. Open the refrigerator doors, and press the water dispenser button to get water.
2. Move your glass downward on the dispenser pad and press inward.

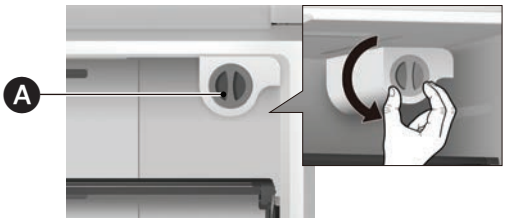


3. Hold the glass underneath the dispenser for 2-3 seconds after releasing the dispenser button because water may continue to dispense after the button is released.

Remove and Replace Water Filter

Remove the Water Filter

1. Shut off the water supply.
2. Turn the water filter counterclockwise a quarter turn.

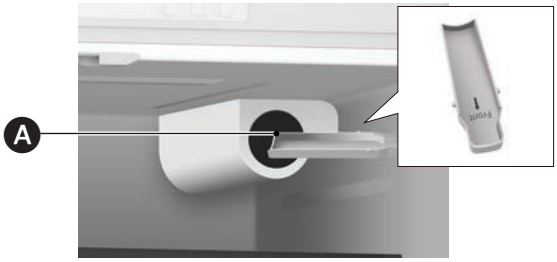


A Water filter

3. Keeping the water filter in a horizontal position, pull the filter from the filter compartment.

   NOTE: When removing the filter, some water may leak from the filter or compartment opening.

4. Remove and empty the water filter tray in the compartment, and then dry the compartment and the tray before replacing it into the compartment.



A Water filter tray

5. Turn on the water supply.

Replace the Water Filter

1. Remove the new filter from its packaging.
2. Insert the new filter into the filter compartment.
3. Push the filter inward, and then turn it clockwise until it locks into place.

Flush the Water Filter

After installing the replacement water filter it is important to flush air from the water line so that water will not drip from the water dispenser.

1. Turn on the main water supply.
2. Dispense 2.5 gallons of water (flush for approximately 5 minutes) to remove trapped air and contaminants from the system.

   NOTE: Do not dispense the entire 2.5 gallon amount continuously. Depress and release the dispenser pad for cycles of 30 seconds ON and 60 seconds OFF. In some homes, additional flushing may be required.

3. Open the refrigerator door to make sure there are no water leaks coming from the water filter.

Reverse Osmosis Systems

The pressure of the water supply coming out of a reverse osmosis system going to the water inlet valve of the refrigerator needs to be between 30 and 125 psi (207 and 862 kPa).

If a reverse osmosis water system is connected to your cold water supply, the water pressure to the reverse osmosis system needs to be a minimum of 40 to 60 psi (276 to 414 kPa). If the water pressure to the reverse osmosis system is less than 40 to 60 psi (276 to 414 kPa):

- Check to see whether the sediment filter in the reverse osmosis system is blocked.
- Replace the sediment filter, if necessary.
- Allow the storage tank on the reverse osmosis system to refill after heavy usage.

NOTE: A refrigerator water filter may further reduce the water pressure when used in conjunction with a reverse osmosis system. Remove the refrigerator water filter.

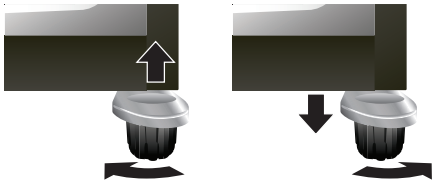
Door Leveling and Alignment

Level Refrigerator

The refrigerator must be level to maintain optimal performance and appearance.

1. Turn the leveling feet on the bottom, front of the cabinet to raise or lower that side of the refrigerator until the refrigerator is level side-to-side.
2. Turn both feet, by the same amount, to slightly raise the front of the refrigerator. This will make it easier for the doors to close.

   NOTE: Having someone push against the top of the refrigerator takes some weight off the leveling feet. This makes it easier to turn the feet.

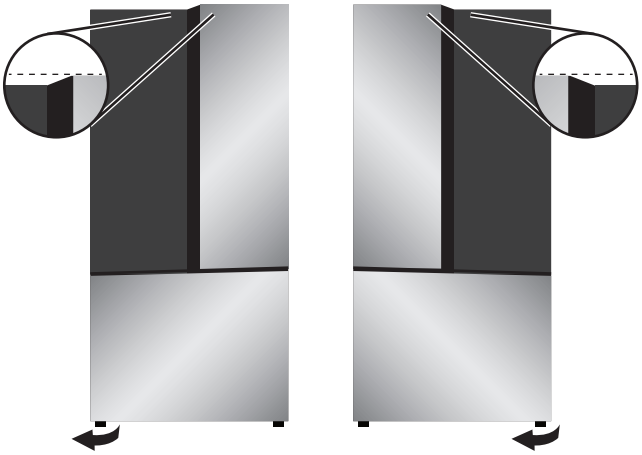


Align Doors

If the edges of the refrigerator doors do not align with each other, you can make adjustments.

Using Adjustable Foot

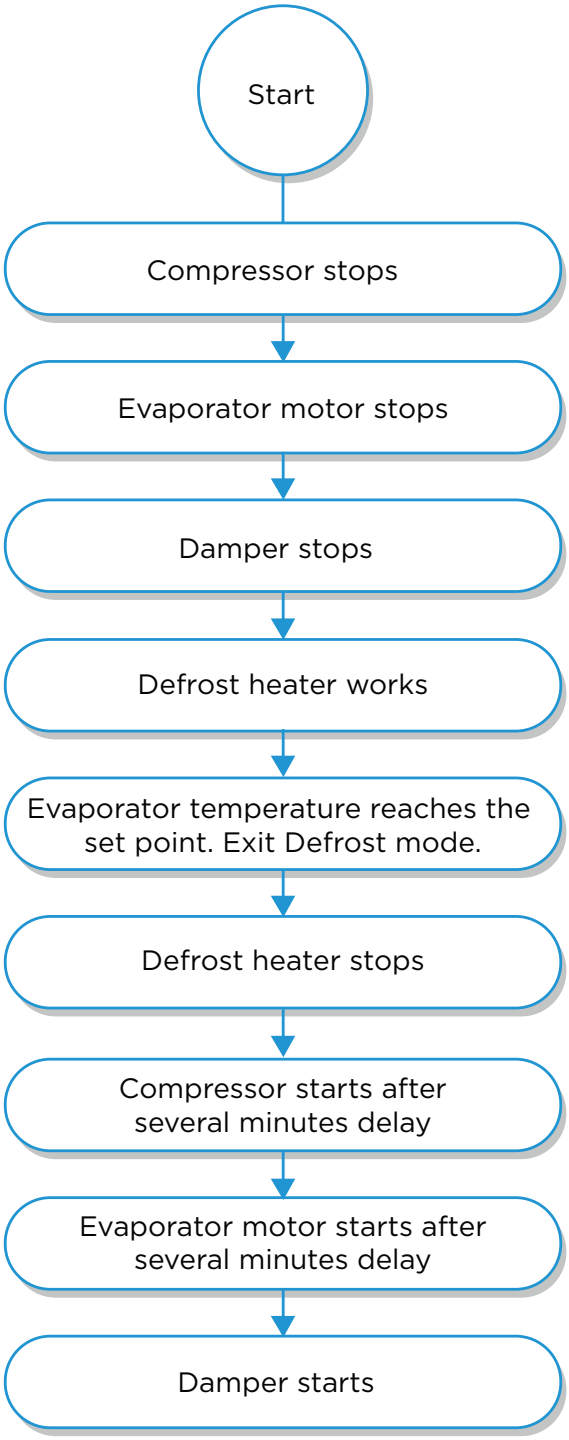
- Turn the adjustable foot to raise or lower that side of the refrigerator.
  - Clockwise - to raise
  - Counterclockwise - to lower



Defrost Mode

Automatic Defrost

When the accumulated running time of the compressor reaches the set point (dependent on the environmental temperature) the compressor will automatically enter defrost mode.



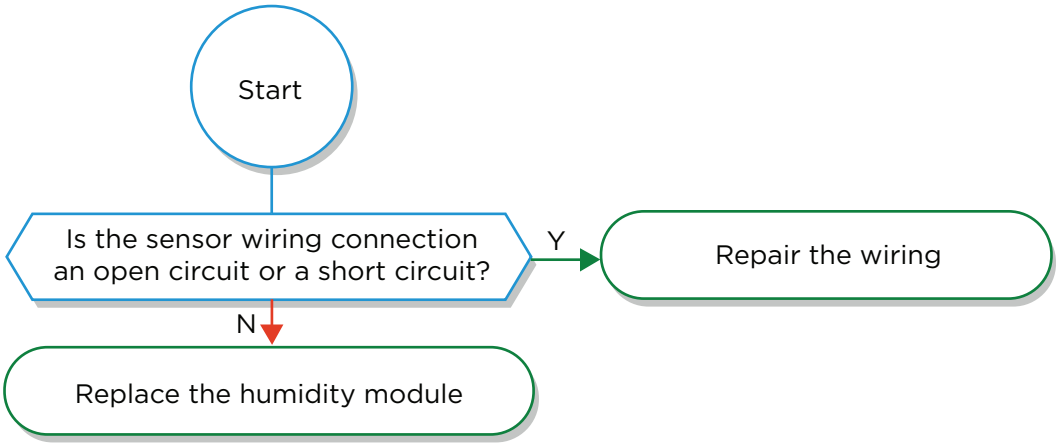
5. Diagnostic Process

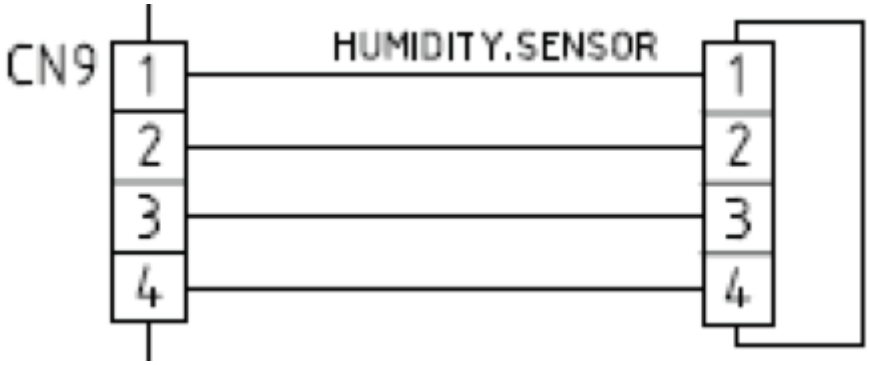
Error Code Summary

CODE	DISPLAY AREA	PROBLEM
E0	Refrigerator temperature display area	Environment sensor malfunctions
E1	Refrigerator temperature display area	Refrigerator sensor malfunctions
E3	Freezer temperature display area	Freezer sensor malfunctions
E4	Freezer temperature display area	Freezer defrost sensor malfunctions
E8	Refrigerator temperature display area	Humidity sensor malfunctions
E9	Freezer temperature display area	Ice maker sensor malfunctions
Eb	Freezer temperature display area	Ice maker malfunctions
Ec	Refrigerator temperature display area	Communication sending malfunctions
Er	Refrigerator temperature display area	Communication receiving malfunctions
F1	Freezer temperature display area	Freezer fan malfunctions
dr	Freezer /Refrigerator temperature display area	Closed Freezer/Refrigerator doors or the door switch malfunctions

NOTE: Fault codes will show for the first four minutes after the refrigerator is plugged in. Codes will appear in the display area specific to the section where the error occurred.

Environment or Humidity Sensor Error





NOTES:

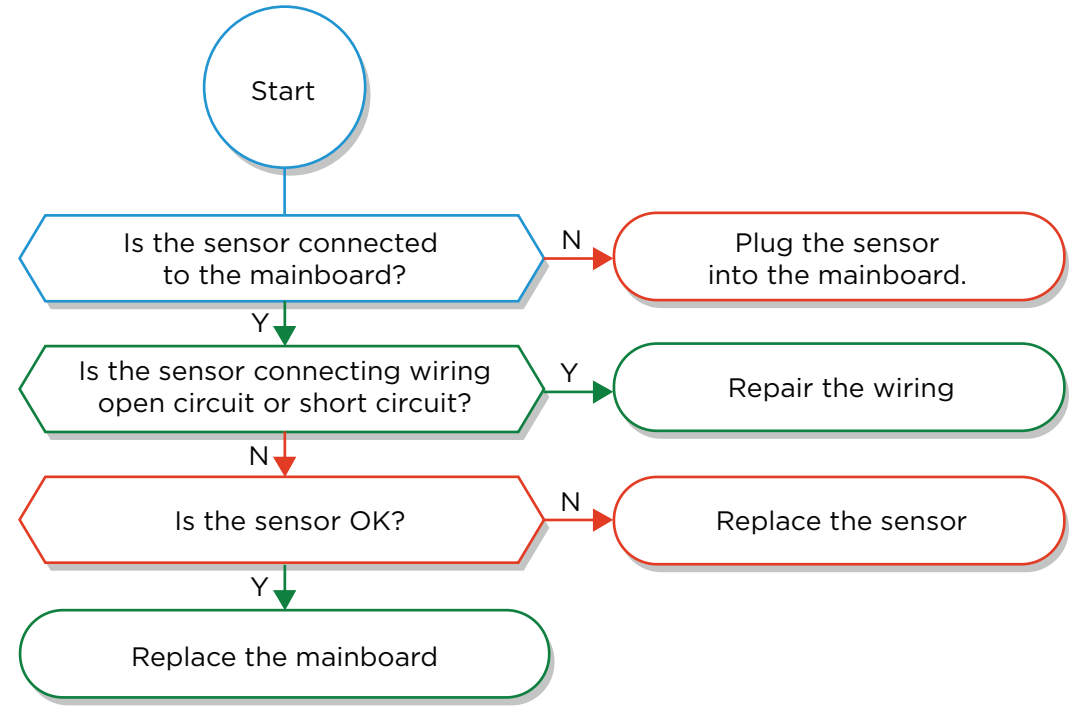
- The Environment Sensor: Pins No. 1 and No. 3 on CN9
- The Humidity Sensor: Pins No. 1 and No. 4 on CN9

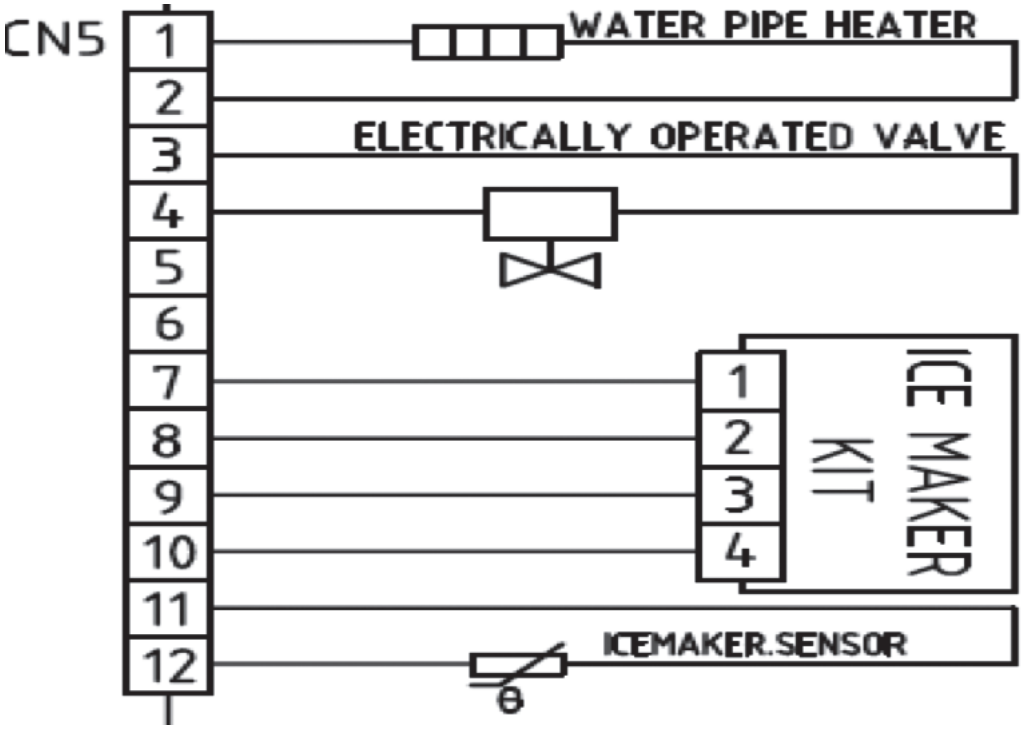
1. Check the voltage across Pins No. 1 and No. 3 (5 volts DC) and across Pins No. 1 and No. 4 (1.2 to 3.5 volts DC). If the result is abnormal, the humidity sensor is faulty.
2. Replace the humidity sensor.

