



SERVICE MANUAL

JennAir® Columns Built-In



Model Numbers	JBRFR24IGX	JBRFL24IGX	JBRFR30IGX	JBRFL30IGX
	JBRFR36IGX	JBRFL36IGX	JBZFR18IGX	JBZFL18IGX
	JBZFR24IGX	JBZFL24IGX	JBZFR30IGX	JBZFL30IGX

W11377840

FORWARD

This JennAir® Service Manual (Part No. W11377840), provides the In-Home Service Professional with service information for the “JennAir® Columns Built-In.”

The Wiring Diagram used in this Service Manual is typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product tech sheet when servicing the refrigerator.

For specific operating and installation information on the model being serviced, refer to the “Use and Care Guide” or “Installation Instructions” provided with the refrigerator.

GOALS AND OBJECTIVES

The goal of this Service Manual is to provide information that will enable the In-Home Service Professional to properly diagnose malfunctions and repair the “JennAir® Columns Built-In.”

The objectives of this Service Manual are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than authorized In-Home Service Professionals.

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Notes

Section 1: General Information

This section provides general safety, parts, and information for the “JennAir® Columns Built-In.”

- Refrigerator Safety
- Product Specifications
- Product Feature
 - Refrigerator Control Panel
 - Freezer Control Panel
- Model & Serial Label and Tech sheet
 - Location
- Model Nomenclature

Refrigerator Safety

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING."

These words mean:

⚠ DANGER

You can be killed or seriously injured if you don't immediately follow instructions.

⚠ WARNING

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of fire, electric shock, or injury when using your refrigerator, follow these basic precautions:

- Plug into a grounded 3 prong outlet.
- Connect to a potable water supply only.
- Do not remove ground prong.
- Do not use an adapter.
- Do not use an extension cord.
- Disconnect power before servicing.
- Replace all parts and panels before operating.
- Remove doors from your old refrigerator
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Remove doors from your old 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.
- Disconnect power before installing ice maker (on icemaker kit ready models only).
- Use a sturdy glass when dispensing ice (on some models).
- Do not hit the refrigerator glass doors (on some models). Children should be supervised to ensure that they do not play with the appliance.
- Connect to a potable water supply only.

SAVE THESE INSTRUCTIONS

Product Specifications

JennAir® Built-In Refrigerator/Freezer Column

AHAM Volumes and Shelf Area	
Refrigerator Volume (Cu Ft)	8 or 13 or 17 or 20
Total Volume (Cu Ft)	8 or 13 or 17 or 20
Dimensions	
Capacity (FT3, Cu. Ft.)	8 or 13 or 17 or 20
Cabinet Width (IN, inches)	18 or 24 or 30 or 36
Cutout Height (IN, inches)	84
Cutout Width (IN, inches)	18 or 24 or 30 or 36
Cutout Depth (IN, inches)	25
Depth Closed Excluding Handles (IN, inches)	24½
Depth Closed Including Handles (IN, inches)	27 ¹ / ₈
Depth Excluding Doors (IN, inches)	23 ¹¹ / ₁₆
Depth With Door Open 90 Degree (IN, inches)	44 ⁷ / ₁₆ or 50 ⁷ / ₁₆ or 56 ³ / ₈ or 62 ⁷ / ₁₆
Depth (IN, inches)	27 ¹ / ₈
Height To Top Of Cabinet (IN, inches)	84
Height (IN, inches)	79 ⁷ / ₈ or 84
Width (IN, inches)	23 ³ / ₄ or 29 ³ / ₄ or 35 ³ / ₄
Description	
Type of Refrigerator	Column Refrigerator or Column Freezer
Installation Option	Built-In
Details	
Advance Foam Insulation	99.9% lower Global Warming Potential and Better Energy Performance
Exterior	
Base Grille Color	Black
Cabinet Color	Black
Cabinet Finish	Smooth
Door Color	Panel Ready
Door Finish	Textured
Door Style	Flat
Door Swing	Right or Left
Handle Color	Stainless Steel
Handle Material	Metal
Handle Type	Reach Through Handle
Hidden Hinge	Yes
Number of Doors	1
Levelers	2 Black
Wheels	4-Natural
Dispenser	
Dispenser Type	Interior Water Only or Ice Cubes Only
Dispenser Options	Filtered Water
Dispenser Pad Color	Black
Design Type	
Design Expression	Panel-Ready

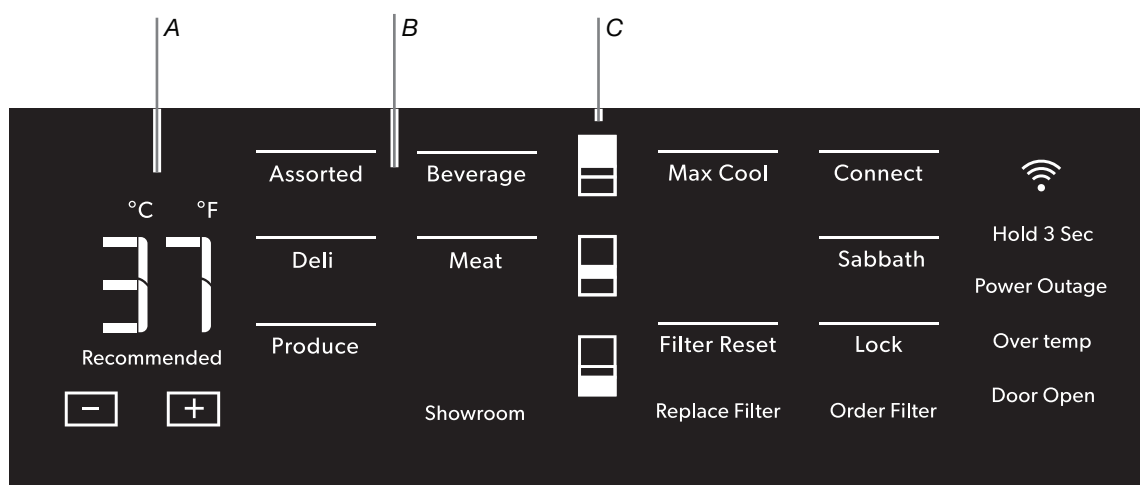
Product Specifications (Continued)

JennAir® Built-In Refrigerator/Freezer Column

Controls	
Automatic Defrost	Yes
Control Location	Interior Up Front
Control Lockout	Yes
Control Type	Electronic Touch
Door Ajar/Open Alarm	Yes
Max Cool/Fast Cool	Yes
Temperature Range	33°F to 45°F
Water Filter Indicator/Reset	Yes
Refrigerator/Freezer Compartment	
Number of Interior Shelves	3
Conventional Shelves	3 Adjustable Full-Width Glass
Shelf Supports	Cantilever
Deli Drawer	1 Flexi-Slide Bin
Temperature-Controlled Drawers	3 Full Width
Door Bins	4 Adjustable Gallon
Supplementary Containers	Herb Tender™ Container
Lighting	Strip and Tower LED Lighting
Liner Finish	Obsidian (Metallic Black)
Filters	
Fresh Flow Air Filter	Yes
Produce Preserver	Yes
Water Filter Location	Interior
Water Filter Part Number	EDR2RXD1
Icemaker	
Icemaker	Factory Installed
Icemaker Location	Freezer
Certifications	
ADA Compliant	ADA Height and Operation Compliant
CEE Tier	Not Rated
Energy Star® Qualified	ENERGY STAR® Qualified
Kosher Consumer Friendly	Yes
Prop 65	Standard
UL	•
Electrical	
Amps	15
Hz	60
Compatibility	
Connectivity	Android iOS
Works With	Wi-Fi App Remote Access

Product Features

Refrigerator Control Panel



- A. Viewing and Adjusting Temperature
 B. Activate Temperature Mode for Refrigerator Deli Drawer
 C. Cooling Zones

Refrigerator Controls

1. Viewing and Adjusting Temperature:

When you first install your refrigerator, make sure that the control is still set to the recommended setting. The factory-recommended temperature is 37°F (3°C). Touch - or + to select a temperature setting. Press and hold - and + to change display from Fahrenheit to Celsius.

2. Activate Temperature Mode for Refrigerator Deli Drawer:

Touch Assorted, Beverage, Deli, Meat, or Produce to select a zone temperature setting.

3. Cooling Zones:

Select features of your refrigerator are tied to the perimeter lighting. Press a zone key to light the corresponding zone in your refrigerator.

4. Max Cool:

Assists with periods of high refrigerator use, full grocery loads, or temporarily warm room temperatures. Press MAX COOL to activate Max Cool. After the Max Cool cycle completes, the refrigerator will return to its previous setting.

5. Connect:

Wi-Fi connectivity allows your Smart Refrigerator to connect to the Internet and interact with the JennAir® App from your smartphone or mobile device.

6. Sabbath:

Allows the door of the refrigerator to be opened or closed during the Sabbath or other religious holidays without activating the interior lights or controls. Press and hold Sabbath for 3 seconds to activate Sabbath mode.

7. Lock:

The control panel can be locked for easy cleaning or to avoid unintentional mode changes.

8. Power Outage:

Lets you know if the power supply to the refrigerator has been off and the temperature has risen.

9. Over temp:

Helps avoid food spoilage and high energy costs by sounding an alert when refrigerator temperatures remain at unusually high levels.

10. Door Open:

Sounds an alarm when the refrigerator door(s) or freezer door is open for 5 minutes and cooling is turned on. The alarm will repeat every 2 minutes. Close the door to turn the alarm and "Door Open" alert off. To stop the alarm noise with the door open, press any key.

11. Showroom:

This mode is used when the refrigerator is on display in a retail store or if you want to turn the cooling off and deactivate all other functions except interior lighting.

To activate showroom mode, press and hold top and bottom zone icons simultaneously for 3 seconds.

To deactivate the showroom mode, press and hold top and bottom zone icons simultaneously for 3 seconds.

12. Filter Reset:

Displays the status of the water filter. To reset the filter, press and hold FILTER RESET for 3 seconds. After countdown, the "Replace Filter" indicator will turn off.

