

### Fill Tube Heater

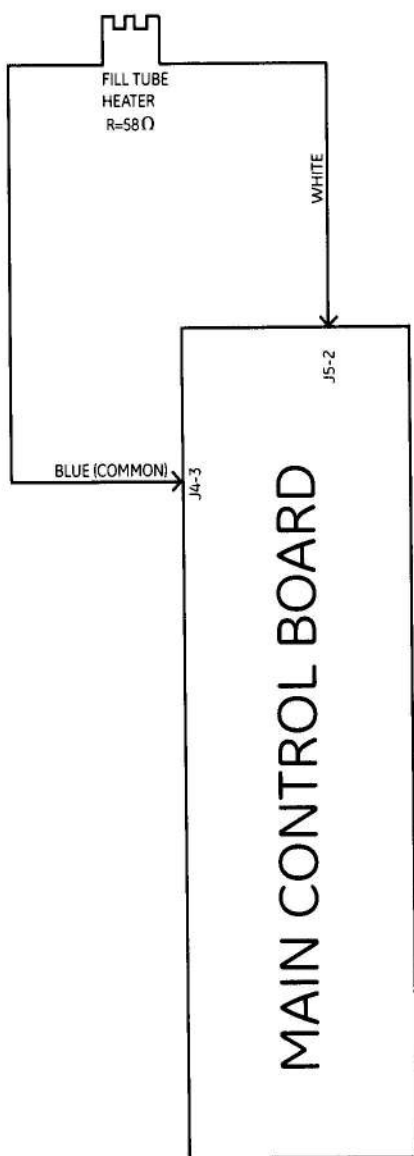
The fill tube heater is located inside the left-side fresh food door.

The fill tube heater will be on after water valve activation or when ice is dispensed.

The heater is controlled by the main control board and will be on for 2 hours after water valve operation or when ice is dispensed.

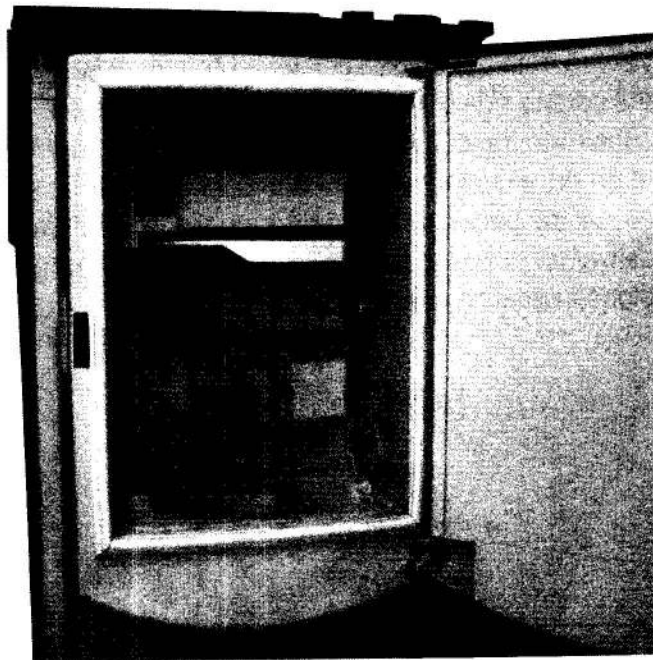
Applied voltage to this circuit can be tested at the main control board J4-3 to J5-2.

To replace the fill tube heater, it is necessary to replace the left-side fresh food door.



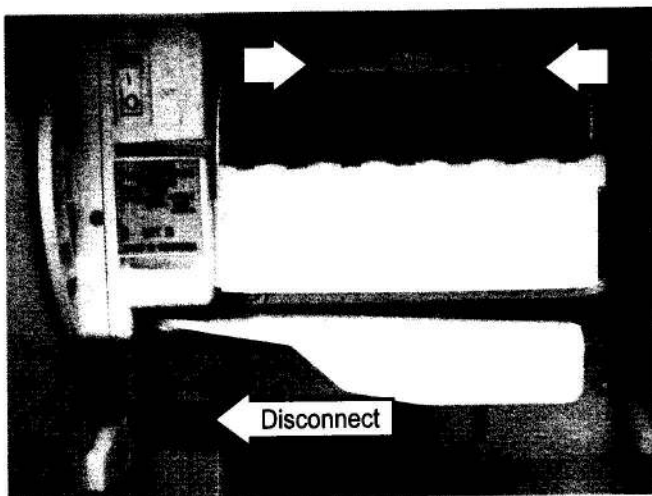
### Icemaker

To chill the icemaker, cold air enters the inlet port and exits the outlet port openings located on the right-side wall of the ice compartment.

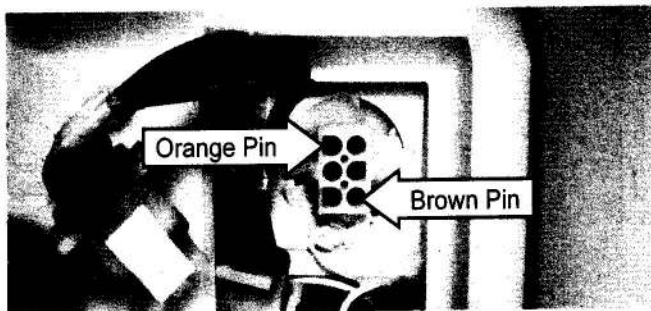


The icemaker is attached to the back wall of the ice compartment with two 1/4-in. hex-head screws. The icemaker connects to a receptacle located on the auger motor housing.

**Note:** When replacing the IM use only the originally electronic IM part number.



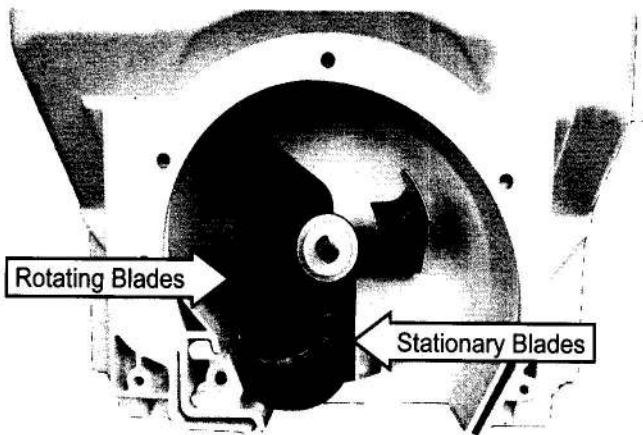
Check for icemaker supply voltage of 120 VAC on the ice compartment wire harness receptacle brown to orange pins. (See **Auger Motor**, steps 2-3.)