Normal Voltage Measurement:

- Pins No. 1 and No. 3 is 5V
- Pin No. 4 is between 1.2V and 3.5V (the voltage will vary depending on ambient temperature and humidity).

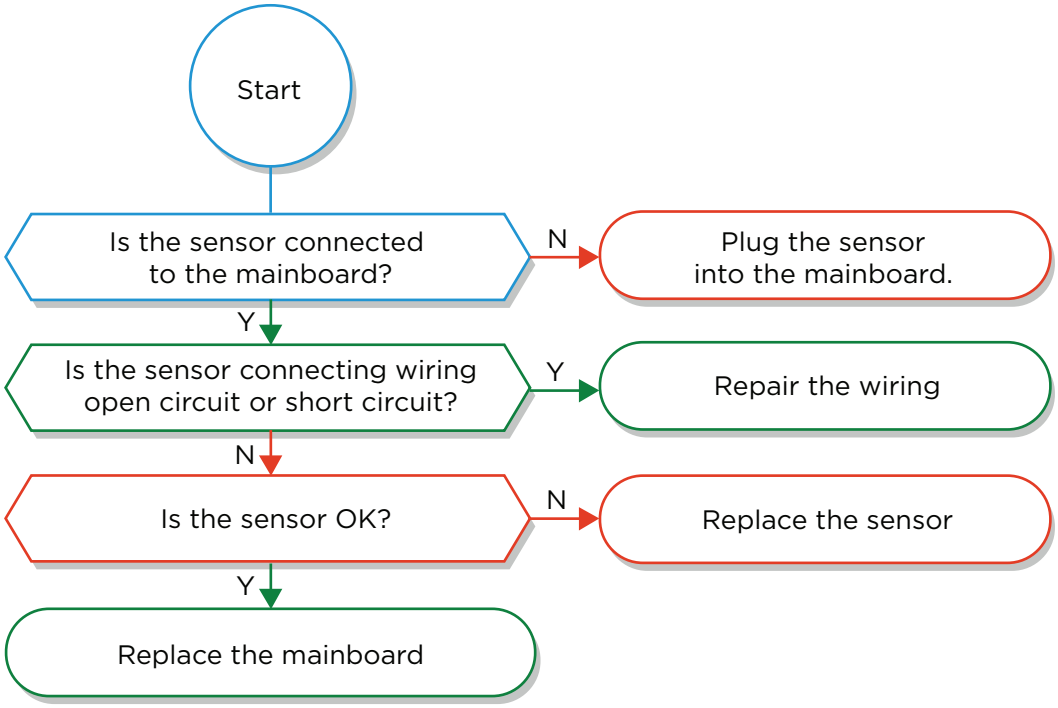
Ice Maker Sensor Error

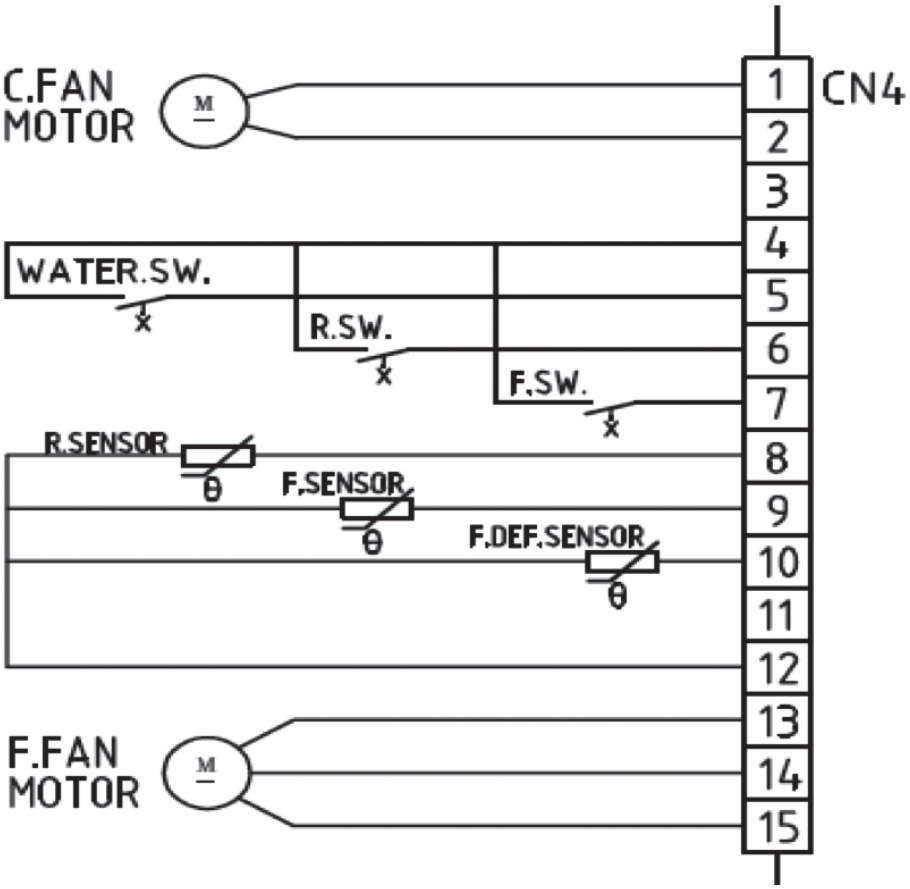




NOTE: The Ice Maker sensor corresponds to pins No. 11 and No. 12 on the CN5 connector of the mainboard.

Other Sensor Errors





1. Use a multimeter to measure the resistance of the sensor. If the circuit is open or there is a short circuit, the sensor is faulty.
2. Replace the faulty sensor.

   Sensors correspond with pins on the CN4 connector of the mainboard:

   Ground Pins: Pins No. 1 and No. 2

   Refrigerator Compartment sensor: Pins No. 8 and No. 12

   Freezer Compartment sensor: Pins No. 9 and No. 12

   Freezer Defrost sensor: Pins No. 10 and No. 12

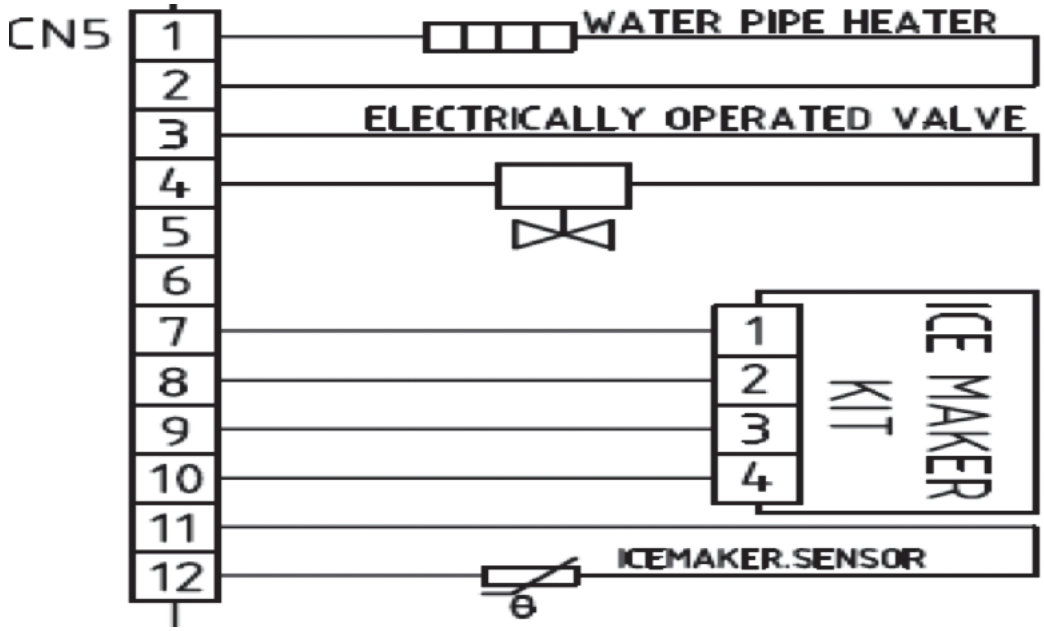
Ice Maker Error (Eb)

Check the wiring connection between the mainboard and the ice maker (Pins No. 7~ No. 10 on the CN5 connector of the mainboard), and repair the connection if it is broken.

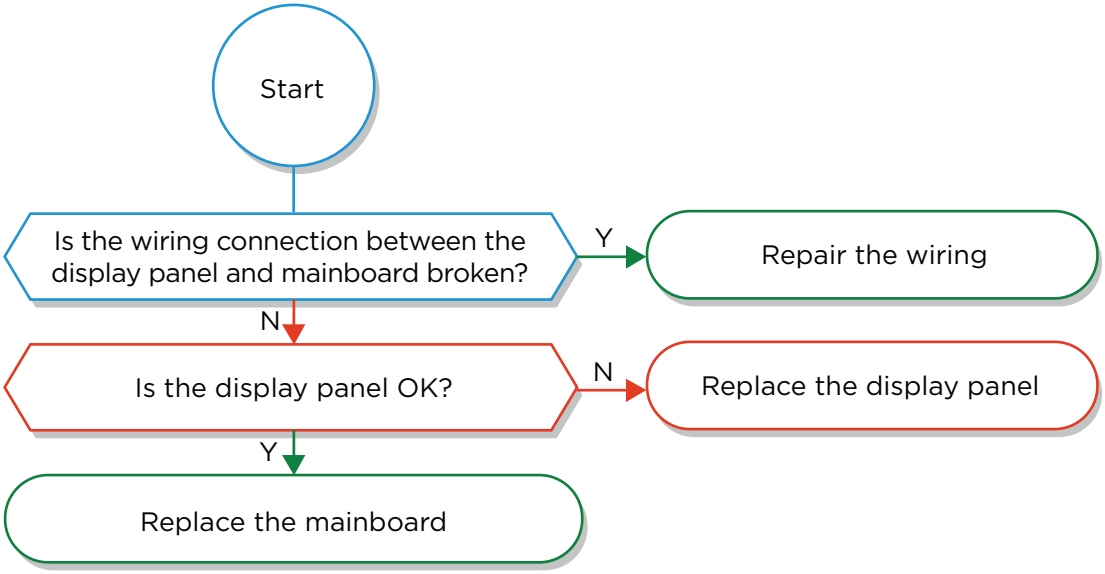
Input 12V power to Pins No. 7 and No. 8 on CN5 connector, to check whether or not the ice maker can rotate normally in both directions. If the ice maker does not rotate normally, replace the ice maker or mainboard.

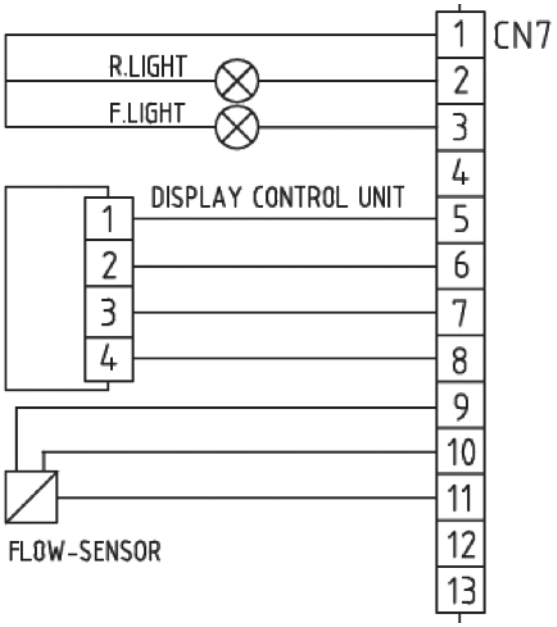
NOTES:

- White wire: Connects power
- Red wire: Connects GND



Communication Error (Ec or Er)





NOTE: The Communication sensor corresponds to Pins No. 5~No. 8 on the CN7 connector of the mainboard.

Fan Error (F1)

Check the wiring connection of the fan motor, and repair if broken.

Freezer Fan

Freezer Fan Motor: corresponds to Pins No. 13 ~ No. 15 on CN4 connector of the mainboard.

- Pin No. 14 connects the 12V power
- Pin No. 13 connects the Ground

1. Replace the mainboard, if the freezer fan motor works normally.

2. Replace the freezer fan, if the freezer fan does NOT work normally.

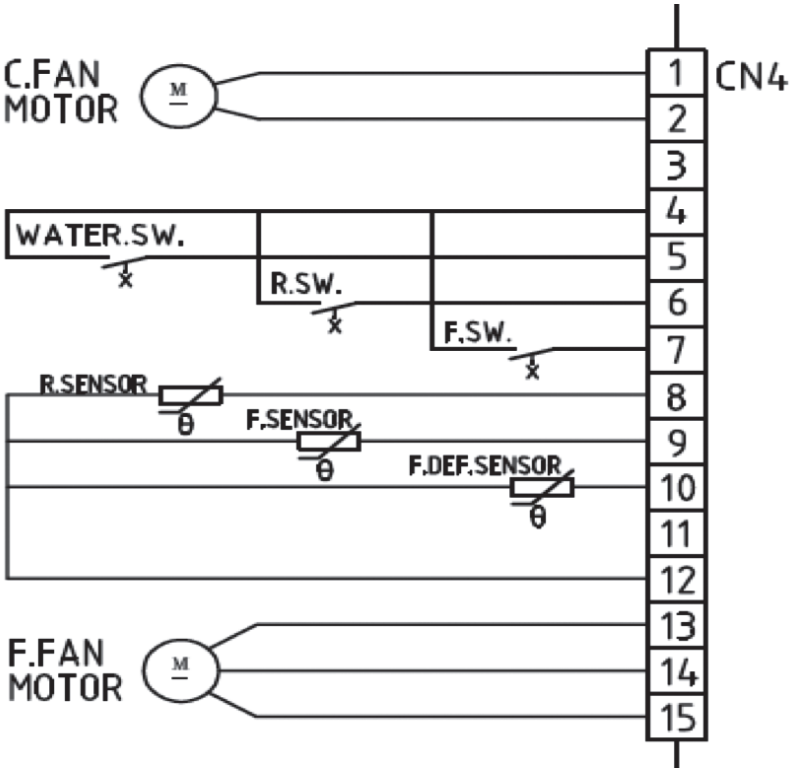
Condenser Fan

Condenser Fan Motor: corresponds to Pins No. 1 ~ No. 2 on CN4 connector of the mainboard.