13. Replace Filter:

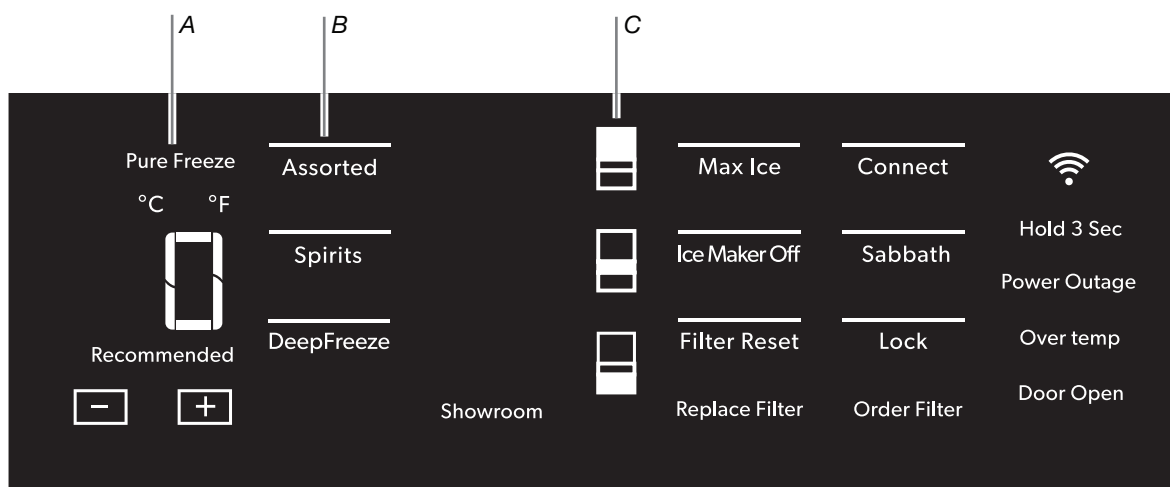
Replace the water filter. While you are dispensing water, the "Replace Filter" icon will flash constantly from beginning to the end of dispensing. After 14 days without replacing the water filter, the "Replace Filter" icon will blink seven times and an alert tone will sound three times at the end of dispensing.

NOTE: "Replace Filter" will remain illuminated if a filter reset is not completed.

14. Order Filter:

Order a replacement water filter.

Freezer Control Panel



- A. Viewing and Adjusting Temperature
 B. Activate Temperature Mode for Refrigerator Deli Drawer
 C. Cooling Zones

Freezer Controls

1. Pure Freeze® Feature:

It is activated automatically when the freezer is at its lowest setting. The Pure Freeze® setting reduces freezer burn.

2. Viewing and Adjusting Temperature:

When you first install your freezer, make sure that the control is still set to the recommended temperature. The factory recommended setting is -2°F (19°C) for the freezer. Touch - or + to select a temperature setting.

3. Activate Temperature Mode for Freezer Deli Drawer:

Touch Assorted, Spirits, or Deep Freeze to select a zone temperature setting.

4. Cooling Zones:

Select features of your freezer are tied to the perimeter lighting. Press the zone keys to light the corresponding zones in your freezer.

5. Max Ice:

The Max Ice Setting increases the freezer cooling capacity improving the ice making rate.

6. Ice Maker Off:

To turn the ice maker off, touch ICE MAKER OFF.

7. Connect:

Wi-Fi connectivity allows your Smart Freezer to connect to the Internet and interact with the JennAir® App from your smartphone or mobile device.

8. Sabbath:

Allows the door of the freezer to be opened or closed during the Sabbath or other religious holidays without activating the interior lights or controls. Press and hold Sabbath for 3 seconds to activate Sabbath mode.

9. Lock:

The dispenser can be locked for easy cleaning or to avoid unintentional dispensing.

10. Power Outage:

The Power Outage indicator lets you know if the power supply to the freezer has been off and the freezer temperature has risen.

11. Over temp:

Helps avoid food spoilage and high energy costs by sounding an alert when freezer temperatures remain at unusually high levels.

12. Door Open:

The Door Open alarm feature sounds an alarm when the refrigerator door(s) or freezer door is open for 5 minutes and cooling is turned on. The alarm will repeat every 2 minutes. Close the door to turn the alarm and "Door Open" alert off. To stop the alarm noise with the door open, press any key.

13. Showroom:

This mode is used when the freezer is on display in a retail store or if you want to turn the cooling off and deactivate all other functions except interior lighting.

To activate showroom mode, press and hold top and bottom zone icons simultaneously for 3 seconds.

To deactivate the showroom mode, press and hold top and bottom zone icons simultaneously for 3 seconds.

14. Filter Reset:

Displays the status of the water filter. To reset the filter, press and hold FILTER RESET for 3 seconds. After countdown, the "Replace Filter" indicator will turn off.

15. Replace Filter:

Replace the water filter. While you are dispensing water, the "Replace Filter" icon will flash constantly from beginning to the end of dispensing. After 14 days without replacing the water filter, the "Replace Filter" icon will blink seven times and an alert tone will sound three times at the end of dispensing.

NOTE: "Replace Filter" will remain illuminated if a filter reset is not completed.

16. Order Filter:

Order a replacement water filter.

Model & Serial Number and Tech Sheet Location

Model Serial
Information plate in
the Top Right
Corner

Tech Sheet
location behind
lower grill



Model Nomenclature

MODEL NUMBER INTERNATIONAL SALES OR MARKETING CHANNEL	J	B	Z	F	R	36	I	G	X
Brand J = JennAir									
Categories R = Freestanding Refrigeration B = Built-in Refrigeration									
Configuration/Fuel R = Refrigerator Column (1-door) Z = Freezer Column (1-door) B = Bottom Mount (2-door) F = French Door (3-door)									
Installation F = Flush Install (84" tall) S = Standard Install (84" tall)									
Product Detail R = Right Swing Door L = Left Swing Door									
Size 18 = 18 inch wide 24 = 24 inch wide 30 = 30 inch wide 36 = 36 inch wide									
Feature Pack N = Non Dispense I = Internal Dispense E = External Dispense									
Year H = 2018 J, I = 2019 K = 2020									
Color X= Custom Overlay K = Black SS									

Section 2: Diagnostics

This section provides diagnostic mode and sales mode information for the “JennAir® Columns Built-In.”

- Safety
- Diagnostics Mode
 - Component Specification
 - To Enter Service Diagnostics Mode
 - To Exit Service Diagnostics Mode

For Service Technician Use Only

Safety

⚠ DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an antistatic wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance

-OR-

Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.

- Before removing the part from its package, touch the antistatic bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in antistatic bag, observe above instructions.

For Service Technician Use Only

Diagnostics Mode

Component Specification

Component	Specifications of all parts 115 VAC/60 Hz unless noted	
Cooling		
Compressor	BTUH	Variable VEGD6H
	Wattage FC	60 Hz/158 W @ 4000 RPM
	Wattage RC	60 Hz/193 W @ 4000 RPM
	Current lock rotor	3.30 A
	Current full load	3.30 A
	Resistance run windings	7.69 Ω @ 25°C ± 8%
	Resistance start windings	7.69 Ω @ 25°C ± 8%
	Inverter	Input 115 V, 3.1 A Output 250 V, 1.1 A
Condenser motor	Rotation (facing end opposite shaft)	Clockwise
	RPM	1240
	Watt	2.3 ± 1 W @ 115 VAC
	NOTE: Fan blade must be fully seated on shaft to achieve proper airflow.	
Refrigerator/ Freezer Evaporator Fan Motor	Rotation (facing end opposite shaft)	Clockwise
	RPM	Minimum 3450 RPM @ 12 VDC and 100% duty cycle
	Watt	Maximum 4.2 W @ 12 VDC and 100% duty cycle
Controls		
Control Board	Volt See control board section for diagnostics	120 VAC, 60 Hz
Thermistor	Temperature	Resistance
	77°F (25°C)	2700 Ω ± 5.0%
	36°F (2°C)	7964 Ω ± 1.0%
	0°F (-18°C)	23,345 Ω ± 2.0%
Light switch	Type	SPDT NO/NC
	Volt	125/250 VAC
	Current	8/4 A
Ice & Water		
Mullion Valve	Watt	16 W @ 12 VDC
Isolation Valve Refrigerator	Watt	20 W @ 120 VAC
Isolation Valve Freezer	Watt	35 W @ 120 VAC
Fill Tube Heater	Volts	8 W
	Watt	12 VDC
	Resistance	18 Ω ± 7.5%

For Service Technician Use Only

To Enter Service Diagnostics Mode:

Press the pulsing JennAir logo to wake up the UI. Press the middle zone key. Press Connect key slightly before Assorted key and hold both for 3 seconds. Release both keypads when you hear the chime indicator.

The display will show "01" to indicate the control is in step 1 of the diagnostics routine.

To Exit Service Diagnostics Mode:

Do one of the following four options:

- Press ASSORTED and CONNECT simultaneously for 3 seconds.
- Select Step 0 by pressing Enter key (DEEPFREEZE in the Freezer Control or PRODUCE in the Refrigerator Control).
- Disconnect the power from the product.
- Allow 20 minutes to pass.

The controls will resume normal operation after exiting Service Diagnostics Mode.

Each step must be manually advanced. Press + to move to the next step in the sequence. Press - to go back to the previous step. Diagnostics will begin at Step 1. Each step is displayed in the two digits of the internal user interface display. The step results are displayed in the two digits on the internal user interface display when the Enter key. To return to the step selection after running one step, press the Back key (SPIRITS in the Freezer Control, DELI in the Refrigerator Control).

Key Assignments

Service mode requirement	Keypad on Django UI	
	Freezer	Refrigerator
Enter Key For Navigation	Press DEEPFREEZE keypad	Press PRODUCE keypad
Increment Key For Navigation	Press "+" Keypad	Press "+" Keypad
Decrement Key For Navigation	Press "-" Keypad	Press "-" Keypad
Back Key For Navigation	Press SPIRITS Keypad	Press DELI Keypad
Degree C LED Indicator	Press °C Indicator	
Degree F LED Indicator	Press °F Indicator	
Enter Service Key Combination	NOTE: Press CONNECT key slightly before ASSORTED key and hold both for 3 seconds.	
Exit Service Key Combination	NOTE: Press CONNECT key slightly before ASSORTED key and hold both for 3 seconds.	

Service Test 00 – Exit Service Mode

Service Test 01 – Deli Compartment Thermistor

Read Deli Compartment Thermistor value or indicate SH for short circuit and OP for open circuit.

Service Test 02 – Main Compartment Thermistor

Read Main Compartment Thermistor value or indicate SH for short circuit and OP for open circuit.

Service Test 04 – Evaporator Thermistor

Read Evaporator Thermistor value or indicate SH for short circuit and OP for open circuit.

Service Test 14 – Crisper Thermistor (Refrigerator Only)

Read Crisper Compartment Thermistor value or indicate SH for short circuit and OP for open circuit.

