

Hoshizaki America, Inc.

Commercial Refrigerators & Freezers

Models

RR28A

RR55A

RF28A

RF55A



“A Superior Degree
of Reliability”

www.hoshizaki.com

INSTRUCTION MANUAL



Issued: 8-10-2006

IMPORTANT

Only qualified service technicians should attempt to install, service or maintain this unit. No installation, service or maintenance should be undertaken until the technician has thoroughly read this Instruction Manual. Likewise, the owner/manager should not proceed to operate the unit until the installer has instructed them on its proper operation.

HOSHIZAKI provides this manual primarily to assist qualified service technicians in the installation, maintenance and basic service of the unit.

Should the reader have any questions or concerns which have not been satisfactorily addressed, please call, write or send an e-mail message to the HOSHIZAKI Technical Support Department for assistance.

HOSHIZAKI AMERICA, INC.
618 Highway 74 South
Peachtree City, GA 30269

Attn: HOSHIZAKI Technical Support Department

Phone: 1-800-233-1940 Technical Service
(770) 487-2331

Fax: 1-800-843-1056
(770) 487-3360

E-mail: techsupport@hoshizaki.com

Web Site: www.hoshizaki.com

NOTE: To expedite assistance, all correspondence/communication MUST include the following information:

- Model Number
- Serial Number
- Complete and detailed explanation of the problem

- Please review this manual. It should be read carefully before the unit is installed and operated. Only qualified service technicians should install, service and maintain the unit. This manual should be made available to the technician prior to installation, maintenance or service.
- Keep this manual with the unit for later reference.

CONTENTS

I. General Information	4
A. Construction	4
II. Installation Instructions	5
A. Checks Before Installation	5
B. Location.....	5
C. Setup.....	6
D. Electrical Connections	7
E. Final Checklist.....	7
III. Operating Instructions.....	8
A. Startup	9
B. Cabinet Temperature Setting.....	9
C. Defrost	10
D. Temperature Display (°F or °C)	10
E. Shutdown	10
F. Locking the Unit	10
IV. Cleaning and Maintenance Instructions.....	11
A. Cleaning.....	11
1. Exterior	11
2. Interior	11
3. Door Gaskets.....	11
4. Shelves.....	11
B. Maintenance.....	12
1. Air Filter	12
2. Condenser	13
3. Light.....	13
V. Troubleshooting.....	14
A. Unit Fails to Operate	14
B. Alarm Code Appears in Display	14
C. Poor Cooling Performance	15
D. Condensation	16
E. Noise	16



Keep Dry

WARNING

To reduce the risk of electric shock and fire, do not allow this product to get wet and avoid use in potentially wet conditions.

IMPORTANT

This is a commercial refrigerator/freezer, and should be used only for the purpose for which it has been expressly designed. Any other use should be considered improper and therefore dangerous. The manufacturer will not be held liable or responsible for any damage caused by improper, incorrect and unreasonable use.