## Ice Bucket

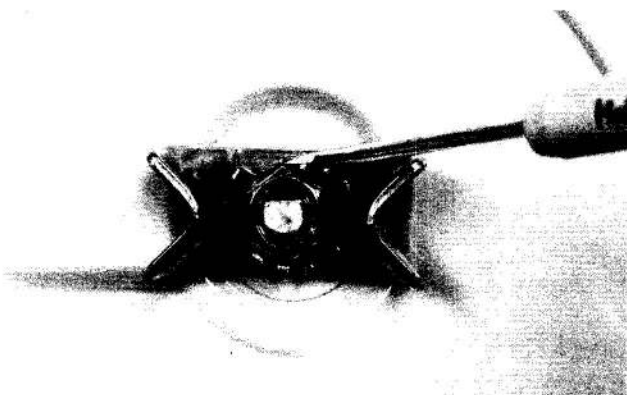
The ice bucket is approximately 6 inches deep and 9 inches wide and holds approximately 4 lbs of ice.

The direction of the rotating blades determine if cubed or crushed ice exits the ice bucket. When viewed from the back, clockwise rotation allows the cutting side of the rotating blades to drive the cubes into the cutting side of the stationary blades to produce crushed ice. Counterclockwise rotation allows the back side of the rotating blades to lift and deliver ice cubes to the back side of the stationary blades, allowing cubes to exit the bucket.



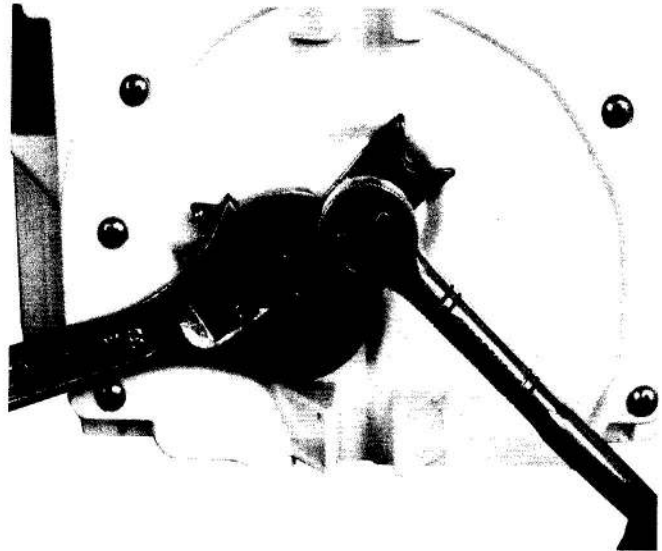
### To access the blades:

1. Remove the ice bucket from the door and place it front down on a protective surface.
2. Using a small flat blade screwdriver, pry the tabs on the lockwasher away from the hex nut.

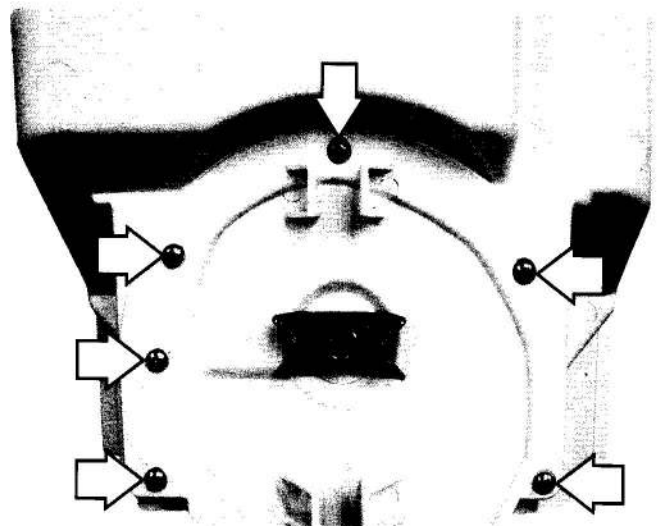


**Note:** In the following step, it may be helpful to attach an adjustable wrench to the coupling.

3. Remove the 14-mm hex nut from the coupling.



4. Remove the 6 Phillips-head screws and the cover from the ice bucket.



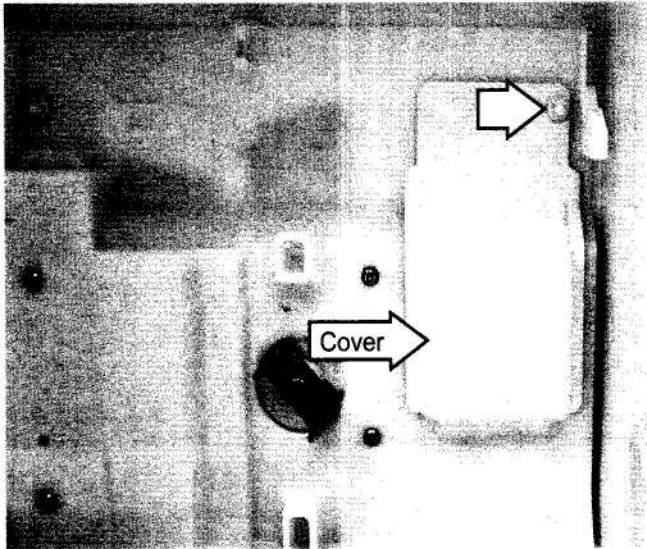
**Note:** Individual ice bucket parts are available and the ice bucket can be replaced as an assembly.

