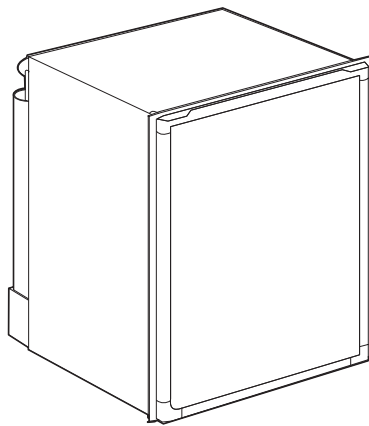




REFRIGERATION REFRIGERATORS



RM2193

EN

Manual Refrigerator

Service Manual. 2

WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Do not touch any electrical switch.
 - Do not use any phone in your recreational vehicle.
 - Clear the recreational vehicle of all occupants.
 - Turn off the gas supply tank valve(s) or main gas supply.
 - Immediately call your gas supplier for instructions.

If you cannot reach your gas supplier, call the fire department.

- Have the gas system checked and leakage source corrected by a qualified installer, service agency, manufacturer or dealer, or the gas supplier.

Service Center & Dealer Locations

Visit: 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 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.

i 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 servicing] 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 Z21.19, Absorption Code

Canada

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

1.4 General Safety Messages

⚠ DANGER! CARBON MONOXIDE POISONING HAZARD.

This product can produce carbon monoxide, which has no odor and can be life-threatening. Avoid improper adjustment, alterations, service, or maintenance. Follow instructions for the proper installation of this appliance. Failure to obey this danger notification can result in improper installation causing carbon monoxide poisoning that will result in death or serious injury.

⚠ 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.
- Do **not** attempt to operate this product by both gas and electricity at the same time. Always ensure that one method of operation is turned off before using the alternate energy source.
- Do **not** allow anyone (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, to use this product unless they have been given supervision or instruction (concerning use of this product) by a person responsible for their safety. Do **not** allow children to play with the product or with the fixed controls (if applicable).

- This product is equipped with a three-prong (grounding) plug for protection against shock hazards. This product should be plugged directly into a three-prong receptacle that provides grounding in compliance with all applicable electrical codes. Do **not** cut or remove grounding prong from plug.
- Before refueling or parking near a gasoline pump, make sure all LP gas appliances are shut off.
- Do **not** store or use gasoline, oil- or gasoline-soaked rags, or flammable liquids in the service area behind the refrigerator or in the vicinity of this or any other gas appliance.

⚠ WARNING: ABSORPTION-COOLING SYSTEMS: FIRE, BURN, OR INHALATION HAZARD.

Do **not** fracture or puncture cooling unit. The cooling unit is under pressure and contains ammonia, sodium chromate, and other chemicals. Repeated or prolonged exposure to sodium chromate could cause organ damage or cancer. Exposure to a high concentration of ammonia refrigerant could cause pulmonary edema (fluid in lungs); chemical burns to eyes, lungs, and skin; and could cause a fire (when exposed to open flame). If the refrigerator stops working and/or emits an ammonia smell, immediately turn the refrigerator off (if it is safe to do so), leave the vicinity, and contact a qualified service center. Failure to obey this warning could result in death or serious injury.

⚠ WARNING: PRESSURE HAZARD.

Do **not** place carbonated liquids, glass containers, or sealed bottles in the freezer. Liquids expand when frozen and could cause the container to explode. Failure to obey this warning could result in death or serious injury.

⚠ WARNING: LIFTING HAZARD.

Use proper lifting technique and control when lifting the product. Failure to obey this warning could result in death or serious injury.

⚠ CAUTION: BURN, FROSTBITE, OR FROSTNIP HAZARD. Failure to obey the following cautions could result in minor or moderate injury:

- Do **not** touch cold surfaces (or stored items) in freezer compartment with damp or wet skin. Skin could stick to cold surfaces and freeze.

- Cooling unit piping may be hot. Allow time to cool before touching.

2 Intended Use

This service manual is intended for use by OEM Service Center and dealer technicians. It is not intended for use by RV owners, or those unfamiliar with the workings of refrigerators used in the RV industry.

Readers of this manual are assumed to have a basic understanding of RV refrigerator best practices and experience in the proper use of the tools and materials related to the installation, operation, maintenance, and service of the refrigerator equipment used in the RV industry.

The refrigerator service manual is a resource created to help service technicians identify the refrigerator product by serial number, diagnose an operational issue, and efficiently and effectively process warranty claims.

For applicable installation instructions, authorized service center information, or specific warranty information, visit www.dometic.com.

For applicable exploded parts views or service kit information, visit www.dometic.com/en-us/us/for-business.

3 Troubleshooting

This section has tables showing the main causes for refrigerator issues.

Review the “Troubleshooting Table” on page 5 to help you identify the suspected operational issue, the potential causes, and the diagnostic procedure associated with those issues.

Refer to the “Diagnostics Table” on page 6 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, including contributing issues, before replacing any parts. Refer to “Installation Issues” on page 13 for more detail.

Troubleshooting Table

Operational Issue	Potential Reason	Page
The refrigerator does not operate in AC or DC mode.	The AC or DC switch is in the off position.	11
	The AC or DC voltage is too low or absent.	13
	The wiring is faulty, has shorted, or is mis-wired.	8
	The heating element is defective.	10
The refrigerator does not operate in gas mode.	The knob on the gas valve is set to the off position.	10
	The gas pressure is too low or absent.	13
	The altitude is affecting the operation of the refrigerator in gas mode.	14
	The gas valve is defective.	10
	The burner is blocked.	8
	The piezo is not generating a spark.	11
	The electrode is out of alignment or is defective.	9
	The thermocouple is defective.	11
The refrigerator does not get cold enough in AC mode but does in DC or gas mode.	The thermostat is not operating within the proper temperature range.	11
The refrigerator does not get cold enough in gas mode but does in AC or DC mode.	The flue baffle is out of place or damaged.	10
	The burner is blocked.	8
	The temperature level set by the knob on the gas valve is too low for the ambient temperature.	10
The refrigerator does not get cold enough in any operating mode.	Improper installation caused an imbalance in the airflow around the refrigerator.	13
	The refrigerator level is not within tolerance.	13
	The ventilation fan/fan switch is defective.	12
	The ambient temperature is preventing the proper functioning of the refrigerator.	14
	The door is warped.	9
	The door gasket is cracked, warped, or has a gap.	9
	The cooling unit is defective.	9
The fresh food compartment freezes.	The thermostat is set too cold.	11
	The temperature level set by the knob on the gas valve is too high for the ambient temperature.	10
	The thermostat is not operating within the proper temperature range.	11
Frost builds up rapidly.	The door has been open too often or too long.	9
	Food was placed in the refrigerator while it was still warm.	N/A
	The thermostat is not operating within the proper temperature range.	11
	High humidity in the environment is causing frost buildup.	14
	The door is warped.	9
	The door gasket is defective.	9
Condensation forms around the frame.	High humidity in the environment is causing frost buildup.	14
	The door is warped.	9
	The door gasket is cracked, warped, or has a gap.	9

Operational Issue	Potential Reason	Page
There is a strong smell of ammonia.	The cooling unit is defective.	9
There is a loud gurgling noise coming from the cooling unit.	The cooling unit is defective.	

Diagnostics Table

Component	Page
Burner Assembly	8
Cooling Unit	9
Door	9
Electrode	9
Fan/Fan Switch	12
Flue Baffle	10
Gas Valve	10
Heating Element	10
Piezo	11
Switch (AC)	11
Switch (DC)	
Thermocouple	11
Thermostat	11
Ventilation Fan/Switch	12

4 General Information

This section provides reference information on the tools, components, and terminology associated with the refrigerator.