I. General Information

A. Construction

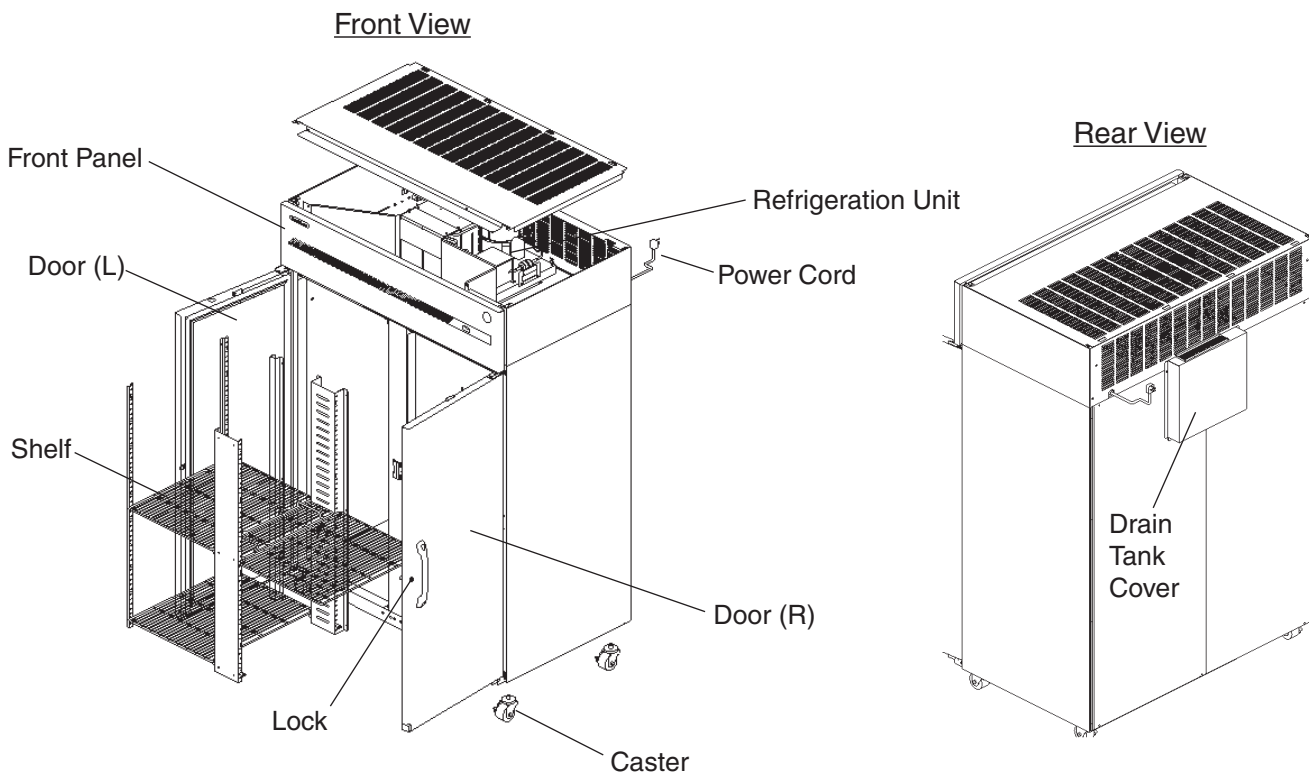


Fig. 1

II. Installation Instructions

A. Checks Before Installation

- Visually inspect the exterior of the shipping container, and report any severe damage to the carrier.

IMPORTANT

Remove shipping tape holding the door, shelves, shelf support clips and other parts inside the cabinet. If shipping tape is left in the unit, it will not work properly.

- Remove the package containing the accessories.
- See the nameplate on the right-side interior wall, and check that your voltage supplied corresponds with the voltage specified on the nameplate.

B. Location

IMPORTANT

This refrigerator/freezer is not intended for outdoor use. Normal operating ambient temperature should be within 45°F to 100°F (7°C to 38°C).

For best operating results:

- The refrigerator/freezer should not be located next to ovens, grills or other high heat producing equipment.
- The location should provide a firm foundation for the equipment.
- Avoid a site where dripping is not allowed.
- Do not expose the unit to direct sunlight or high temperatures.
- Allow at least 40" (102 cm) clearance at the front of the unit for proper air circulation and smooth door operation. Also allow at least 12" (30 cm) clearance from the ceiling to the top of the unit for air circulation. See Fig. 2.
- Allow at least 1/2" (13 mm) clearance at the rear of the unit to protect the drain tank from the impact of door opening/closing and the wall from the drain tank heat. See Fig. 2.