## Auger Motor

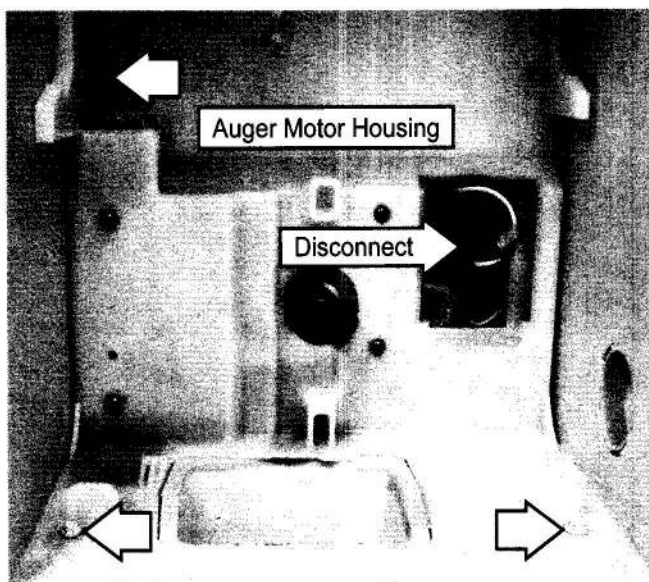
The auger utilizes a 120 VAC motor rated at 10.2 watts and draws .09 amps. The rated speed is 24.5 rpm. As viewed with the ice bucket out, clockwise rotation of the auger motor provides crushed ice, counterclockwise rotation produces cubes.

### To remove the auger motor:

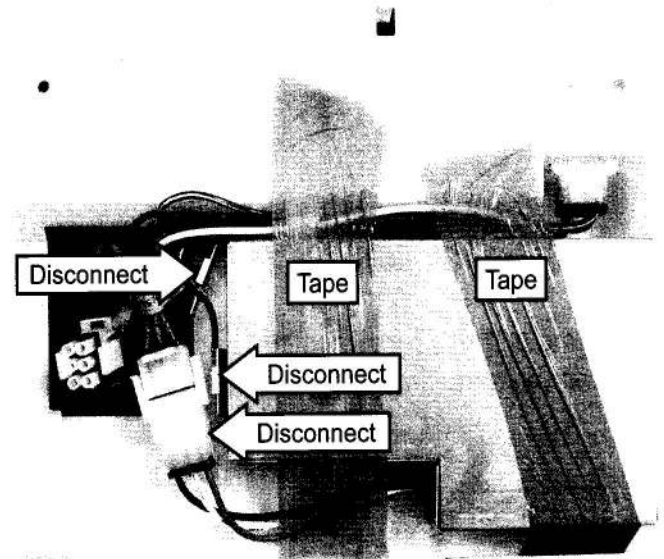
1. Remove the icemaker. (See *Icemaker*.)
2. Remove the 1/4-in. hex-head screw and the wiring access cover from the auger motor housing.



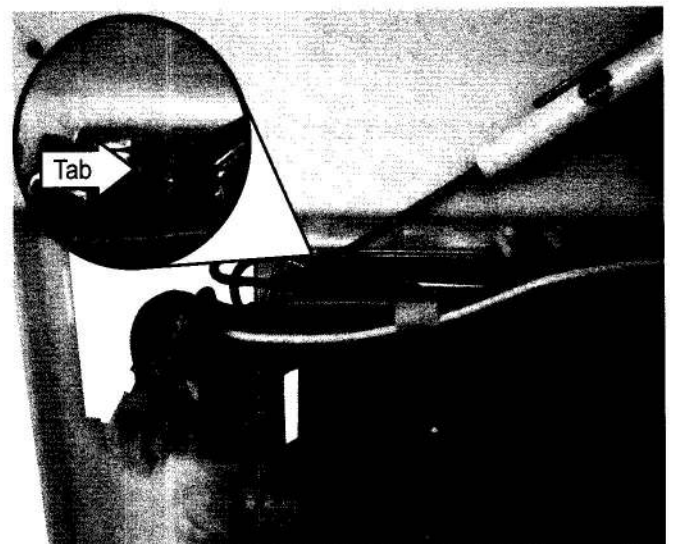
3. Disconnect the ice compartment wire harness.
4. Remove the three 1/4-in. hex-head screws from the auger motor housing.
5. Pull out the auger motor housing from the ice compartment.



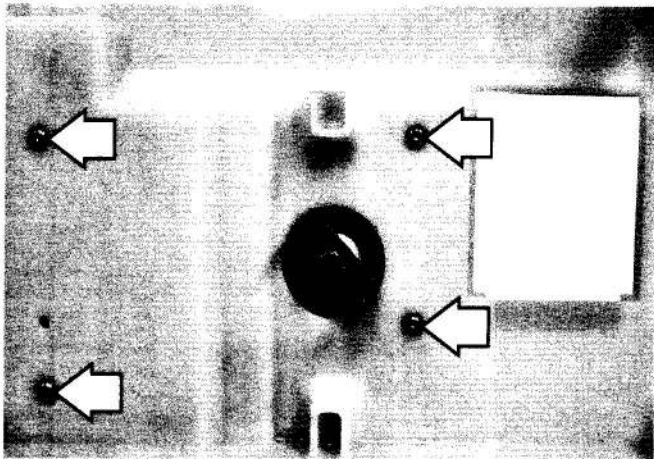
6. Disconnect the auger motor wire harness.
7. Disconnect the 2 ground wires from the metal rear cover.
8. Remove the tape from the metal rear cover located at the back of the housing.



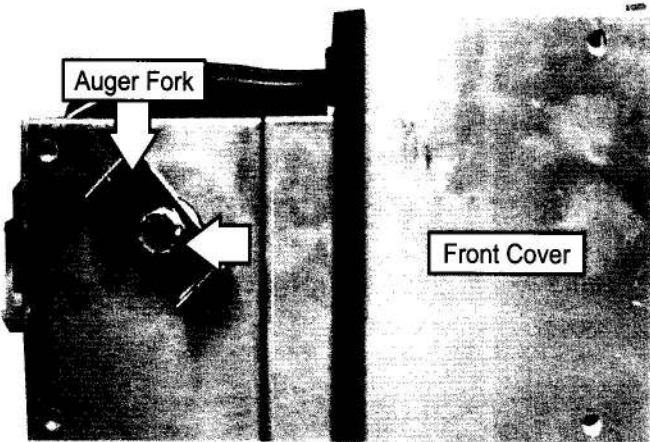
9. Using a small flat blade screwdriver, uncrimp the metal tabs located at the top right and bottom left corners of the metal rear cover. Remove the cover.