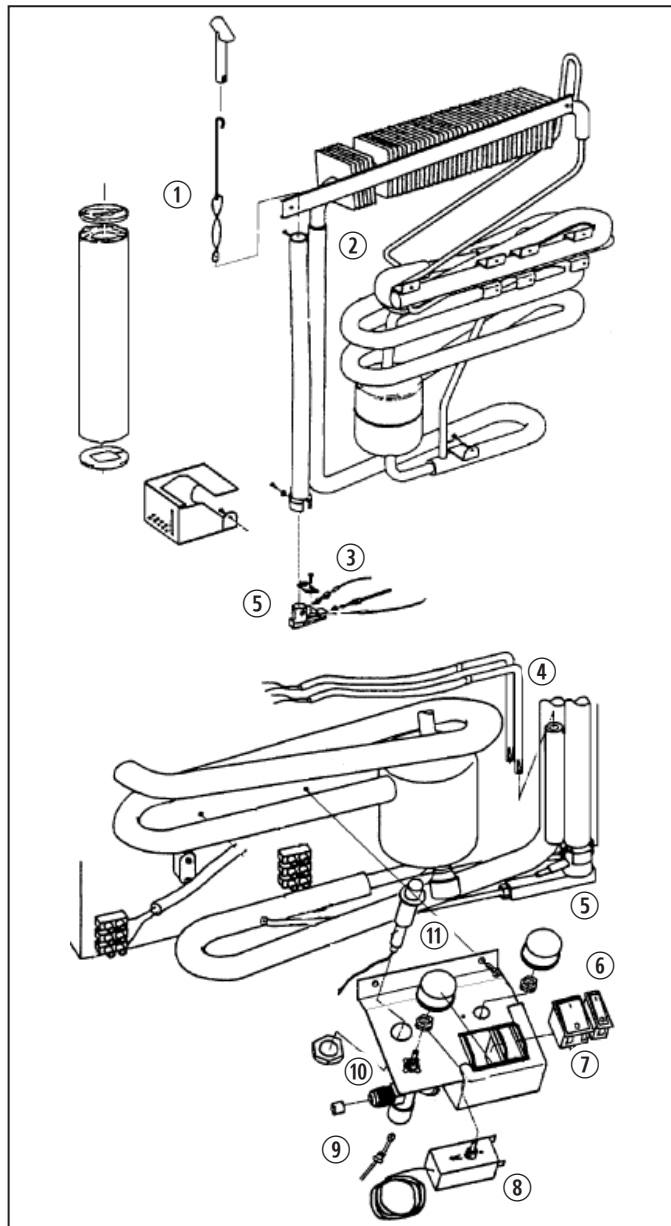
4.1 Tools and Materials

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

Recommended Tools	
Flat-Bladed Screwdriver	Heat Gun
Multimeter - DC/AC Amperage, DC/AC Voltage, Millivolts, Ohms	Substance Temperature Thermometer
	U-Tube Manometer
Needle Nose Pliers	Wrenches
Phillips Head Screwdriver	

4.2 Component Locations

Figure 1 shows the general component locations. Actual model component locations may vary.



1 Component Locations

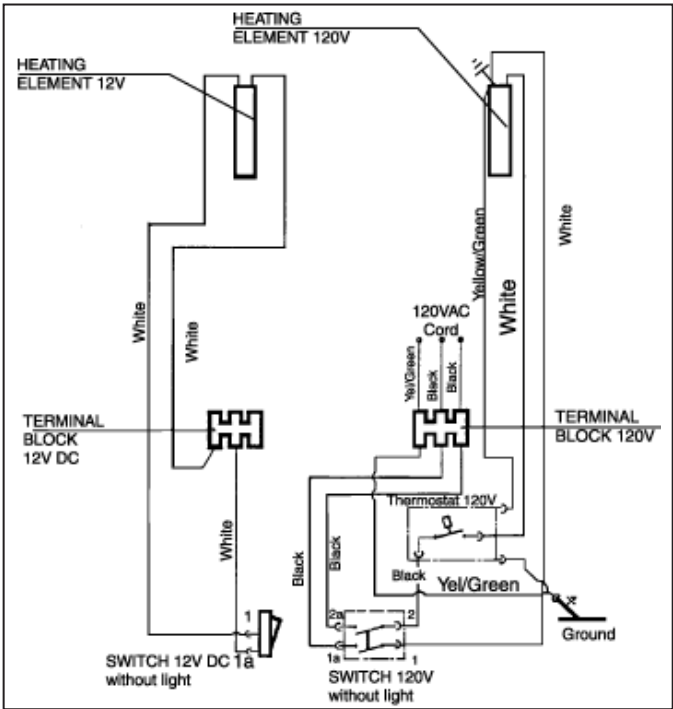
- | | |
|-------------------|--------------------|
| ① Flue Baffle | ⑦ Switch (AC) |
| ② Cooling Unit | ⑧ Thermostat Piezo |
| ③ Electrode | ⑨ Thermocouple |
| ④ Heating Element | ⑩ Gas Valve |
| ⑤ Burner Assembly | ⑪ Thermostat |
| ⑥ Switch (DC) | |

4.3 Terminology

Term	Definition
2-Way	A refrigerator designed to work on either LP gas or 120 VAC
3-Way	A refrigerator designed to work on LP gas, 12 VDC, or 120 VAC
Baffle Box	A box created to meet ventilation clearances at the rear of the refrigerator
Baffle Extension	A "false wall" extending off of a box baffle to ensure strong air to the condensing fins
Burner Tube	A tube welded to the burner that conducts heat during gas operation to provide proper heat exchange to the cooling unit
Cooling Unit	A sealed ammonia-based absorption cooling system
Electrode	Passes the spark from the piezo through the high tension wire to the burner where the spark ignites the LP gas
Flue Baffle	Installed within the burner tube to slow heat rise and spread heat along the burner tube
Gas Valve	Controls LP gas flow and the temperature of the refrigerator during gas operation
Heating Element	Provides a specific amount of BTUs of heat to the burner for electric operation
Piezo	A manual spark generator
Thermocouple	A flame detection device that uses resistance to keep fuel flowing for gas operation
Thermostat	Controls the temperature of the refrigerator during electric operation
Ventilator Fan	Fan positioned in the rear of the refrigerator to circulate air and help the cooling unit function properly

5 Wiring Diagrams

This section provides the wiring specification for the RM2193 refrigerator.

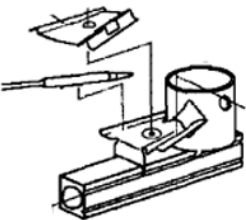


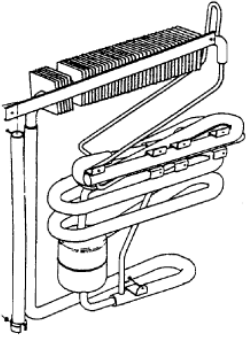
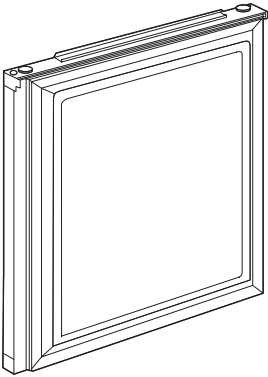
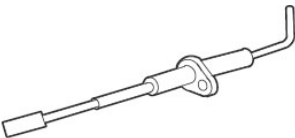
2 RM2193 Wiring Diagram

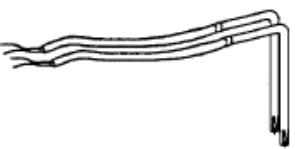
6 Diagnostic Procedures

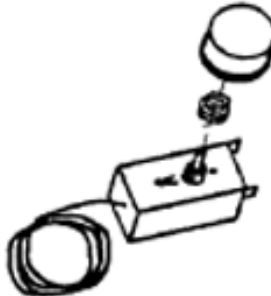
This section has information to help you identify various operational issues by diagnosing the individual component parts.

