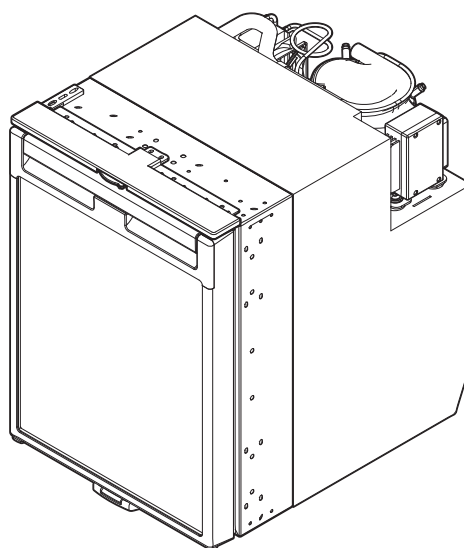
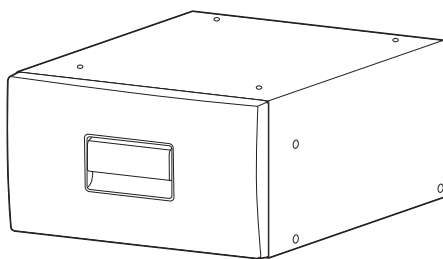




# REFRIGERATION REFRIGERATORS



CD20, CD30, CD50, CR50T, CR65T, CRX50, CRX65

EN

## Refrigerator

Service Manual..... 2

**Service Center & Dealer Locations**

Visit: [www.dometic.com](http://www.dometic.com)

Read these instructions carefully.

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# 1 Explanation of Symbols and Safety Instructions

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.

## 1.1 Recognize Safety Information

 **This is the safety alert symbol.** It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

## 1.2 Understand Signal Words

A signal word will identify safety messages and property damage messages, and it also will indicate the degree or level of hazard seriousness.

### **DANGER!**

Indicates a hazardous situation that, if **not** avoided, will result in death or serious injury.


### **WARNING**

Indicates a hazardous situation that, if **not** avoided, could result in death or serious injury.

### **CAUTION**

Indicates a hazardous situation that, if **not** avoided, could result in minor or moderate injury.

**NOTICE:** Used to address practices **not** related to physical injury.

 Indicates additional information that is **not** related to physical injury.

## 1.3 Supplemental Directives

To reduce the risk of accidents and injuries, please observe the following directives before proceeding to service this appliance:

- Read and follow all safety information and instructions.
- Read and understand these instructions before service or maintenance of this product.

- The installation must comply with all applicable local or national codes, including the latest edition of the following standards:

### **U.S.A.**

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code
- ANSI Z21.57, Recreational Vehicles Code

### **Canada**

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

## 1.4 General Safety Messages

 **WARNING: ELECTRICAL SHOCK, FIRE, AND/OR EXPLOSION HAZARD. Failure to obey the following warnings could result in death or serious injury:**

- Disconnect all power before working within any electrical enclosure or before handling any electrical connections.
- If powered diagnostics are necessary to troubleshoot the appliance, a trained and certified service technician is required.
- Use only Dometic replacement parts and components that are specifically approved for use with the appliance.
- Avoid improper installation, adjustment, alterations, service, or maintenance of the appliance. Service and maintenance must be done by a qualified service person only.
- Do not modify this product in any way. Modification can be extremely hazardous.

# 2 Intended Use

This service manual is intended for use by OEM installers and dealer technicians. Manual users are assumed to have a basic understanding of refrigeration best practices and experience in the proper use of the tools and materials related to the maintaining and servicing of refrigeration equipment used in the trucking industry.

The refrigerator is designed for installation in trucks. Dometic recommends that the unit be installed into a fixed position. Once it is installed, only the front of the appliance may be accessible. The refrigerator is only suitable for cooling, freezing, and storing foodstuffs.

**i** The refrigerator is not intended for the proper storage of medicine.

## 3 Troubleshooting

This section outlines the main causes of refrigerator issues and helps to identify the potential causes.

Review the Troubleshooting table to help identify the suspected operational issue, the potential causes, and the diagnostic procedure associated with those issues.

Refer to the Diagnostics table for links to specific refrigerator components that show diagnostic tasks to help you confirm the suspected operational issue and potential cause.

Remember to check the basics before replacing any parts, such as contributing issues. Refer to the Maintenance (on page 23) and Power/Installation Issues (on page 12) sections for more detail.

### Troubleshooting

Operational Issue	Potential Reason	Page
The refrigerator will not start.	The battery voltage is too low.	12
	The control module is faulty.	8
	The load dump board is faulty.	12
	The thermostat assembly is faulty.	10
The refrigerator tries to start, but it immediately shuts off.	The battery voltage is too low.	12
	The control module is faulty.	8
	The compressor is faulty.	7
	There is a loose wiring or power connection.	12
	The thermostat assembly is faulty.	10
The door will not close properly.	The door assembly requires adjustment.	9
	The door seal is broken or faulty.	9
	The bottom and/or top latch catch is misaligned or broken.	9
	The thermostat assembly is not installed properly (CR models only).	15
The compressor runs, but the unit does not cool.	The ambient temperature is too high.	12
	There is insufficient ventilation.	12
	The condenser is dirty.	23
	The condenser fan is faulty.	8
	The unit has experienced a loss of refrigerant liquid.	13
There is excessive frost inside the unit.	The thermostat assembly is faulty.	10
	The NTC sensor thermistor is faulty.	9
	The refrigerator door is not closing properly.	9
There is a loud humming noise.	The compressor motor is locked.	7
	The condenser fan motor is faulty.	8
The thermostat assembly is blinking.	The unit has a system error.	11

## Diagnostics

Component	Page
Compressor	7
Condenser Fan	8
Control Module	8

## 4 General Information

This section provides reference information on the tooling, model identification, components, and terminology associated with the different refrigerator models.

### 4.1 Tools and Materials

Dometic recommends that the following tools and materials be used while servicing the refrigerator:

#### Recommended Tools

Multimeter	Needle Nose Pliers
18-Gauge Alligator Clip Jumper Wire	#1 and #2 Phillips-Head Screwdrivers
12 VDC Battery <sup>1</sup>	Control Module (Secop)

<sup>1</sup> Dometic does not recommend the use of a power supply or AC/DC power converter, unless it is supplied by Dometic.

### 4.2 Model Identification

Each refrigerator is manufactured with a data plate that indicates the model number, product number, serial number, and other useful information, as shown in Figure 1.

To locate the data plate, open the door of the refrigerator and look inside. The data plate is located near the top of the refrigerator interior cabinet.

<b>MOD.NO.</b> CRX0050		<b>PROD.NO.</b> 936001487	
<b>SKU NO.</b> 9105306035		<b>SER. NO.</b> 54602906	
Bruttoinhalt/Gross Volume: 47L Nutzinhalt/Storage Volume: 45L Klimaklasse/Climatic Class: T Kältemittel/Refrigerant: R134a/0.038kg Treibmittel/Insulation Blowing Gas: C <sub>3</sub> H <sub>10</sub> Max. Druck/Max. Pressure: ND 11 bar/HD 25 bar		Eingangsspannung/Input Voltage: DC 12/24V --- Leistungsaufnahme/Power Rating: 5.0A at DC 12V 2.6A at DC 24V	
Contains fluorinated greenhouse gases covered by the Kyoto Protocol. Type and amount of refrigerant see product label. Hermetically sealed.			
		www.dometic-waeco.de 5375 10 R-04 3115	
Manufactured in China by Dometic Group		1546 F3	

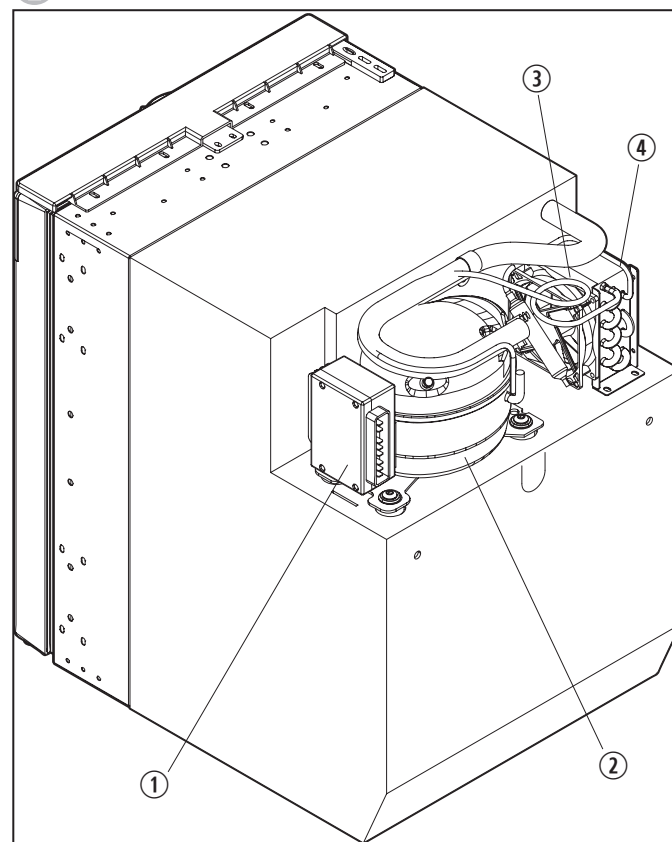
1 CRX Data Plate Example

Component	Page
Door Assembly	9
NTC Sensor	9
Thermostat Assembly	10

### 4.3 Component Locations

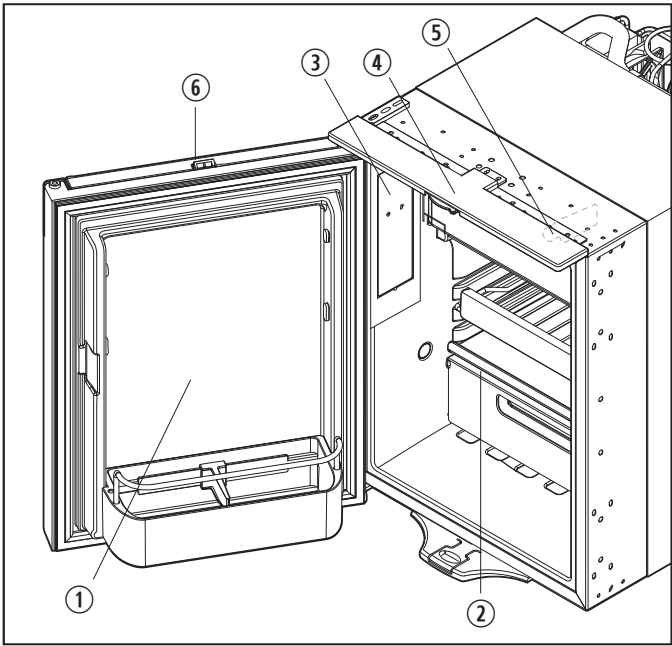
Figures 2 and 3 show the locations of the major components on the CR and CRX series refrigerators.