Service Test 16 – Ice Maker Tray 1 Thermistor (Freezer Only)

Read Ice Maker Tray Thermistor value or indicate SH for short circuit and OP for open circuit.

Service Test 23 – Deli Maximum Temperature

Maximum temperature reached during the last 6 hours of operation.

Service Test 24 – Main Maximum Temperature

Maximum temperature reached during the last 6 hours of operation.

Service Test 26 – Crisper Maximum Temperature

Maximum temperature reached during the last 6 hours of operation.

Service Test 28 – Deli Average Temperature

Average temperature during the last 6 hours of operation.

Service Test 29 – Main Compartment Average Temperature

Average temperature during the last 6 hours of operation.

Service Test 31 – Crisper Average Temperature

Average temperature during the last 6 hours of operation.

Service Test 33 – Deli Minimum Temperature

Minimum temperature during the last 6 hours of operation.

Service Test 34 – Main Minimum Temperature

Minimum temperature during the last 6 hours of operation.

Service Test 36 – Crisper Minimum Temperature

Minimum temperature during the last 6 hours of operation.

Service Test 38 – Compressor Speed Change Without Ramp

In this step, UI will lock out until 2 minutes 30 seconds has passed. In this test, the compressor will turn on but the unit will not cool.

Control the compressor speed. When entering Service Test, the compressor goes off if it was previously on.

- Press the + or - keypad to select the power from 0 to 133 Hz (0 to max speed). When pressing the Enter key, the compressor will change power.
- After changing the power keypad from 0, the compressor will shut off after 2 minutes 30 seconds.

Service Test 39 – Compressor Speed Change With Ramp

In this step, UI will lock out until 2 minutes 30 seconds has passed. In this test, the compressor will turn on but the unit will not cool.

Control the compressor speed. When entering Service Test, the compressor goes off if it was previously on.

- Press the + or - keypad to select the power from 0 to 133 Hz (0 to max speed). When pressing the Enter key the compressor will ramp up to the selected frequency.
- After changing the power keypad from 0, the compressor will shut off after 2 minutes 30 seconds.

Service Test 40 – Compressor and Compartment Freezing Cooling Test

After entering, the compressor will be turned on and will be turned off when leaving the step.

"off" – Off

"on" – On (Compressor on at 100%)

For Service Technician Use Only

Service Test 42 – Deli Air Baffle State

When entering Service Test, the damper continuously turns, showing the state in the numeric display.

- Possible position readings:
“00” - Air Baffle in Open Position
“02” - Air Baffle in Closed Position

Service Test 43 – Crisper Air Baffle State (Refrigerator Only)

When entering Service Test, the damper continuously turns, showing the state in the numeric display.

- Possible position readings:
“00” - Air Baffle in Open Position
“02” - Air Baffle in Closed Position

Service Test 44 – Deli Perimeter Lighting

- When entering Service Test, the Deli Perimeter lights turn on. The display shows “ON.”
- When leaving Service Test, the Deli Perimeter lights turn off.

Service Test 45 – Main Perimeter Lighting

- When entering Service Test, the Main Perimeter lights turn on. The display shows “ON.”
- When leaving Service Test, the Main Perimeter lights turn off.

Service Test 46 – Crisper Perimeter Lighting

- When entering Service Test, the Crisper Perimeter lights turn on. The display shows “ON.”
- When leaving Service Test, the Crisper Perimeter lights turn off.

Service Test 47 – Tower Lighting

- When entering Service Test, the Tower and Top lights turn on. The display shows “ON.”
- When leaving Service Test, the Tower and Top lights turn off.

Service Test 54 – Crisper Lighting

- When entering Service Test, the Crisper lights turn on. The display shows “ON.”
- When leaving Service Test, the Crisper lights turn off.

Service Test 56 – Evap Fan Test

- When entering Service Test, the Evap Fan turns on. The display shows “ON.”
- When leaving Service Test, the Evap Fan turns off.

Service Test 58 – Condenser Fan Test

- When entering Service Test, the Condenser Fan turns on. The display shows “ON.”
- When leaving Service Test, the Condenser Fan turns off.

Service Test 66 – Ice Maker Fill Tube Heater Test (Freezer Only)

- When entering Service Test, the Ice Maker Fill Tube Heater turns on. The display shows “ON.”
- When leaving Service Test, the Ice Maker Fill Tube Heater turns off.

Service Test 73 – Door Switch State

- “00” identifies door OPEN and “01” identifies door CLOSED. Press the switch inside the hinge pocket manually to see state change.
- “00” identifies Water Dispenser Switch is CLOSED and “01” identifies Water Dispenser Switch is OPEN.

Service Test 82 – Water Dispenser Switch State

- “00” identifies Water Dispenser Switch is CLOSED and “01” identifies Water Dispenser Switch is OPEN.

Service Test 89 – Run Defrost Heater

- When entering this Service Test, Defrost Heater turns on and stays on for 5 minutes or until the evaporator thermistor goes above 60°F (16°C).
- “--” will be displayed while the operation is executed

Service Test 91 – Run a Forced Defrost

- Activates the Forced Defrost.
- When ON is selected and exiting Service Mode, defrost will be executed.
- When OFF is selected and exiting Service Mode, defrost will NOT be executed. FF will be displayed when OFF.
- Press + or - key pad to change state.

Service Test 92 – Turn All User Interface LEDs ON

- When entering Service Test, all indicators and keypads will light up in the two user interfaces (UIs).
- The icons turn automatically off after 30 seconds.

Service Test 93 – User Interface Keypad Test

- When inside Service Test, the numeric display shows “00” for no keypad press and “01” for keypad press.

Service Test 96 – Water Valve General Test (RC Only)

- When entering Service Test, the Water Dispenser Valve turns on for 7 seconds.

Service Test 97 – Ice Maker Valve General Test (FC Only)

- When entering Service Test, the Freezer Ice Maker Water Valve turns on for 7 seconds.

For steps 100 and above, initiating the step will display the first two numbers example 01, then a slight delay of about 2 seconds, then the next set of numbers would display showing for example, “06” indicating you are in step 106.

Service Test 100 – Display Water Filter Gallons Remaining

- Displays the remaining gallons of water left on the water filter

Service Test 101 – Display Water Filter Days Remaining

- Displays the remaining days left on the water filter.

Service Test 102 – Display Days Since Last Water Filter Reset

- Displays the total amount of days since the last Water Filter Reset.

Service Test 103 – Display Number of Water Filter Resets

- Displays the total amount of Water Filter Resets that have occurred over the life of the product.

Service Test 106 – Wi-Fi Link Connection Self Test

- While the test is in progress, the display will show:
“00” – Link Test in Progress.
- Following the completion of the Link Test, the display will transition to the following code designation:
“01” – Not able to link with AP or WISE.
“02” – Not able to link with WISE.
“03” – Connected to AP and WISE.

Service Test 107 – Wi-Fi Antenna Self Test

- While the test is in progress the display shall show :
“00” – Link Test in Progress
- Following the completion of the Link Test, the display shall transition to the following code designation:
“01” – Antenna A is good
“02” – Antenna B is good
“03” – Antenna A and B not functioning
“04” – Antenna A and B are good

For Service Technician Use Only

Service Test 108 – Wi-Fi Antenna 1 Signal Strength (Top Filter Assembly)

- Display the measured value as a percentage of possible range. The possible range to the technician is 0% to 100%.

Service Test 109 – Wi-Fi Antenna 2 Signal Strength (Toe Kick)

- Display the measured value as a percentage of possible range. The possible range to the technician is 0% to 100%.

Service Test 120 – Check Ice Maker Self Diagnostics (Freezer Only)

- “00” – Stopped
- “01” – Moving to End of Harvest Location
- “03” – Reached End of Harvest Location
- “04” – Moving Back to Homing Location

Service Test 126 – Change Defrost Type

- Press + or - key pad to change mode.
- Displays the current Defrost Mode. (01 Default)
- Engineer will then choose between the 2 available modes. Pressing the Enter key will save the selection.
- The display will then return to Service Test Screen where the selected Duty cycle will be displayed.
- Available Defrost Modes: “01” - Global Defrost Routine ON “02” - Basic Mode ON (8 hour timer).

Service Test 127 – Gemini Flash 2 SW Version Number (Main ACU)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 128 – Gemini Flash 2 Flashmap Version Number (Main ACU)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 134 – Django UI SW Version Number (Internal UI)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 135 – Django UI Flashmap Version Number (Internal UI)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 136 – Django UI Touch EEPROM Version Number (Internal UI)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 137 – Wi-Fi SW Version Number

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 140 – Neleus SW Version Number (LED Driver)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Service Test 141 – Neleus Flashmap Version Number (LED Driver)

- Show XX for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show YY for 1 second (version format XX YY ZZ)
- Blank for 0.5 seconds
- Show ZZ for 1 second (version format XX YY ZZ)
- Keep Blank when Complete.

Section 3: Component Testing

This section provides the wiring diagram and component location for the “JennAir® Columns Built-In.”