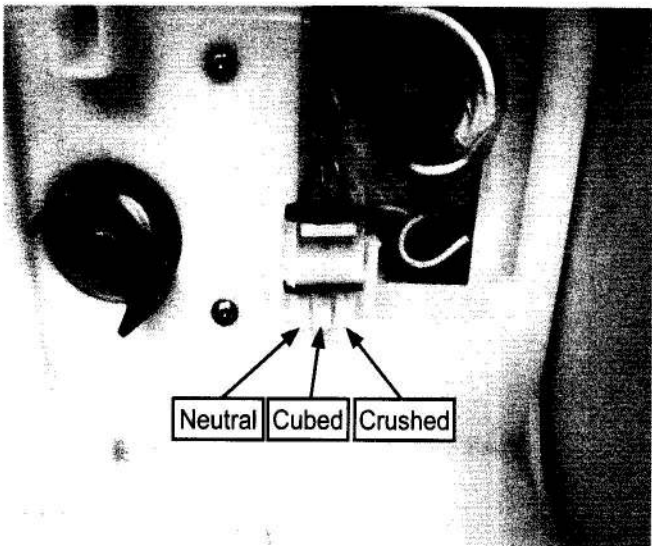
10. Remove the four T-10 Torx screws that attach the auger motor to the housing.



11. Remove the 1/2-in. hex-head nut, auger fork, and the metal front cover from the auger motor.



Check for auger motor supply voltage of 120 VAC on the disconnected auger motor wire harness.  
 Crushed rotation - orange (neutral) to beige wire  
 Cubed rotation - orange (neutral) to silver wire



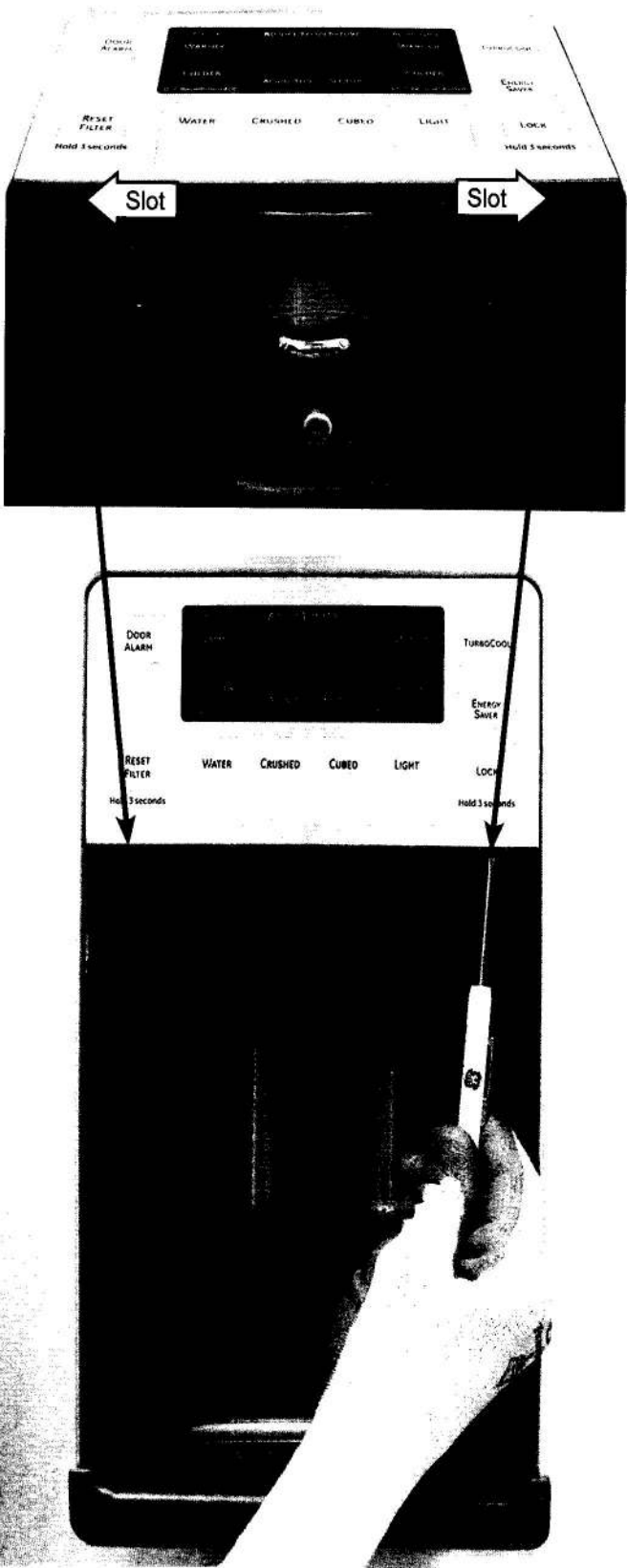
**Note:** To center the ice bucket cam and unload the crusher, the auger motor does a quick “reverse” action when dispensing is stopped (glass removed). (Not noticeable to consumer)

### Dispenser and Interface

The dispenser assembly incorporates the interface used for temperature control and features. The interface has 2 tabs that hold it to the dispenser housing. The tabs are located above 2 slots located behind the bottom of the interface.

#### To remove the water dispenser assembly:

1. Using a flat blade screwdriver, pry the bottom of the interface away from the dispenser recess.



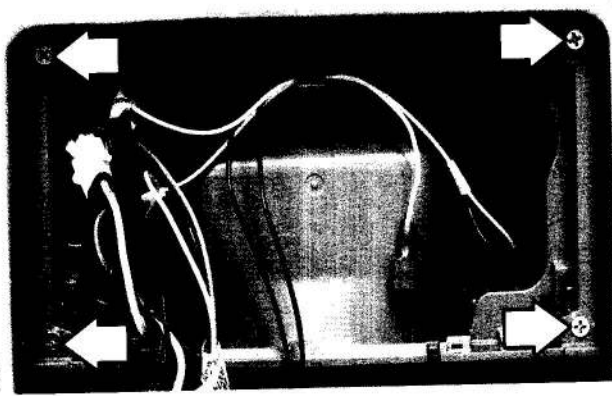
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- Carefully lower the interface and disconnect the 3 wire harnesses.

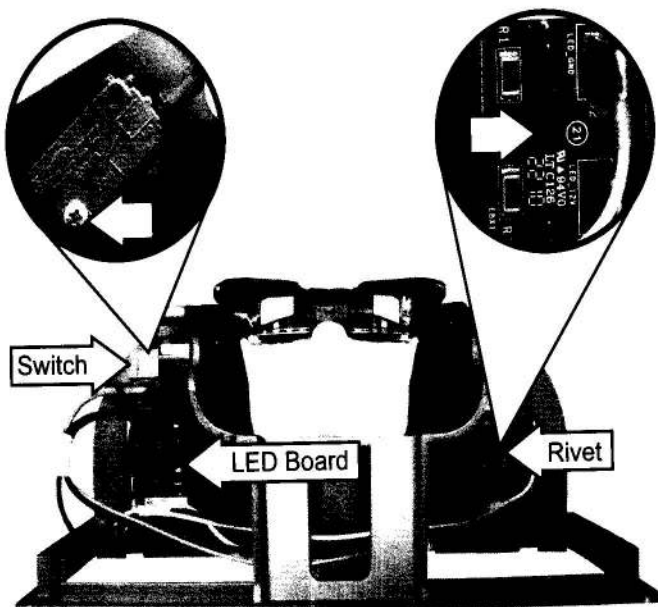


- Remove the 4 Phillips-head screws and the dispenser housing from the dispenser recess.