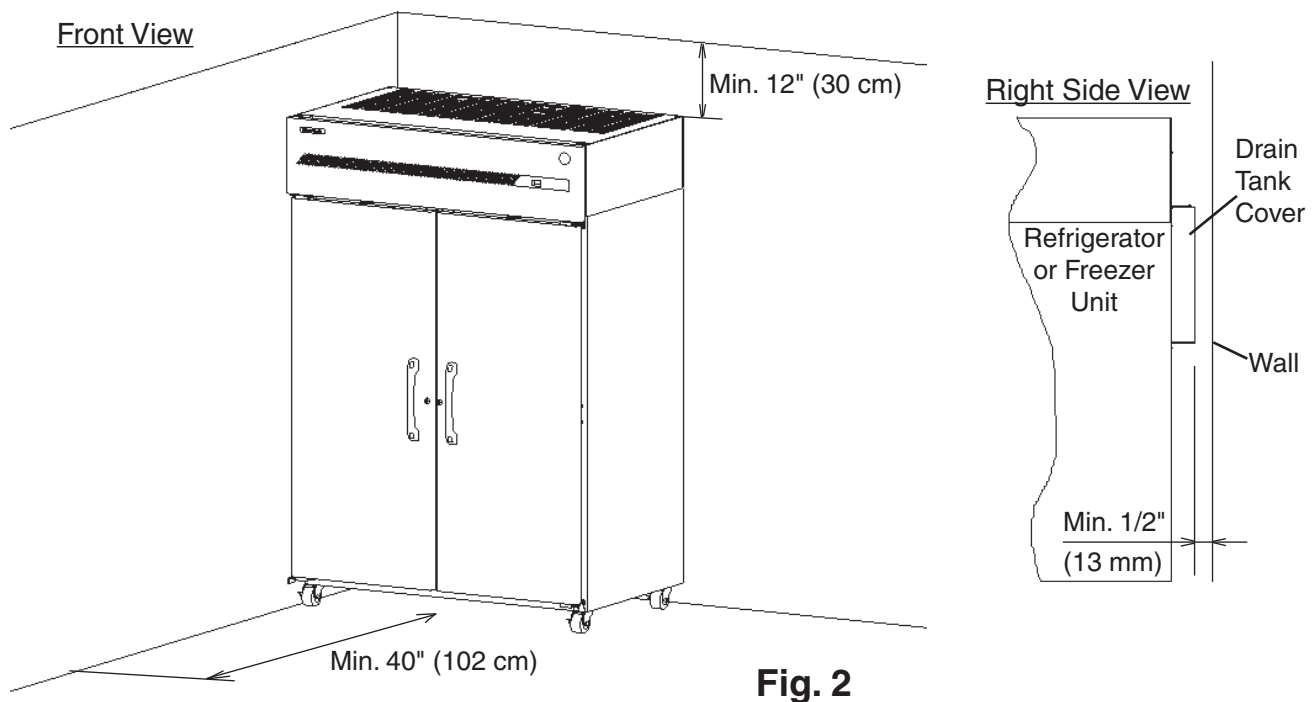


Fig. 2

C. Setup

IMPORTANT

1. Do not tilt the unit more than 45° when mounting the legs or casters.
2. Hold the bottom of the unit. Do not hold the doors; they could become deformed or come off.

- 1) Cut the shipping band and remove the carton.
- 2) Take out the accessory casters.
- 3) Mount the casters according to the instructions printed on the package (work in pairs).
- 4) When mounting the casters, lock them to help prevent the unit from moving.
- 5) Before operating the unit, remove the shipping carton and all packing material, tape and protective plastic film on the exterior. Be careful not to damage the exterior panels. If the unit has been exposed to the sun or to heat, remove the film after the unit cools.
- 6) Position the unit in the selected site.

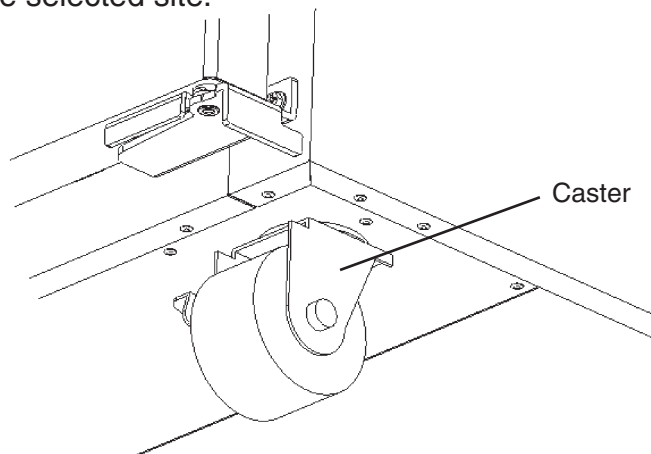


Fig. 3

- 7) Clean the interior with a damp cloth containing a neutral cleaner.
- 8) Install the accessory shelves using the shelf support clips provided.