- Safety
- Wiring Diagram
- Component Location

For Service Technician Use Only

Safety

⚠ DANGER



Electrical Shock Hazard

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics

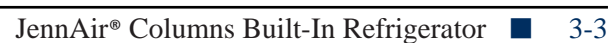
ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an antistatic wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance

-OR-

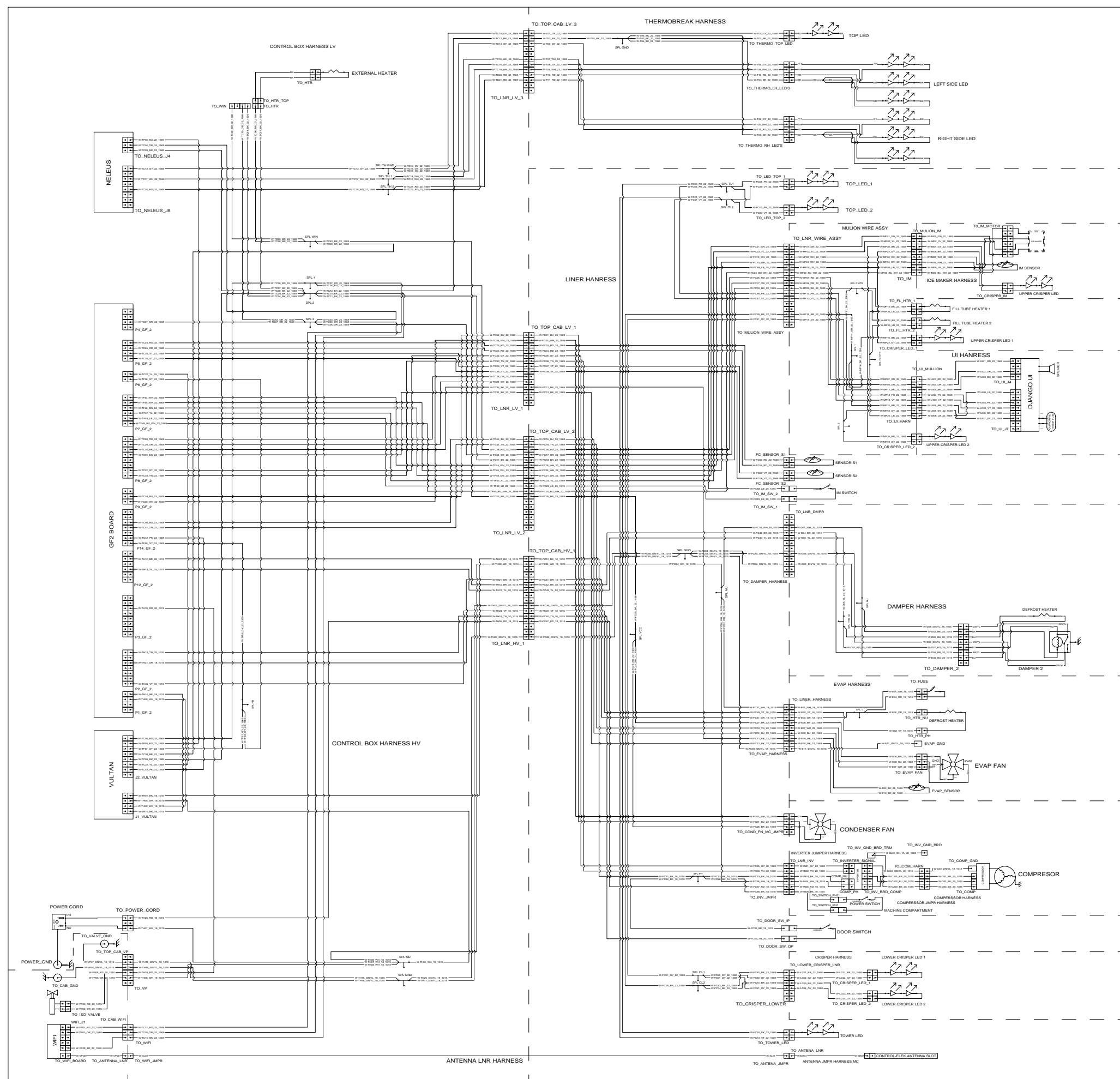
Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.

- Before removing the part from its package, touch the antistatic bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in antistatic bag, observe above instructions.



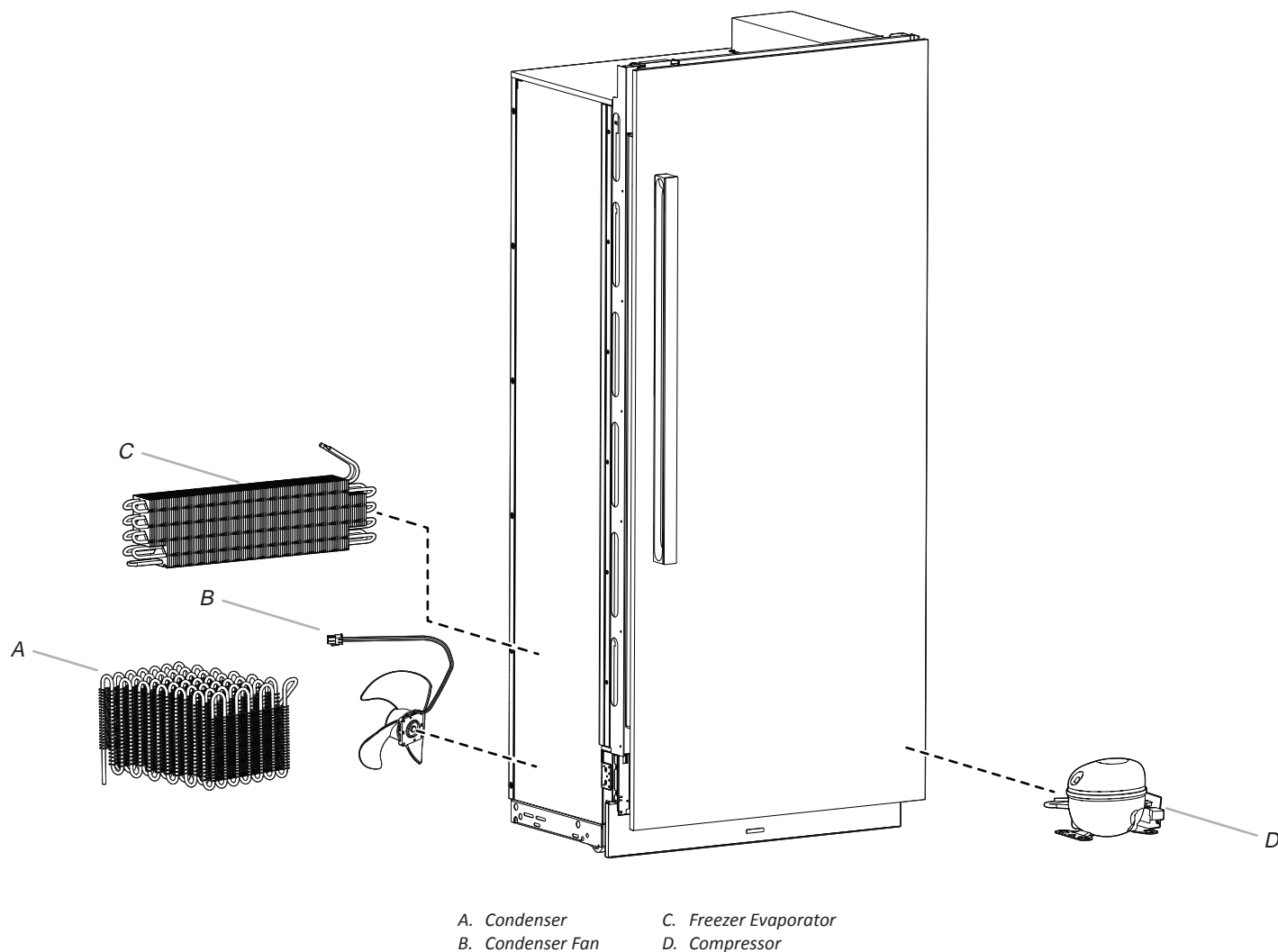
For Service Technician Use Only

Freezer Wiring Diagram



For Service Technician Use Only

Component Location



For Service Technician Use Only

Notes

Section 4: Component Access

This section provides service parts access, removal, and replacement instructions for the “JennAir® Columns Built-In.”

- Accessing Interior Compartment Components
 - Door
 - Crisper Pan
 - User Interface (UI)
 - Deli Crisper Pan
 - Ice Maker (Freezer Models Only)
 - LED Strip
 - Air Tower Light
- Components on Top of the Refrigerator/Freezer
 - Water Filter Cover
 - Water Filter Assembly
 - Wi-Fi Module
 - Control Board Mounting Tray
 - Whirlpool Connected-Appliance Service Policy
- Accessing Components Under the Refrigerator
 - Lower Grille Cover
 - Front Panel
- Accessing Machine compartment components
 - Condenser Fan
 - Compressor Inverter
 - Discharging the System
 - Condenser and Compressor

Accessing Interior Compartment Components

WARNING



Electrical Shock Hazard

Disconnect power before servicing.

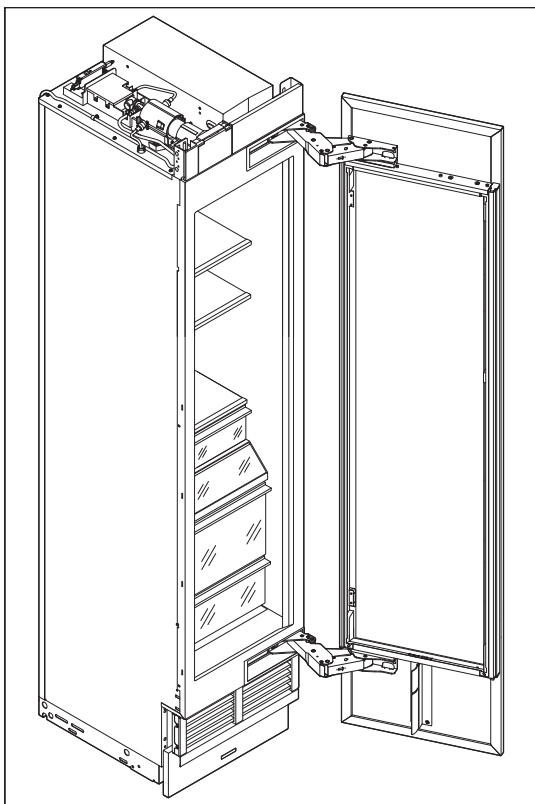
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

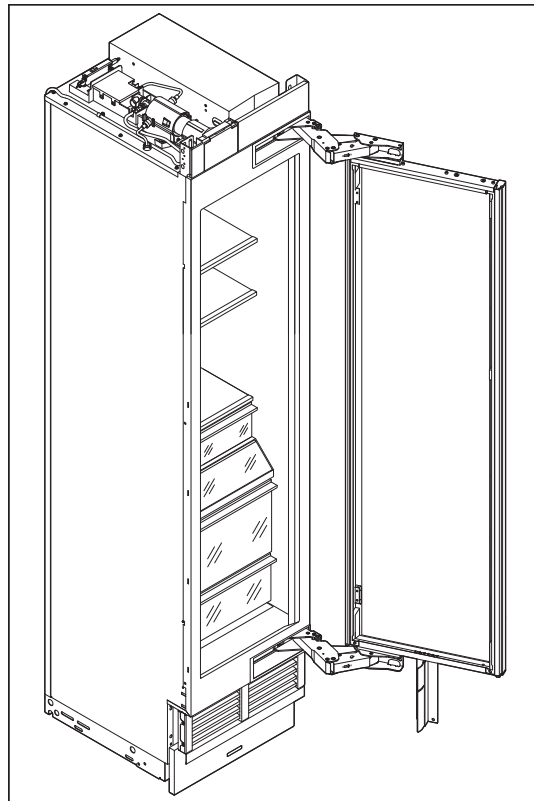
Door

IMPORTANT: Door removal requires two people. Second person required to support weight of the door.