**i** The CD series models vary.



2 General CR/CRX Component Locations (Rear View)

- ① Control Module
- ② Compressor
- ③ Condenser Fan
- ④ Condenser



3 General CRX Component Locations (Front View)

- ① Door Assembly
- ② Shelving and Racks
- ③ Thermostat Assembly
- ④ Vent Cover
- ⑤ NTC Sensor
- ⑥ Handle Assembly

**i** The NTC sensor is mounted on the interior of the unit toward the left side of the refrigerator.

4.4 General Refrigerator Terminology

The following table defines some of the terms that are typically used when dealing with refrigerator units.

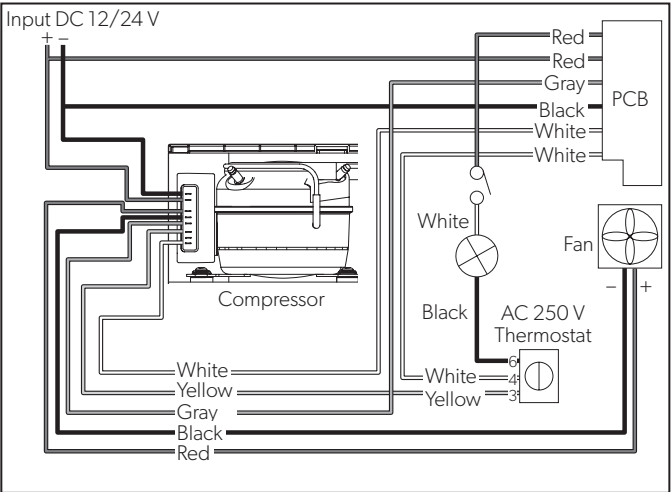
Term	Definition
Capillary Tube	Refrigerant liquid metering device that regulates refrigerant flow from the high-pressure side into the low-pressure side
Capillary Tube Strainer/Dryer	Filter used to prevent particulate from entering the refrigerant flow control
Compressor	Component that circulates the refrigerant necessary for heat exchange through the coils
Condenser	Heat exchanger section to cool down and condense incoming refrigerant vapor into liquid
Condenser Coil	Tubing used to release heat energy from refrigerant and condense refrigerant vapor into liquid

Term	Definition
Condenser Fan	Fan that circulates air, which helps the condenser unit function properly
Control Module	Power distribution board and compressor controller that directs incoming power to the unit
Load Dump Board	Component that disconnects the refrigerator from the truck electrical system when DC voltage exceeds 32 VDC (reconnection occurs after the DC voltage returns to normal)
Locking Wheel	Selector wheel on the refrigerator handle assembly that can be set to "normal" or "vent" positions
Negative Temperature Coefficient (NTC) Sensor	Thermistor that allows the refrigerator to stay within a short range of temperatures and turn on its cooling cycle when the temperature starts to rise
Printed Circuit Board (PCB)	Thin board made of fiberglass, composite epoxy, or other laminate material on which conductive pathways are etched or "printed"
Thermostat Assembly	Device that controls the cooling system components and interior temperature of the refrigerator unit

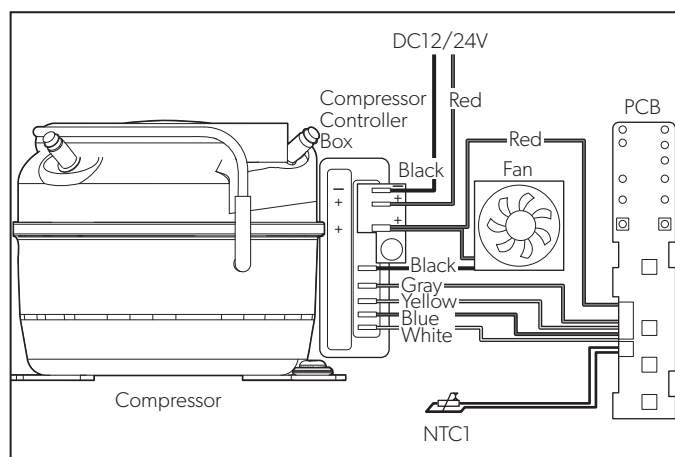
4.5 Wiring Diagrams

Figures 4 and 5 provide examples of the wiring specifications for CR and CRX series refrigerators.

**i** The wiring specifications for CD series refrigerators are similar to those for the CR series shown below.



4 CR Series Wiring Diagram



**5** CRX Series Wiring Diagram

## 5 Diagnostic Procedures

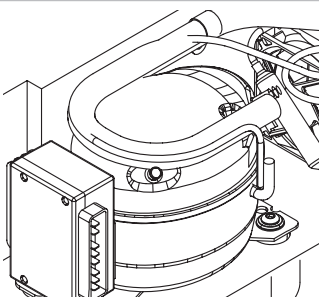
You can identify refrigerator operational issues using either component-based diagnostic procedures, or via the LED indicator lights on the thermostat assembly.

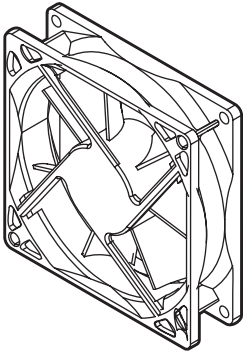
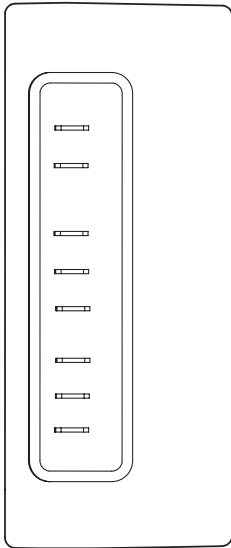
Refer to the Component-Based Diagnostics (on page 7) and the Error-Based Diagnostics (on page 11) sections for more details.

### 5.1 Component-Based Diagnostics

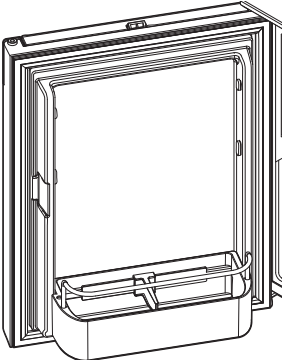
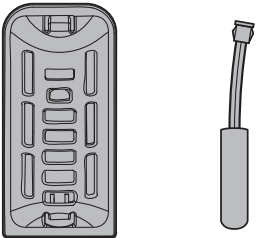
This section has information to help you identify various refrigerator operational issues by diagnosing individual component parts.

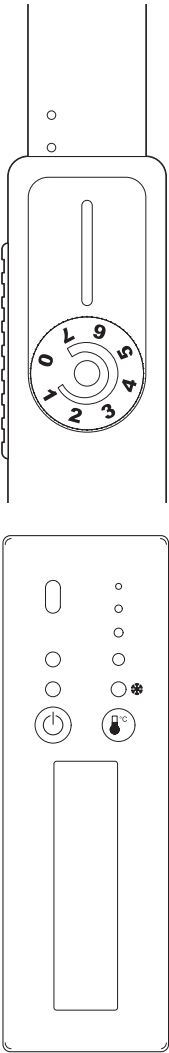
Remember to check the basics before replacing any parts, such as loose wiring and overall installation issues. Refer to the Maintenance (on page 23) and Power/Installation Issues (on page 12) sections for details.

Component	Diagnostic Question	Action Based On Status	Page
<b>Compressor</b>			
	Does the compressor run?	<ul style="list-style-type: none"> <li>Verify that the compressor is wired correctly and has power.</li> <li>Correct any wiring and/or power issues as needed.</li> </ul>	6
		<ul style="list-style-type: none"> <li>Verify that the thermostat works correctly.</li> <li>Correct any issues as needed.</li> </ul>	10
	Does the compressor turn on/off frequently?	<ul style="list-style-type: none"> <li>Verify that the compressor is wired correctly and has power.</li> <li>Correct any wiring and/or power issues as needed.</li> </ul>	6
		<ul style="list-style-type: none"> <li>Verify that the door seals properly.</li> <li>Correct any door and/or seal issues as needed.</li> </ul>	14
		<ul style="list-style-type: none"> <li>Verify that the thermostat works correctly.</li> <li>Correct any issues as needed.</li> </ul>	10
	Does the compressor still not function properly after performing the above diagnostic tests?	Replace the refrigerator unit.	13

Component	Diagnostic Question	Action Based On Status	Page
<b>Condenser Fan</b>			
	Is the condenser fan receiving power from the control module?	<ul style="list-style-type: none"> <li>Manually test the condenser fan to ensure that it works correctly.</li> <li>Ensure that the control module is properly wired to send power to the fan.</li> <li>Correct any wiring issues as needed.</li> </ul>	6
	Does the condenser fan make loud or uncharacteristic sounds, such as humming?	<ul style="list-style-type: none"> <li>Verify that the fan is clean and that it moves freely without obstruction.</li> <li>Clean the fan and remove any debris as needed.</li> </ul>	23
	Does the condenser fan still not function properly after performing the above diagnostic tests?	<ul style="list-style-type: none"> <li>Manually test the condenser fan to ensure that it works correctly.</li> </ul> Replace the condenser fan.	17
<b>Control Module</b>			
	Is the control module properly connected to and receiving supply power?	<ul style="list-style-type: none"> <li>Ensure that the module is properly connected and receiving power from the 12 VDC or 24 VDC supply circuit.</li> <li>Correct any power issues as needed.</li> </ul>	12
	Is the polarity correct?	<ul style="list-style-type: none"> <li>Ensure that the module positive and negative inputs are correctly wired.</li> <li>Correct any polarity issues as needed.</li> </ul>	6
	<b>NOTICE:</b> Reversed polarity can blow fuses and might cause damage the control module.		
	Is the control module receiving a run signal?	<ul style="list-style-type: none"> <li>Place a jumper wire on the C and T terminals of the control module to verify that the run signal is being received.</li> <li>Correct any wiring issues as needed.</li> </ul>	6
	Are all other wiring connections correct?	<ul style="list-style-type: none"> <li>Ensure that the control module inputs and outputs are correctly wired.</li> <li>Correct any wiring issues as needed.</li> </ul>	6
	Are the LED lights on the thermostat assembly illuminated or flashing?	<ul style="list-style-type: none"> <li>Verify whether the LED lights on the thermostat assembly are flashing.</li> <li>Correct any issues as needed.</li> </ul>	10
	Does the control module still not function properly after performing the above diagnostic tests?	Replace the control module.	13