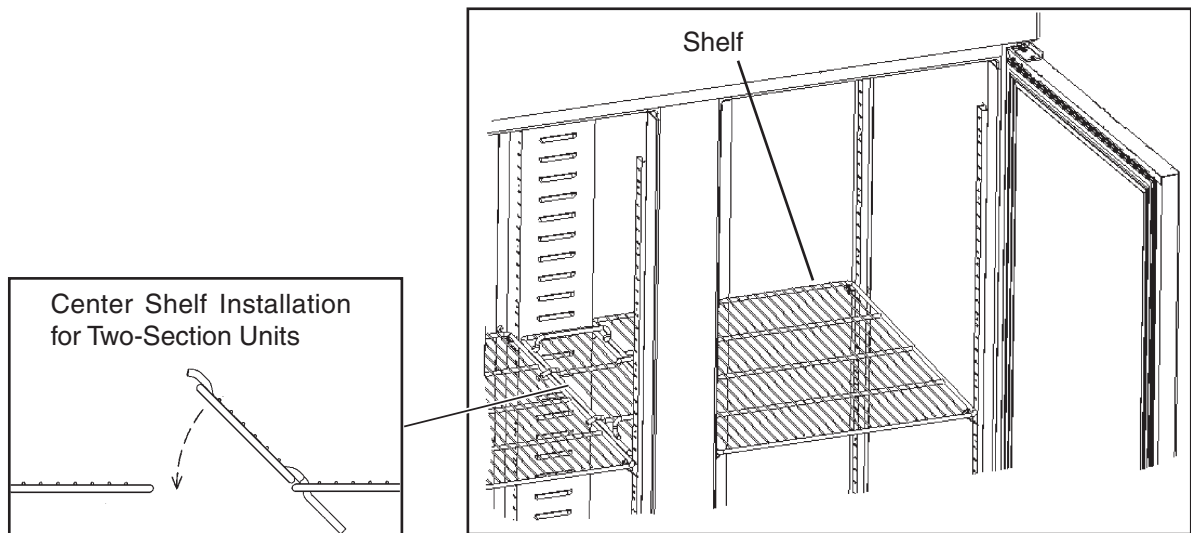


Fig. 4

D. Electrical Connections

- This refrigerator/freezer must be plugged into a separate power receptacle which is readily accessible and has enough capacity. The maximum allowable voltage variation should not exceed ± 10 percent of the nameplate rating. See the nameplate.
- If the supply cord and the plug should need to be replaced, replacement should be carried out by a qualified service technician.
- Run the refrigerator/freezer for 1 hour and check for proper temperature before putting food in the cabinet.

E. Final Checklist

- 1) Is the refrigerator/freezer in a site where the ambient temperature is within 45°F to 100°F (7°C to 38°C) all year?
- 2) Have the shipping carton and all packing material, tape and protective plastic film on the exterior been removed from the refrigerator/freezer?
- 3) Have all electrical connections been made?
- 4) Has the power supply voltage been tested or checked against the nameplate rating?
- 5) Has the user been given the Instruction Manual and instructed on how to operate the refrigerator/freezer and the importance of the recommended periodic maintenance?
- 6) Has the end user been given the name and telephone number of an authorized service agent?
- 7) Has the warranty tag been filled out and forwarded to the factory for warranty registration?

III. Operating Instructions

IMPORTANT

- Be careful not to get the machine compartment wet. This might cause failure or an electric shock hazard.
- To prevent electric shock, do not touch the plug with wet hands.
- Do not store any volatile or flammable substances, such as benzine, ether, adhesives, or LPG in the unit.
- This refrigerator/freezer is designed only for temporary storage of foods. Use for any other purposes (ex. storage of chemicals or medical supplies such as vaccine and serum) could cause deterioration of stored items.
- Do not throw anything onto the shelves or load any single shelf with more than 88 lb (40 kg) of product. They may fall off and cause injury.
- Do not store bottles or cans near the air outlet. They may freeze up and break, causing a risk of injury.
- Do not use combustible spray or place volatile and flammable substances near the unit. They could catch fire from a spark of a switch or the like.
- Do not put anything into the machine compartment or the air inlet/outlet. The fan rotating rapidly inside may cause injury or heat.
- Run the refrigerator/freezer for 1 hour and check for proper temperature before putting food in the cabinet.
- Do not block the air inlet/outlet with food.
- Do not pack the cabinet with food. Allow some space between items to ensure a good air flow.
- Do not put in warm or hot food. Let it cool first, or it may raise the cabinet temperature and could deteriorate other food in the cabinet or overload the refrigerator/freezer.
- Make sure all items are secure on the shelves.
- Moist or fresh food and food with a strong smell like seafood should be wrapped in plastic film or packed in a container. Otherwise the food may dry up or give its smell to other food.
- Food containing acetic acid or yeast should be wrapped in plastic film. Otherwise it may accelerate corrosion of the evaporator and copper tubes, resulting in failure.
- Foods intended for direct human consumption should be stored on the shelf in a proper container and protected from direct contact with the cabinet walls.
- Do not use the freezer to freeze foods. It is designed only to store frozen foods. High quality ice cream may melt during defrost cycle and should not be stored in the freezer.
- The doors may become difficult to open just after closed because of the negative pressure created inside the cabinet. Wait for about 30 seconds.
- To prevent burns, do not touch the hot surface of the drain tank located at the rear of the unit.