The dispenser cradle switch is attached to the left side of the dispenser housing with a Phillips-head screw.

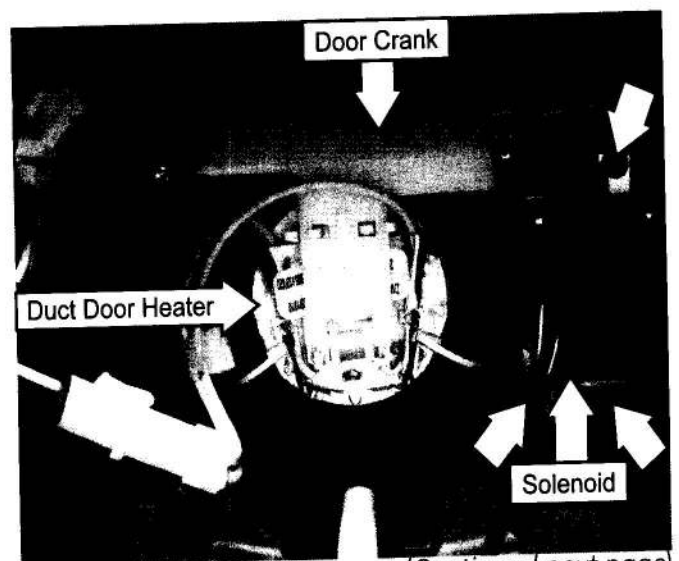
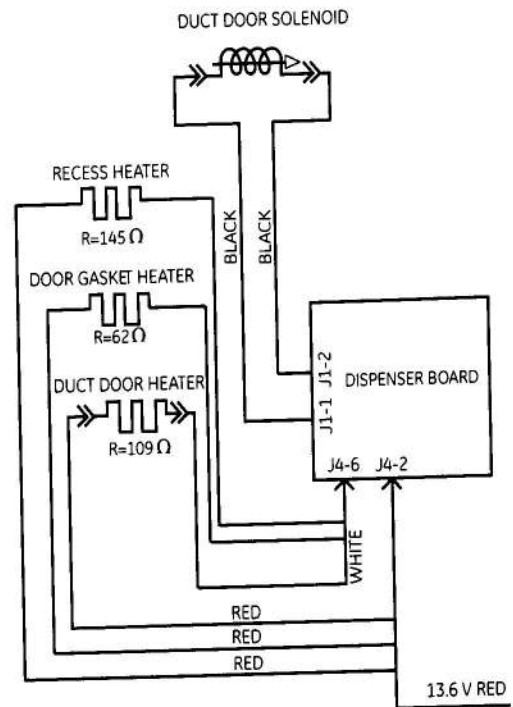
Each of the 2 dispenser LED boards are attached to the dispenser housing with a plastic clinch rivet.



The duct door heater consists of the heater, door, and door seal, available as an assembly. The heater operates on 13.6 VDC and has an approximate resistance value of  $109\ \Omega$ . The assembly is connected with a single wire harness and can be unsnapped from the solenoid-operated door crank.

The duct door heater is in a parallel circuit with the recess heater and the door gasket heater. These heaters operate based on temperature settings. For example, a freezer setting of mid-range temperature or higher equals 100 percent on-time except during ice dispense. Applied voltage to this circuit can be tested at dispenser board J4-2 to J4-6.

The solenoid operates on 13.6 VDC and has an approximate resistance value of  $13\ \Omega$ . The solenoid is connected with a single wire harness and is attached to the recess with 3 Phillips-head screws. Applied voltage to solenoid can be tested at dispenser board J1-1 to J1-2.



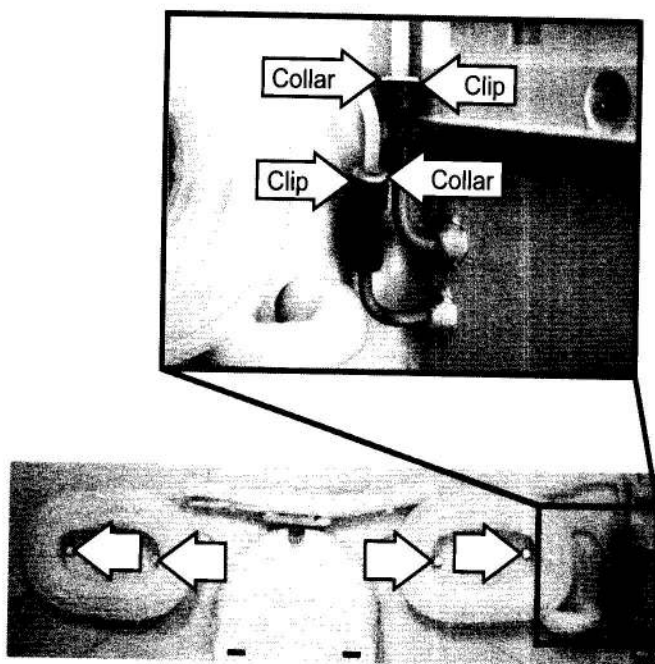
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## Double Coil Water Tank

The double coil water tank is located in the bottom of the fresh food compartment. (See **Components Locator Views**.) The icemaker and dispenser water tank supply tubes, connected to the water valve, enter the fresh food compartment near the right side tank. Both tubes connect to exit tubing using John Guest couplings. Exit tubing located inside the liner connects to the disconnect collars located near the left-door bottom hinge and cannot be replaced.

### To remove the water tank:

1. Remove the fruit and vegetable crisper drawers and the crisper drawer cover and frame assembly.
2. Using a flat blade screwdriver, push the top black plastic lock clip (if utilized) off each coupling.
3. Carefully push the collar in while pulling each water line out from the coupling.
4. Remove the two 1/4-in. hex-head screws that attach each water coil.