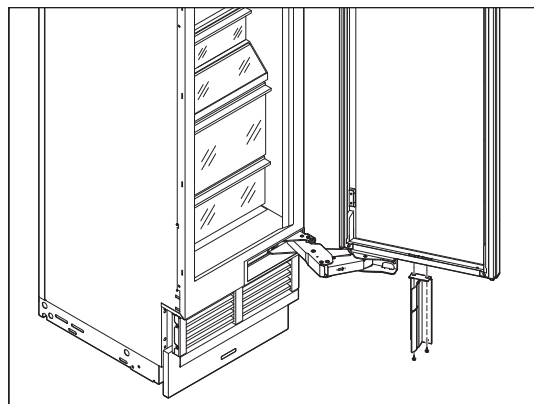
1. Unplug refrigerator or disconnect power.
2. Open the door.



3. Loosen the screws in the keyhole slots on both sides. Remove the screws holding the door panel with the door.

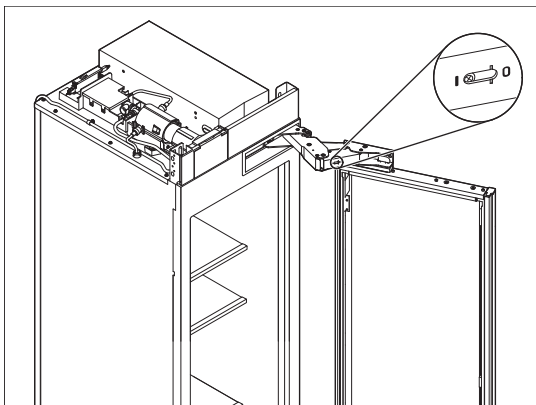


4. Remove two, 1/4" (6.4 mm) hex head screws from the air divider bracket on the bottom of the door.
NOTE: This step is not required if the door panel is attached.

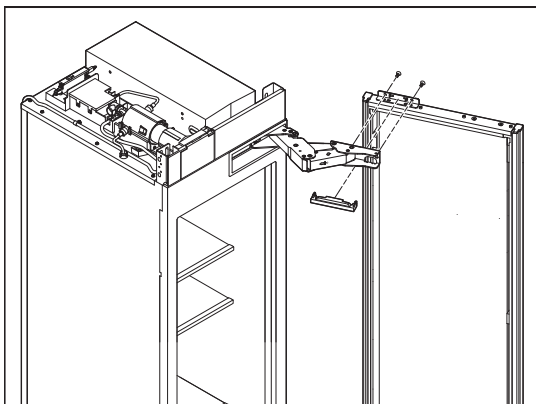


Accessing Interior Compartment Components (Continued)

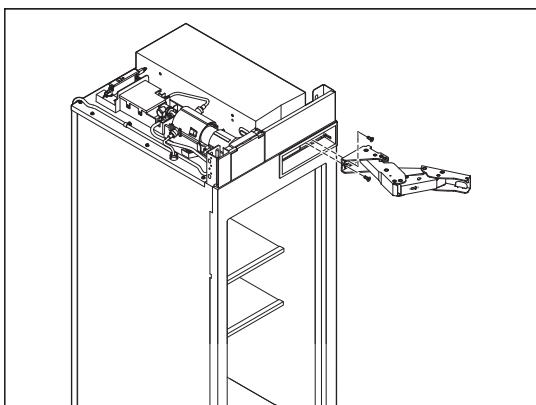
5. Deactivate the top hinge spring system by turning the T20 Torx® adjustment screw to the "0" position. Do the procedure again for the bottom hinge spring system.



6. Loosen 1/4" (6.4 mm) hex head screws from the top hinge attach bracket. Do the procedure again for the bottom hinge attach bracket.



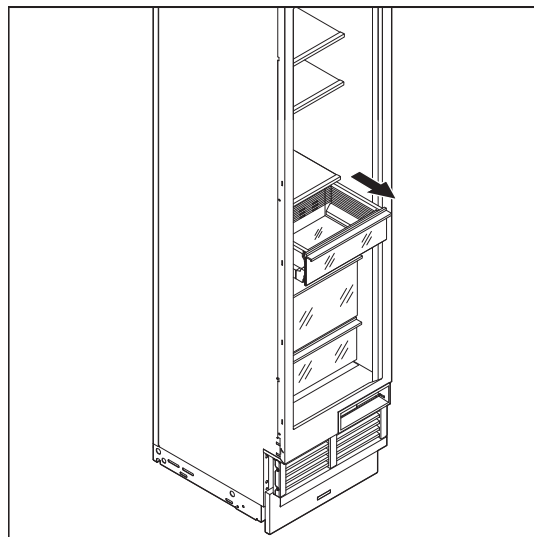
7. Remove the door with assistance from a second person.
8. Loosen the two, 4 mm hex key screws from the bottom and top hinges.



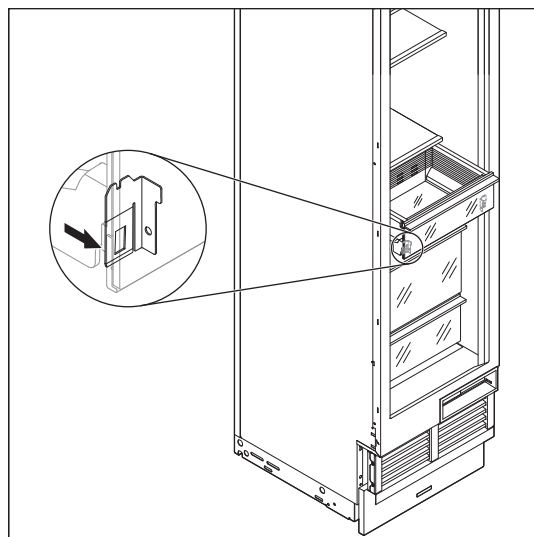
9. Slide hinges out of slots and remove.

Crisper Pan

1. Unplug refrigerator or disconnect power.
2. Open the door.
3. Pull crisper pan to the full extent.

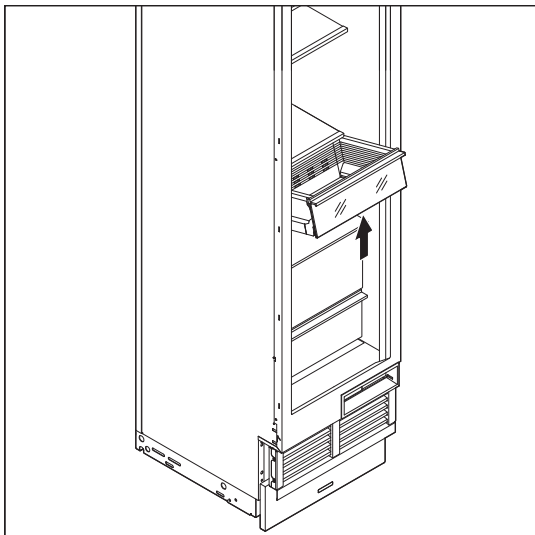


4. Press both release tabs located on the front-bottom sides of the crisper pan.



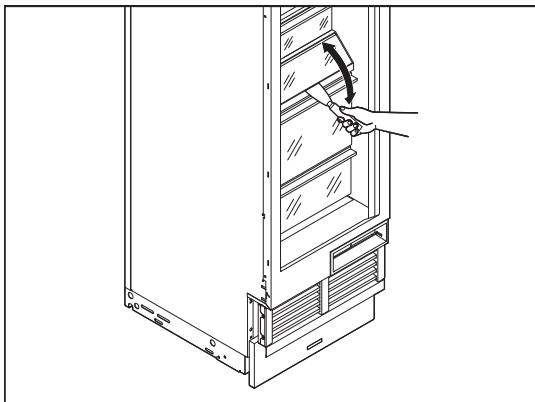
Accessing Interior Compartment Components (Continued)

5. Lift the crisper pan up from the front and remove.

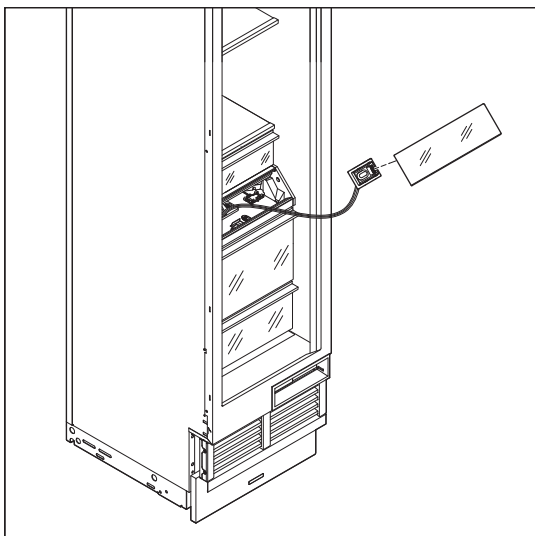


User Interface (UI)

1. Unplug refrigerator or disconnect power.
2. Open the door.
3. Insert a plastic putty knife between the bottom of the UI and the UI housing. Pray out the UI.

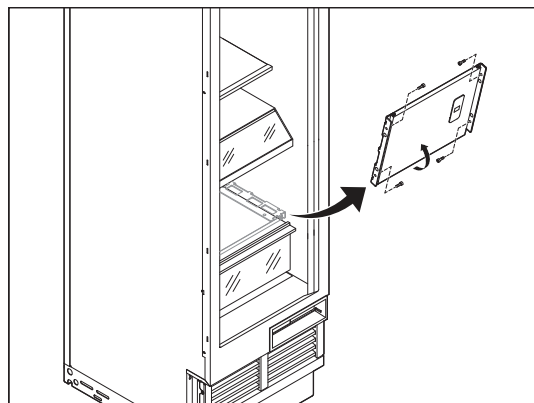


4. Disconnect the wiring harness from the UI housing cup.

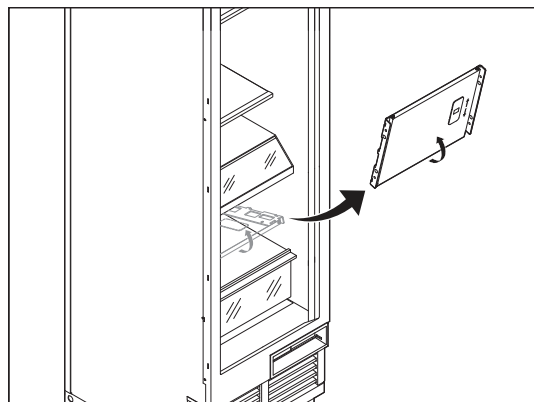


Deli Crisper Pan

1. Complete the steps [1-5](#) from **Crisper Pan** removal instructions.
2. Remove two, 3 mm hex key screws on each side under the deli shelf.