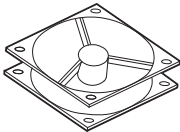
Remember to check the basics, including contributing issues, before replacing any parts. Refer to “Installation Issues” on page 13 for more detail.

Component	Diagnostic Question	Action Based On Status	Page
Burner Assembly			
	Does the refrigerator not operate in gas mode?	1. Inspect the burner and the area around the burner for blockages. Clear any blockages.	7
	Does the refrigerator not get cold enough in gas mode but does in AC or DC mode?	2. Inspect the burner slots for clogs. Clean any that are clogged.	16
		3. Clean the burner jet.	
		4. Turn on the refrigerator in gas mode.	
		5. Confirm that the flame from the burner is blue and steady.	
		6. If the burner cannot be unclogged or if it appears damaged, replace the burner.	15

Component	Diagnostic Question	Action Based On Status	Page
Cooling Unit			
	Does the refrigerator not get cold enough in any operating mode?	Perform a diagnostic on the power supply.	13
		Perform a diagnostic on the gas pressure if the problem occurs during gas operation.	
		Perform a diagnostic on the ventilation fan(s), if installed.	12
	Is a loud gurgling noise coming from the cooling unit?	If the problem persists, replace the cooling unit.	16
		Replace the cooling unit.	
	Is there a strong smell of ammonia?		
Door			
	Does the refrigerator not get cold enough in any operating mode?	1. Inspect the door and door gasket for any damage that would prevent it from closing properly.	17
	Does frost build up rapidly?	2. If damage is observed, replace the door.	
	Does condensation form around the frame?	1. Test the door gasket. 2. If the gasket is weak at any point, repair it. 3. After 24 hours, test the gasket again. 4. If the gasket remains weak, replace the door.	
		Confirm with the owner that the door has not been held open or opened often enough to allow a substantial volume of warm air to enter.	N/A
Electrode			
	Does the refrigerator not operate in gas mode?	1. Inspect the ceramic insulator for cracks or breaks in the ceramic casing.  A hair line crack at the electrode can be difficult to see.	7
		2. If cracks or breaks are observed, replace the electrode.	
		1. Confirm that the electrode is securely held by its clip. 2. Confirm that the tip of the electrode is positioned 3/16 in. (4.8 mm) from the slots in the burner. 3. If the electrode is out of position, adjust it.	18
		1. Turn on the refrigerator in gas mode and confirm that the electrode generates a spark. 2. If the electrode fails to generate a spark, replace it.	

Component	Diagnostic Question	Action Based On Status	Page
Flue Baffle			
	Does the refrigerator not get cold enough in gas mode but does in AC or DC mode?	1. Confirm that the flue baffle is properly positioned in the burner tube. 2. Inspect the flue baffle for damage. 3. If damaged is observed, replace the flue baffle.	18
Gas Valve			
	Does the refrigerator not operate in gas mode?	Confirm that the knob on the gas valve is set to on.	7
		Perform a diagnostic on the gas pressure.	13
		Perform a diagnostic on the burner assembly.	8
		Perform a diagnostic on the flue baffle.	10
		Perform a diagnostic on the piezo.	11
	If the problem persists, replace the gas valve.	19	
	Does the refrigerator not get cold enough in gas mode but does in AC or DC mode? Does the fresh food compartment freeze?	Adjust the knob on the gas valve to the appropriate setting for the operating conditions. i If the ambient temperature is above 80 °F (27 °C), or the door of the refrigerator is opened frequently, the knob should be set to high.	N/A
Heating Element			
	Does the refrigerator not operate in AC or DC mode?	1. Check the part number of the heating element against the parts list for the refrigerator model. 2. If the number does not match, replace the heating element with the correct part.	N/A
		Set the thermostat to the coldest position (7) and confirm that the voltage supplied to the heating element is within specification. • AC heating element: 103.5–126.5 VAC • DC heating element: 10.5–22 VDC	13
		1. Inspect the heating element for cracks or breaks. 2. If damage is observed, replace the heating element.	19
		1. Confirm that the resistance of the heating element is within specification. 2. If the resistance is out of specification, replace the heating element.	

Component	Diagnostic Question	Action Based On Status	Page
Piezo			
	Does the refrigerator not operate in gas mode?	1. Depress the piezo button several times in quick succession. 2. If you do not hear a click or do not feel resistance each time the button is depressed, replace the piezo.	20
Switch (AC or DC)			
	Does the refrigerator not operate in AC or DC mode?	Confirm that the switch for the AC or DC power is set to the on position.	7
		Confirm that the voltage supplied to the AC or DC switch is within specification.	13
		Perform a diagnosis on the heating element.	10
		If the problem persists, replace the switch.	21
Thermocouple			
	Does the refrigerator not operate in gas mode?	Clean the thermocouple tip with an alcohol- based solvent and let air dry.	7
		1. Confirm that the gas is lighting but not staying lit. 2. Confirm that the voltage of the thermocouple while in the burner flame is between 14–30 mV. 3. If the voltage is out of specification, replace the thermocouple.	21
Thermostat			
	Does the refrigerator not get cold enough in AC mode but does in DC or gas mode?	Adjust the thermostat to the appropriate setting for the operating conditions.	7
	Does the fresh food compartment freeze? Does frost build up rapidly?	i If the ambient temperature is above 80 °F (27 °C), or the door of the refrigerator is opened frequently, the thermostat should be set to 7. 1. Set the refrigerator to AC operation. 2. Set the thermostat to 5. 3. Place a bottle of water in the compartment of the refrigerator. 4. When the thermostat turns off the heating element, use a substance thermometer to test the temperature of the water in the bottle. The temperature should read approximately 40 °F (4 °C). 5. If the reading is out of specification, replace the thermostat.	21

Component	Diagnostic Question	Action Based On Status	Page
Ventilation Fan/Switch			
	Does the refrigerator not get cold enough in any operating mode?	1. Confirm that the temperature at the ventilator fan switch is within the range that will activate the ventilator fan. i Installation location varies by model and installer. The temperature range for activation varies by model. 2. If the temperature is within specification, does the fan switch close the circuit. 3. If the circuit does not close, replace the fan switch.	22
		4. If the circuit closes, but the fan does not activate, confirm that the voltage supplied to the fan is between 10.5–22 VDC.	13
		5. If the voltage is within specification, replace the fan.	22

7 Installation Issues

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

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

Operational Issue	Potential Issue
The refrigerator does not operate in gas mode.	Gas Pressure
The refrigerator does not operate in AC or DC mode.	Power
The refrigerator cools insufficiently during AC operation, but cools properly during gas and DC operation.	
The refrigerator cools insufficiently during DC operation, but cools properly during AC and gas operation.	
The refrigerator does not get cold enough in any operating mode.	Improper Installation Ambient Temperature
The refrigerator does not operate in gas mode.	Altitude
The fresh food compartment freezes. Frost builds up rapidly.	Humidity

7.1 Power Issues

The following checks should be made using the battery, converter, or generator, where applicable. Do not use a test light, as it does not provide enough useful information for a proper diagnosis.

Use a digital multi-meter to take readings. Check that the DC power to the refrigerator is between 10.5–18 VDC for DC operation, testing with the interior lights of the RV both on and off.

Check that the AC power to the refrigerator is between 103.5–126.5 VAC for AC operation.