**Note:** In the following step, water may drain from disconnected tubing. Use care to avoid water spills.

5. Disconnect icemaker and water tank tubing from the water valve. (See **Water Valve**.)
6. Carefully pull water tank and tubing from the fresh food compartment.

## Fresh Food and Freezer Lights

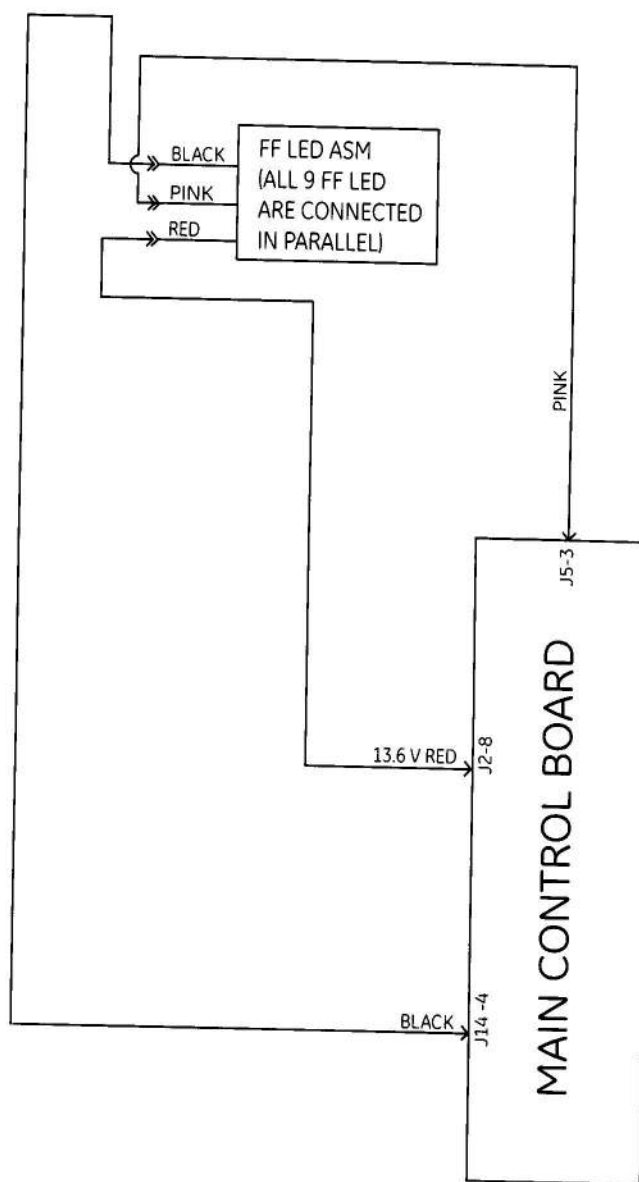
### Fresh Food LED Lights

**Note:** Setting the controls to **OFF** does not remove power to the LED light circuit.

The fresh food section utilizes 9 LED light assemblies and the freezer utilizes 1 LED light assembly. All 9 fresh food LEDs are wired in parallel.

When a door or drawer is left open continuously for 10 minutes, the main control will turn off the lights. Once the door or drawer is closed and then opened, the 10-minute count starts over.

### Fresh Food LED Schematic



J14-4 = LED Ground

J2-8 = 13 VDC

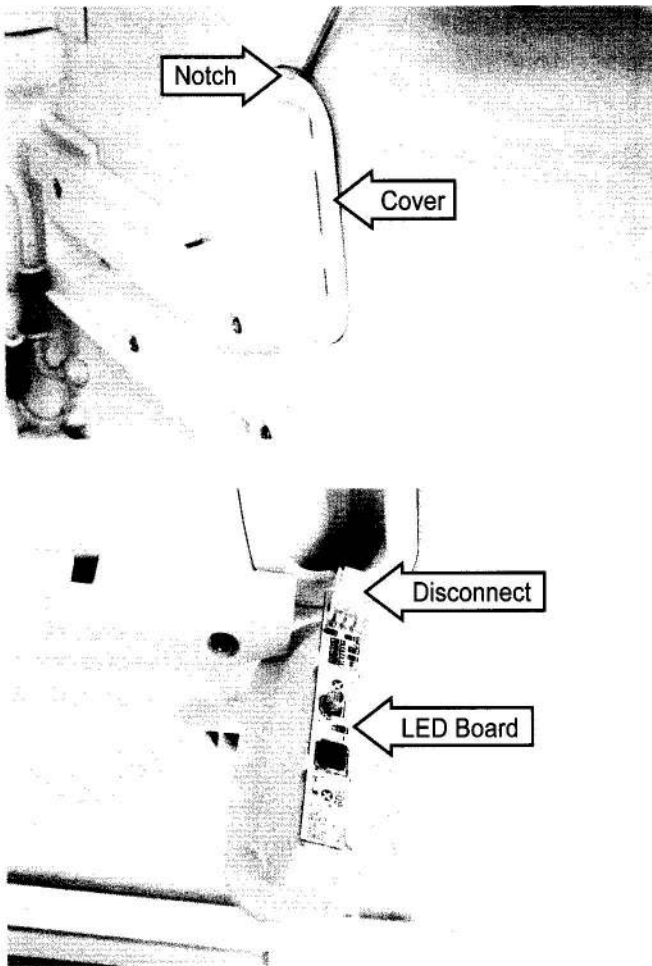
J5-3 = LED Enable

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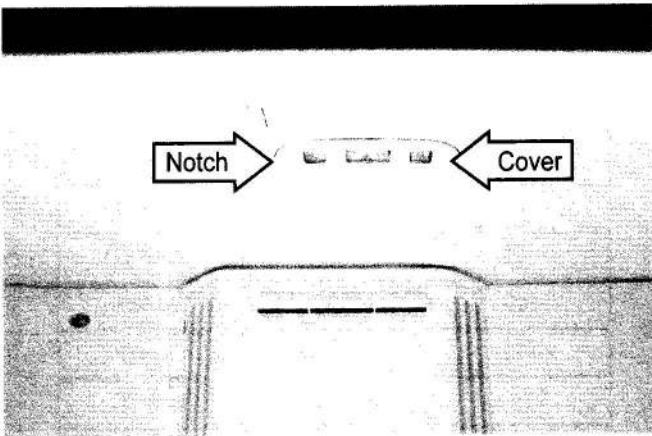
**Note:** The fresh food and freezer LED light assemblies are removed in the same manner.