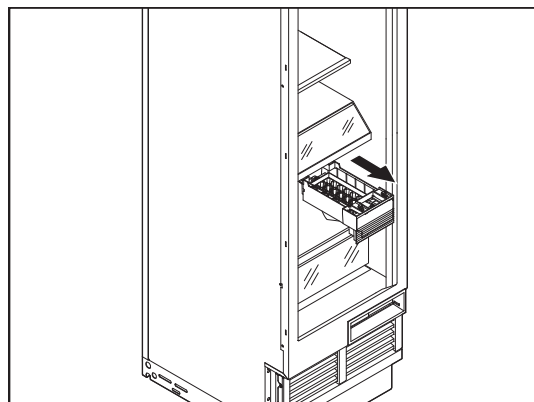
3. Lift the front of the shelf, and rest the rear side on the tab. You get access to the thermistor.



4. Slide the thermistor cover to open and disconnect the wiring harness.
5. Pull out the deli shelf.
NOTE: Replacement of thermistor **W11265008** includes cover. Shelf must be warm to attach replacement thermistor kit.

Ice Maker (Freezer Models Only)

6. Press the two tabs on the top of ice maker bracket using a screwdriver. Pull forward the ice maker assembly.



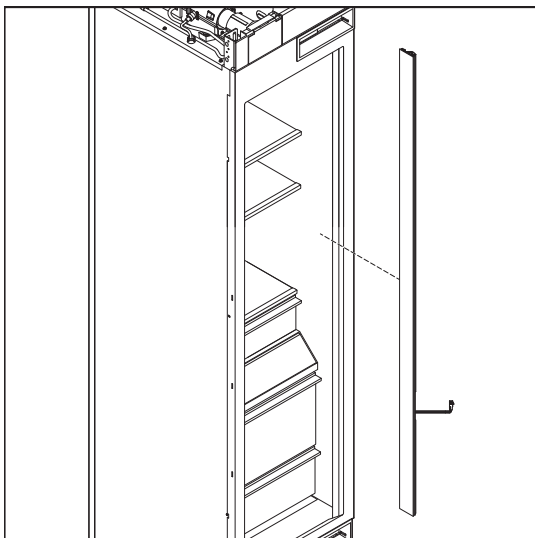
Accessing Interior Compartment Components (Continued)

LED Strip

1. Unplug refrigerator or disconnect power.
2. Open the door.
3. Start to pry out the LED strip liner by using a screwdriver from top to bottom on the left side. Do the procedure again on the right side of the LED strip.

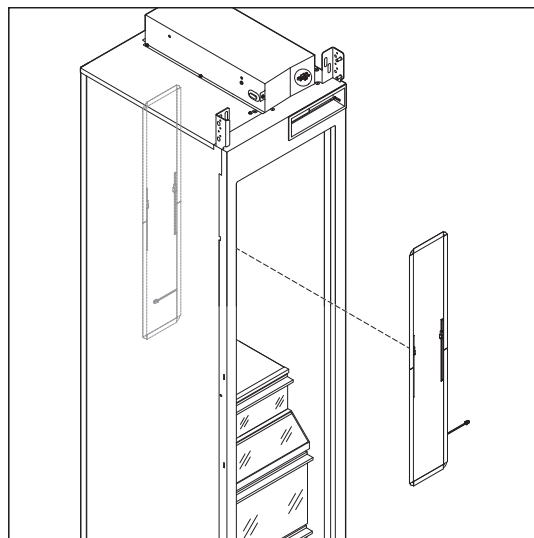
NOTE: Touch-up Pen for the LED strip liner is given in **Repair Part List (W11258621)**.

4. Disconnect the connector from the LED strip and remove.



Air Tower Light

1. Unplug refrigerator or disconnect power.
2. Open the door.
3. Remove the top shelves by tilting it up at the front and lifting it out of the shelf supports.
4. Put your hand behind top of the air tower. Push the latch away and pull the unit out.
5. Disconnect wiring harness to remove air tower light.



Components on Top of the Refrigerator/Freezer

⚠ WARNING



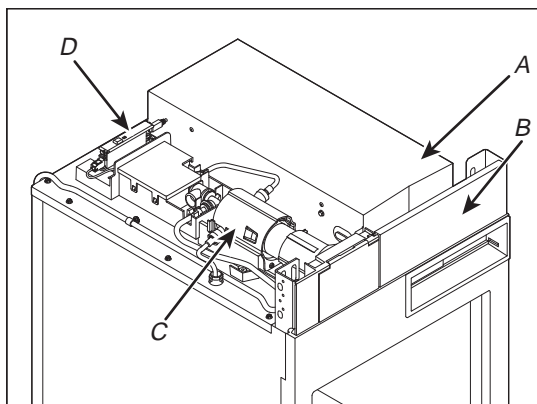
Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

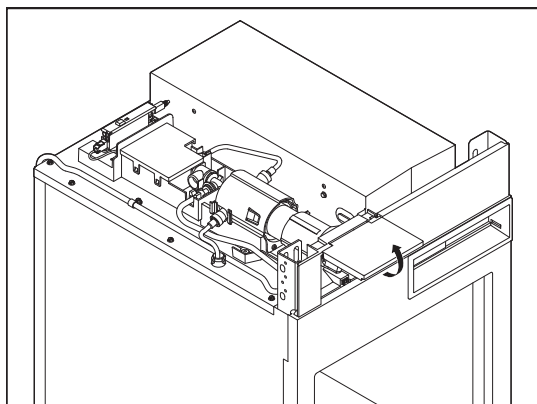
Below picture shows the components located on the top of refrigerator/freezer:



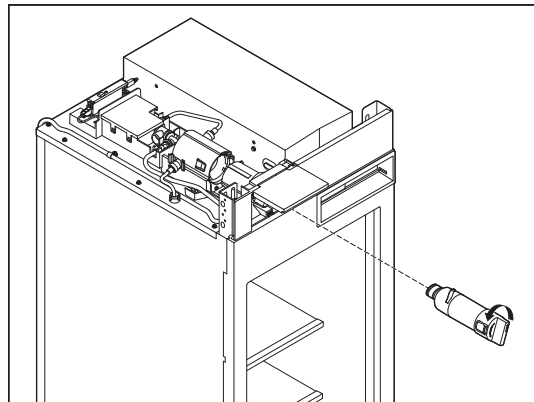
- A. Control Board
- B. Cover Plate
- C. Wi-Fi Module
- D. Water Filter

Water Filter Cover

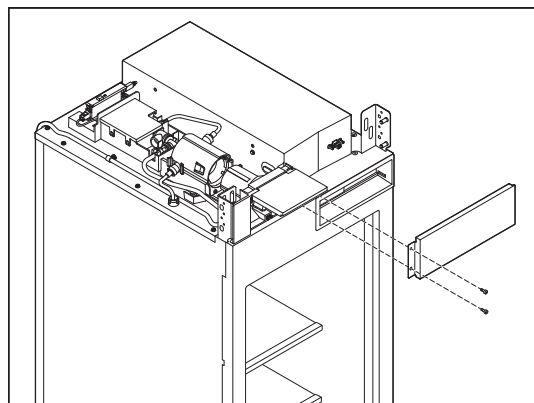
1. Unplug refrigerator or disconnect power.
2. Open the refrigerator/freezer door.
3. Press the filter cover and flip upward to access the water filter housing.



4. Rotate the water filter cartridge counterclockwise until it stops and remove.

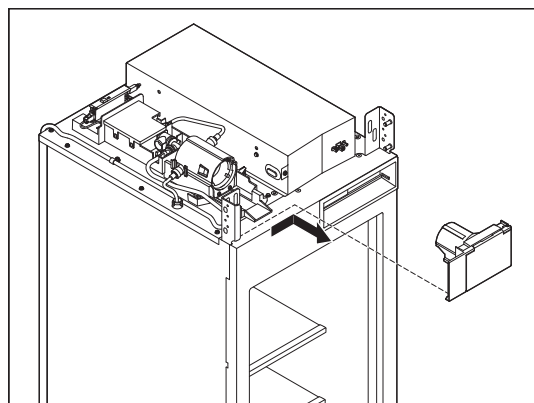


5. Remove the two, 3 mm hex key screws on the left side of the cover plate and remove.



Water Filter Assembly

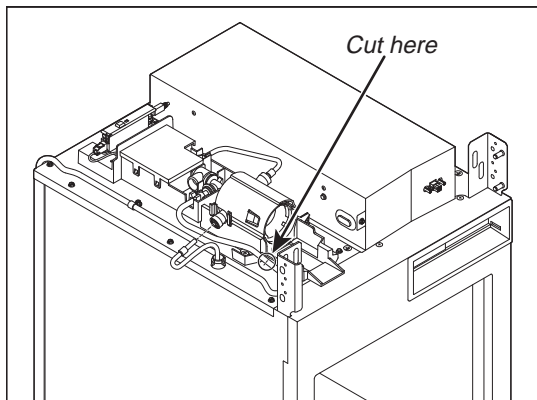
6. Pull the water filter housing to the right and remove.



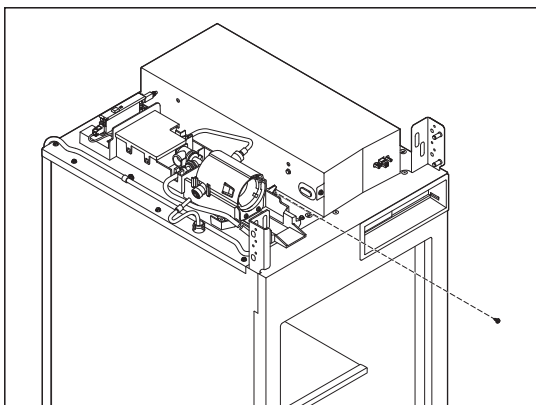
Components on Top of the Refrigerator/Freezer (Continued)

7. Cut the 5/16" (7.9 mm) water tube on the left side of the water filter. Disconnect the water tube from the left side of the water filter housing.