7.2 Gas Pressure Issues

Check that the gas pressure is between 10.5–11.5 in. W.C., ideally as close to 11 in. W.C. (at the refrigerator) as possible. Perform the check with a minimum of 50% (ideally 100%) of other gas-fired appliances operating while the refrigerator is in operation. The pressure should be tested using a U-tube manometer. If using a digital-type manometer, calibrate it often with a U-tube manometer.

Check the outside air temperature. As the air gets colder, it reduces the capacity of the liquid propane (LP) tank and the gas pressure is affected by a combination of the fill level of the LP tanks and the ambient temperature outside.

To raise the tank temperature and increase the capacity of the tank:

1. Place an insulated, fire-resistant blanket over the tanks.
2. Place an illuminated 75 W light bulb under the blanket.

The temperature of the bottle should rise 10–20 °F [(-12)–(-7) °C] over a brief period of time, which increases tank capacity.

7.3 Installation Issues

Specific clearances are required during the installation of the refrigerator. Check the installation manual for the refrigerator to find the proper dimensions, and ensure that the existing installation location complies with the requirements. In addition, check for these potential installation issues:

- Air space: after installing the refrigerator within the cabinetry, there should be less than 0.5 in. (13 mm) of open air space on the sides and top of the refrigerator or performance issues can occur. If there is any open air space around the refrigerator, fill the space with insulation. There should be no more than 1 in. (25 mm) of space between the cooling unit and the side wall of the RV. If there is more than 1 in. (25 mm) of space, install a baffle box to fill the extra space

- Fan(s): when installing the refrigerator with two side wall vents (typically slide-out room installations), a ventilator fan must be installed at the rear of the refrigerator as close to the center as possible to assist with airflow.
- Baffle Extension: when installing the refrigerator with two side wall vents (typically slide-out room installations) and the outer edge of the cooling unit more than 1 in. (25 mm) from the sidewall of the RV, install a baffle extension below the fins. . Start at the lower portion of the upper vent and lead up to between 0.25–0.50 in. (6–13 mm) away from the bottom of the condensing fins to ensure a strong airflow is maintained directly to and through the fins.
- Deflector shield: when installing the refrigerator with two side wall vents (typically slide-out room installations), install a deflector shield air baffle (turning vein) above the condensing fins to assist with deflecting the air sideways out of the upper side wall vent after the air passes through the fins.
- Leveling: the refrigerator should be set at 3° from left to right and 6° from front to back. Level the refrigerator within this tolerance setting.

7.4 Ambient Temperature Issues

The ambient temperature can impact the performance of the refrigerator. As the ambient temperature rises, the air temperature around the cooling unit rises and may result in decreased cooling performance if the unit is not installed and ventilated according to specification. Refer to “Installation Issues” on page 13 for more details.

 If the ambient temperature is below 32 °F(0 °C) operating the refrigerator may damage the cooling unit.

7.5 Humidity Issues

High levels of humidity can impact the cooling performance of the refrigerator and can cause condensation and frost build up if the doors are opened frequently.

7.6 Altitude Issues

The gas system on the refrigerators are not designed to operate at extremely high altitude. The higher the refrigerator is in altitude, the more chance there is of improper gas operation until the refrigerator is brought to a lower altitude.

7.7 RF Interference Issues

Supply the refrigerator with straight-line DC voltage from a different 12 VDC source and deaden the RV (unplug shore cord and disconnect the batteries), this will eliminate interference.

8 Service Procedures

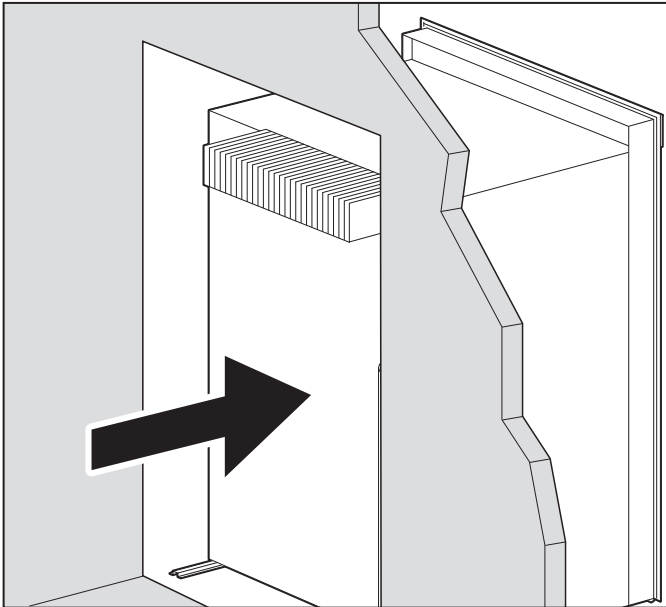
 **WARNING: ELECTRICAL SHOCK, FIRE, AND/OR EXPLOSION HAZARD. Failure to obey the following warnings could result in death or serious injury:**

After service, perform a leak check on the gas system, like a pressure drop test. Verify that there is a sufficient gas supply before attempting to light any burner. Air in the line will significantly delay the burner ignition and a burner may light unexpectedly as the air in the line clears out and is replaced by LP gas.

This section has information to help you access the components for diagnosis and service.

Remember to check the basics, including contributing issues, before replacing any parts. Refer to “Installation Issues” on page 13 for more detail.

8.1 Removing the Refrigerator from an Enclosure



3 Removing the Refrigerator from an Enclosure

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Turn off the LP gas supply to the refrigerator.
3. Disconnect the LP gas line from the refrigerator. Cap the line and confirm there are no LP gas leaks. Refer to "Performing a Gas Leak Test" on page 15 for more details.
4. Remove the screws anchoring the refrigerator to the enclosure.
5. Slide the refrigerator out of the enclosure.
6. Perform these steps in reverse to replace the refrigerator in the enclosure.
7. Confirm there are no LP gas leaks. Refer to "Performing a Gas Leak Test" on page 15 for more details.

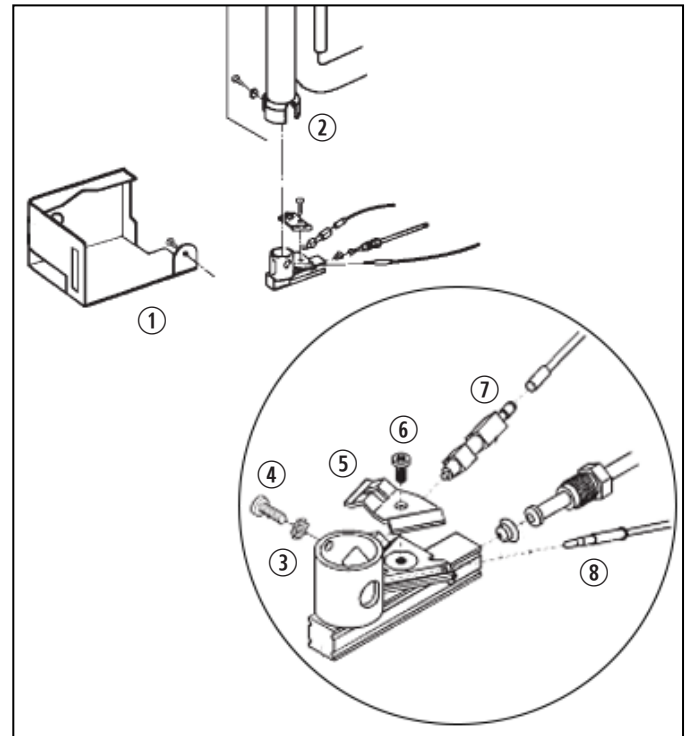
8.2 Performing a Gas Leak Test

⚠ WARNING: FIRE AND/OR EXPLOSION HAZARD.