Component	Diagnostic Question	Action Based On Status	Page
<b>Door Assembly</b>			
	Does the compressor run constantly or turn on/off frequently?	<ul style="list-style-type: none"> <li>Verify that the door seals and closes properly.</li> <li>Adjust any door and/or seal issues as needed.</li> </ul>	14
	Does the door seal and latch properly to the unit?	<ul style="list-style-type: none"> <li>Verify that the door seals and closes properly.</li> <li>Adjust any door and/or seal issues as needed.</li> </ul>	14
	Does the unit reach the appropriate cooling temperature and/or is there excessive frost inside the unit?	<ul style="list-style-type: none"> <li>For CR series models, verify that the thermostat assembly is installed correctly.</li> <li>Adjust the thermostat assembly as needed.</li> </ul>	15
	Does the door assembly still not function properly after performing the above diagnostic tests?	Replace the door assembly.	14
<b>NTC Sensor</b>			
	Does the unit not hold the set temperature or does it warm too quickly?	Ensure that the vent mechanism is not set to the "vent" position.	N/A
	Is the unit attempting to start, but then stops?	<ul style="list-style-type: none"> <li>Verify that the sensor is properly connected and powered.</li> <li>Fix any wiring and/or power issues as needed.</li> </ul>	6
	Is the thermostat assembly red indicator light flashing?	<ul style="list-style-type: none"> <li>Check the thermostat assembly.</li> <li>Determine whether the red indicator light is flashing in sequence.</li> </ul>	11

Component	Diagnostic Question	Action Based On Status	Page
Thermostat Assembly			
	Are the LED lights illuminated on the thermostat?	<ul style="list-style-type: none"><li>• Verify that the thermostat assembly has power and that the LED lights are illuminated.</li><li>• Correct any power or wiring issues as needed.</li></ul>	6
	<div><div>i</div><div>If the green light is steadily illuminated, the assembly is functioning properly; if the red light is flashing, then the unit has identified a system error. See Error-Based Diagnostics on page 11 for details.</div></div>		
	Is there excessive frost inside the unit?	<ul style="list-style-type: none"><li>• Verify that the door is closing properly.</li><li>• Adjust the door as needed.</li></ul>	14
	Does the unit respond appropriately to the specified cooling setting?	<ul style="list-style-type: none"><li>• Turn the dial to the coldest setting, and let the unit run for fifteen minutes.</li><li>• Verify that the unit is cooling according to the specified settings.</li></ul>	N/A
	Is the temperature inside the unit too cold?	<div>Verify that the unit has not been placed into Freezer mode:</div> <ul style="list-style-type: none"><li>• Press and hold the Temperature button for three seconds to switch between modes.</li><li>• Refer to the unit operating manual for more information.</li></ul>	N/A
	Does the thermostat assembly still not function properly after performing the above diagnostic tests?	Replace the thermostat assembly.	17

## 5.2 Error-Based Diagnostics

The thermostat assembly has two LED indicator lights. The green light is used to indicate that the system is receiving voltage. The red light will flash (for approximately one quarter of a second) to indicate any operational errors that are identified.

Refer to the following table to diagnose system errors based on the flash sequences from this indicator light.

**i** The CD 30 series refrigerators do not include an LED thermostat assembly, so the following information does not apply.

Flashes	Fault Description	Possible Cause	Recommended Action	Page
1	Low Voltage Cutoff <sup>1</sup>	The control module experiences voltage at or below 11.7 VDC upon compressor startup, or the voltage has dropped to 10.4 VDC or below after the compressor is running.	Monitor the voltage at the input of the control module to ensure that there is not a voltage drop below 0.2 VDC when the compressor attempts to start. If the voltage drop is greater than 0.2 VDC: <ul style="list-style-type: none"> <li>Inspect the truck wiring and all connections for loose or corrosive terminals.</li> <li>Check for a weak cell in the truck battery.</li> </ul>	12
2	Too Many Start Attempts	The compressor attempts too many starts within one minute.	<ul style="list-style-type: none"> <li>Allow the refrigerator to sit with the thermostat set to the coldest setting, with power applied, for two minutes to clear the fault.</li> <li>If the fault continues, complete the actions described for the fan overload current fault.</li> </ul>	N/A
	Fan Overload Current	The fan draws more than 0.5 amps.	<ul style="list-style-type: none"> <li>Locate and remove the wire from terminal "F" on the control module (negative terminal for the fan circuit).</li> <li>Attempt to restart refrigerator.</li> <li>If the fault continues, replace the control module. If not, replace the condenser fan.</li> </ul>	13/17
3	Motor Start Error <sup>2</sup>	The rotor is jammed.	<ul style="list-style-type: none"> <li>Turn the unit off for fifteen minutes, and then turn the unit back on.</li> <li>Using a multimeter, verify that the compressor pins show 2.2 – 2.5 ohms between all three pins, and ensure that there are no shorts to ground.</li> <li>If the ohm readings are within specification, replace the control module.</li> <li>If the fault still occurs, replace the refrigerator.</li> </ul>	13
		The pressure difference in the cooling system is too high (> 5 bar).		
4	Minimum Speed Error	The cooling system is too heavily loaded, and the compressor cannot maintain a high enough RPM (1,850 RPMs).	<ul style="list-style-type: none"> <li>Remove all items from the unit, and let it cool down to the set temperature while empty.</li> <li>Using a multimeter, verify that the compressor pins show 2.2 – 2.5 ohms between all three pins and ensure that there are no shorts to ground.</li> <li>If the ohm readings are within specification, replace the control module.</li> </ul>	13
5	Thermal Cut-Off <sup>3</sup>	There is a lack of proper ventilation.	<ul style="list-style-type: none"> <li>Remove the unit from the truck, and place it in a well ventilated area. If the unit starts working correctly, then the issue is a lack of ventilation around the unit, or it is too hot in the truck.</li> <li>If the fault persists, replace the control module.</li> </ul>	13
		The cooling system is too heavily loaded, causing the electronics to overheat.		
6 <sup>4</sup>	NTC Sensor Error	The NTC sensor is defective.	Replace the NTC sensor.	21

<sup>1</sup> You may not actually see the voltage dip all the way to 10.4 VDC voltage cut out. The module has a voltage sensor that can read voltage more quickly than most common Fluke meters. If any voltage drop is present, this issue must be corrected.

<sup>2</sup> There is no way to bypass the module. Trying to do so with 12 VDC power will damage the compressor. The compressor is actually a three phase AC motor that the module powers.

<sup>3</sup> Heat must be removed from the rear of the refrigerator for proper operation. The design temperatures are 14 °F – 110 °F (-10 °C – 43 °C). Lack of ventilation can lead to premature compressor failure or poor cooling capabilities. There must be a minimum of 36 square inches of opening to the outside for ventilation, and a minimum of four inches of clearance behind the refrigerator. Two openings are recommended. Ventilation air must have a clear path in and a clear path out.

<sup>4</sup> Although the LED light flashes six times in succession, it will appear to blink continuously.

## 6 Power/Installation Issues


Many of the refrigerator problems are caused by issues outside the product itself. When diagnosing a refrigerator problem, always check the issues described in this section before replacing components.

### 6.1 Power Issues

If the refrigerator is experiencing a source issue from the power supply of the truck, the fix is not related to the appliance and could be the result of a battery issue.

Use a digital or analog volt meter to take voltage readings. Refer to the following table to diagnose possible power issues.

Problem	Possible Cause	Remedy
$U_{\text{Term}} = 0 \text{ V}$	There is an interruption in the battery or electronics connection.	Establish a connection.
	The main switch is faulty (if installed).	Replace the main switch.
	The additional supply line fuse has blown (if installed).	Replace the supply line fuse.
$U_{\text{Term}} \leq U_{\text{ON}}$	The battery voltage is too low.	Charge the battery.
Start attempt with $U_{\text{Term}} \leq U_{\text{OFF}}$	There are loose cables or a poor contact (corrosion).	Establish a connection.
	The battery voltage is too low.	Replace the battery.
	The cable cross-section is too small.	Replace the cable.
Start attempt with $U_{\text{Term}} \leq U_{\text{ON}}$	The ambient temperature is too high.	Move the unit to a new location.
	There is insufficient ventilation.	
$U_{\text{Term}}$	Voltage between positive and negative terminals	
$U_{\text{ON}}$	Cut-in voltage	
$U_{\text{OFF}}$	Cut-off voltage	

 This appliance must be installed with a load dump board. Refer to the manufacturer's specifications for troubleshooting and/or replacement.

### 6.2 Installation Issues


Specific clearances are required during the installation of the refrigerator. Check the installation manual for the appliance to find the proper dimensions, and ensure that the installation location complies.

**NOTICE:** Improper clearances and/or ventilation can lead to high ambient temperature, causing cooling issues and possible damage to equipment electronics.

## 7 Service Procedures

 **WARNING: ELECTRICAL SHOCK, FIRE, AND/OR EXPLOSION HAZARD. Failure to obey the following warnings could result in death or serious injury:**

- Use only Dometic replacement parts and components that are specifically approved for use with the appliance.
- Service must be done by a qualified service person only.
- Always disconnect the unit from power before servicing.
- Always ensure sufficient ventilation so that the heat generated during operation can dissipate.
- Do not fill the inner container with fluid or immerse the appliance in water.
- Protect the appliance and power cable against heat and moisture.

 Images in this section are general depictions of the refrigerators and are informational only. Actual model setup may vary. To see general component locations, refer to Component Locations on page 5.

This section has information to help you service the unit components and replace the unit, if needed. Remember to check the basics before replacing any parts, such as loose wiring and overall Installation issues. Refer to the Maintenance (on page 23) and Power/Installation Issues (on page 12) sections for more detail.