Each LED assembly consists of an LED board attached to the inside of a cover. To access the LED board, insert a flat blade screwdriver under the cover's notched end and gently pry out until it releases from the compartment wall. The LED board can then be unsnapped from the cover and the wire harness disconnected.

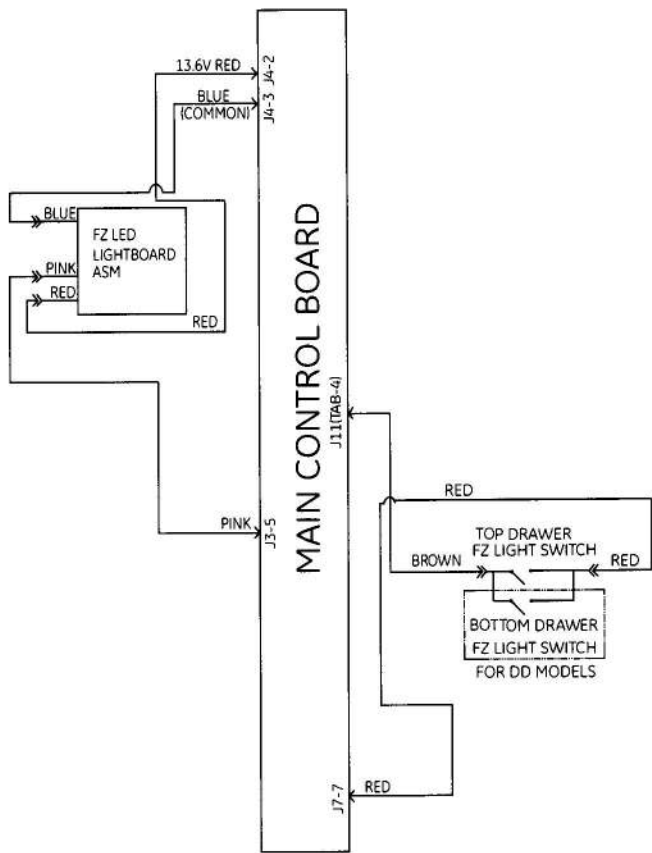
**Fresh Food LEDs**



**Freezer LED**



**Freezer LED Schematic**



J4-3 = LED Ground

J4-2 = 13 VDC

J3-5 = LED Enable

# Thermistors

Thermistor Values		
Temperature Degrees (°F)	Temperature Degrees (°C)	Resistance in Kilo-ohms
-40	-40	166.8 kΩ
-31	-35	120.5 kΩ
-22	-30	88 kΩ
-13	-25	65 kΩ
-4	-20	48.4 kΩ
5	-15	36.4 kΩ
14	-10	27.6 kΩ
23	-5	21 kΩ
32	0	16.3 kΩ
41	5	12.7 kΩ
50	10	10 kΩ
59	15	7.8 kΩ
68	20	6.2 kΩ
77	25	5 kΩ
86	30	4 kΩ
95	35	3.2 kΩ
104	40	2.6 kΩ
113	45	2.2 kΩ
122	50	1.8 kΩ
131	55	1.5 kΩ
140	60	1.2 kΩ

**Note:** To accurately test a thermistor, place the thermistor in a glass of ice and water (approximately 33°F) for several minutes and check for approximately 16K Ω.

## Ambient Thermistor

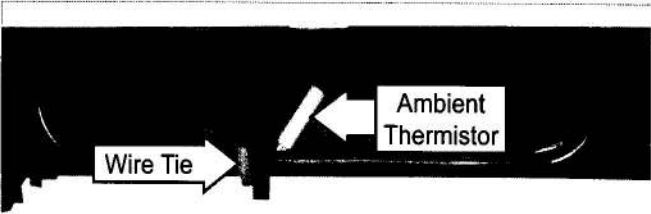
The ambient thermistor is located under the freezer compartment and connected at J1-2 on the main control board. (See **Component Locator Views**.) It assists the main control board in compensating for room ambient that is higher or lower than 60°F.

For example, in ambient below 60°F, the fresh food temperature control will shut down properly. The cooler room ambient assists in keeping fresh food temperature at the preset temperature. However, the compressor does not get enough run time to bring the freezer down to 0°F.

At lower room temperatures, the ambient thermistor alters the main control board's calculations for the target temperature. The main control board then runs the compressor at higher speeds to get the freezer, as well as the fresh food, to an acceptable temperature.

If the external thermistor is not functioning, the main control board default will assume the ambient temperature is 90°F and there will be no adjustment to the fresh food or freezer set point.

The ambient thermistor is attached to the front of the base (under the left side of the freezer compartment) with a plastic wire tie.

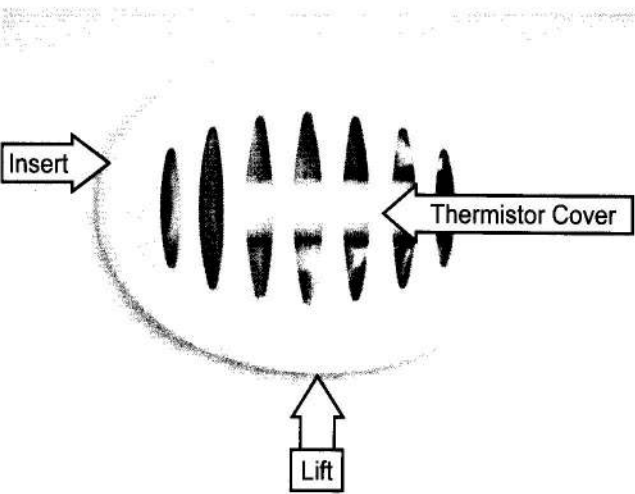


## Fresh Food and Freezer Thermistors

The fresh food thermistor is located in the left wall of the fresh food compartment and connected at J1-1 on the main control board. The freezer thermistor is located in the right wall of the freezer compartment and connected at J1-3 on the main control board.

**Note:** The fresh food and freezer thermistors are removed in the same manner.

To remove the thermistor cover, insert a flat blade screwdriver under the front of the cover and gently lift the bottom edge until it releases from the compartment wall.