- Pin No. 2 connects the 12V power.
- Pin No. 1 connects the Ground

1. Replace the mainboard, if the condenser fan motor works normally.

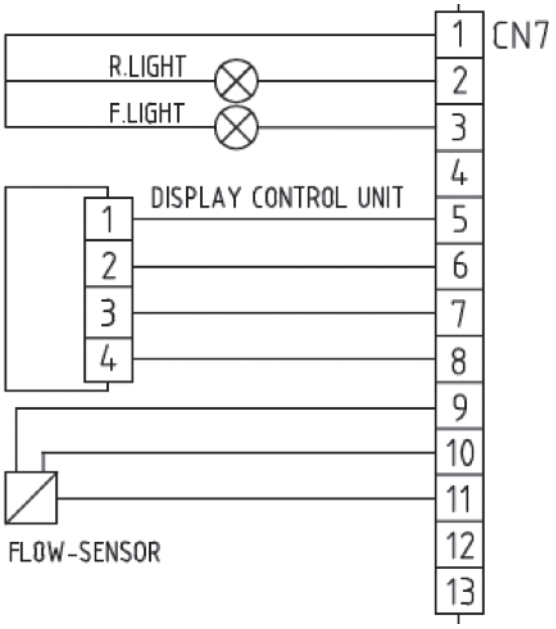
2. Replace the fan motor, if the condenser fan motor does NOT work normally.



Flow Sensor Error

1. Check the water supply.
   - If there are faults with the water supply, correct the faults.
   - If there are no faults with the water supply, then check the wiring connection.
2. Check the flow sensor

   NOTE: The flow sensor corresponds to Pins No. 9 ~ No. 11 on CN7 connector of the mainboard.
   - If the wiring connection is broken, repair the connection.
   - If the wiring connection is good, replace the mainboard or the water valve.



Basic Troubleshooting

Refrigerator is Not Operating

PROBLEM	POSSIBLE CAUSE(S)	SOLUTION
Refrigerator does not run	Refrigerator is unplugged.	Plug refrigerator into a grounded 3 prong outlet.
	Breaker is tripped or turned off, or fuse is blown.	Reset/Turn on breaker or replace fuse.
	Refrigerator is in defrost mode.	Wait for defrost cycle to end and cooling system to restart.
	The ambient temperature is too low.	Lower the temperature of the refrigerator or freezer compartment.
Refrigerator compressor runs frequently or for long periods of time **NOTE:** This refrigerator is designed to run for longer periods of time at a lower energy usage.	Refrigerator is first plugged in.	This is normal. Allow 24 hours for the refrigerator to cool down.
	Warm or large amounts of food added.	This is normal.
	Door is left open, or refrigerator is not level.	Check that an item is not preventing door from closing. Level the refrigerator. See “Level Refrigerator.”
	Hot weather or frequent openings	This is normal.
	Temperature control set to coldest setting.	Adjust temperature to a warmer setting.
Refrigerator has an odor	Food is not sealed or packaged properly.	Reseal packaging. Place an opened box of baking soda in the refrigerator, replace every 3 months.
	Interior needs to be cleaned.	Clean the interior. See “Cleaning.”
	Food stored too long.	Dispose of spoiled food.
Light does not come on	Refrigerator is unplugged.	Plug refrigerator into a grounded 3 prong outlet.
	LED light is burned out.	Check wiring and replace light as needed.
	The control disabled the light because the door was open too long.	Close and reopen the door to reset the control.
	Faulty door switch.	Check the door switch to see if it is functioning properly. Replace if needed.
Doors do not close easily	Refrigerator is not level.	See “Level Refrigerator.”
	Something is obstructing door closure.	Check for and remove obstructions.
	The back of the refrigerator is not tilted downward.	Raise the front leveling legs slightly (⅜″~½″) so that the doors can self close.
Vibration or rattling	Refrigerator is not resting firmly on the floor or the back panel is touching the wall.	Level the refrigerator or move it away from the wall.
Normal Sounds	Water flowing or bubbling in the refrigerator.	Refrigerant flowing in the lines will make this sound when the compressor starts and stops.
		The refrigerator has an automatic defrosting system. The defrosted water will make this sound.
	Humming or buzzing sounds	The compressor and fans used for cold air circulation can make this sound. If the refrigerator is not level, the sound will be louder.
	Cracking or clicking sounds	The interior parts will make this sound as they contract and expand in response to temperature changes.
	Popping noise	May occur during automatic defrosting.

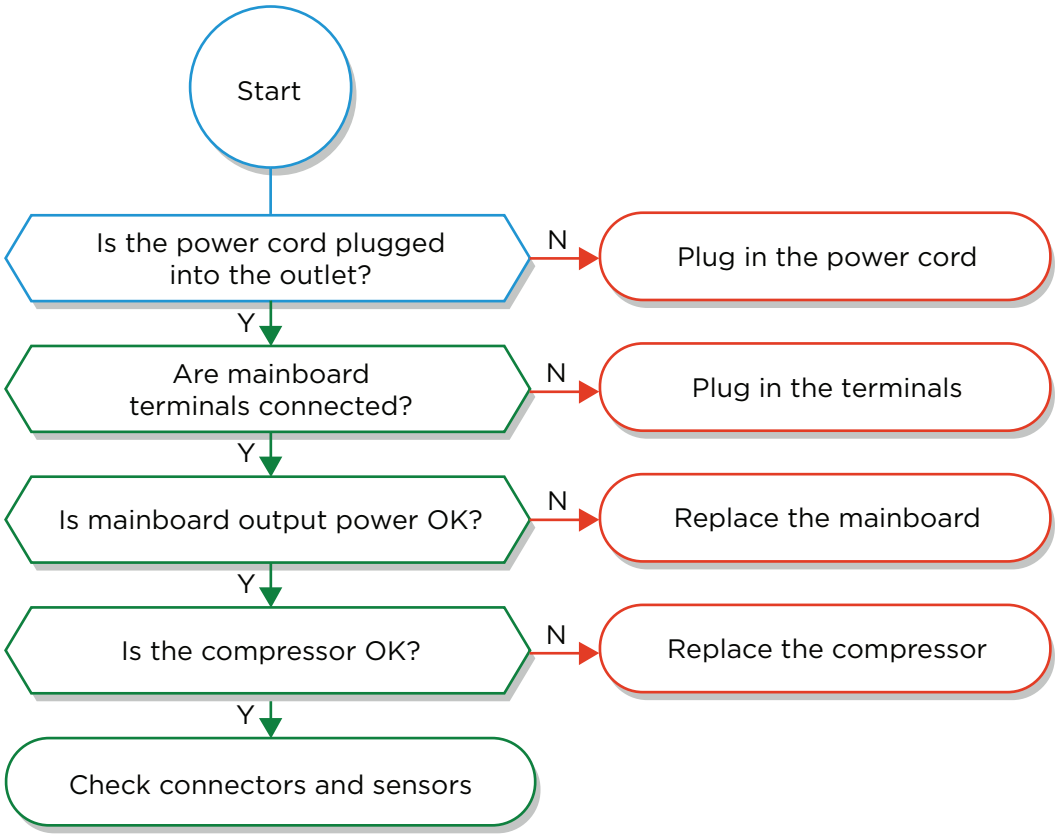
Temperature and Moisture

PROBLEM	POSSIBLE CAUSE(S)	SOLUTION
Refrigerator or freezer is too warm	Temperature control is not set cold enough.	Adjust the compartment to a colder setting; allow 24 hours for the temperature to adjust.
	Doors opened frequently or left open.	Limit door openings to maintain the internal temperature. Check that an item is not preventing door from closing.
	Warm food added recently.	Allow time for food and refrigerator to cool.
	The space between the back of the refrigerator and the wall is too close.	Allow 2″ (5 cm) space between the back of the refrigerator and the wall.
	Items against back of compartments are blocking proper airflow.	Store items only inside the trim of the glass shelves; don't place items against sides of the compartments or directly in front of any vents.
Refrigerator or freezer is too cold	Temperature control is set too cold.	Raise the temperature in the compartment to the next warmer setting; allow 24 hours for temperature to adjust.
Moisture on exterior/ interior of refrigerator	High humidity	This is normal during times of high humidity. Dry surface and adjust temperature to a slightly colder setting.
	Doors opened frequently or left open.	Keep door closed. Check that an item is not preventing the door from closing. Level the refrigerator. See "Level Refrigerator."
	Open container of liquid in refrigerator	Cover or seal container.
Frost or ice crystals on frozen food	Freezer door left open or opened frequently.	Limit door openings to maintain the internal temperature. Check that an item is not preventing door from closing.
	Refrigerator door is not closing completely or the door gasket is not sealing.	Level the refrigerator. See "Level Refrigerator." Confirm condition of door gasket, and replace if necessary.
	Items blocking freezer air vents and preventing proper air flow.	Move items away from rear wall.
Food freezing in refrigerator	Food placed too close to the air vent.	Move items away from back and top of the refrigerator.
	Temperature control set too cold.	Adjust the temperature to a less cold setting.

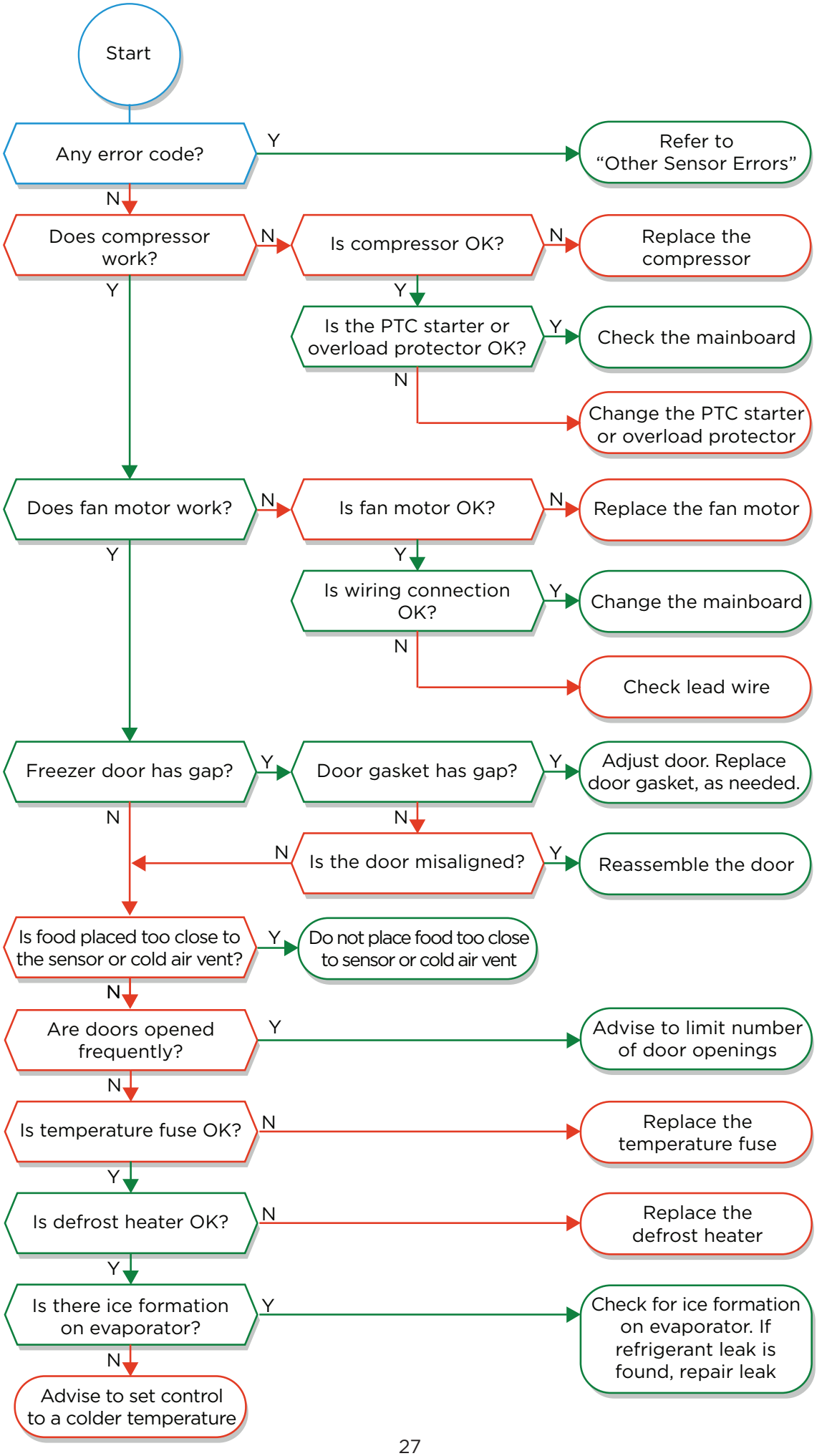
Ice and Water

PROBLEM	POSSIBLE CAUSE(S)	SOLUTION
The ice maker is not producing ice, enough ice, or cubes are hollow	Ice maker is not turned on.	Press the Ice On/Off control to turn On/Off the ice maker. See “Display Controls.”
	New installation	Wait 12 hours after installation for ice production to begin.
	The water line is not connected or the water valve is not open.	Connect the water line and turn the water valve to the fully open position.
	The freezer temperature is set too high.	Lower the temperature of the freezer compartment.
	Ice in the ice bin is blocking the action of the ice maker.	Break up or remove large clusters of ice cubes.
	Kink in the water line	Replace water line.
	Inadequate water pressure	Contact a licensed, qualified plumber.
The water dispenser is not functioning	The water line is not connected or the water valve is not open.	Connect the water line and turn the water valve to the fully open position.
	The water line is crushed or kinked.	Ensure the water line is free and clear from any obstruction. Replace the water line if it has been damaged.
	The refrigerator temperature is set too low and the water tank is frozen.	Raise the temperature of the refrigerator compartment.
	The water filter is not properly installed.	Remove and reinstall the water filter.