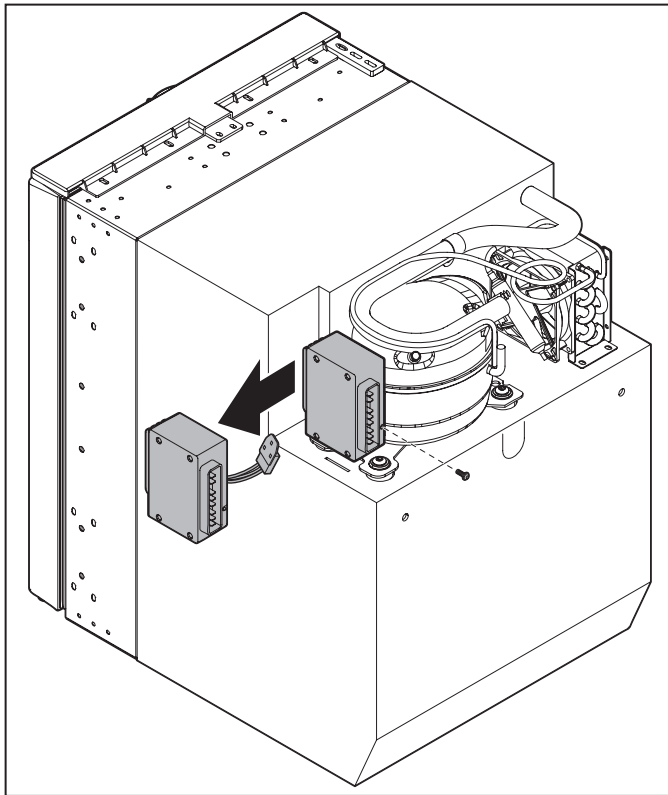
## 7.1 Replacing the Refrigerator

Replacement of the refrigerator will vary according to the specific model, installation location and cabinetry, and distributor specifications.

If replacement of the unit is required for any reason (such as physical damage, loss of refrigerant liquid, or a faulty compressor), refer to the appliance installation manual for specific guidelines, and ensure that installation complies with all applicable local or national codes.

**i** For specific refrigerator information outside of what is presented in this manual, refer to the appliance installation manual at [www.dometic.com](http://www.dometic.com).

## 7.2 Replacing the Control Module



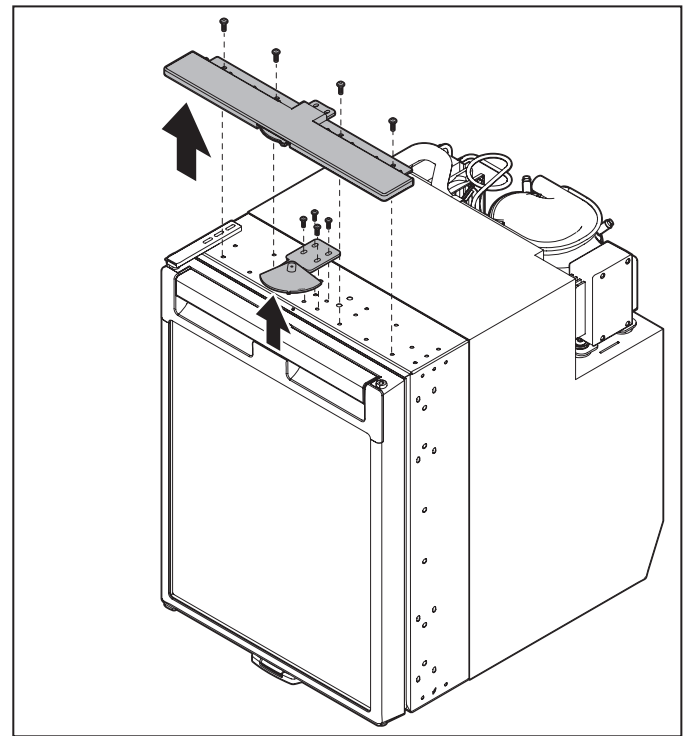
**6** Replacing the Control Module

**i** The example figure shows the CRX model. Other models may vary.

1. Disconnect the unit from power.
2. Make note of all designated wire locations on the control module and remove all connected terminals.

3. Locate and remove the Phillips-head screw holding the controller to the compressor.
4. Pull the control module away from compressor and disconnect the connector with the three wires from the side of the compressor.
5. Complete these steps in reverse order to install the new module.

## 7.3 Replacing the Vent Cover and Selector Mechanism

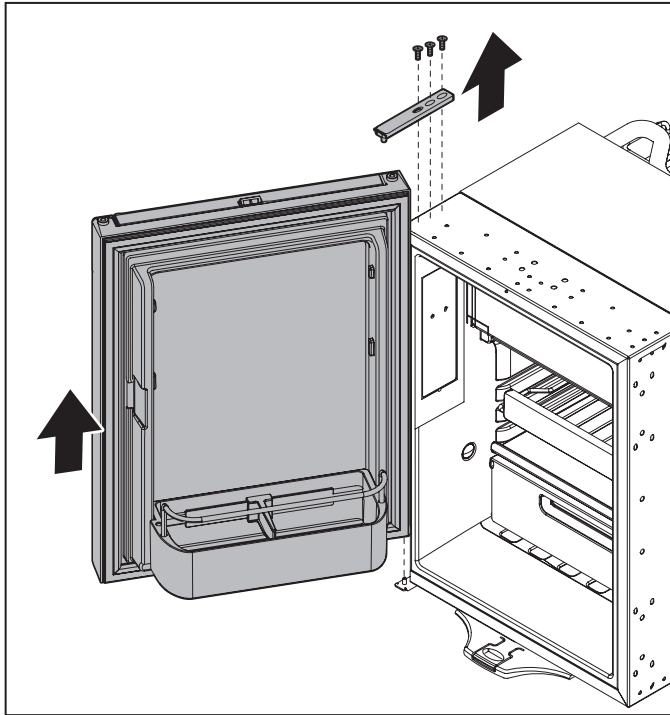


**7** Replacing the Vent Cover and Mechanism

1. Locate and remove the four screws securing the vent cover to the refrigerator unit.
2. Remove the vent cover.
3. Locate and remove the four screws securing the vent selector mechanism to the unit.
4. Complete these steps in reverse order to install the new vent cover and/or selector mechanism.

**i** The vent selector mechanism has two available positions: normal and vent. Ensure that the mechanism is set to the desired position upon replacement.

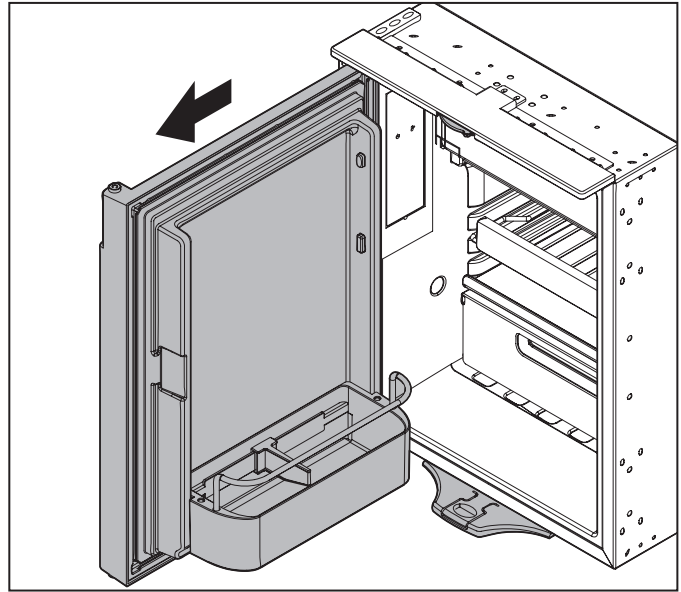
## 7.4 Replacing the Door Assembly and Hinges



### 8 Replacing the Door Assembly and Hinges

1. Complete the steps on page 13 to remove the vent cover and mechanism.
  2. Remove the three screws securing the top hinge to the unit and remove the hinge.
  3. Pull the door upwards to remove it from the bottom hinge.
- i** At this point, perform these steps in reverse order to install the new door assembly, or proceed with the following steps to replace the hinges.
4. Rest the refrigerator on its back side so that the bottom hinge can be accessed.
  5. Remove the three screws securing the bottom hinge to the unit.
  6. Complete these steps in reverse to install the new hinges and/or door assembly.
- i** Do not over-tighten the screws during installation. Refer to the Adjusting the Door section to adjust the door, if required.

## 7.5 Adjusting the Door



### 9 Adjusting the Door

- i** Before adjustment begins, set the vent mechanism to the "normal" position (no marking).
1. Verify that the gasket is not rolled over on the hinge side of the door upon closing. If the gasket is rolled over when the door is closed, complete the following steps:
    - Loosen the top and bottom hinge screws (refer to the Replacing the Door Assembly and Hinges section for details).
    - Pull the door away from the hinges, keeping the door parallel with the side of the refrigerator and evenly spaced with the front of the unit.
    - Tighten the screws (do not over-tighten).
    - Ensure that the door closes properly with minimal effort. The door should latch and the gasket should be flat against the front of the unit when the door hinge is properly set.
  2. With the door closed and latched, attempt to pull it open (without using the door handle) to verify that it only opens 1/16 – 3/16 in. (2 – 5 mm). If the gap falls outside of this range, complete the following steps to adjust the upper and lower latches.
    - Remove the vent cover and adjust the upper latch, as needed, to achieve a gap that falls within the specified range.

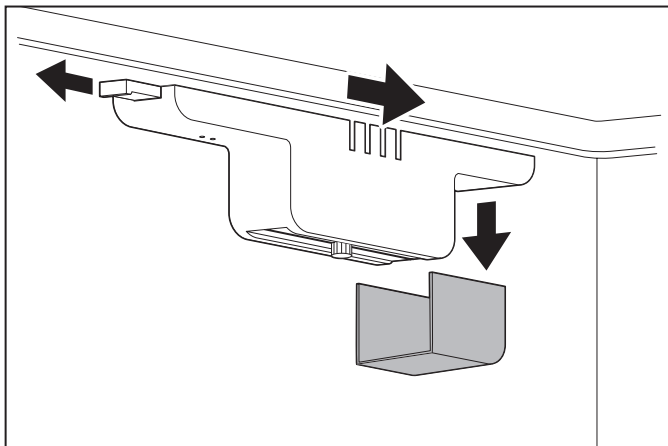
- Tilt the unit backwards to gain access to the lower latch catch, and adjust it so that the door catches both the upper and lower latches simultaneously upon closing.