Do **not** use matches, candles, or other sources of open flame when checking for gas leaks. Failure to obey this warning could result in death or serious injury.

1. Turn on the LP gas.
2. Locate the component for testing. See "Component Locations" on page 7.
3. Place a non-corrosive leak detection fluid into a spray bottle.
4. Lightly spray the component with the fluid.
5. Look for bubbles forming on the component. The appearance of bubbles indicates a leak in the component.

8.3 Replacing the Burner Assembly

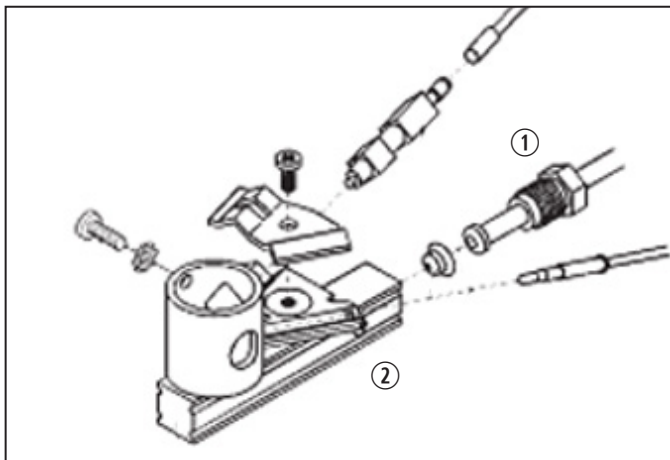


4 Removing the Burner Assembly

- | | |
|---------------|----------------|
| ① Shielding | ⑤ Clip |
| ② Burner Tube | ⑥ Screw |
| ③ Washer | ⑦ Thermocouple |
| ④ Burner Jet | ⑧ Electrode |

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Turn off the LP gas supply to the refrigerator and cap the gas line.
3. Remove the screw securing the shielding around the burner assembly.
4. Remove the screw and washer securing the burner assembly to the burner tube.
5. Slide the burner assembly out of the burner tube.
6. Remove the screw securing the clip that holds the thermocouple and electrode in position.
7. Disconnect the gas line from the burner assembly.
8. Remove the defective burner assembly.
9. Perform these steps in reverse with a new burner housing to complete the replacement.
10. Confirm there are no LP gas leaks. Refer to "Performing a Gas Leak Test" on page 15 for more details.

8.4 Cleaning the Jet



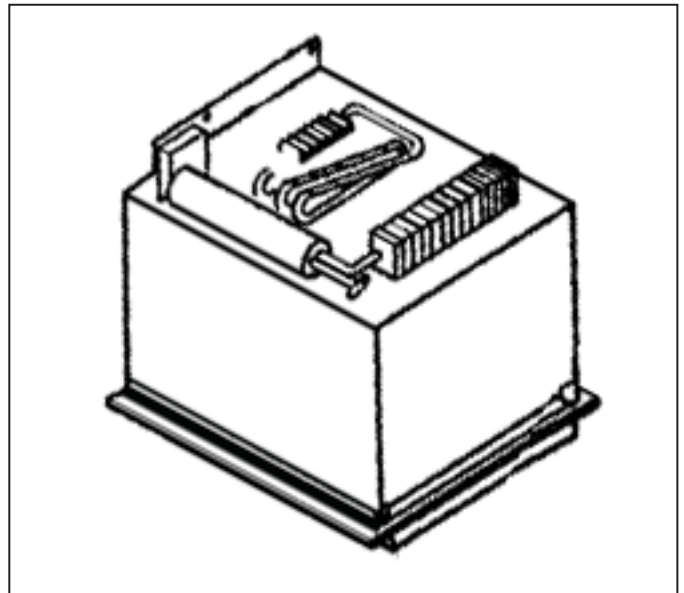
5 Removing the Jet

- ① Gas Line ② Jet

1. Perform the steps in "Replacing the Burner Assembly" on page 15 to access the jet.
2. Disconnect the gas line from the jet.
3. Remove the jet.
4. Soak the jet in an alcohol-based solvent for one hour.

5. Remove it from the cleaner and use compressed air to blow out any residual deposits. Let it air dry.
- i** Do not stick any object into the jet as it may cause damage.
6. Perform these steps in reverse to reassemble the burner assembly.

8.5 Replacing the Cooling Unit

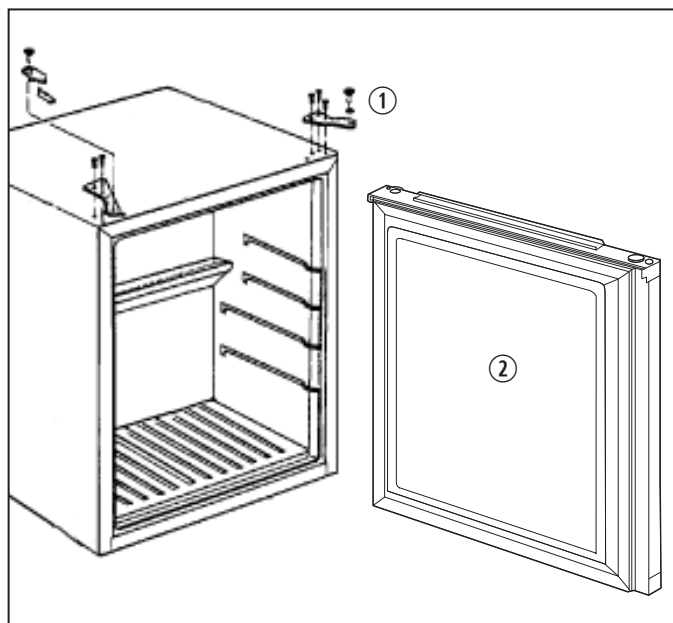


6 Removing the Defective Cooling Unit

1. Perform the steps in "Removing the Refrigerator from an Enclosure" on page 15.
 2. Remove the handles (if needed) and lay the refrigerator face down on a protected surface.
 3. Remove the screws securing the outside frame of the cooling unit to the box of the refrigerator.
 4. Remove the heating elements from their pockets in the cooling unit and set aside to re-use.
 5. Pull the flue baffle from the top of the burner tube of the defective cooling unit and set aside to re-use.
- i** Replacement cooling units do not come with a replacement flue baffle. The flue baffle must be transferred from the defective cooling unit to the new cooling unit.
6. Disconnect all wiring from the cooling unit.

7. Refer to steps in "Replacing the Burner Assembly" on page 15 to remove the burner assembly from the cooling unit.
8. Pry out the defective cooling unit. Some careful force may be required.
9. Clean and prepare the inside of the cavity space for the new cooling unit. A bead of thermal mastic is required to help the heat transfer process.
10. Apply a thick bead of thermal mastic to the following:
 - The cavity-facing side of the new cooling coils.
 - Each inner corner of the recessed cavity from bottom to top.
 - Around the middle of the inner walls of the cavity.
11. Perform these steps in reverse with the new cooling unit to complete the replacement.