Start Fault

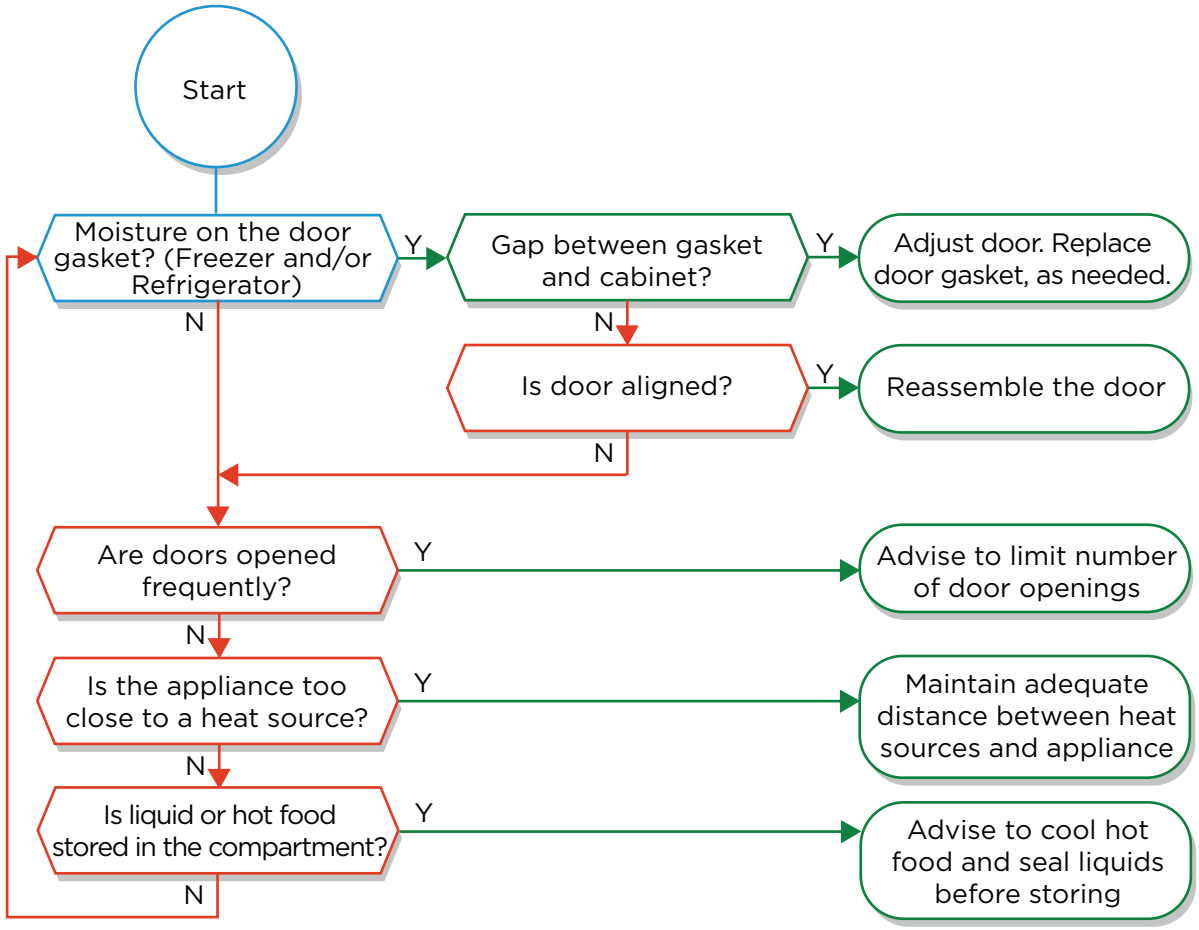


Freezer Compartment Cooling

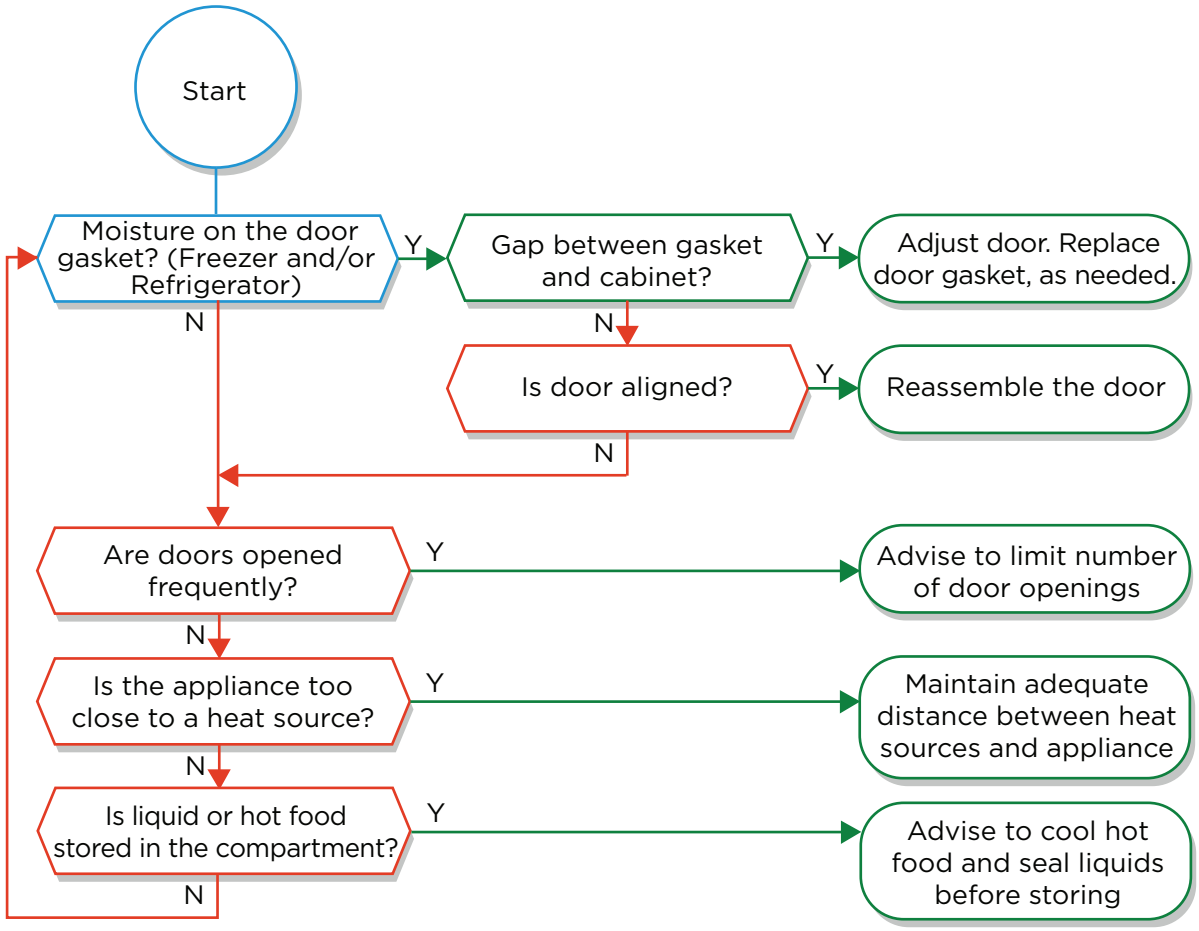


Refrigerator Compartment Cooling

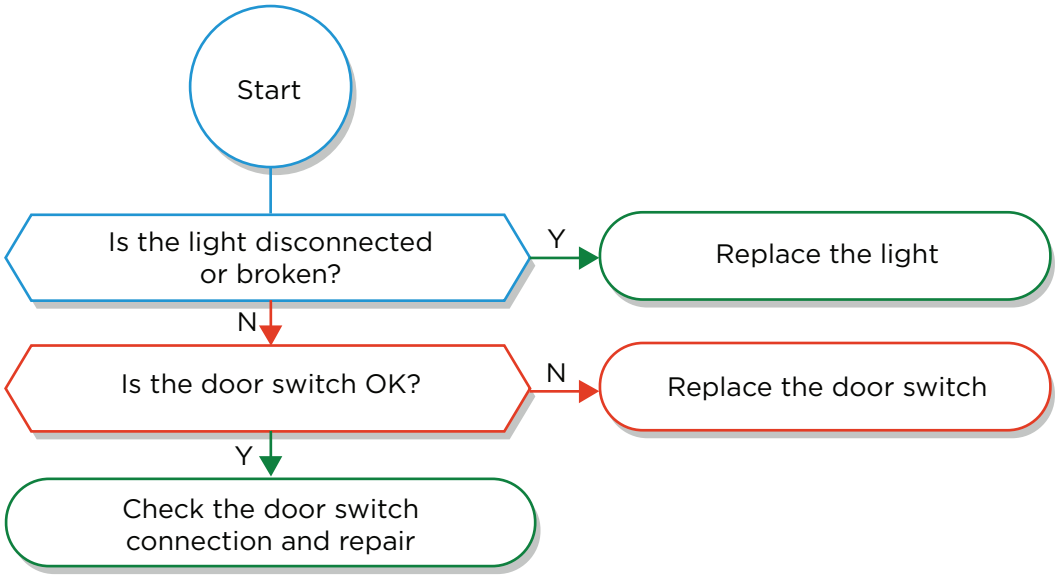
Thick Frost in Freezer Compartment



Moisture in Refrigerator Compartment

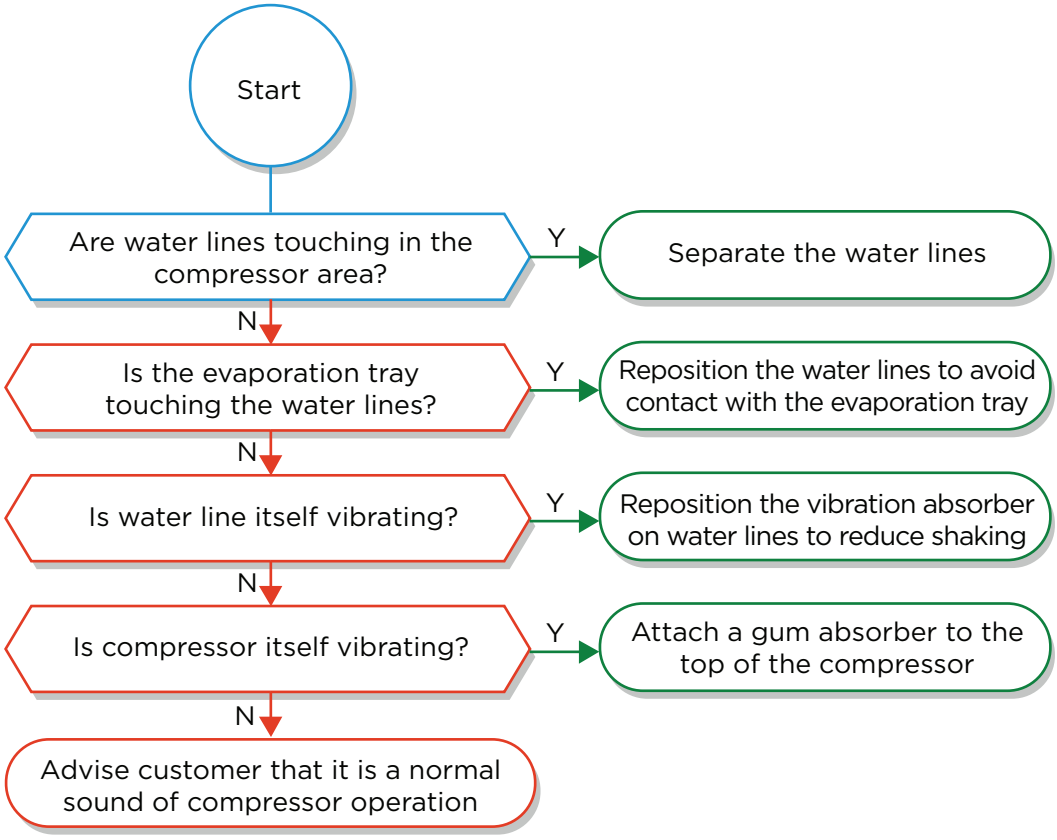


Light Function



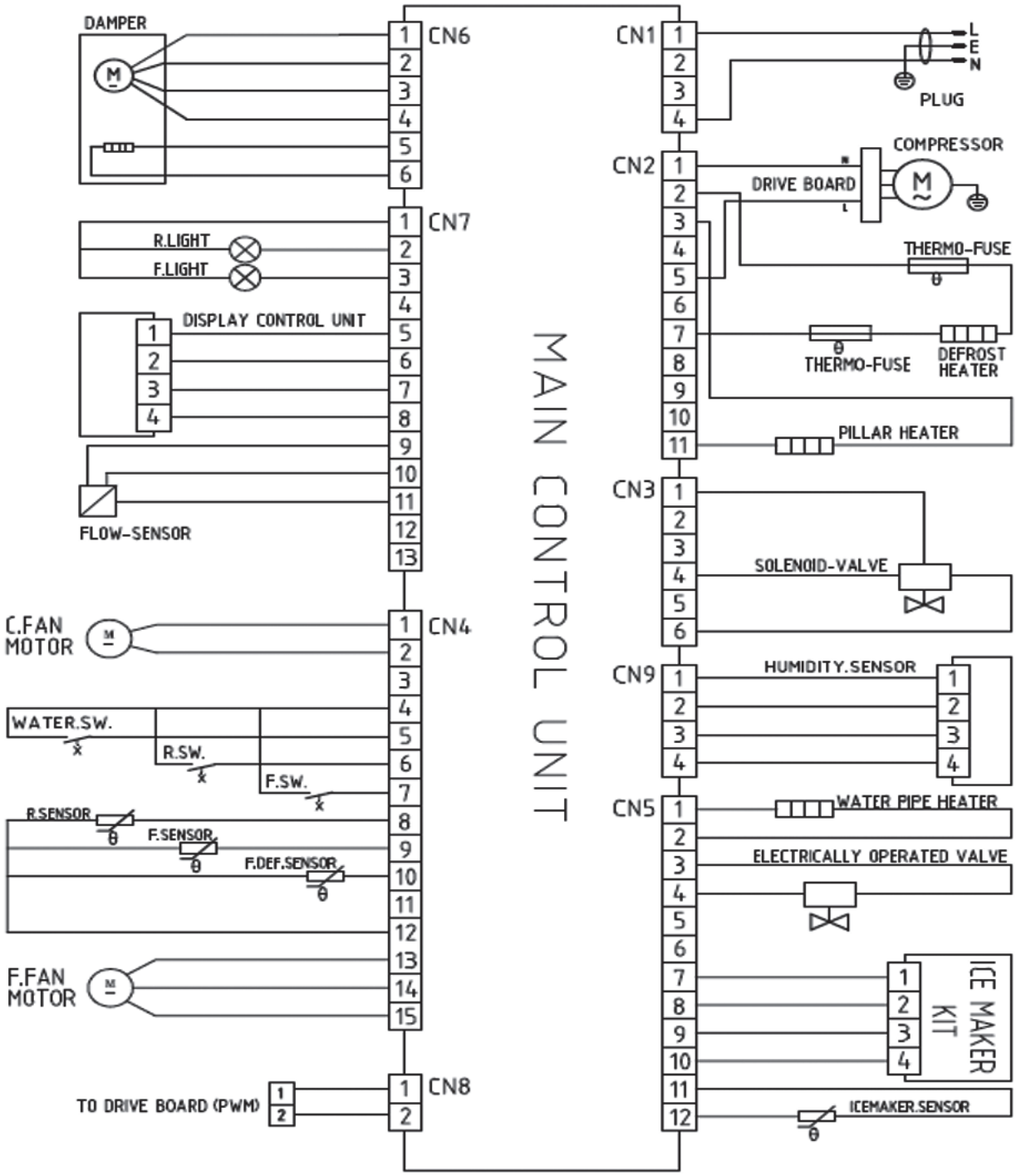
Noise

Water Line Noise



6. Diagnostic and Repair Procedures

Wiring Diagram



Mainboard

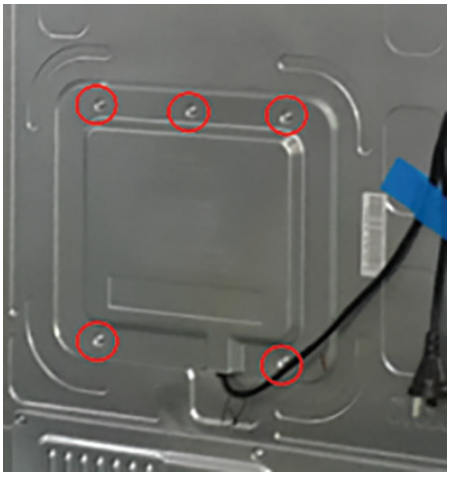
Check the Mainboard

IMPORTANT: If the problem is most likely caused by a faulty mainboard, replace the mainboard first to confirm.