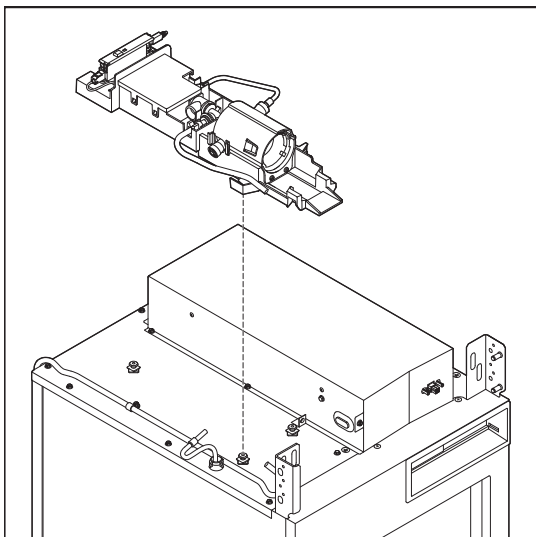
NOTE: Repair the water line using a John Guest fitting (PN 2300868, used when replacing any water line).



8. Remove the 1/4" (6.4 mm) hex head screw from right side of the housing assembly.

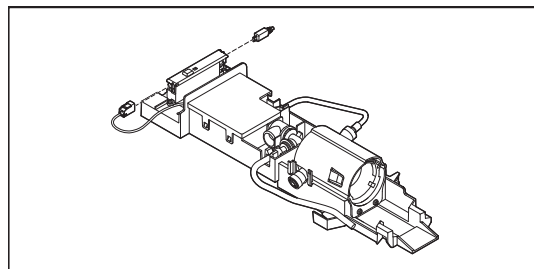


9. Use a flat-blade screwdriver to lift the front tab on the water filter assembly onto the front trim and pull forward to remove.

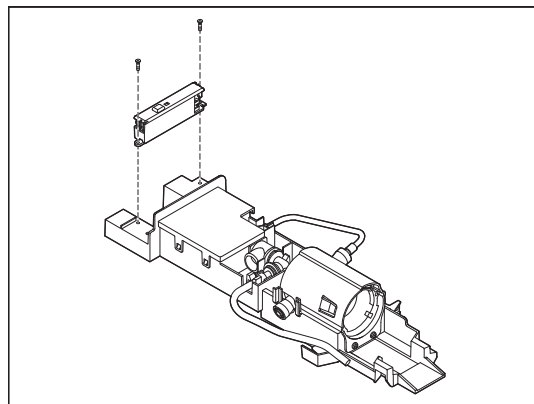


Wi-Fi Module

10. Disconnect Wi-Fi module from the harness.



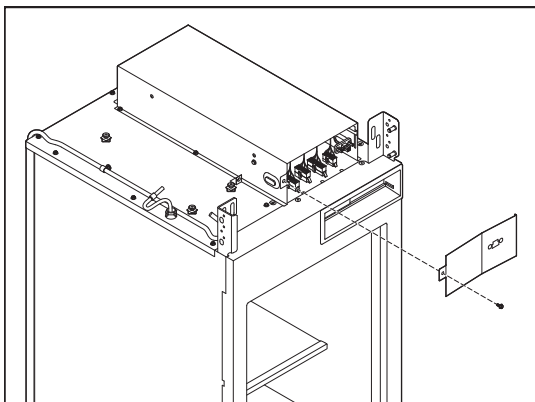
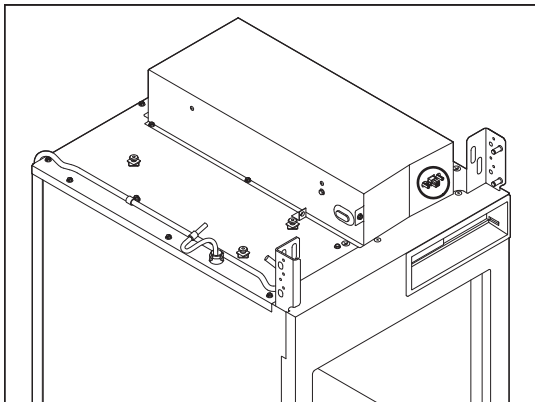
11. Remove two T10 Torx screws to remove the Wi-Fi module located on the rear of the water filter assembly.



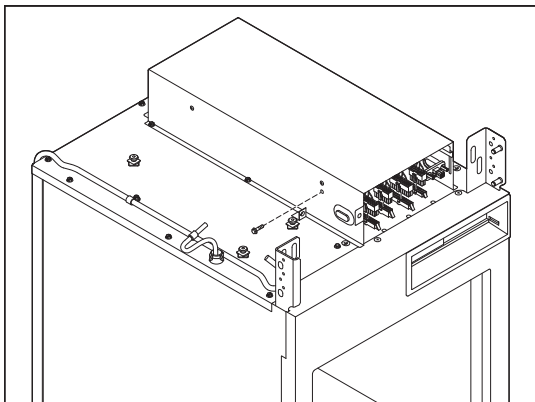
Components on Top of the Refrigerator/Freezer (Continued)

Control Board Mounting Tray

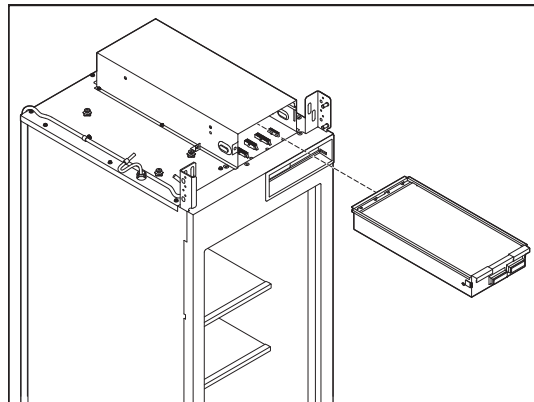
1. Complete the steps [1-5](#) from **Water Filter Cover** removal instructions.
2. Remove a 1/4" (6.4 mm) hex head screw from the front tray cover and separate from the control board cover.
NOTE: Use a plier to loose connector through the tray cover.



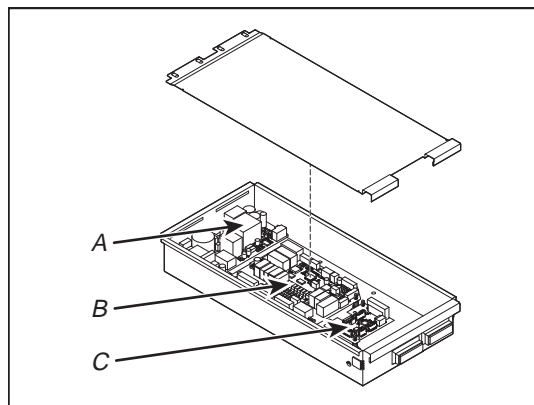
3. Disconnect all connectors of the control board.
NOTE: Make sure that the Wi-Fi antenna and grommet must be unseated for clearance.



4. Pull control board mounting tray forward to remove.



5. Remove the cover lid. The components of control boards are shown in below image:



- A. Power Supply
- B. Electronic Control Board
- C. LED Driver Board

Whirlpool Connected-Appliance Service Policy

If service performed on the appliance interrupts the appliance connection to the home Wi-Fi network or to the Internet, the service technician should re-provision (reconnect) the appliance after service is complete. Due to privacy/security, if in the provisioning process, the customer password is required, the service technician is encouraged to hand the mobile device back to the customer for entry of that password.

See **Service Pointer** (W11189173) on servicematters.com for more information.

Accessing Components Under the Refrigerator

⚠ WARNING



Electrical Shock Hazard

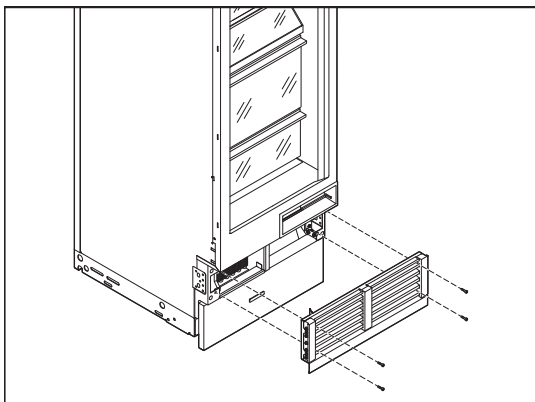
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

Lower Grille Cover

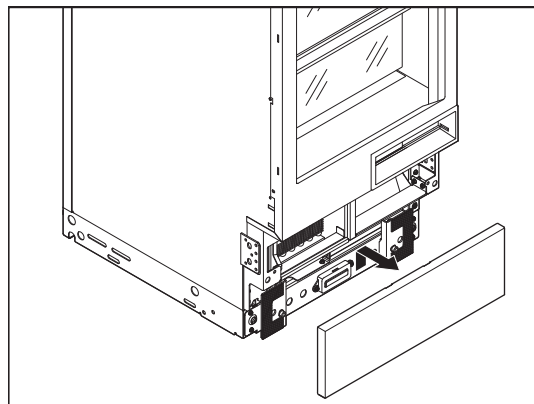
1. Complete the steps [1-7](#) from **Door** removal instructions.
2. Remove the four, 3 mm hex key screws (two on each side) as shown in the illustration.



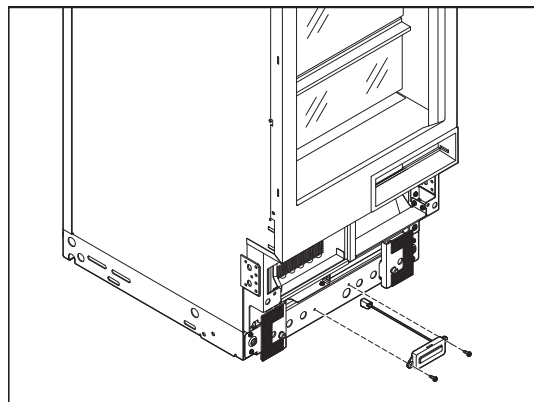
3. Pull the grill cover out.