A. Startup

WARNING

The unit comes with the drain tank cover installed on the rear of the machine. Due to heat generated in the drain tank area, this cover must be in place when the unit is operating.

- 1) Plug in the unit. The evaporator fan starts.
- 2) The compressor and condenser fan motor will start in 3 minutes.

B. Cabinet Temperature Setting

The cabinet temperature is factory-adjusted to 37°F (3°C) for refrigerator models and 0°F (-18°C) for freezer models. If necessary, readjust the temperature as follows:

- 1) Press the **SET** button to display the current setpoint temperature.
 - 2) To change the setpoint, press and hold the **SET** button while pressing the **▲** up or **▼** down button to raise or lower the setpoint. The cabinet temperature is adjustable between 21°F and 54°F (-6°C and +12°C) for refrigerator models and between -13°F and 19°F (-25°C and -7°C) for freezer models.
 - 3) The new setpoint will be saved automatically 10 seconds after releasing the buttons.
- Note: The displayed cabinet temperature is adjusted to be almost equal to the temperature at the center of the cabinet without foods. But it can be different from the actual temperature depending on arrangement of stored foods, frequency of door opening or location of measuring points.

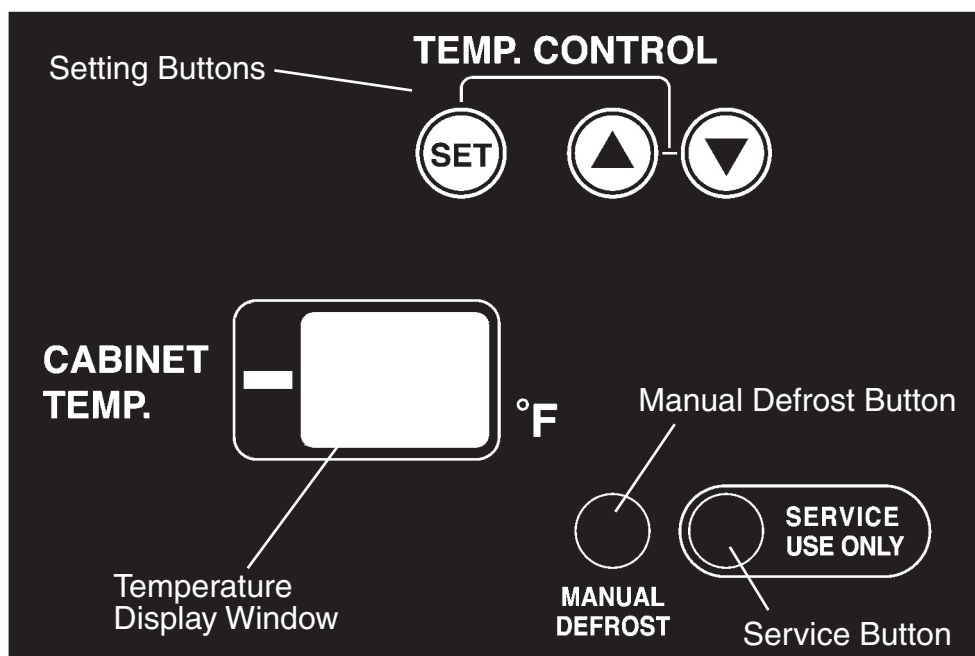










Fig. 5

C. Defrost

This unit is preset at the factory to defrost every 6 hours for general conditions, the first defrost occurring 6 hours after power to the unit is turned on. Note that the defrost is a heated defrost, and therefore will have a tendency to raise the cabinet temperature. Cabinet temperature is not displayed during defrost; "dF" is displayed in its place. Defrost may be initiated manually by holding down the MANUAL DEFROST button for 5 seconds.

D. Temperature Display (°F or °C)

The factory setting is °F. To change the display to °C, follow the steps below.