NOTE: Replacement board settings are at factory default. After replacing the mainboard, set all temperatures to the customer's previous setting.

Remove the Mainboard

1. Unplug the refrigerator or disconnect power.
2. Using a Phillips screwdriver, remove the screws fastening the electrical compartment cover to the cabinet.



3. Remove the compartment cover.
4. Remove the screw, and then remove the mainboard.

Compressor

Input Voltage/Frequency: 100-120V/60Hz

Input Power: ≤300W

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

Check the Compressor

1. Plug in refrigerator. The compressor should start within 1 minute.
2. Allow time for the evaporator fan to start.
3. If neither the compressor or evaporator fan begin to operate check:

Voltage Readings on Mainboard

Remove the electrical compartment cover to check mainboard.

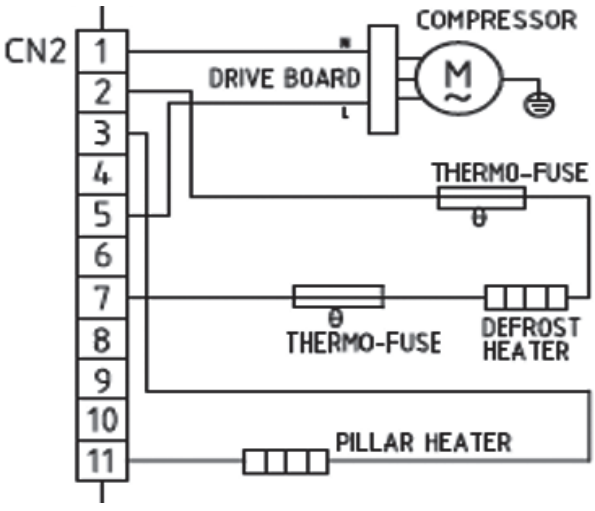
Mainboard Wiring Connection

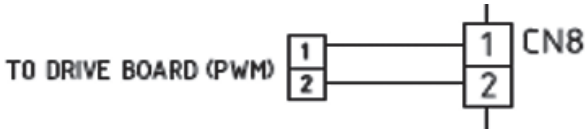
Check the wiring connection between the compressor and the mainboard. If the connection is loose, repair the connection.

Mainboard Voltage and Frequency

- Use a multimeter to measure the voltage between Label N and Label COMP on the CN2 (Pin No. 1 and Pin No. 5) connector of the mainboard.
- Then, measure the frequency of CN8 connector (Pin No. 1 and Pin No. 2).

If the measured voltage is equal to the electric supply power and there is stabilized frequency, it means the compressor is faulty. If not, then the mainboard is faulty. Replace the mainboard.

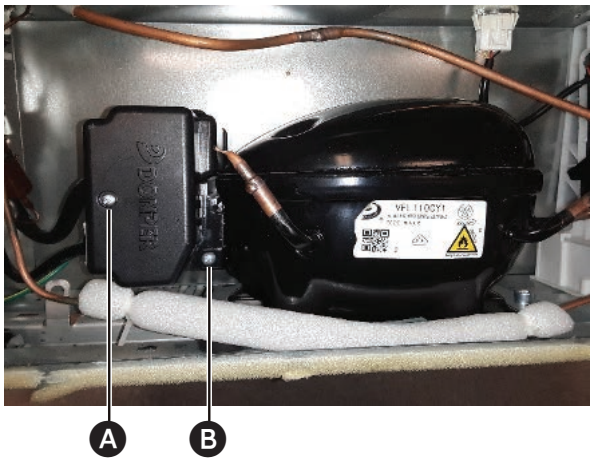




Compressor Inverter Board

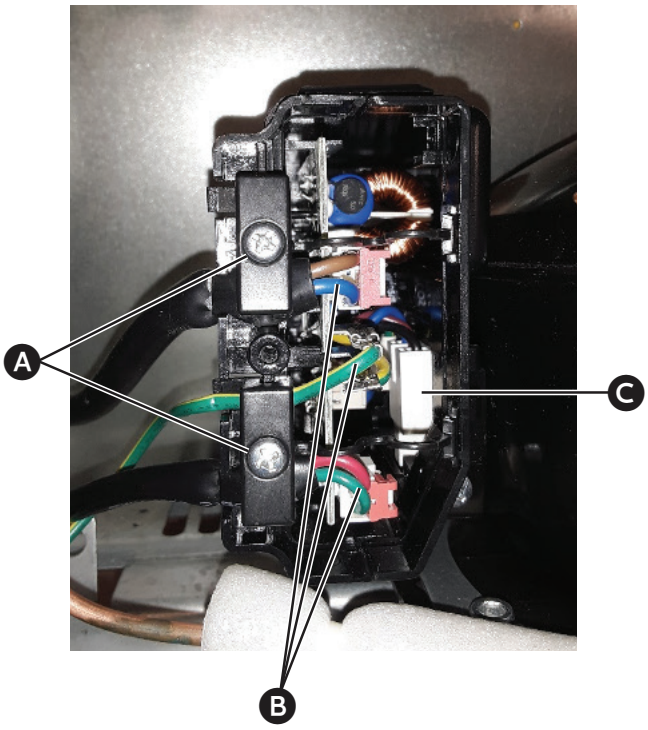
Remove Compressor Inverter Board

1. Unplug the refrigerator or disconnect power.
2. Remove the machine compartment cover to access the inverter housing.
3. Remove the screw fastening the cover to the inverter housing.
4. Remove the screw fastening the inverter housing to the compressor.



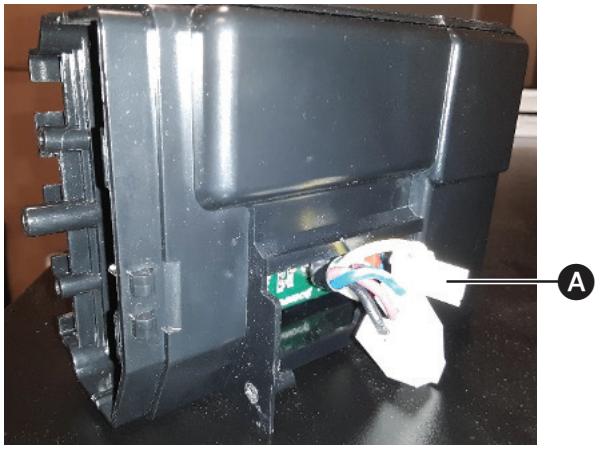
A Housing cover screw
B Housing screw

5. Remove the two screws from the wire clamps, and then remove the three wires from the inverter board.
6. Unplug the white molded wire connector from the compressor pins.



A Wire clamp screws (2)
B Wires (3)
C White molded wire connector

7. Unplug the ground wire connector from the compressor.

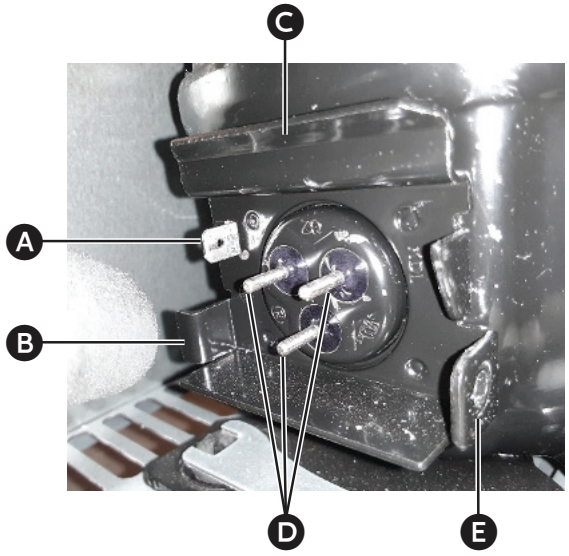


A Ground wire connector

8. Lift straight up on the inverter housing and slide it to the left.

Reassemble Inverter Board

1. Plug ground wire from inverter board into ground connection on compressor.
2. Align the rear angled piece with the slot on the board cover.
3. Fit the inverter board housing onto the angled bar above the compressor terminals.
4. Fit the front of the inverter board cover behind the screw hole bracket.



A Ground connection
B Angled piece
C Angled bar
D Compressor terminals
E Screw hole bracket

Fan Motor

Rated Voltage:

Freezer Fan: DC12V

Condenser Fan: DC12V

Check the Fan Motor

Mainboard Wiring Connection

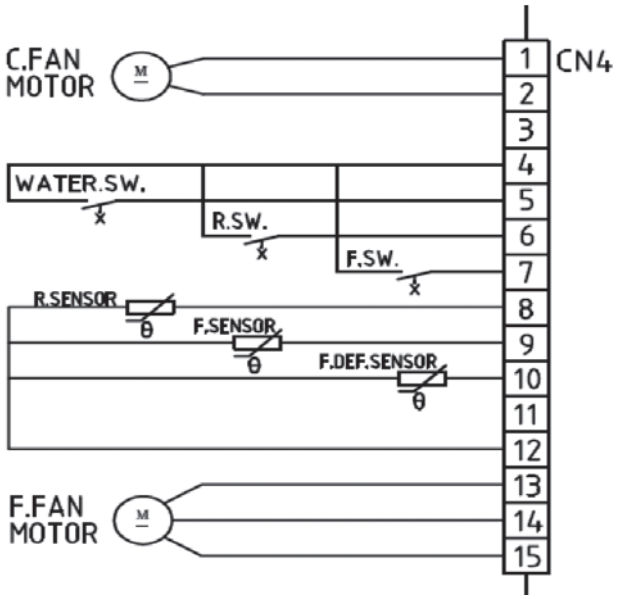
Make sure the wiring connection between the fan motor and mainboard is secure. If the wiring connection is loose, repair the connection.

The Freezer fan motor corresponds to Pins No. 13~15 on the CN4 connector of the mainboard.

- Pin No. 14 connects 12V power.
- Pin No. 13 connects the Ground.

The Condenser Fan Motor: Corresponds to Pins No. 1~2 on CN4 connector of the mainboard.

- Pin No. 2 connects 12V power.
- Pin No. 1 connects the Ground.

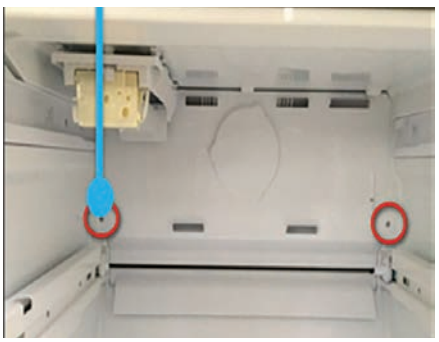


If the fan motor works normally, replace the mainboard.

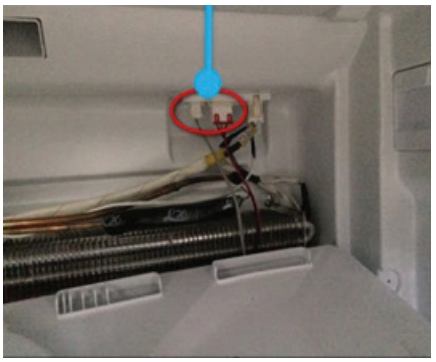
If the fan motor does not work normally, replace the fan motor.

Remove the Freezer Fan Motor

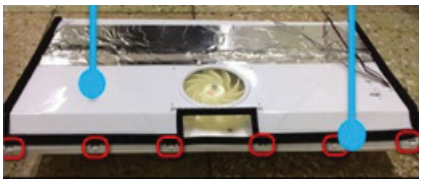
1. Unplug the refrigerator or disconnect power.
2. Remove the Freezer Drawer. See “Drawer Removal.”
3. Using a Phillips screwdriver, remove the two screws fastening the air duct.



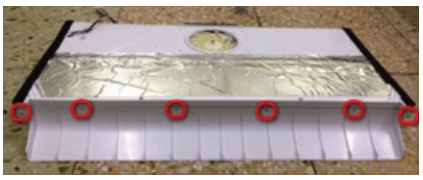
4. Disconnect the wire harnesses, and then remove the air duct.



5. Using both hands and a screwdriver, pry up the rear clapboard part at the buckles, and then remove.

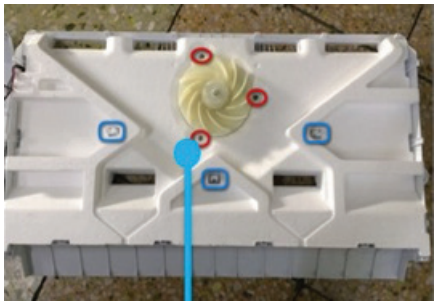


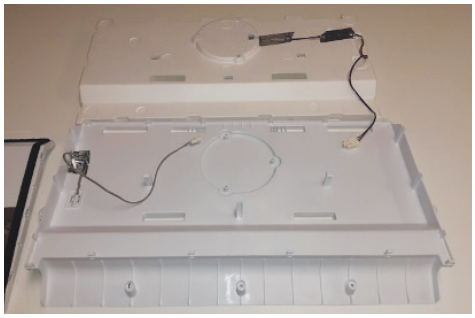
6. Pull the freezer wind channel component from its compartment, as shown.



7. Separate the wind channel cover from the foam.

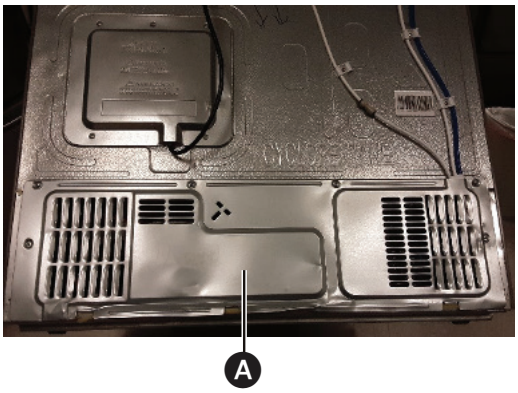
8. Using a Phillips screwdriver, remove the three screws securing the fan, and then remove the fan motors.