**i** Refer to the Adjusting the Thermostat Assembly (for CR series models only), Replacing the Handle Assembly, or Replacing the Lower Latch Catch sections as needed if proper adjustment is not possible and/or not sufficient to remedy the door issues.

### 7.5.1 Adjusting the Thermostat Assembly

**i** This procedure is for CR series models only.

If the door does not close properly, and you feel spring pressure just before the door latches, then the interior light switch actuator is being squeezed between the door and the side of the cabinet. This is due to the thermostat assembly being installed too far forward inside the unit. Complete this procedure to adjust the position of the thermostat assembly remedy the issue.



**10** Adjusting the CR Thermostat Assembly

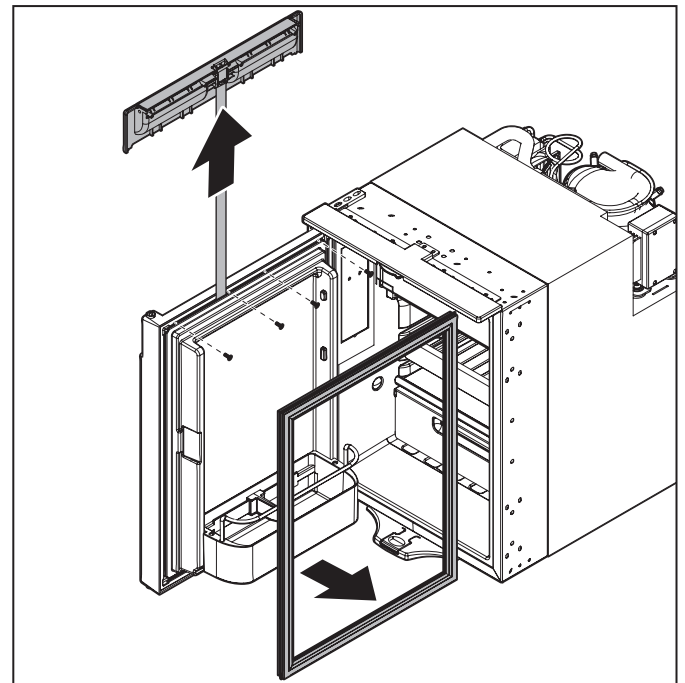
1. Gently pull and remove the plunger that activates the interior light.
2. Remove the light bulb cover.
3. Remove the Phillips-head screw behind the plunger location and loosen the screw behind the light bulb location approximately 1.5 turns (do not remove).
4. Gently push the thermostat assembly toward the back of the unit approximately 1/8 in. (3 mm).
5. Use masking tape (or similar product) to temporarily hold the assembly in place.

6. Carefully replace the plunger and verify that the door closes properly and that the light turns off. Make any adjustments as needed to ensure proper placement.
7. Remove the plunger and reinstall the front mounting screw.

**i** When you install the front mounting screw, it will create a new hole in the plastic interior.

8. Complete steps 1—3 in reverse order.

### 7.6 Replacing the Handle Assembly



**11** Replacing the Handle Assembly

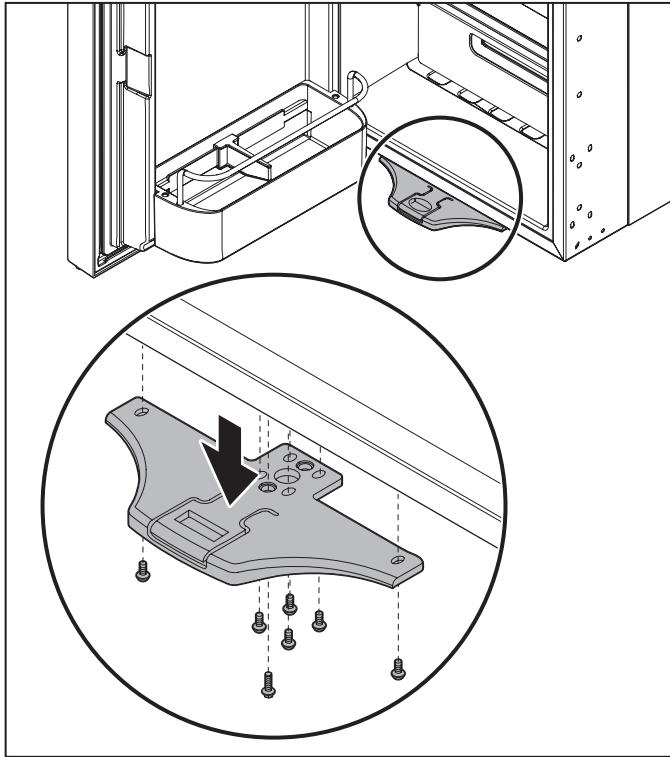
#### **⚠ CAUTION: CUT HAZARD.**

The metal bar is very sharp, so use care when handling. Failure to obey this caution could result in minor or moderate injury.

1. Open the refrigerator door.
2. Remove the interior gasket from the refrigerator door.
3. Locate and remove the four Phillips-head screws at the top of the door.
4. Pull up on the handle from the outside of the door to remove the assembly.
5. Complete these steps in reverse order to install the new handle assembly.



## 7.7 Replacing the Lower Latch Catch

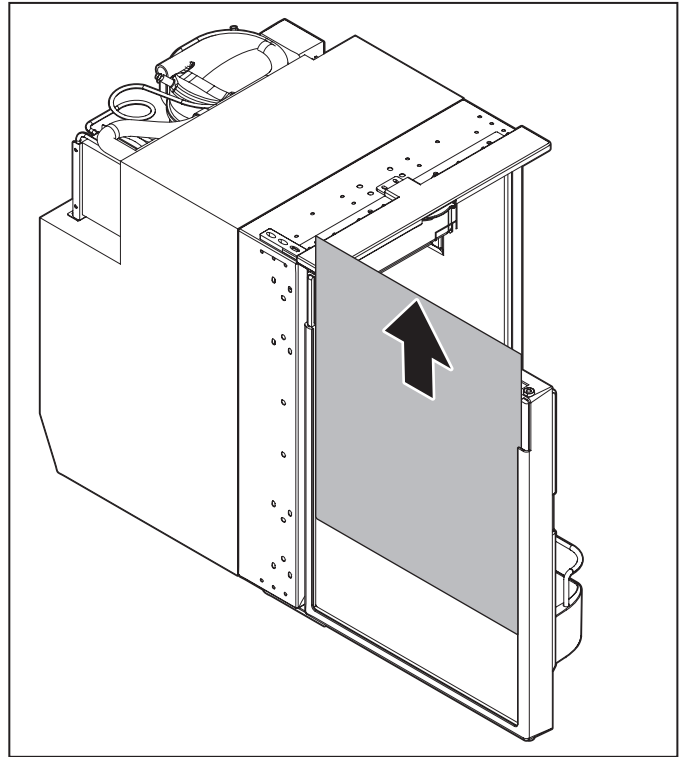


### 12 Replacing the Lower Latch Catch

1. Locate and remove the Phillips-head screw securing the lower latch catch to the bottom of the unit.
2. Locate and remove the six T20 Torx-head screws securing the lower latch catch to the bottom of the unit.
3. Remove the bottom latch catch.
4. Complete these steps in reverse order to install the new lower latch catch.

**i** Refer to Adjusting the Door on page 14 to properly adjust the lower latch catch.

## 7.8 Replacing the Door Panel



### 13 Replacing the Door Panel

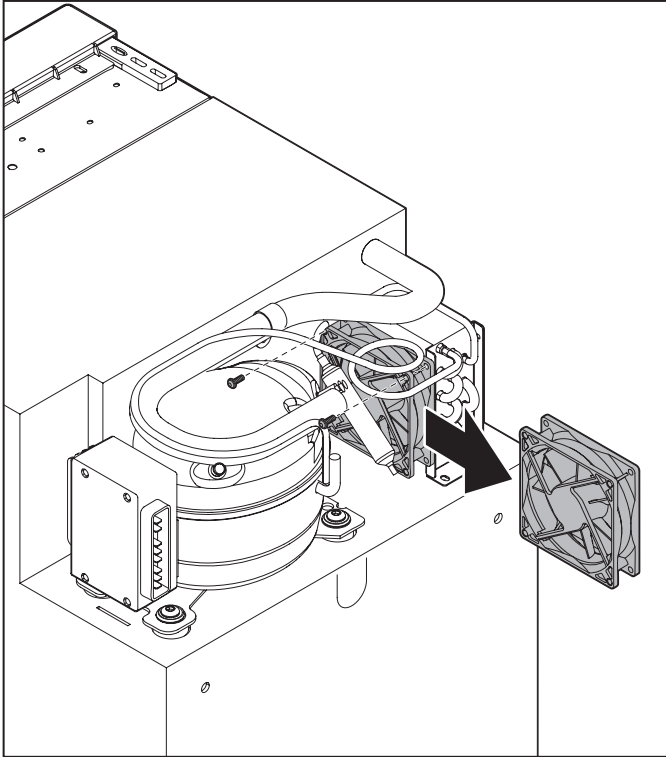
#### **⚠ CAUTION: CUT HAZARD.**

The metal door panel is very sharp, so use care when handling. Failure to obey this caution could result in minor or moderate injury.

1. With the door open, gently slide the door panel up and out of the door frame.
2. To install the new door panel, carefully align it with the grooves in the door frame, and gently slide it down until properly seated.



## 7.9 Replacing the Condenser Fan



**14** Replacing the Condenser Fan

1. Disconnect the unit from power.
2. Disconnect the fan wires from the control module terminals marked with "F" and a small "+" symbol.
3. Locate and remove the two screws securing the fan to the condenser.
4. Remove the fan from the unit.