Front Panel

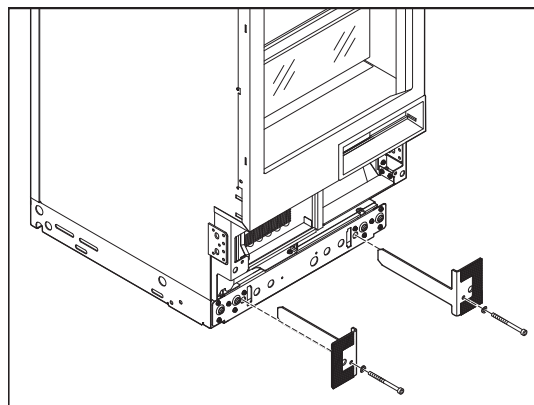
4. Lift the toe kick panel up and remove (if installed).



5. Loosen two, 1/4" (6.4 mm) hex head screws to remove the Wi-Fi antenna.

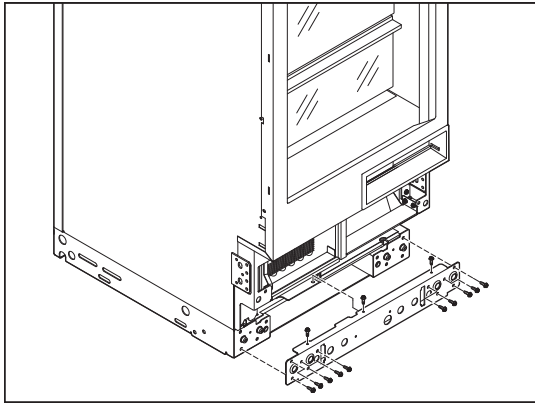


6. Remove the 5 mm hex key screw from each adjustment brackets as shown in the image.



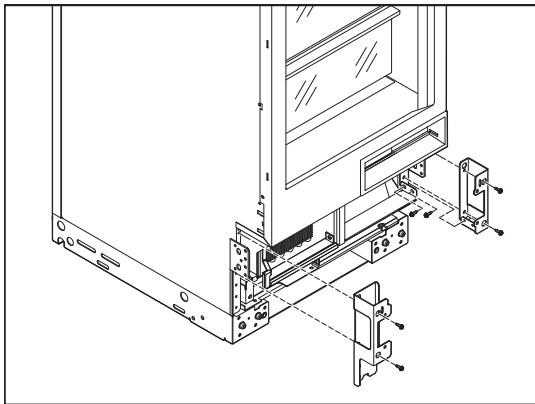
Accessing Components Under the Refrigerator (Continued)

- 7.** Remove thirteen, 1/4" (6.4 mm) hex head screws on the mullion bracket.

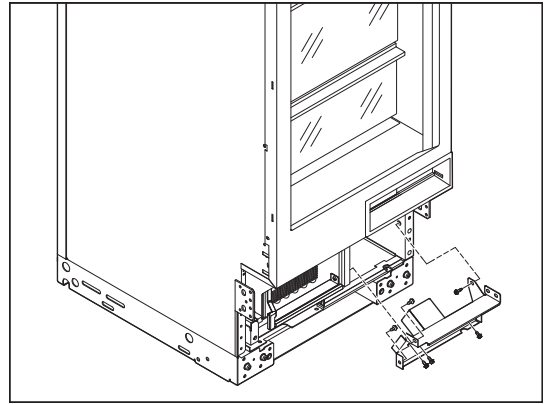


- 8.** Remove the mullion bracket.

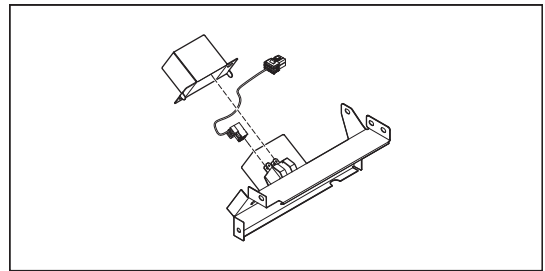
- 9.** Remove two, 1/4" (6.4 mm) on the left mount bracket. Remove the bracket. Remove four, 1/4" (6.4 mm) on the right mount bracket and remove the bracket.



- 10.** Remove six hex head screws to remove the safety cover as shown in the image.



- 11.** Disconnect wiring harness from ON/OFF switch and remove the ON/OFF switch.



Accessing Machine Compartment Components

⚠ WARNING



Electrical Shock Hazard

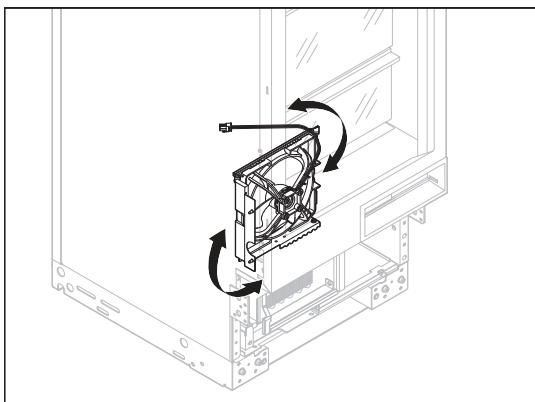
Disconnect power before servicing.

Replace all parts and panels before operating.

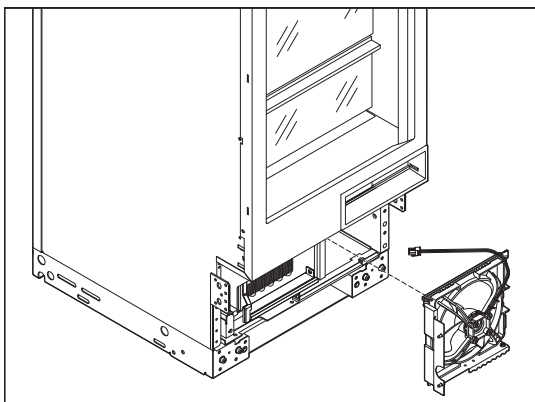
Failure to do so can result in death or electrical shock.

Condenser Fan

1. Complete the steps [1-11](#) from "Accessing Components Under the Refrigerator" section.
2. Disconnect the condenser fan wiring.
3. Push the locking tab on the condenser to release.
4. Move the condenser fan forward until it can be moved freely.



5. Gently remove condenser fan from the compartment.



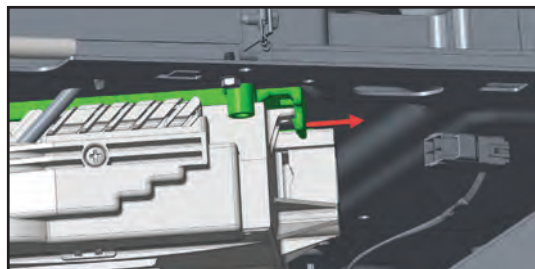
NOTE: Removal of Condenser Fan may require many movements and multiple attempts.

Compressor Inverter

6. Move heat loop tube in front of the compressor inverter to the right.



7. Disconnect the wiring harness of the inverter.
8. Pry the front center tab on the inverter box forward and pull down to remove.



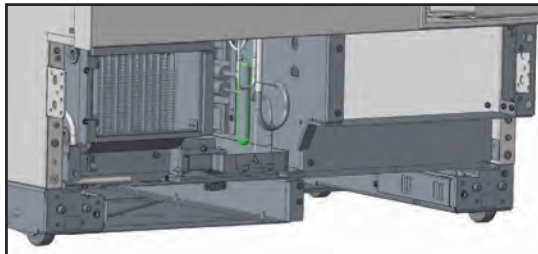
NOTE: The base pan of compartment and the remaining attached components are possible to remove (compressor and condenser).

Accessing Machine Compartment Components (Continued)

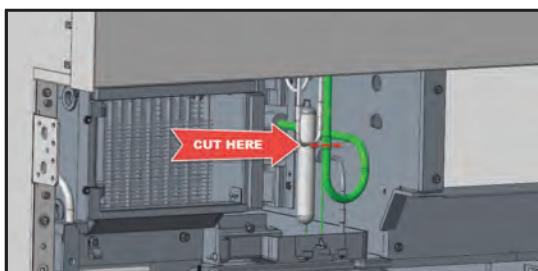
Discharging the System

NOTE: If the piercing valve is already installed during previous service or diagnostics, then use it for discharging the system.

9. Pierce the filter drier (accessing from front side).
NOTE: Refer to **Sealed System Manual (W10393765)** for standardized procedure.

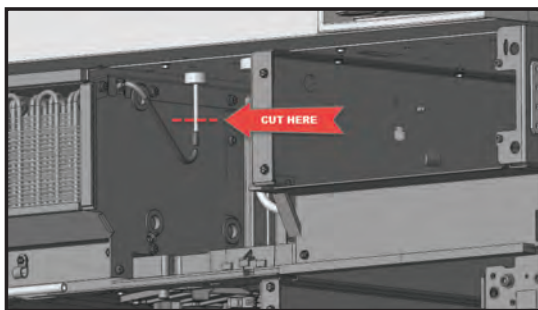


10. Cut the suction line below the existing joint.



11. Cut the first heat-loop inlet above the line to allow space for the compressor install kit.

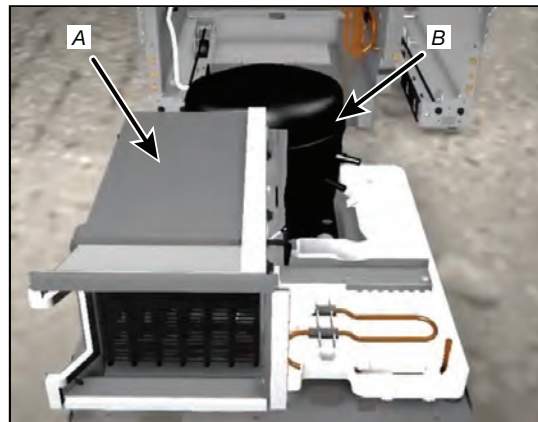
NOTE: Use **Compressor Install Kit (W10779331)** to bend the heat-loop inlet without damaging.



12. Remove the filter drier if necessary.

Condenser and Compressor

13. Move the base pan out from the front of the refrigerator. Below image shows components on the base pan of the compartment:



A. Condenser
B. Compressor

NOTE: Guide suction and discharge tubes during removal of the base pan to make sure that they do not catch the fan bracket.

PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:
FOR WHIRLPOOL PRODUCTS: 1-800-253-1301**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:
THE TECHNICAL ASSISTANCE LINE: 1-800-832-7174**

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

**FOR LITERATURE ORDERS (CUSTOMER EXPERIENCE CENTER):
PHONE: 1-800-851-4605**

**FOR TECHNICAL INFORMATION AND SERVICE POINTERS:
www.servicematters.com**

IN CANADA:

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL
1-800-461-5681**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:
THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791**

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