8.6 Replacing the Door



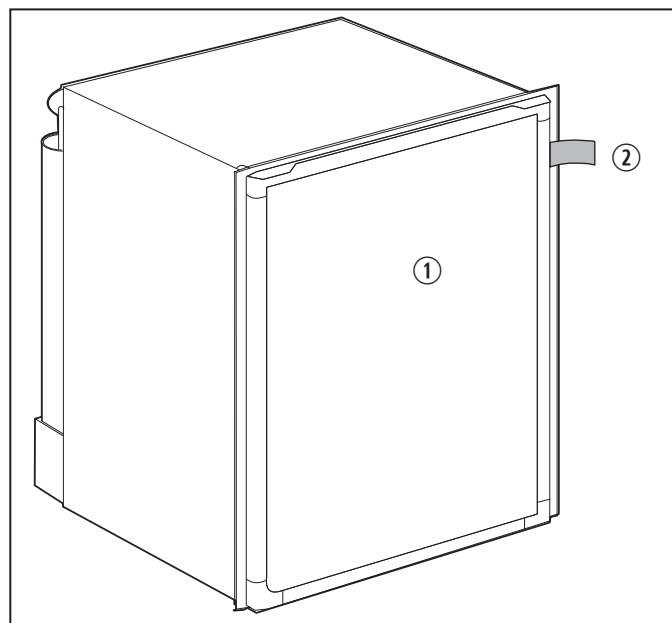
7 Removing the Door

- ① Door Hinge ② Door

1. Locate and gain access to the door hinges. Refer to "Removing the Refrigerator from an Enclosure" on page 15 if removing the refrigerator is necessary to access the hinges.
2. Remove the bolt from the top hinge securing the door to the hinge.

3. Remove any washers.
4. Lift the door from the bottom hinge pin. It may be necessary to do this at an angle.
5. Perform these steps in reverse with the new door to complete the replacement.

8.7 Testing the Door Gasket



8 Testing the Door Gasket

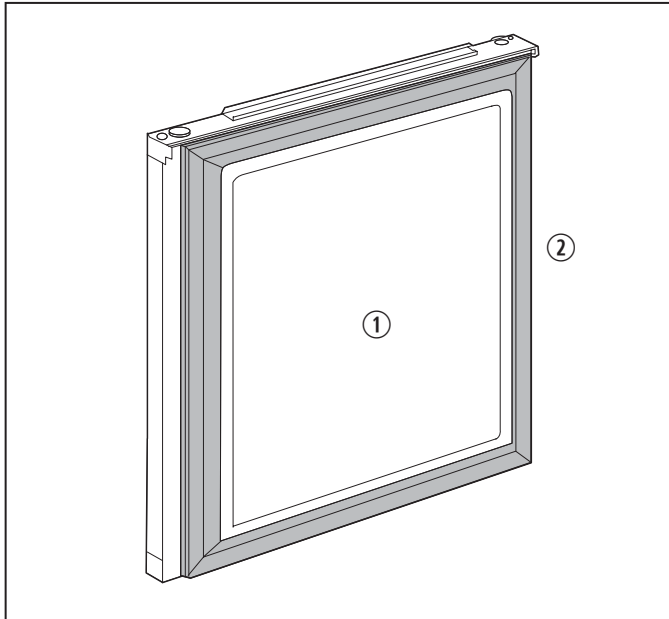
- ① Door ② Paper

1. Open the refrigerator door and place a piece of paper, such as a dollar bill, near the door hinge and between the gasket and the liner of the refrigerator.
2. Close the door on the paper.
3. Try to pull out the paper.

If the paper slips out with no resistance, the gasket is weak at that point.

4. Repeat this test at points all around the door.

8.8 Repairing the Door Gasket



9 Repairing the Door Gasket

- ① Door ② Door Gasket

1. Warm the gasket with a heat gun.

i To avoid melting or damaging the liner, take care to avoid using heat too close to the plastic liner or in one spot for too long.

2. Once the gasket is pliable, pull it open and place a 0.25 in. (6 mm) dowel rod (or tightly rolled newspaper) behind the gasket.
3. Close the door with the dowel rod in position and leave it closed for 24 hours.

8.9 Adjusting the Position of the Electrode

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Perform the steps in "Replacing the Burner Assembly" on page 15 to access the electrode.
3. Loosen the screw securing the clip holding the electrode in position on the burner assembly.

i To avoid cracking the ceramic insulator, do not try to adjust the electrode without first loosening the screw.

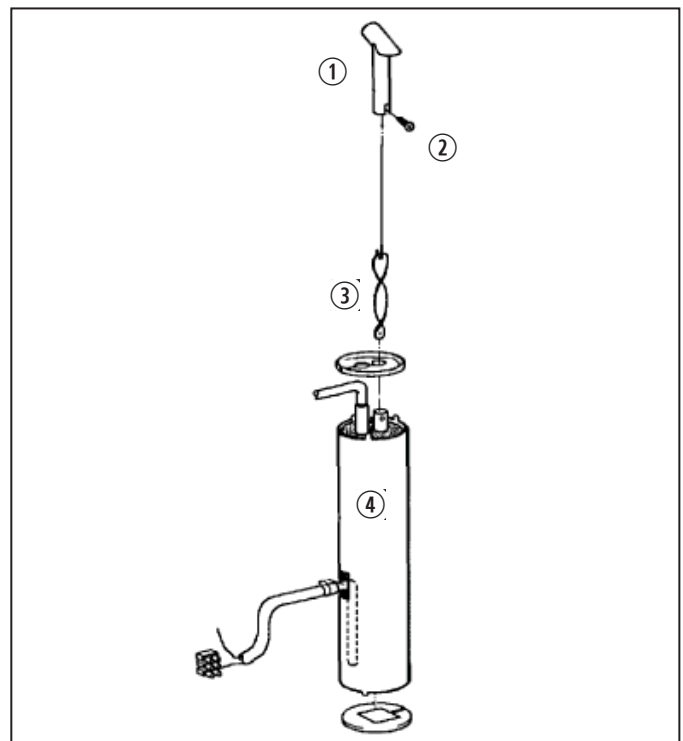
4. Adjust the electrode until the tip of the electrode is 3/16 in. (4.8 mm) from the burner.
5. Perform these steps in reverse to complete the adjustment.

8.10 Replacing the Electrode

i On some versions of this model, the electrode is integrated into the burner assembly. Always use the product number to acquire the correct part.

1. Perform the steps in "Replacing the Burner Assembly" on page 15 to release the electrode from the clip.
2. Perform the steps in "Replacing the Piezo" on page 20 to disconnect the high voltage wire.
3. Remove the defective electrode.
4. Perform these steps in reverse with the new electrode to complete the replacement.

8.11 Replacing the Flue Baffle



10 Removing the Flue Baffle

- ① T-piece ③ Flue Baffle
② Screw ④ Burner Tube

1. Perform the steps in “Removing the Refrigerator from an Enclosure” on page 15 to access the flue baffle.

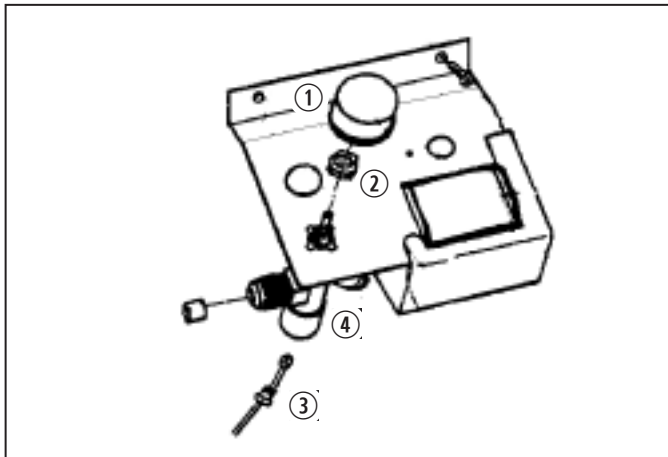
⚠ WARNING: BURN HAZARD.

The flue baffle may be hot. Allow time for the flue baffle to cool before touching.