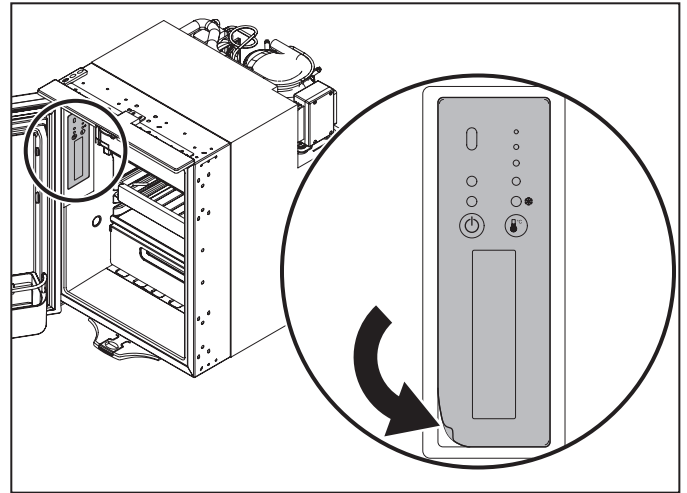
**i** If the condenser fins show debris or dirt, clean them at this time. Refer to Maintenance on page 23 for details.

5. Complete these steps in reverse order to install the new condenser fan.

## 7.10 Replacing the Thermostat Assembly

This section describes how to replace the thermostat assembly on CRX, CR, and CD series refrigerators. Refer to the appropriate section for details.

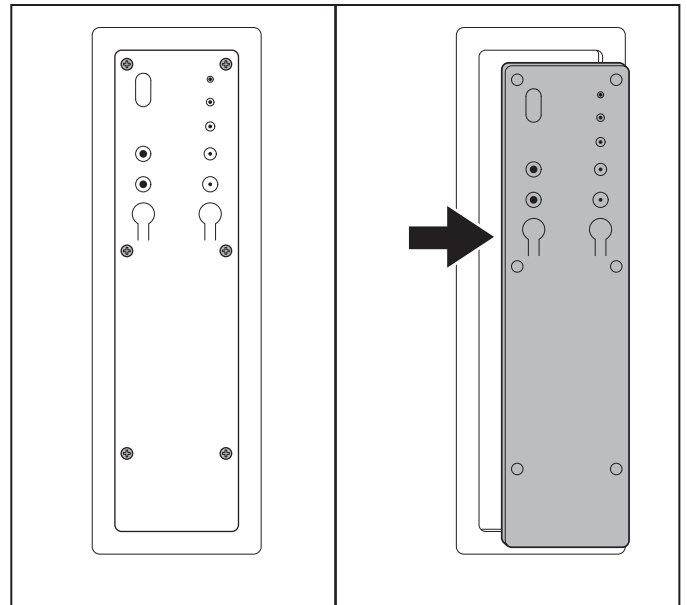
### 7.10.1 Replacing CRX Series Thermostat Assemblies



**15** Removing the Thermostat Sticker

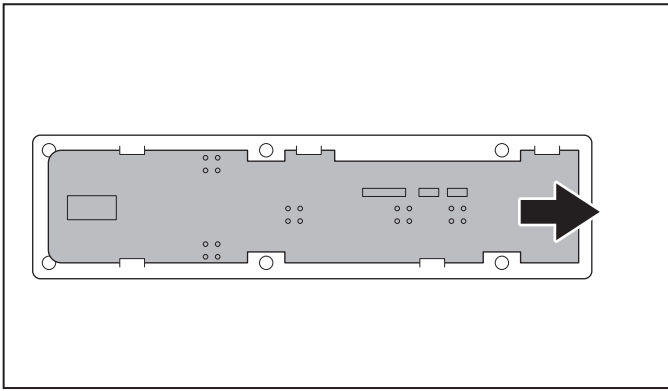
1. Carefully pry the adhesive control panel film from the existing assembly.

**i** The adhesive control panel film will not be reused.



**16** Removing the Thermostat Assembly

2. Locate and remove the six screws securing the plastic cover of the PCB.
3. Carefully pull the cover off, and the PCB will come with it.

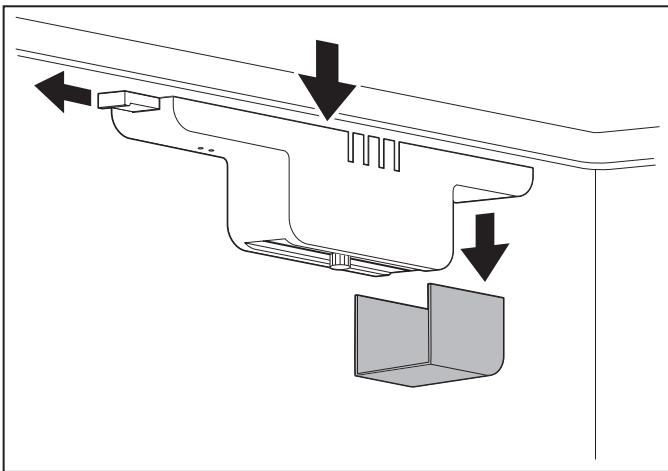
**17** Removing the PCB

4. Unclip and remove the PCB from the plastic cover.

**i** The plastic cover will not be reused.

5. Complete these steps in reverse order to install the new assembly.

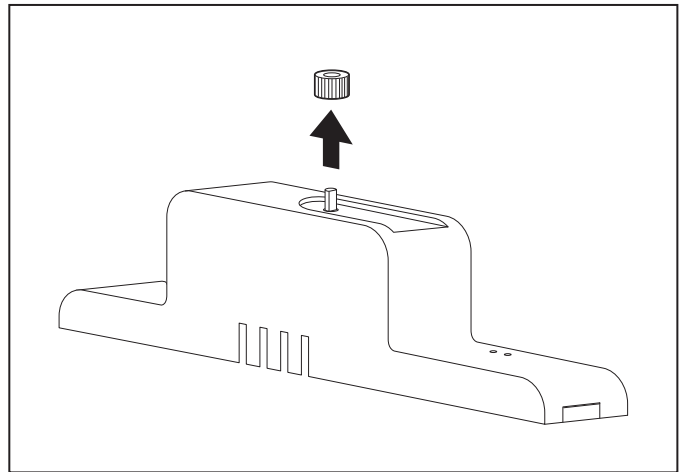
### 7.10.2 Replacing CR Series Thermostat Assemblies

**18** Removing the Thermostat Assembly

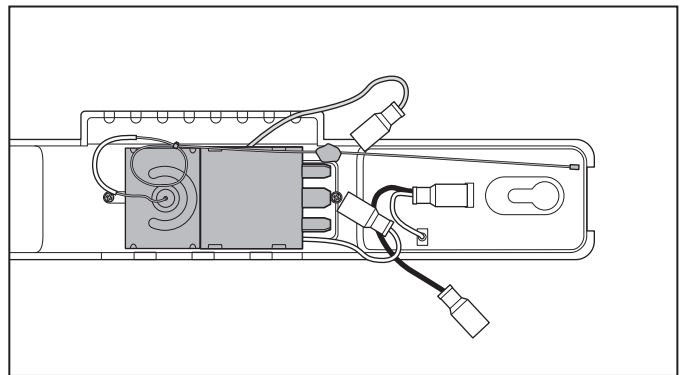
1. Locate the thermostat assembly, which is located inside of the unit on the right-hand wall.
2. Gently pull and remove the plunger that activates the interior light.
3. Remove the light bulb cover and the light bulb.
4. Remove the Phillips-head screw behind the plunger location and loosen the screw behind the light bulb location approximately 1.5 turns.
5. Gently pull the thermostat assembly toward the front of the unit and out of the grooves on the wall.

**i** Handle the capillary tubing attached to the thermostat carefully to ensure that it does not become bent or kinked.

6. Remove the thermostat assembly completely by disconnecting the electrical connector:
  - Remove the hot-melt glue that was put on the lock of the connector.
  - Press the lock release to free the connector.

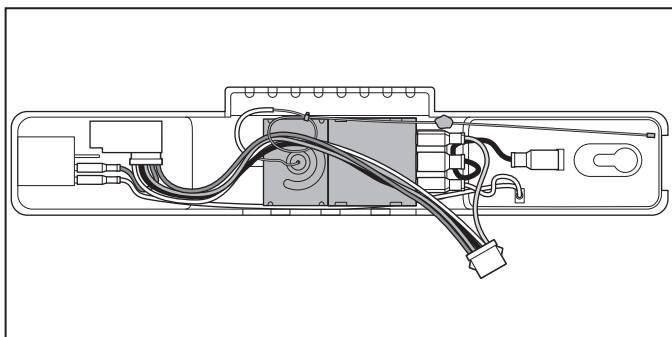
**19** Removing the Thermostat Knob

7. Gently pull the thermostat knob from the stud on the front of the thermostat assembly to remove it.

**20** Removing the Thermostat

**i** Note the wire locations on the back side of the thermostat assembly before proceeding.

8. Disconnect the black, yellow, and white electrical connectors from the thermostat.
9. Loosen the two thermostat mounting screws (do not remove) and swing the white clamps away to remove the thermostat from the assembly.

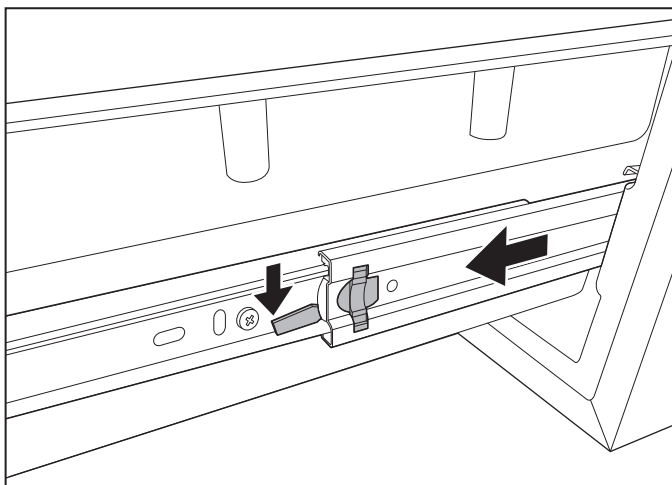
**21** Arranging the Thermostat

10. Arrange the new thermostat as shown in Figure 21.

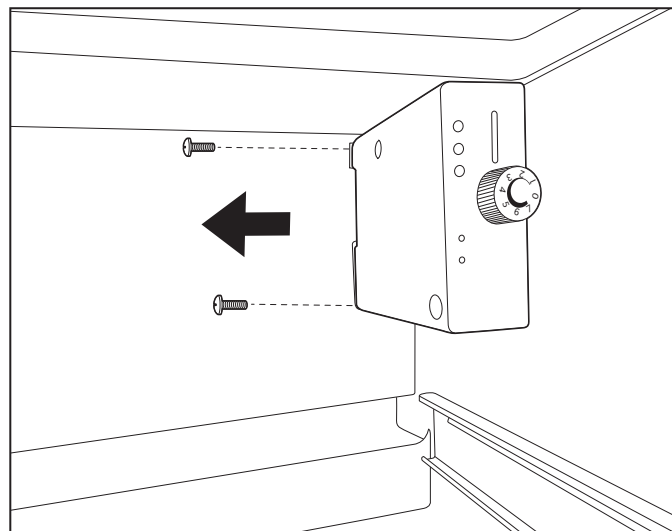
11. Complete these steps in reverse order to install the new thermostat assembly, ensuring that:

- Hot-melt glue or other adhesive is applied to the locations where the glue was removed (the mastic compound can be retained from the old thermostat and reused, if present).
- The wiring harness is pulled through the loop of the sensing probe before making the electrical connections.