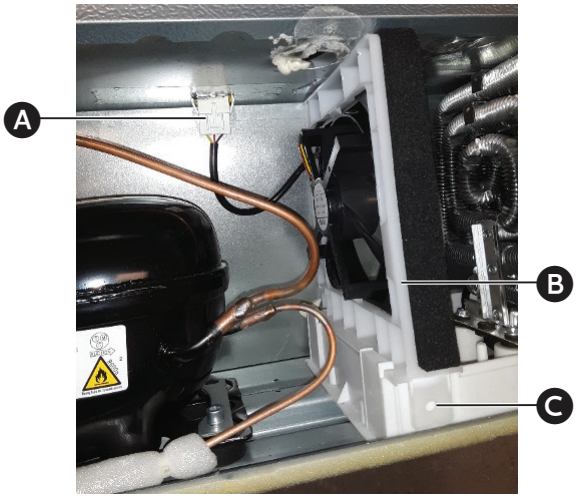
Remove the Condenser Fan Motor and Defrost Drain Tube

1. Remove machine compartment cover.



A Machine compartment cover

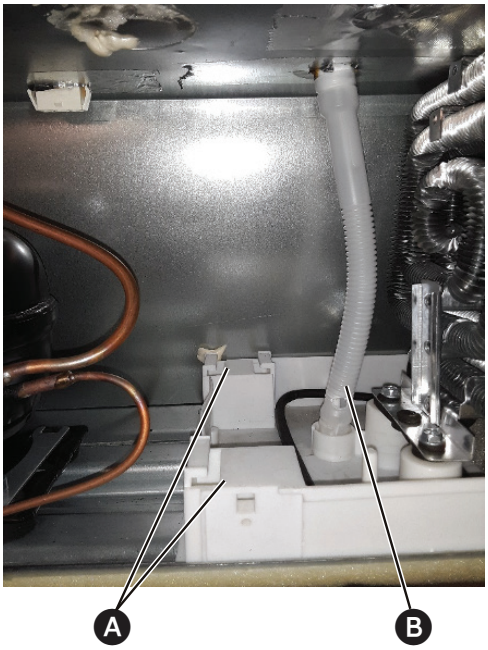
2. Remove screw in bottom of condenser fan frame.
3. Remove fan plug in ceiling of machine compartment.



A Fan plug
B Fan frame
C Condenser fan frame screw

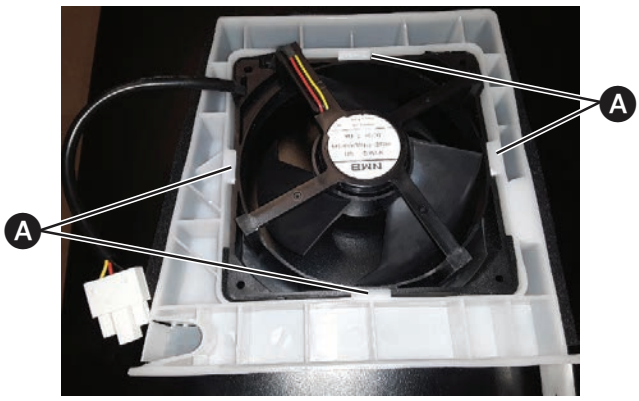
4. Remove fan frame by sliding it straight toward you to access evaporator drain tube. Make sure the drain tube is positioned, as shown.

   NOTE: The channels that hold the fan frame. To reassemble, slide the fan frame into these two channels.



A Fan frame channels (2)
B Evaporator drain tube

5. Release the fan motor from the four snaps securing it in the housing.



A Snaps (4)

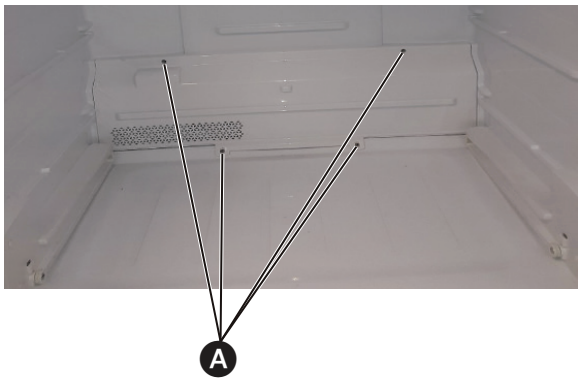
Refrigerator Air Channel

Remove the Air Flow Channel

1. Remove the two screw covers and the screws behind them (1 at each end of the center shelf support).

A Shelf support screws (2)
B Center shelf support

2. Remove four screws from the chilled water tank cover.

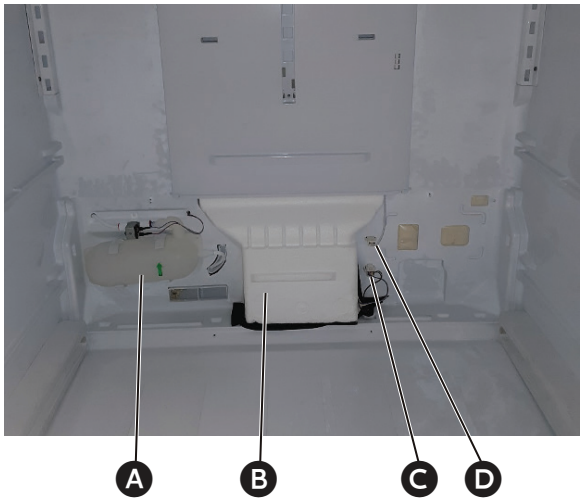


A Water tank screws (4)

3. Remove lower cover by pulling it from either corner.

   NOTE: The center glue strip seal on the air duct will offer resistance.

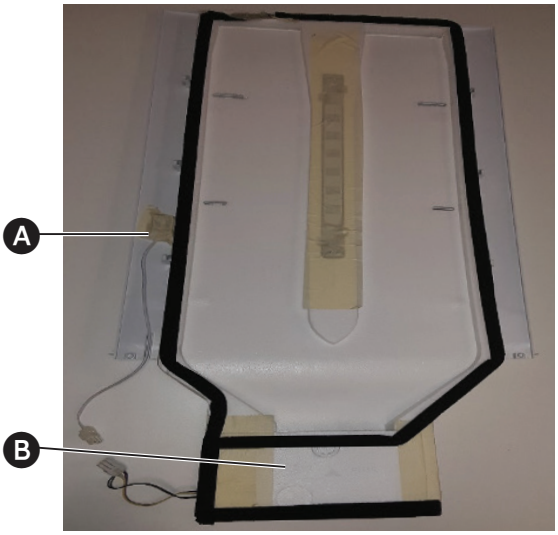
4. Unplug damper and temp sensor connections.



A Chilled water tank
B Air duct
C Damper connection
D Temp sensor connection

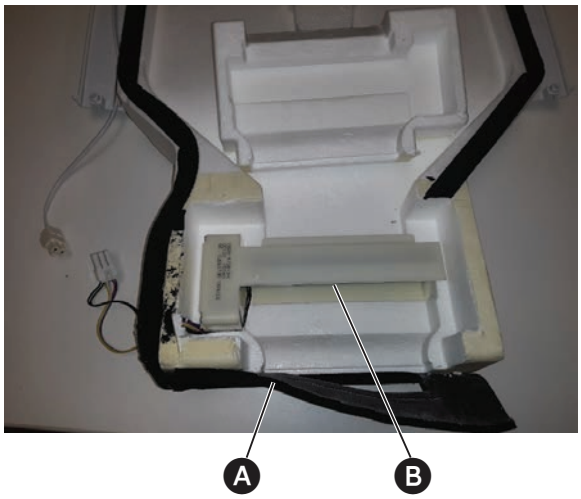
5. Pull on the air duct from either side to unsnap it from the back wall.

   NOTE: The damper is in the base of the air duct just under the foam cover.



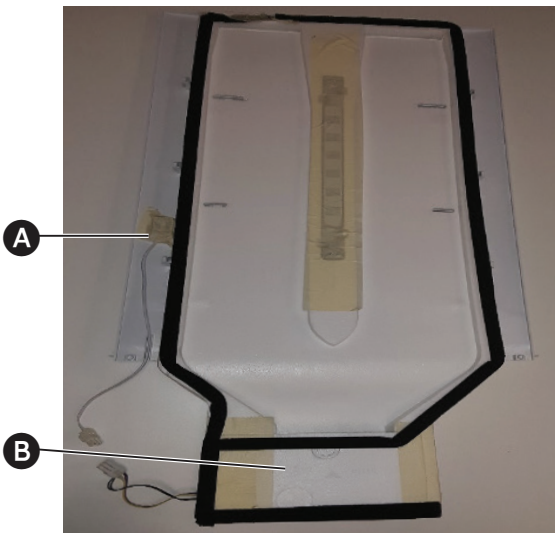
A Temp sensor
B Air duct base

6. Using a box cutter, cut the tape around the damper opening. Do not cut the foam.



A Foam cover
B Damper

Replace Refrigerator Temperature Sensor



A Temp sensor
B Air duct base (damper inside)

Interior Lights

Rated Voltage: DC12V

Check the Light

Mainboard Wiring Connection

1. Make sure the wiring connections between the light and mainboard are secure. If wiring connection is loose, repair connection.

   Refrigerator Light 1: Corresponds to Pins No. 1 and No. 2 on CN7 connector on the mainboard.

   Freezer Light: Corresponds to Pins No. 1 and No. 3 on CN7 connector on the mainboard.

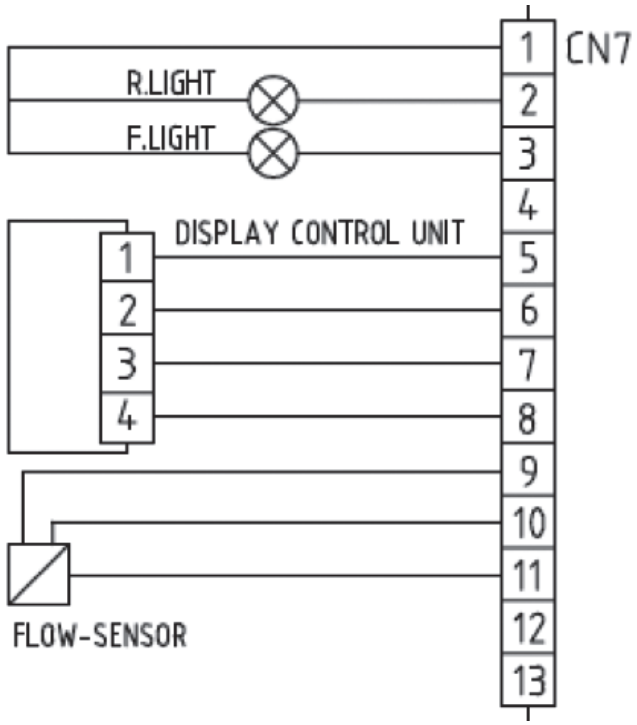
Check Output Voltage

Using a multimeter, check the voltage output of the pins on the mainboard that correspond with the non-working light.

If the voltage measures 12V, the mainboard is good. Replace the light.

OR

If the voltage does not measure 12V, replace the mainboard.



Remove LED - Refrigerator Compartment

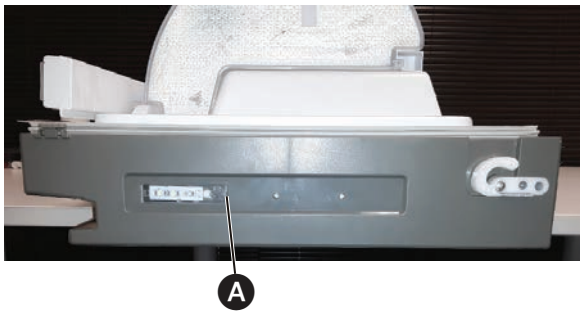
1. Unplug the refrigerator or disconnect power.
2. Using a flat-blade screwdriver or putty knife, pry up on the light cover to release it from the clips.

3. Remove the light.

Remove LED - Freezer Compartment

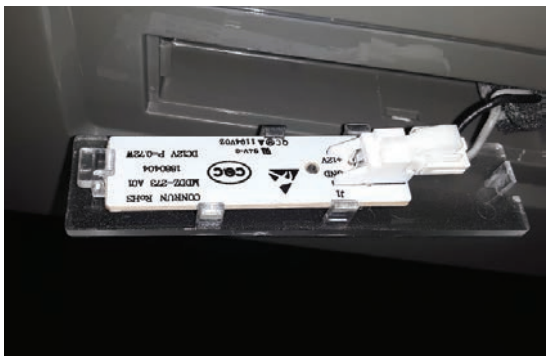
The LED for the freezer is in the base of the left-hand side refrigerator door.

1. Insert a small flat-blade screwdriver into opening.



Ⓐ LED compartment opening

2. Push the tab slightly to the left.
3. Remove LED from the base of the refrigerator door.

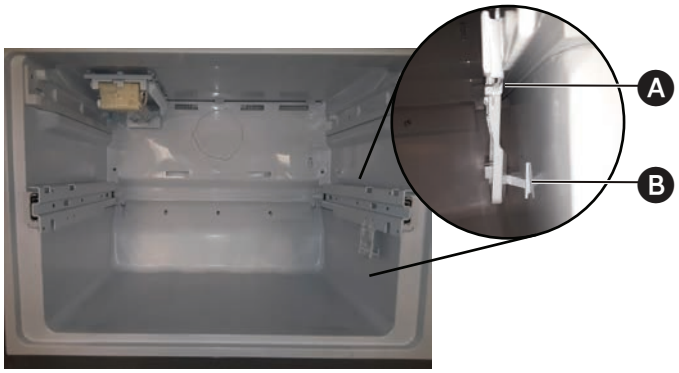


Freezer Door Switch

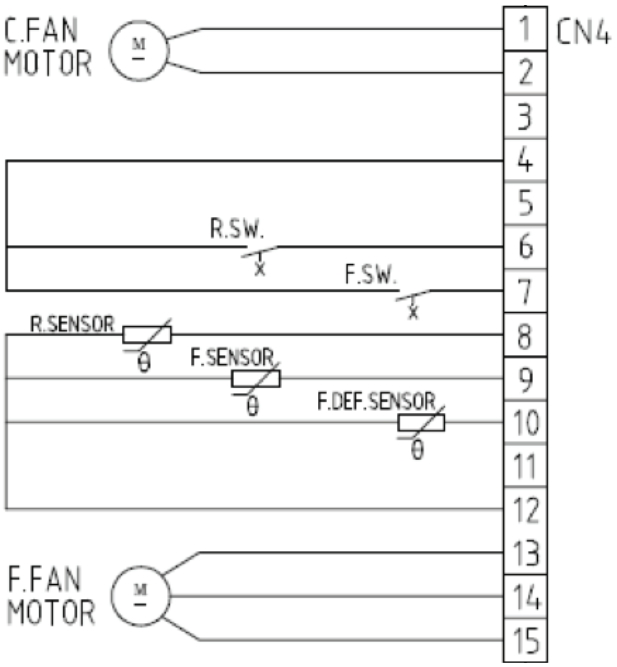
(Activates both the Freezer Light and Evaporator Fan)

Freezer Door Switch: Corresponds to Pin No. 7 on CN4 connector on the mainboard.

- The door switch is mounted on the front, right-hand side of the freezer compartment liner.
- The door switch actuator is mounted onto the lower, right-hand freezer drawer rail.