2. Remove the screw securing the T-piece to the burner tube.
3. Remove the T-piece.
4. Pull the flue baffle out of the burner tube.
5. Perform these steps in reverse with the new flue baffle to complete the replacement.

The new flue baffle should hang just above the burner.

8.12 Replacing the Gas Valve



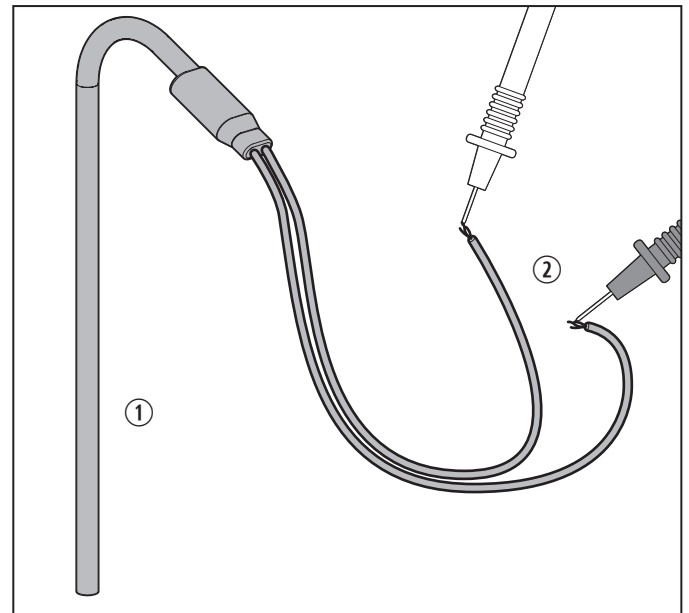
11 Replacing the Gas Valve

- | | |
|--------|----------------|
| ① Knob | ③ Thermocouple |
| ② Nut | ④ Gas Valve |

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Turn off the LP gas supply to the refrigerator.
3. Disconnect the gas line from the gas valve and cap the gas line.
4. Disconnect the thermocouple from the bottom of the gas valve.

5. Remove the knob from the top of the gas valve selector switch.
6. Remove the nut securing the gas valve to the panel.
7. Remove the defective gas valve.
8. Perform these steps in reverse with the new gas valve to complete the replacement.
9. Confirm there are no LP gas leaks. Refer to “Performing a Gas Leak Test” on page 15 for more details.

8.13 Testing a Heating Element for Resistance



12 Testing the Heating Element Wires

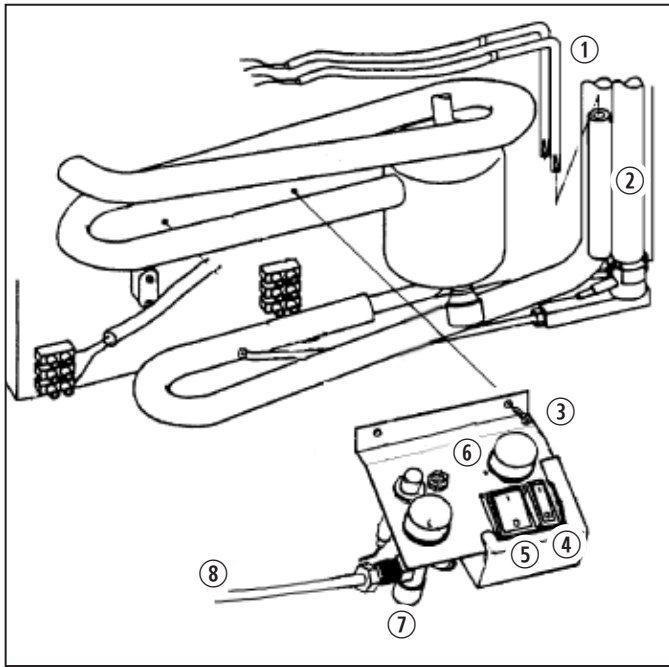
- | | |
|-------------------|-------------|
| ① Heating Element | ② Wire Ends |
|-------------------|-------------|

1. Perform the steps in “Replacing a Heating Element” on page 20 to remove the heating element.
2. Set the multi-meter to the Ohms resistance setting.
3. Attach a lead of the multi-meter to the ends of the heating element wires.

The reading for the 120 VAC heating element should be 104 Ohms ($\pm 10\%$). The reading for the 12 VDC heating element should be 1.3 Ohms ($\pm 10\%$). If the reading is out of specification, it indicates a faulty heating element.

- i** Consult the operating manual for the multi-meter for specific device function.

8.14 Replacing a Heating Element



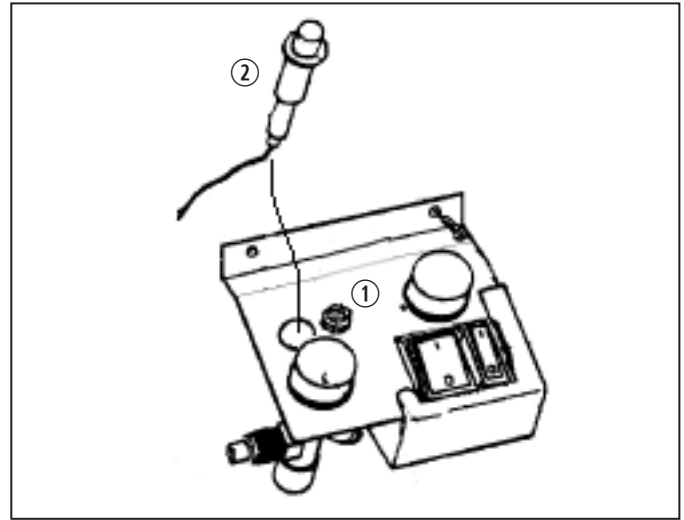
13 Removing a Heating Element from the Flue Stack

- | | |
|--------------------|--------------|
| ① Heating Elements | ⑤ AC Switch |
| ② Burner Tube | ⑥ Thermostat |
| ③ Screw | ⑦ Gas Valve |
| ④ DC Switch | ⑧ Gas Line |
1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
 2. Turn off the LP gas supply to the refrigerator.
 3. Remove the screws securing the switch panel to the back of the refrigerator.
 4. Pull the switch panel out of position.
 5. Trace the wiring from the AC or DC switch to identify the heating element of the same voltage.
 6. Disconnect the wiring of the heating element you are replacing from the thermostat, ground and power switch.
 7. Remove the defective heating element from the pocket within the burner tube.

8. Perform these steps in reverse with the new heating element to complete the replacement.

- i** The element should be securely seated in the pocket. It is easy to place the heating element in the insulation by mistake.

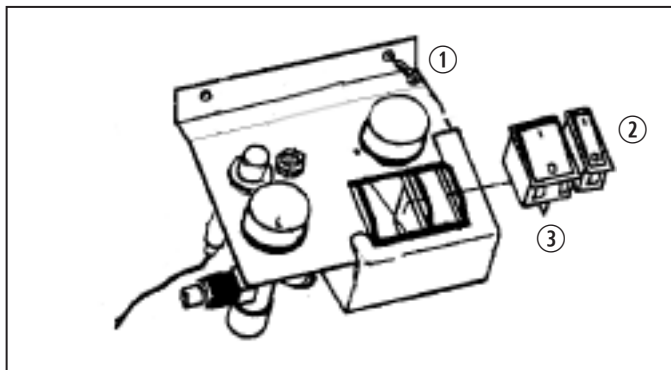
8.15 Replacing the Piezo



14 Removing the Piezo

- | | |
|-------|---------|
| ① Nut | ② Piezo |
|-------|---------|
1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
 2. Turn off the LP gas supply to the refrigerator.
 3. Remove the screws securing the switch panel to the back of the refrigerator.
 4. Slide the switch panel out of position to gain access to the wiring.
 5. From underneath the panel, unscrew the nut securing the piezo to the panel.
 6. Remove the piezo and washer from the panel.
 7. Unplug the high-tension wire from the underside of the piezo.
 8. Perform these steps in reverse with the new piezo to complete the replacement.