- 1) Press and hold both the  button and the  service button for 5 seconds. "F0" should appear in the display window. Press the MANUAL DEFROST button until "F5" appears in the display window.
- 2) Press the  service button to display the current setting (default: "°F"). Press the  up or  down button to switch to °C. Press the  service button again to save the setting.
- 3) Press and hold both the  button and the  service button for 5 seconds. The cabinet temperature will be displayed using the newly saved temperature scale.
- 4) Affix the "°C" label supplied with the unit to the display panel, covering "°F" but not the display window.

Note: The cabinet temperature is updated every 30 seconds.

E. Shutdown

- 1) Before shutting down the unit, move the stored food into another refrigerator/freezer.
- 2) Unplug the unit.
- 3) When preparing the unit for long storage, clean the cabinet interior and door gaskets, dry them thoroughly and store the unit in a dry place.

F. Locking the Unit

The door locks (1 lock per door) are located beside the door handle. To lock the door, push and turn the key.

IV. Cleaning and Maintenance Instructions

A. Cleaning

— WARNING —

1. Do not splash water directly onto the unit. This might cause short circuit, electric shock, corrosion or failure.
2. When cleaning or inspecting the unit, unplug the unit or disconnect the main power source to prevent electric shock by unexpected entrance of water into the unit, or injury by any moving parts.
3. To prevent frostbite, do not touch foods or containers (especially metallic) in the freezer compartment with damp hands.
4. Before using a sanitizer such as inert soap and sodium hypochlorite, thoroughly read the manufacturer's instructions on the proper usage and amount.

— IMPORTANT —

1. To prevent damage to the painted or plastic surfaces, do not use the following: thinner, benzine, alcohol, petroleum, soap powder, polishing powder, alkaline cleaner, acid, scouring pad and especially those strong cleaners for use on a ventilating fan or a cooking range. Also, to prevent corrosion, do not use a chlorine bleach such as sodium hypochlorite on the stainless steel surfaces.
2. Use clean cloth and hands for cleaning. Do not use a water jet to clean the machine compartment.
3. Before cleaning the cabinet interior, move the stored foods into another clean refrigerator/freezer.

1. Exterior

The exterior is exposed to grease, moisture and dust. Even stainless steel needs periodic cleaning to prevent possible corrosion. Wipe the exterior occasionally with a clean, soft cloth. Use a damp cloth containing a neutral cleaner to wipe off oil or dirt build up.

2. Interior

Spills should be wiped up promptly to avoid unpleasant odors. The cabinet interior should be cleaned periodically with a mild soap or detergent.

3. Door Gaskets

Remnants of food on the gaskets or cabinet will accelerate aging. Door gaskets should be cleaned regularly with mild soap and water to remove dirt and grease.

4. Shelves

Remove and clean regularly.

B. Maintenance

IMPORTANT

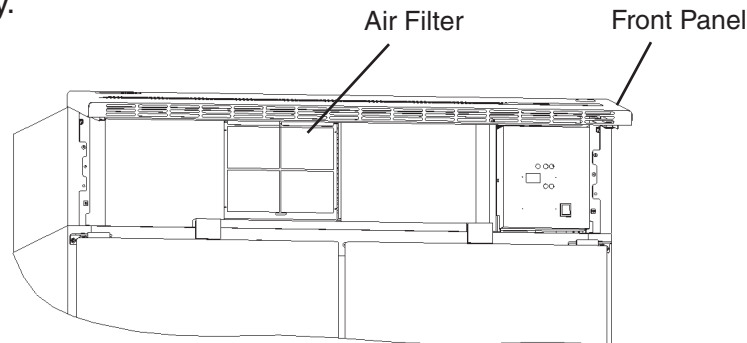
1. Before carrying out any cleaning or maintenance operations, unplug the unit.
2. Do not disassemble the unit further than illustrated in Fig. 1.
3. To reduce the risk of electric shock, fire and breakdown, do not allow this product to get wet and do not touch the machine compartment parts.

1. Air Filter

A plastic mesh air filter removes dirt or dust from the air, and keeps the condenser from getting clogged. As the filter gets clogged, the refrigerator/freezer's performance will be reduced. Check the filter at least twice a month. When clogged, use warm water and a neutral cleaner to wash the filter. To avoid damaging the air filter, do not use water hotter than 104°F (40°C). Do not operate the unit with the air filter removed, or the condenser will get clogged, resulting in failure.