Ⓐ Switch actuator
Ⓑ Door switch



Defrost Heater

Check the Defrost Heater

Rated Voltage: AC115V

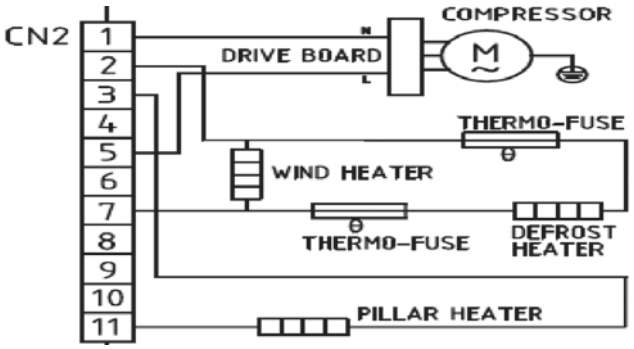
Rated Power: 220W

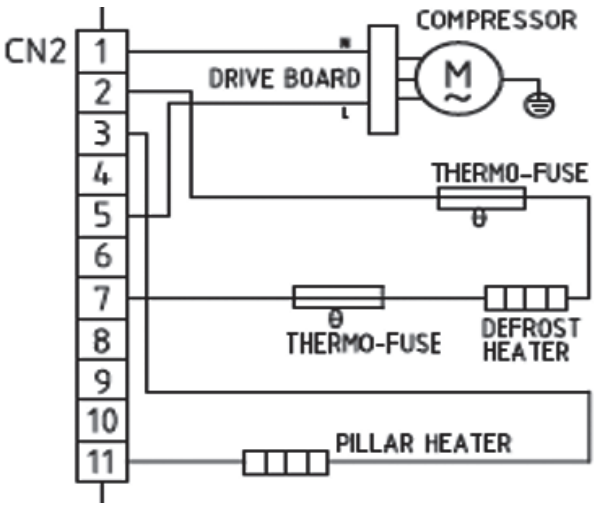
Mainboard Wiring Connection

1. Check that the wiring connections are secure. If connection is loose or broken, repair the connection.
2. Enter forced defrost mode. See “Defrost Mode.”
3. Use a multimeter to measure the voltage between Pins No. 2 and No. 7 on the CN2 connector on the mainboard.
4. If the voltage does not equal the electric supply power, the defrost heater is broken. Replace the defrost heater.

Measure the Resistance of the Heaters

Use a multimeter to measure the resistance of the heaters. If the value is not 60.1Ω±5%, the heater is faulty. Replace the heater.



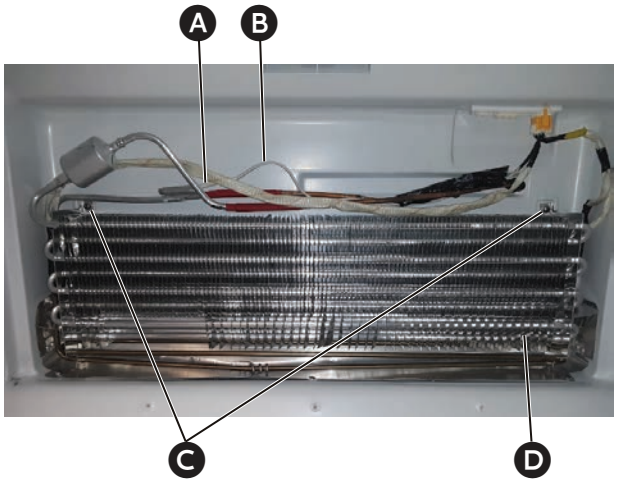


Remove and Replace the Defrost Heater-Defrost Sensor-Evaporator Coil Sensor

IMPORTANT: Wear cut resistant gloves. Coil fins are very sharp.

The defrost heater is an assembly comprised of the heater, defrost sensor and coil sensor.

1. Remove the two screws from the evaporator at the back of the cabinet.
2. On the old assembly, cut the coil temp sensor wire at the retention tube.



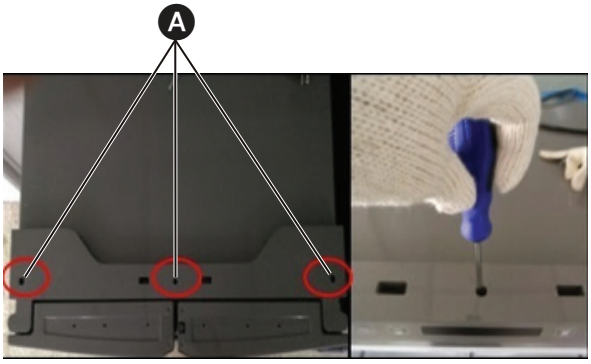
- **A** Retention tube
- **B** Coil temp sensor wire
- **C** Evaporator screws (2)
- **D** Evaporator

3. Swing evaporator toward you to gain access to rear of evaporator.
4. Carefully remove assembly from evaporator.
5. Reverse procedure to reassemble.
6. Using a zip tie, attach the coil sensor to the retention tube.

Control Panel

Remove the Control Panel Display

1. Unplug the refrigerator, or disconnect power.
2. Using a Phillips screwdriver, remove the three screws fastening the hinge cover, and then remove the hinge cover from the top of the cabinet.

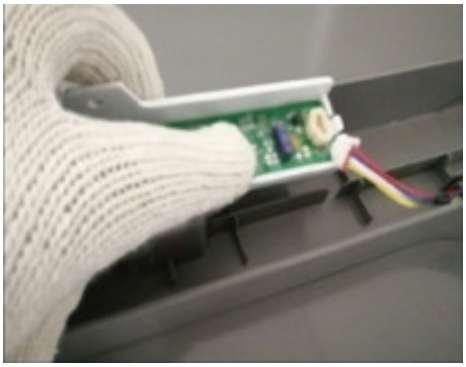


A Hinge cover screws

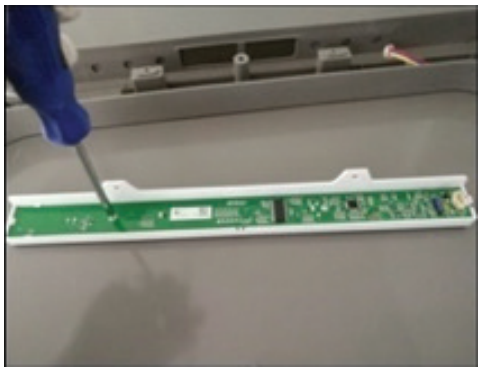
3. Disconnect the wire harnesses.

4. Using a Phillips screwdriver, remove the screws from the back of the control panel.

5. Remove the terminal.



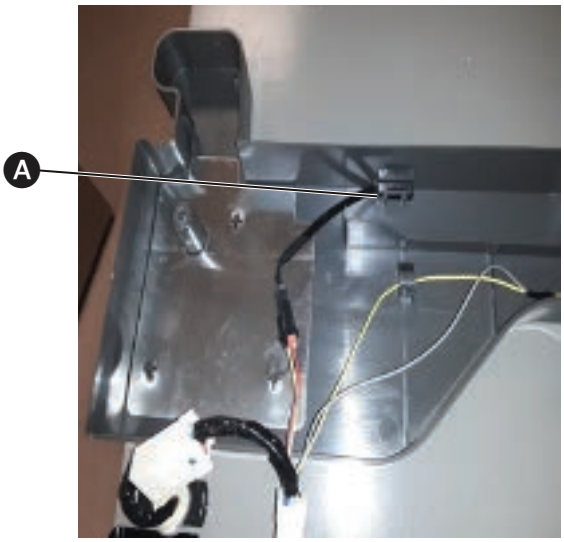
6. Remove the two screws fastening the electrical board to the front of the electronic display.



7. Remove the electrical board.

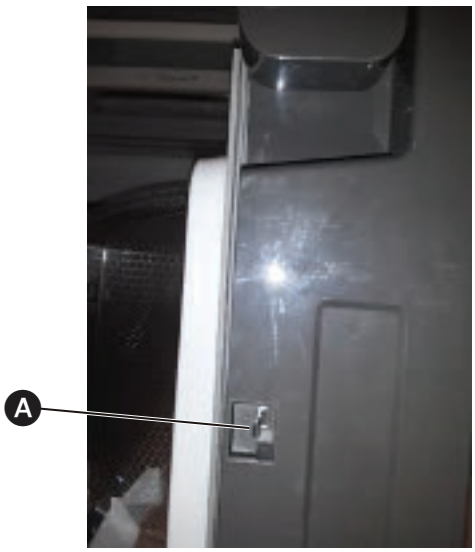
Reed Switch and Reed Switch Magnet

- A reed switch is located on either side of the hinge cover.



A Reed switch

- A reed switch magnet is located in the top edge of each refrigerator compartment door.



A Reed switch magnet

When both refrigerator compartment doors are closed, the interior lights turn off and the fan motor and damper are activated.

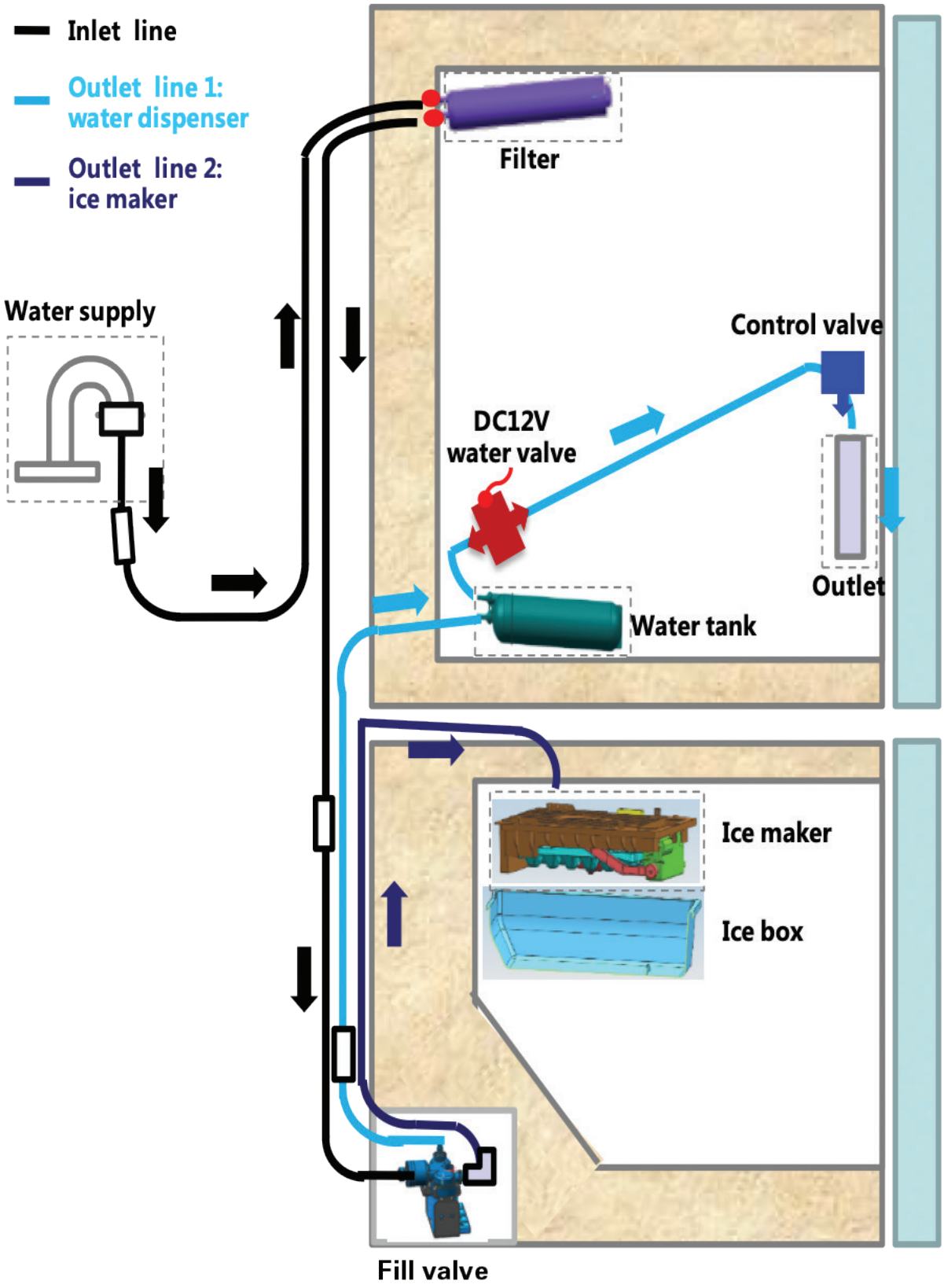
When a refrigerator compartment door is opened, the interior lights turn on and the fan motor and damper are turned off.

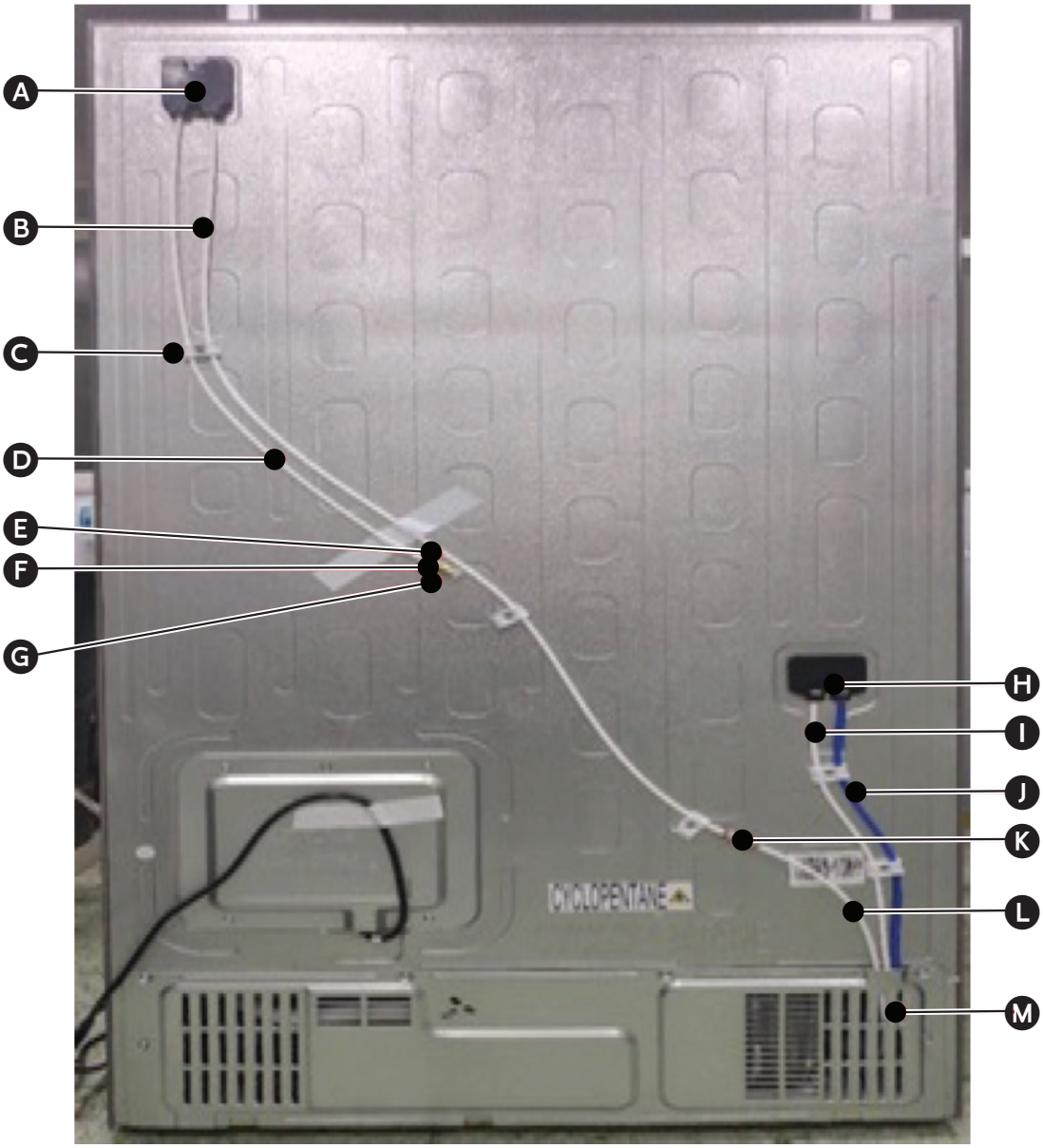
To Simulate a Door Closed State:

1. Hold a magnet over a reed switch. You will hear the damper open and the fan motor turn on.

   NOTE: To complete the test, the other refrigerator compartment door must be closed.