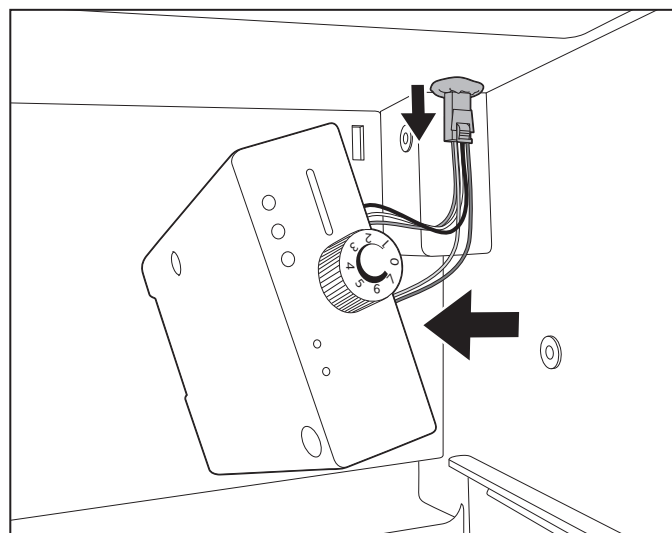
### 7.10.3 Replacing CD Series Thermostat Assemblies

**22** Removing the Drawer

1. Slide the drawer out until the rails reach full extension.
2. Push the lever down on the right side of the rail and gently lift on the left side to remove the drawer.

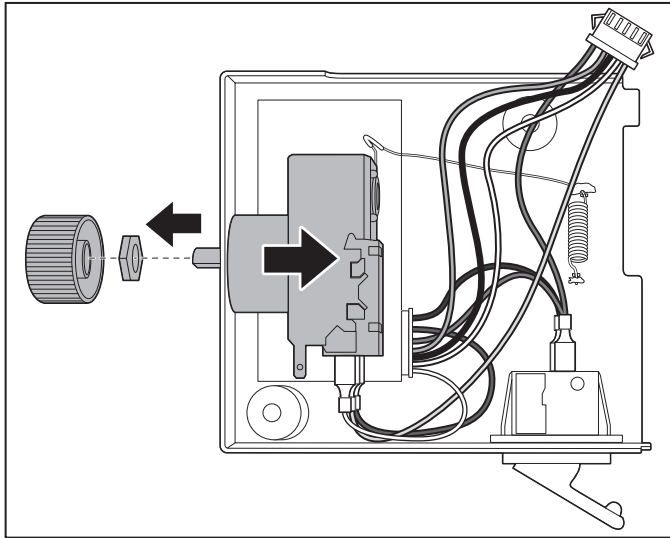
**23** Removing the Thermostat Assembly

3. Locate the thermostat assembly, which is located inside of the unit on the right-hand wall.
4. Remove the two #2 Phillips-head screws securing the thermostat assembly to the interior of the unit.

**24** Disconnecting the Thermostat Assembly

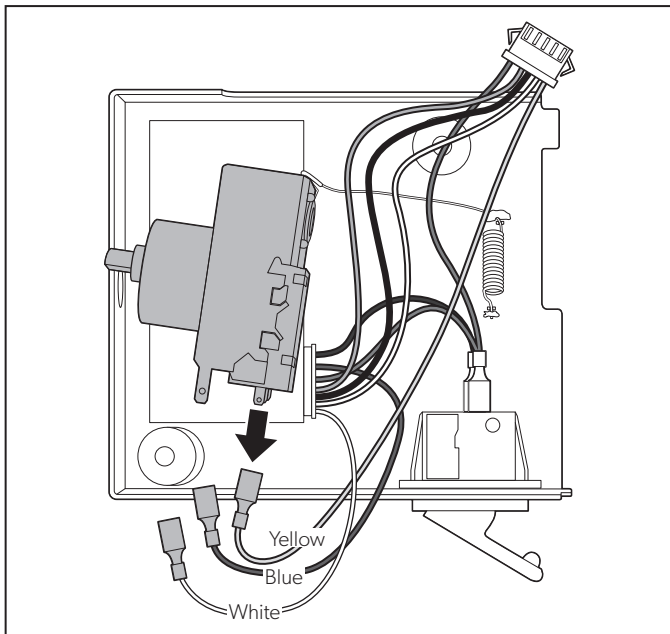
- i** Handle the capillary tubing attached to the thermostat carefully to ensure that it does not become bent or kinked.

5. Remove the thermostat assembly completely by disconnecting the electrical connector:
  - Remove the hot-melt glue securing the connector.
  - Press the lock release to free the connector.
6. Note the thermostat and component locations and orientation within the assembly housing.



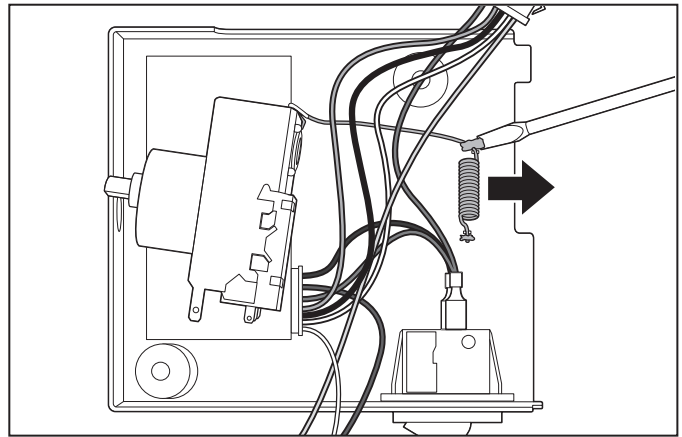
**25** Removing the Thermostat

7. Gently pull the thermostat knob from the stud on the front of the thermostat assembly to remove it.
8. Remove the nut securing the thermostat to the assembly housing, and then gently remove the thermostat.



**26** Disconnecting the Thermostat

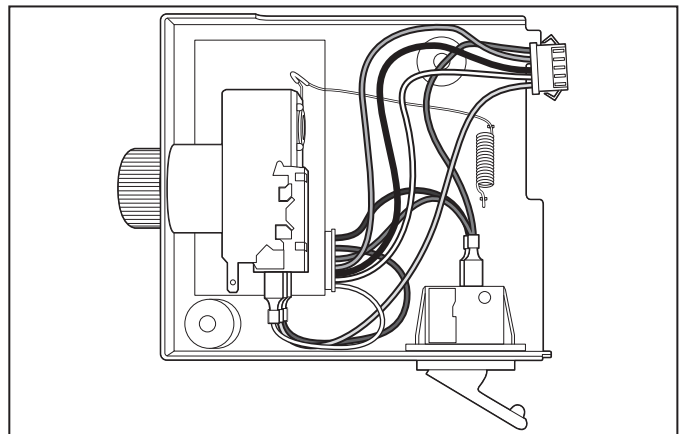
9. Note the wire colors and locations on the thermostat terminals.
10. Disconnect the blue, yellow, and white electrical connectors from the thermostat terminals.



**27** Removing the Sensing Tube

- i** Handle the capillary tubing attached to the thermostat carefully to ensure that it does not become bent or kinked.

11. Carefully remove the sensing tube from the assembly.



**28** Reinstalling the Thermostat

12. Complete these steps in reverse order to install the new thermostat, ensuring that:
  - The new thermostat and components are arranged in the housing as noted in step 6.
  - The wiring connections are correctly and securely fastened as noted in step 9.
  - Hot-melt glue or other adhesive is applied to the locations where the glue was removed.
13. After installation is complete, test and verify the equipment to ensure proper operation.

## 7.11 Replacing the Light Bulb

**i** This procedure is for CR series models only.

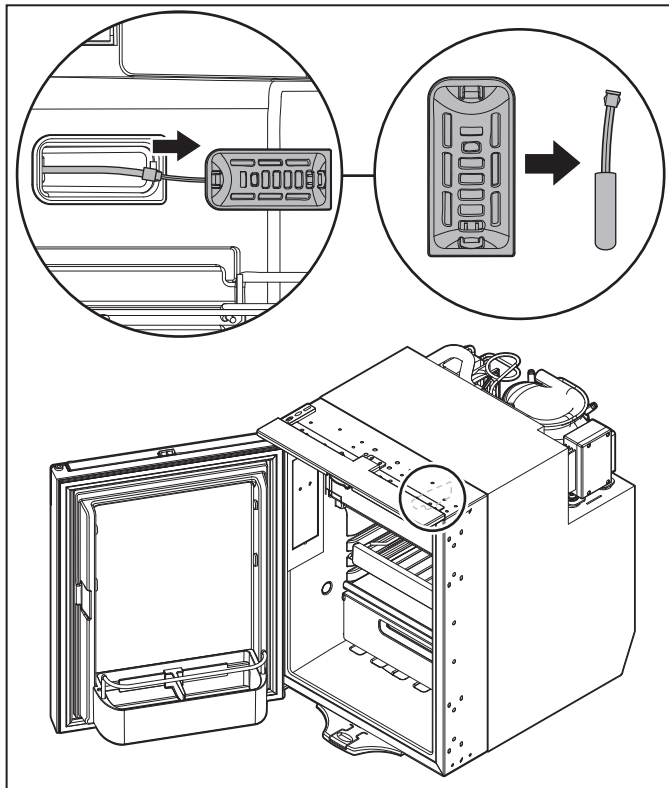
1. Disconnect power to the unit.
2. Remove the light bulb cover and the light bulb.