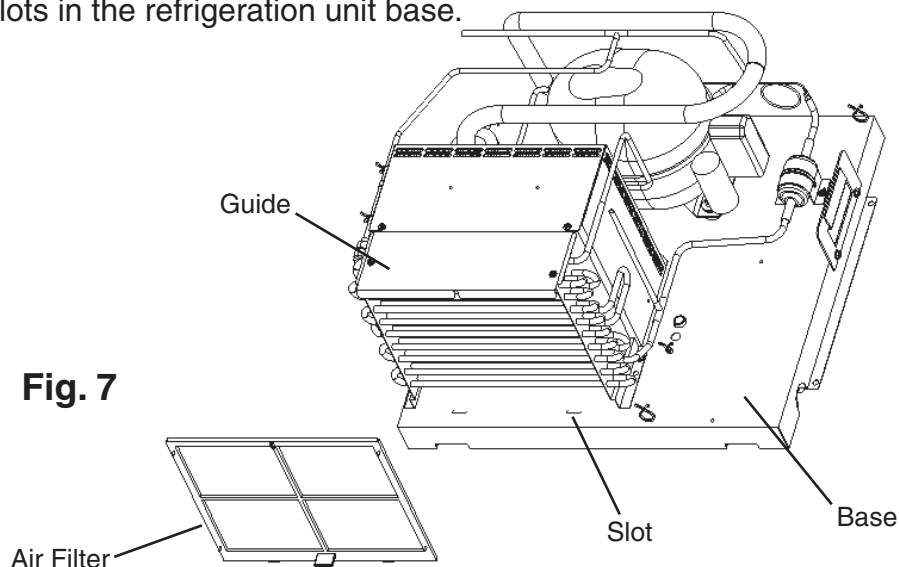
- 1) Open the front panel and remove the air filter. To prevent injury, do not touch the condenser fins directly.

Fig. 6



- 2) Wash the air filter carefully with warm water containing a neutral cleaner. Rinse and dry the air filter thoroughly.
- 3) To refit the air filter, attach it to the guide at the top of the condenser and put the tabs into the slots in the refrigeration unit base.

Fig. 7



2. Condenser

Check the condenser (located behind the air filter) once a year and use a brush or vacuum cleaner to clean the unit as required.

3. Light

Use only a 130V 40W bulb. Replacement should be carried out by a qualified service technician.

V. Troubleshooting

IMPORTANT

1. In case of insufficient refrigeration performance, move the stored foods into another refrigerator/freezer to prevent their deterioration.
2. When contacting a service company, let them know the model name, serial number (see nameplate on the right-side interior wall), date of installation (see warranty card) and type of problem (ex. alarm code).

A. Unit Fails to Operate

- Power failure. Wait until power supply is resumed.
- Unplugged. Plug in.

B. Alarm Code Appears in Display

If an error occurs, the alarm code and cabinet temperature are displayed in 1-second intervals. When an error occurs, check the alarm code and follow the instructions below. If more than one abnormal condition exists, alarm codes will be displayed in order of priority.