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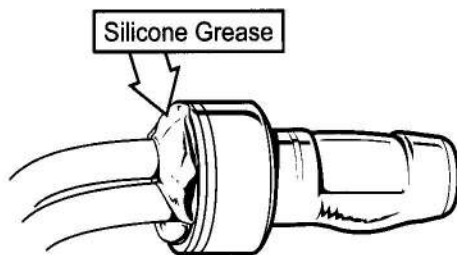


## Evaporator Thermistor

The evaporator thermistor is clipped to the suction tube line of the evaporator. (See **Evaporator** for accessing instructions.)



**Note:** When replacing the evaporator thermistor, splice a new thermistor into the harness using connectors and procedures approved for damp/wet conditions.



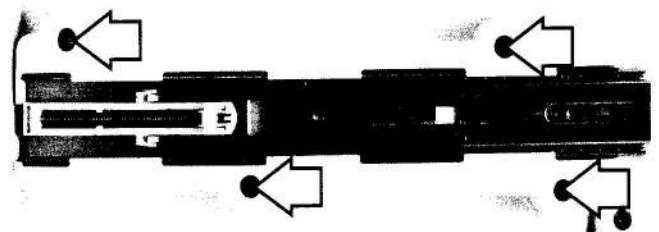
## Evaporator

The following components must be removed in the appropriate order to access the evaporator:

1. Unplug the refrigerator.
2. Remove the upper and lower freezer drawers. (See **Top Freezer Drawer**, **Bottom Freezer Drawer**.)

### Note:

- For added accessibility to freezer components, it may be necessary to remove the double drawers mullion assembly. (See **Double Drawer Mullion Assembly**.)
  - Each upper drawer side rail assembly is held in place by four 1/4-in. hex-head screws and a hook that locks into an opening in the side of the freezer.
3. Extend both upper drawer rail assemblies to the open position.
  4. Remove the four 1/4-in. hex-head screws that attach each upper rail assembly to the freezer wall.



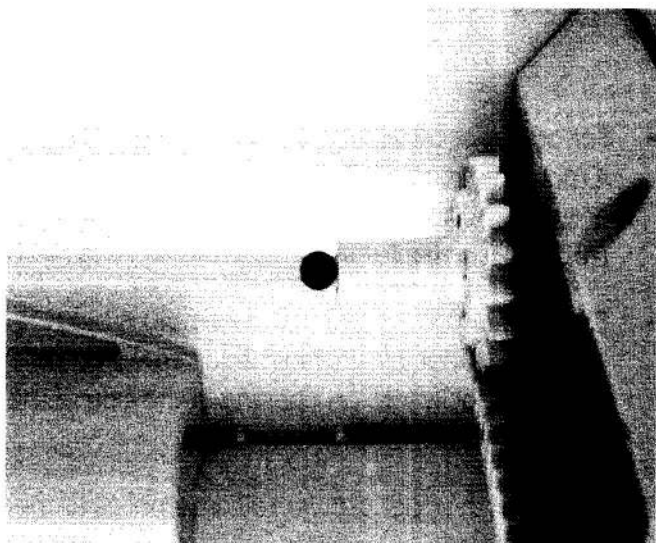
5. Pull the front of the rail assembly towards the center of the freezer and unhook the assembly from the side of the freezer.

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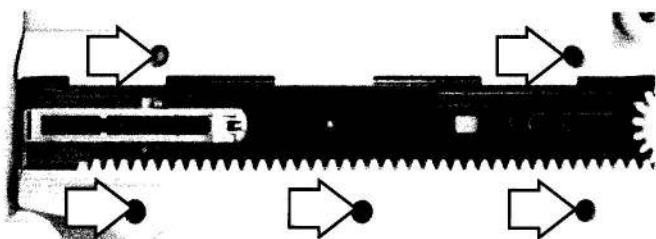
6. Remove small black locating pin from the roller guide bar.

**Note:** For best results when re-installing the roller guide bar, start with rollers in rear location.

7. Slide the roller guide bar to right and remove it from the rollers.

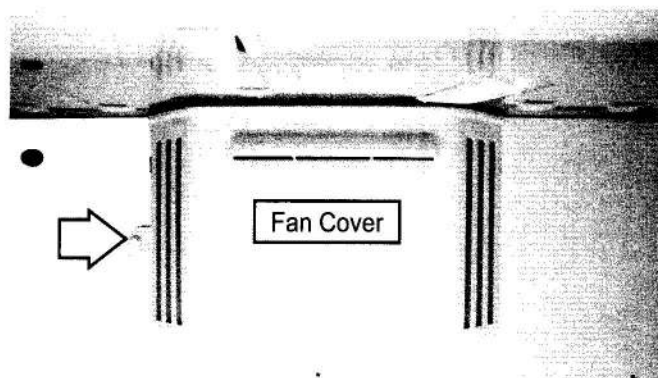


8. Remove the five 1/4-in. Hex-head screws that attach each lower rail assembly to the freezer wall.



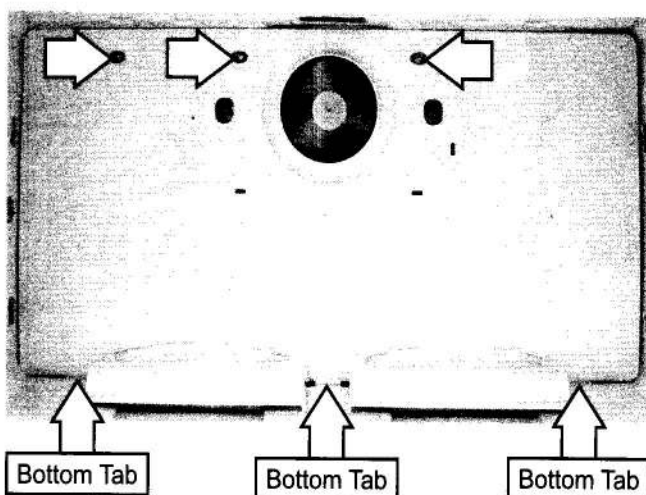
9. Pull the front of the rail assembly towards the center of the freezer and unhook the assembly from the side of the freezer.

10. Remove the 1/4-in. hex-head screw and the fan cover from the evaporator cover.



**Note:** The evaporator cover is attached to the evaporator compartment with 3 recessed 1/4-in. hex-head screws, 3 bottom tabs, and 5 snap tabs located on the back of the cover.

11. Remove the three 1/4-in. hex-head screws that attach the evaporator cover.



12. Grasp the right side of the fan opening and pull the cover towards the front of the freezer to release the right side snap tabs.

13. Reach in and disconnect the evaporator fan motor wire harness, and then remove the cover from the freezer.