8.16 Replacing a Switch

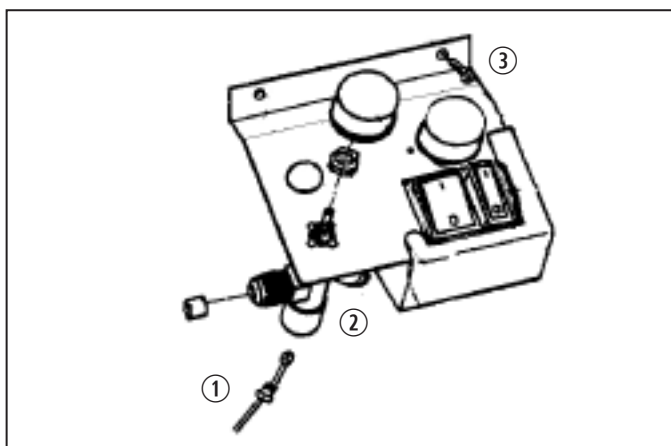


15 Removing a Switch

- ① Screw ③ AC Switch
② DC Switch

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Remove the screws securing the switch panel to the back of the refrigerator.
3. Pull the switch panel out of position.
4. Remove the wiring from the back of the AC or DC switch, whichever you are replacing.
5. From the bottom of the panel, push the switch until it pops out.
6. Perform these steps in reverse with the new switch to complete the replacement.

8.17 Replacing the Thermocouple

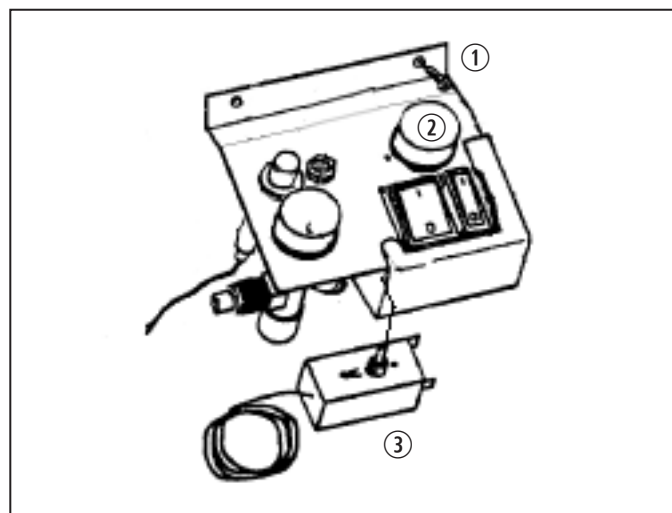


16 Removing the Thermocouple

- ① Thermocouple ③ Screw
② Gas Valve

1. Perform the steps in "Replacing the Burner Assembly" on page 15 to release the thermocouple from the clip.
2. Remove the screws securing the switch panel to the back of the refrigerator.
3. Slide the switch panel out of position to gain access behind panel.
4. Loosen the nut securing the thermocouple wiring below the gas valve.
5. Remove the screw securing the thermocouple to the bottom of the gas valve.
6. Remove the defective thermocouple.
7. Perform these steps in reverse with a new thermocouple to complete the replacement.

8.18 Replacing the Thermostat



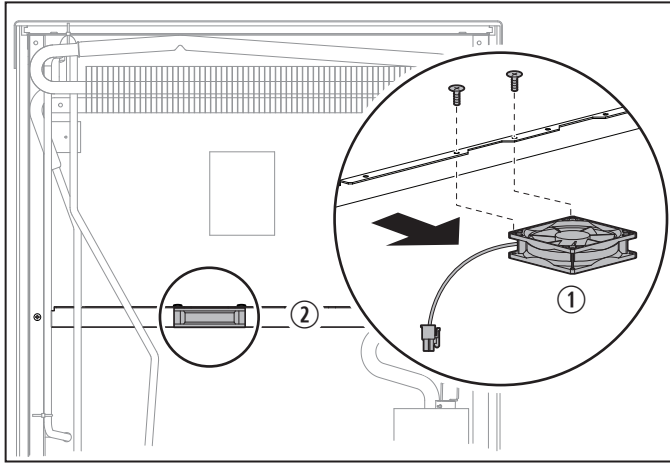
17 Removing the Thermostat

- ① Screw ③ Thermostat
② Knob

1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
2. Remove the knob from the thermostat.
3. Remove the screws securing the switch panel to the back of the refrigerator.
4. Slide the switch panel out of position to gain access behind panel.

5. Disconnect the wiring to the thermostat.
6. Remove the defective thermostat.
7. Perform these steps in reverse with the new thermostat to complete the replacement.

8.19 Replacing the Ventilation Fan

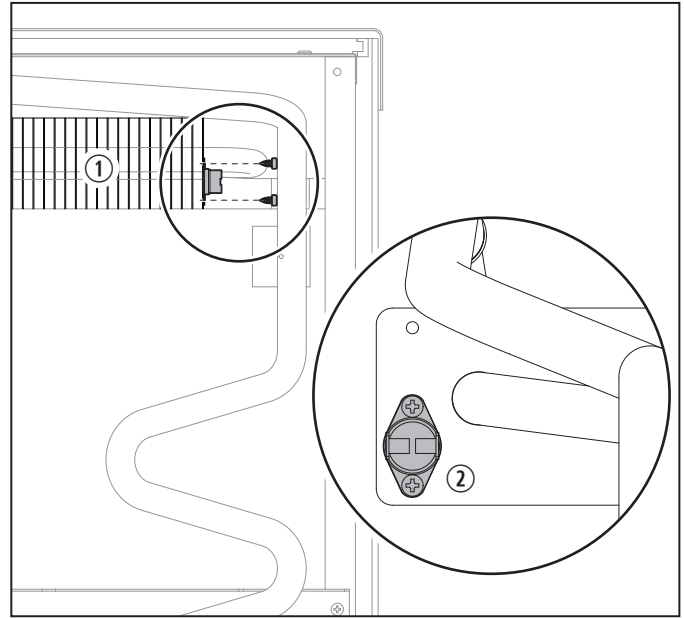


18 Removing the Ventilator Fan from the Mounting Bracket

- ① Ventilator Fan ② Mounting Bracket

- i** The location of the ventilation fan may vary depending on model and installer.
1. Disconnect the unit from all power sources (120 VAC and 12 VDC).
 2. Refer to the steps in “Removing the Refrigerator from an Enclosure” on page 15 if it is necessary to remove the refrigerator to access the fan.
 3. Locate the ventilation fan on the rear of the refrigerator.
 4. Disconnect the wiring to the fan.
 5. Remove the screws securing the fan to the mounting bracket.
 6. Remove the defective fan from the rear of the refrigerator.
 7. Perform these steps in reverse with the new ventilator fan to complete the replacement.

8.20 Replacing the Ventilation Fan Switch



19 Removing the Ventilator Fan Switch

- ① Cooling Fins ② Fan Switch

- i** The location of the ventilation fan switch may vary depending on model and installer.
1. Perform the steps in “Replacing the Ventilation Fan” on page 22 to access the fan switch.
 2. Disconnect the wiring from the fan switch.
 3. Remove the screws securing the fan switch to the fin.
 4. Remove the defective fan switch from the rear of the refrigerator.
 5. Perform these steps in reverse with the new fan switch to complete the replacement.

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.

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