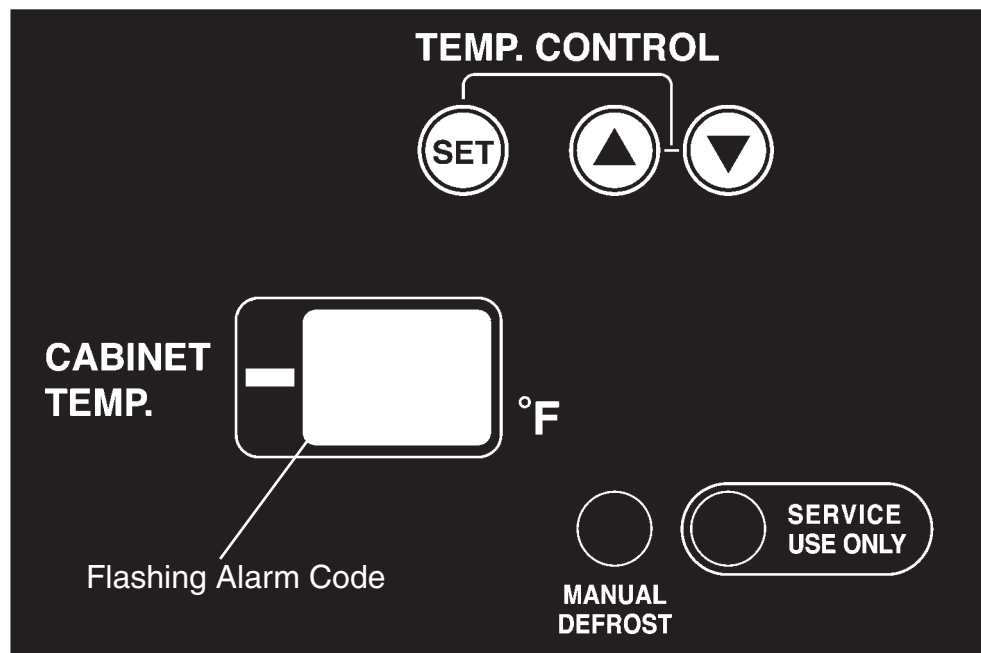


Fig. 8

Alarm Signals		
Alarm Code	Problem	Notes
E1	High Temperature Alarm Cabinet temperature has exceeded set temperature by 18°F (10°C) for more than x minutes. The default value of x is "2" (120 minutes).	When temperature returns to setpoint range, alarm code "E1" will clear. If temperature is not back in range, and obvious corrections do not bring temperature back in range, call a qualified service technician.
E2	Low Temperature Alarm Cabinet temperature has remained below setpoint by 9°F (5°C) for more than y minutes. The default value of y is "1" (60 minutes).	When temperature returns to setpoint range, alarm code "E2" will clear. If temperature is not back in range, and obvious corrections do not bring temperature back in range, call a qualified service technician.
E3	Defrost Alarm Defrost has taken longer than 1 hour. Control board has terminated defrost.	Call a qualified service technician. Note that E3 may alternate with "dF" instead of the temperature.
E4	High Pressure Alarm Compressor discharge pressure is outside normal operating range. Pressure switch has been triggered 5 or more times in 1 hour. Condenser filter may need cleaning.	Clean filter if necessary. Allow time for pressure switch to react, then turn power off and back on again to reset. If switch trips 5 times in 1 hour, and the above steps do not clear the alarm code, call a qualified service technician.
E7	Clogged Filter Alarm Condenser temperature is outside of normal operating range. Condenser filter needs cleaning.	Clean filter. Allow time for sensor to react, then turn power off and back on again to reset. If this alarm occurs frequently, it is recommended that a qualified service technician be called.
E8	Defrost Thermistor Malfunction Alarm Defrost thermistor has failed.	Call a qualified service technician. After replacing thermistor, alarm will reset.
E9	Clogged Filter Thermistor Malfunction Alarm Clogged filter thermistor has failed.	Call a qualified service technician. After replacing thermistor, alarm will reset.
EA	EEPROM Write Error Alarm Control board is defective.	Call a qualified service technician. After replacing the control board, alarm will reset.
ED	EEPROM Verification or Read Error Alarm Control board is defective.	Call a qualified service technician. After replacing the control board, alarm will reset.

C. Poor Cooling Performance

- Door(s) opened too often.
- Door(s) left open. Close.
- Too packed with food or air inlet/outlet blocked. Allow some space between items/containers to ensure good air flow.
- Warm or hot foods inside. Take them out until they cool down more.
- Ambient temperature too high. Avoid installation near high heat producing equipment or exposure to direct sunlight.

- Cabinet temperature setting too high. Readjust it to a lower temperature.
- Unit in defrost. The cabinet temperature may rise temporarily during defrost cycle, but this will not affect the food inside.
- Door gaskets dirty. Clean.
- Air filter clogged. Clean.

D. Condensation

- Door(s) left open. Close.
- Ambient humidity too high. Condensation may occur on a humid or rainy day. Wipe off occasionally.

E. Noise

- Operating sounds from compressor, condenser fan motor, or evaporator fan motor. This is not a sign of failure.
- Installed on an unsteady floor. Contact an authorized Hoshizaki service company.
- Not leveled in the left-to-right or front-to-rear directions. Contact an authorized Hoshizaki service company.

HOSHIZAKI AMERICA, INC.

618 Hwy. 74 S., Peachtree City, GA 30269 USA	TEL (770) 487-2331	FAX (770) 487-3360	www.hoshizaki.com	91A3KA10A
--	--------------------	--------------------	--	-----------