Water System





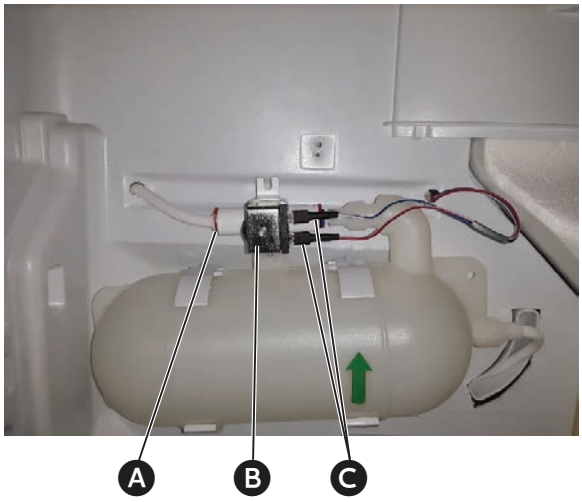
- A Water filter inlet cover
- B Water line to fill valve
- C Water line installation clip
- D Water supply line to water filter
- E Water supply line connector
- F Connector nut
- G Water supply line cap
- H Ice maker inlet cover
- I Water supply line to water tank
- J Water supply line to ice maker
- K Connector 180°
- L Fill valve inlet line
- M Fill valve (inside)

Water Lines

Water Tank Supply Line (White)

To Access Water Tank Line:

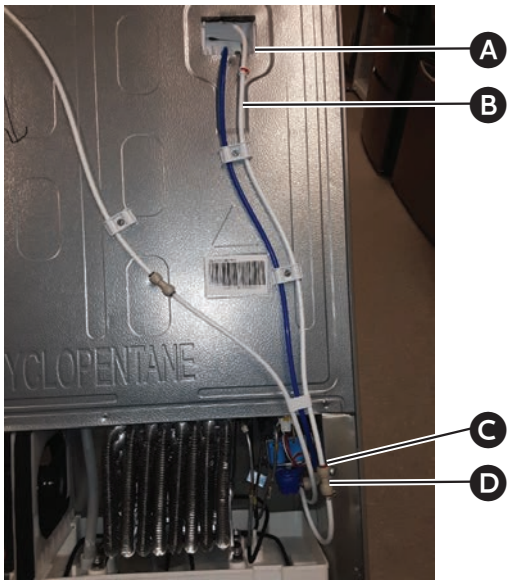
1. Remove the lower back panel of the refrigerator cabinet.
2. Remove the red clip from the water tank outlet.
3. Disconnect the two wires from the solenoid.



A Red clip
B Solenoid
C Wires to solenoid

To Release Water Line from Fill Valve:

1. Working from the back of the refrigerator, remove the machine compartment cover.
2. Remove the red clip from the white water supply line.
3. Squeeze collar to coupler to release the white water supply line.
4. Remove the ice maker water inlet cover.
5. Move to the front of the refrigerator, and then pull the white water supply line from inside the refrigerator.
6. Reverse steps to reassemble.



A Ice maker water inlet cover
B Water supply line to ice maker
C Red clip
D Coupler

Ice Maker Water Line (Blue)

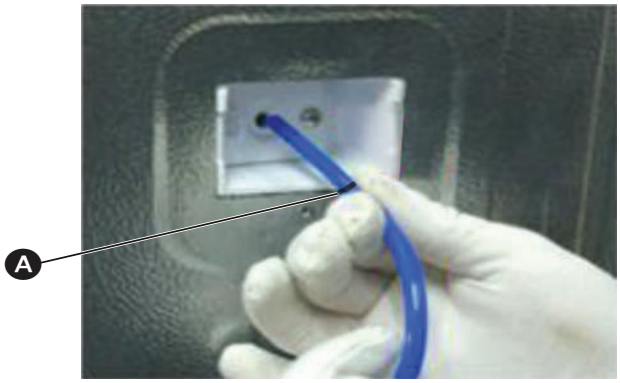
Remove the Ice Maker Water Line

1. Working from the back of the refrigerator, use a Phillips screwdriver to remove the screw fastening the ice maker inlet cover to the cabinet.

2. Pull downward on the inlet cover to remove.

3. Pull outward on the blue water line.

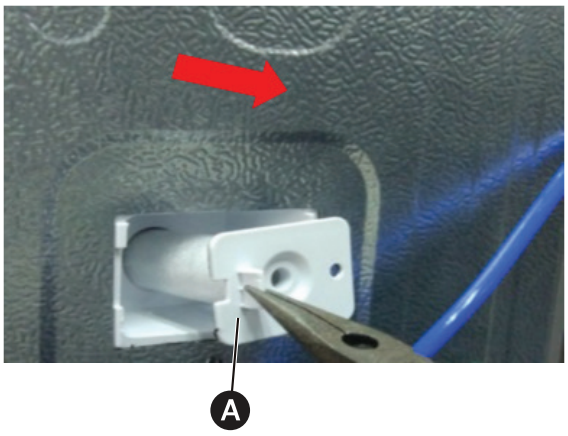
NOTE: The black line imprinted on the blue fill line is a reference point. When reinstalling, push the blue fill line into the water line connector only until the black line is flush with the connector opening on the rear of the cabinet.



A Black imprinted line

4. Using a Phillips screwdriver, remove the screw from the water line connector.

5. Grasp the water line connector with pliers, and pull it from the refrigerator.



A Water line connector

Ice Maker

Check the Water Supply

1. Check the water line connections.

Check the Action of the Ice Tray, the Ice Valve and the Water Valve

1. Unplug refrigerator.
2. Plug the power supply cord back into the electrical outlet.

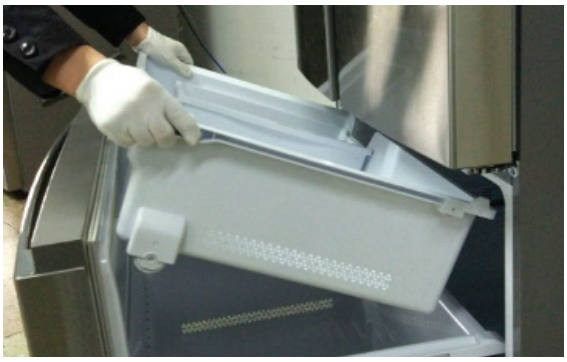
IMPORTANT: Within 15 minutes of the refrigerator being powered on:

3. Press and hold the SUPER FREEZE and FREEZER controls at the same time for 3 seconds to check the action of the ice tray.

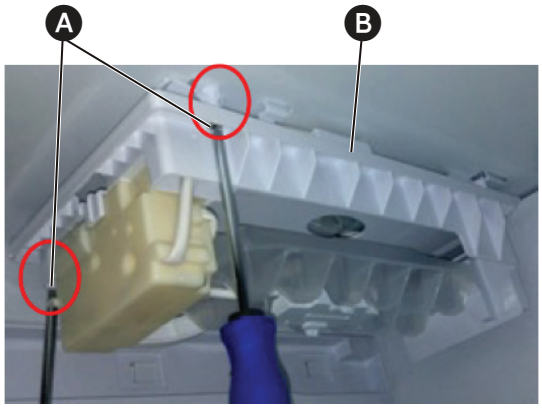
   If the ice tray has NOT turned after 15 minutes, the ice maker is faulty. Replace the ice maker.

Remove the Ice Maker

1. Open the freezer compartment door. Remove the ice bin and the ice maker cover.

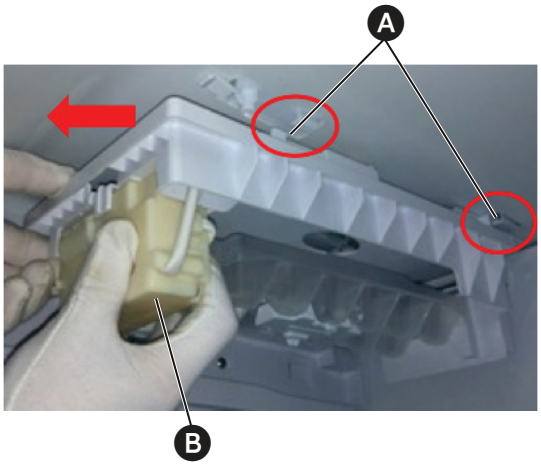


2. Using a Phillips screwdriver, remove the two screws fastening the ice maker to the interior ceiling.



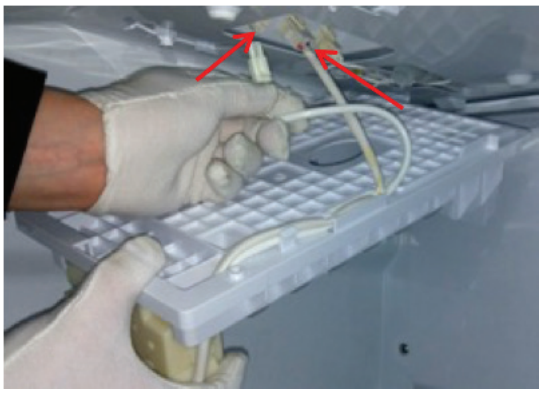
A Screws (2)
B Ice maker

3. Slide out, and then pull down on the ice maker assembly.

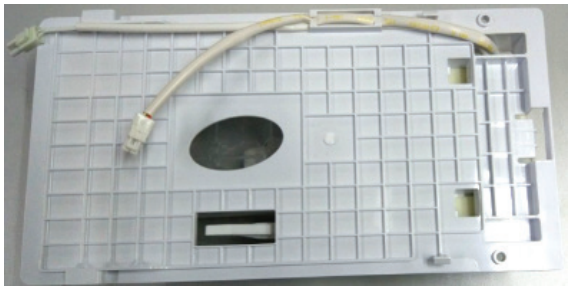


A Clips
B Motor

4. Disconnect the two terminals, and then remove the ice maker.

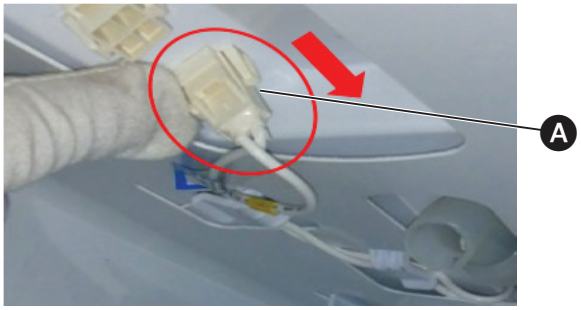


Ice Maker Disassembled



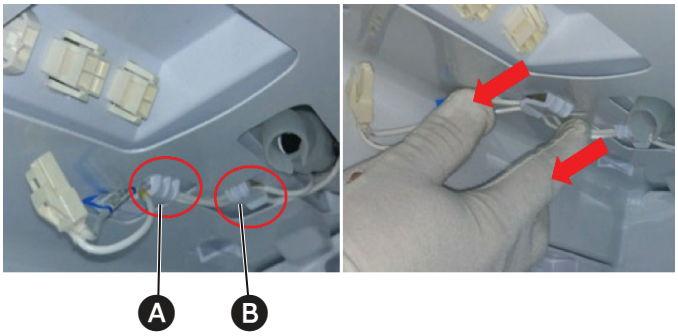
Remove Water Line Connector

1. Disconnect the terminal.



A Terminal

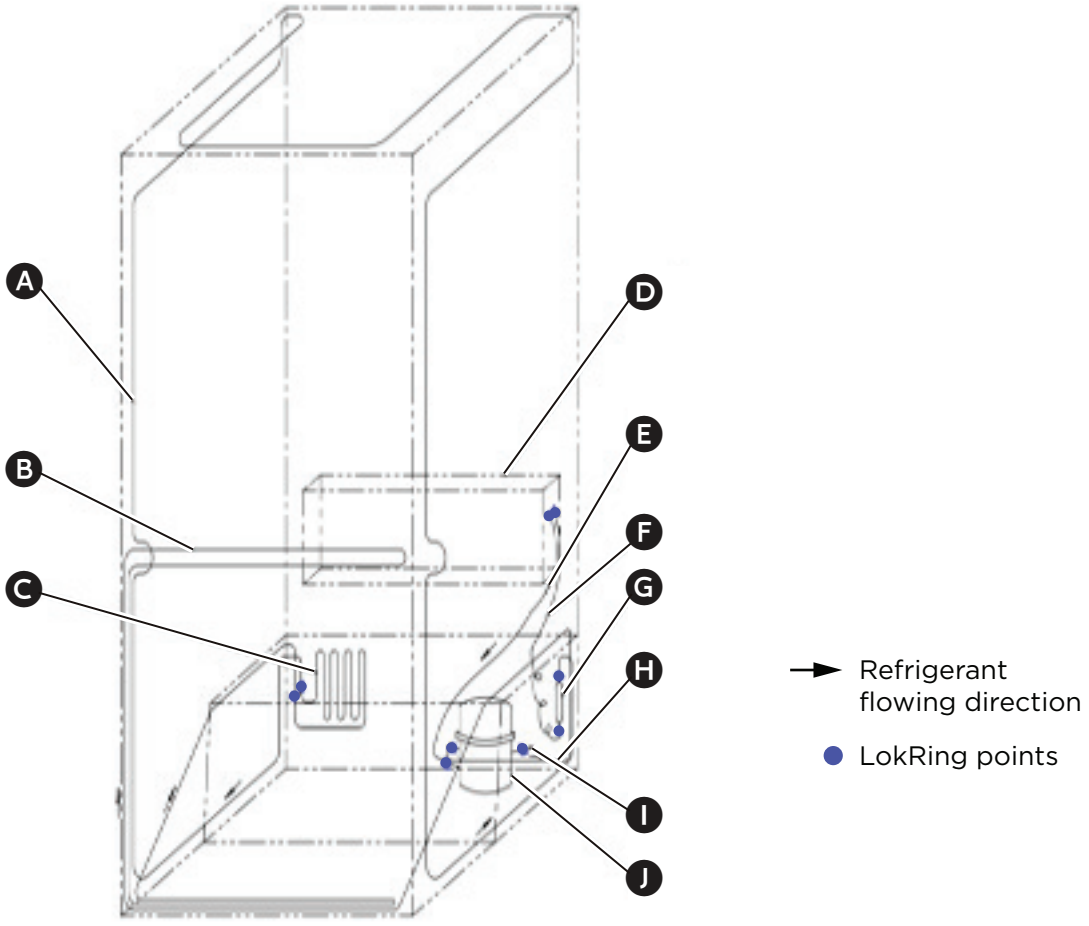
2. Slide the electrical wiring, in the direction of the arrow from under Clip 1 until it is released.



A Clip 1
B Clip 2

3. Slide the electrical wiring, in the direction of the arrow from under Clip 2 until the wire hangs free.

LokRing Connection Points



- A Condenser
- B Antisweat tube
- C Coil condenser
- D Evaporator
- E Suction tube
- F Capillary
- G Filter Dryer
- H Connection tube
- I Process tube
- J Compressor

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