**i** Dometic recommends that gloves be used when touching light bulbs, as oils from hands could significantly reduce the life of the bulb.

3. Insert the new LED light bulb and replace the cover.

## 7.12 Replacing the NTC Sensor

**i** This procedure is for CRX series models only.

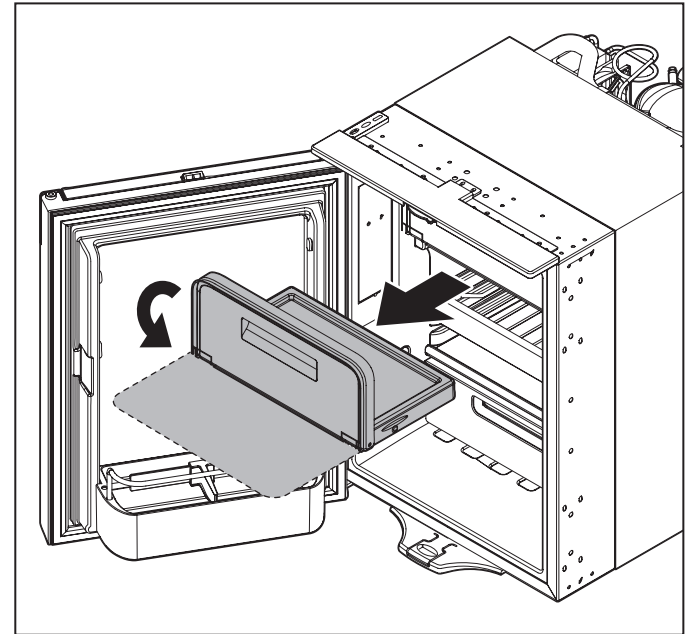


### 29 Replacing the NTC Sensor

1. Locate the NTC sensor inside the unit.
  2. Carefully insert a screwdriver into the designated slot on the cover, prying it away from the wall.
- i** The sensor and cover should come away from the wall as a single unit.
3. Disconnect the sensor from its designated wiring harness.

4. Remove the cover and NTC sensor from the refrigerator.
5. Remove the NTC sensor from the cover.
6. Complete these steps in reverse order to install the new NTC sensor.

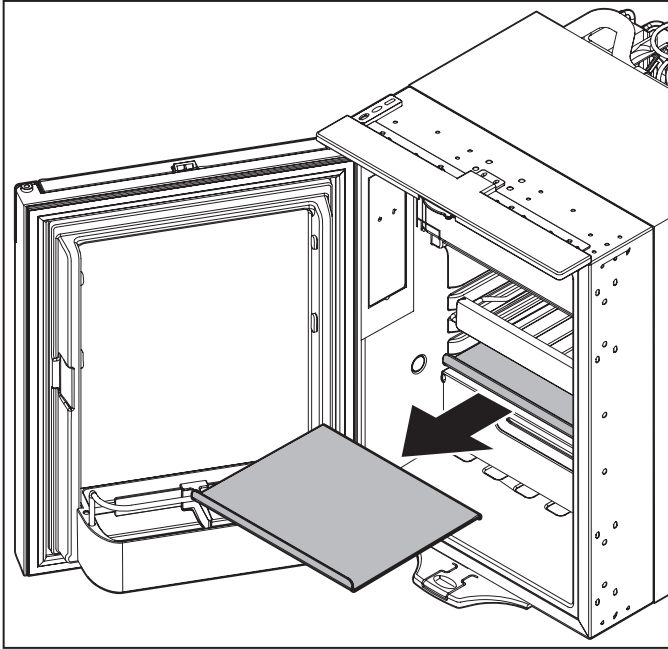
## 7.13 Replacing the Freezer Compartment



### 30 Replacing the Freezer Compartment

1. Open the refrigerator door.
2. Lower the freezer door until fully open.
3. Pull the door toward the front of the refrigerator and slide the entire compartment out.
4. Complete these steps in reverse order to install the new freezer compartment.

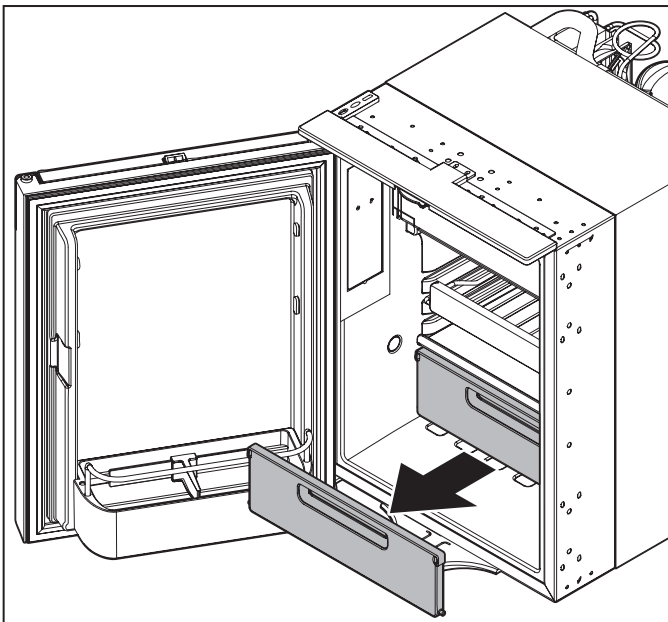
## 7.14 Replacing the Crisper Bin Shelf



**31** Replacing the Crisper Bin Shelf

1. Open the refrigerator door.
2. Slightly lift the rear of the crisper bin shelf and pull it toward the front of the unit to remove it.
3. Complete these steps in reverse order to install the new crisper bin shelf.

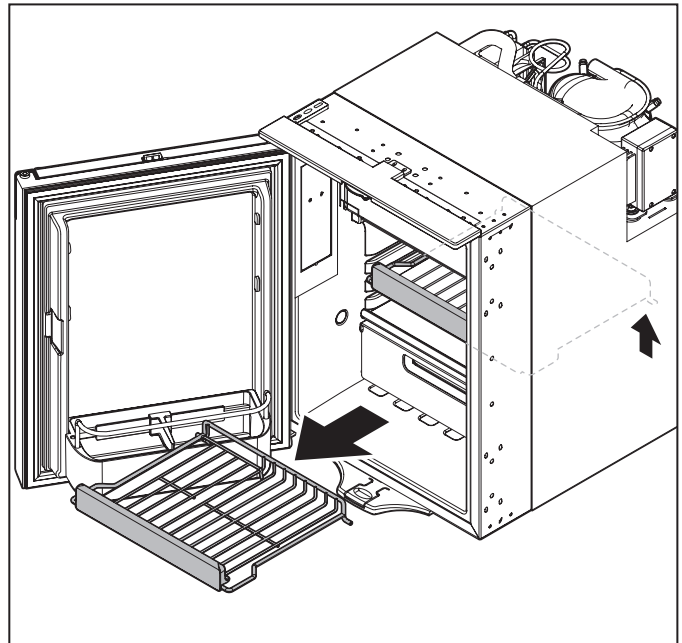
## 7.15 Replacing the Crisper Bin Door



**32** Replacing the Crisper Bin Door

1. Open the refrigerator door.
- i** The crisper bin door has two prongs, one on either side, slightly protruding into the cabinet liner.
2. Gently bend the door in the middle and pull on one side until the prong is removed from the liner.
3. Continue to pull the door toward the front of the unit until the prong on the other side of the door is free from the liner and the entire door is removed.
4. Complete these steps in reverse order to install the new crisper bin door.

## 7.16 Replacing the Wire Shelving



**33** Replacing the Wire Shelving

1. Open the refrigerator door.
2. Gently lift the rear of the shelf, as close to the back wall as possible, until the hook features on each side of the shelf clear the recesses in which they rest.
3. Pull the shelf toward the front of the unit until fully removed.
4. Complete these steps in reverse order to install the new wire shelving.

## 8 Maintenance

### **WARNING: ELECTRICAL SHOCK, FIRE, AND/OR EXPLOSION HAZARD.**

Always disconnect the unit from power before cleaning and/or servicing. Maintenance must be done by a qualified service person only. Failure to obey this warning could result in death or serious injury.

The maintenance and cleaning instructions provided in this section should be performed once a year, or as needed, depending on the use of the appliance. Failure to properly maintain the appliance may void the warranty and could result in unsafe operation. Preventive maintenance is not covered under the warranty.

### 8.1 Defrosting the Refrigerator


**NOTICE:** Never use mechanical tools to remove ice or to loosen objects stuck to the interior of the unit. The only exceptions are devices that are approved for this purpose by the manufacturer.

1. Empty the contents of the refrigerator.
2. Press the power button until the refrigerator switches off.
3. Close the door until it latches into place, ensuring that the locking wheel is set to the "vent" position.
4. Keep the unit powered off until all frost is removed.

### 8.2 Storing the Refrigerator

If you do not intend to use the refrigerator for an extended period of time, complete the following steps:

1. Press the power button until the refrigerator switches off.
2. Disconnect the power cable from the battery.
3. Clean the refrigerator. Refer to the Cleaning the Refrigerator section for more details.
4. Turn the locking wheel to the "vent" position.
5. Close the door until it latches into place.

 Ensure that the locking wheel is set to "vent" to prevent unpleasant smells from developing.

### 8.3 Cleaning the Refrigerator

**NOTICE:** Do not use abrasive cleaning agents or hard objects during cleaning, and do not allow water to drip into the seals, as this can damage the refrigerator.

1. Clean the refrigerator regularly, and as soon as it becomes dirty, using a damp cloth.
2. Wipe the refrigerator dry using a cloth.
3. Clean dust and dirt from the condenser at regular intervals.
4. Clean dust and debris from the condenser fan at regular intervals, and ensure that the fan moves freely without obstruction.

## 9 Disposal



Place the packaging material in the appropriate recycling waste bins, whenever possible. Consult a local recycling center or specialist dealer for details about how to dispose of the product in accordance with all applicable national and local regulations.

## 10 Replacement Parts

For the most current parts information, visit [www.dometic.com](http://www.dometic.com).



# CUSTOMER SUPPORT

For the Authorized Service Center near you, call between 8:00 a.m. and 5:00 p.m., Monday through Friday, or contact the nearest Parts Distributor. Hours may vary.



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