

Model:

Crystal Fire Collection

Decorative Gas Appliances

CF-20-LP (NG)

CF-1224-LP (NG)

CF-2424-LP (NG)



GAS-FIRED



CAUTION



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.



⚠ WARNING



If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- 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 building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

⚠ WARNING



HOT! DO NOT TOUCH. SEVERE BURNS MAY RESULT. CLOTHING IGNITION MAY RESULT.

Glass and other surfaces are hot during operation and cool down.

- Keep children away.
- CAREFULLY SUPERVISE children near or around this appliance.
- Alert children and adults to hazards of high temperatures.
- Keep clothing, furniture, draperies and other combustibles away.

⚠ WARNING

For outdoor use only.

⚠ WARNING

It is imperative the burner be kept clean.

⚠ WARNING

Improper installation, adjustment, alteration service or maintenance can cause injury or property damage. Read the installation and maintenance instructions thoroughly before installing or servicing this equipment.



Installation and service of this appliance should be performed by qualified personnel. The Outdoor Greatroom Company suggests NFI certified or factory-professionals, or technicians supervised by an NFI certified professional.

**Read this manual before installing or operating this appliance.
Please retain this owner's manual for future reference.**

Congratulations

Congratulations on selecting an Outdoor Greatroom Company decorative gas appliance. The Crystal Fire you have selected is designed to provide the utmost in safety, reliability, and efficiency.

As the owner of a Crystal Fire, you'll want to read and carefully follow all of the instructions contained in this owner's manual. Pay special attention to all cautions and warnings.

This owner's manual should be retained for future reference. We suggest you keep it with your other important documents and product manuals.

The information contained in this owner's manual, unless noted otherwise, applies to all models and gas control systems.

Your new Crystal Fire will give you years of durable use and trouble-free enjoyment.

Homeowner Reference Information	<i>We recommend that you record the following pertinent information about your appliance:</i>
Model Name: _____	Date purchased/installed: _____
Serial Number: _____	Location on appliance: _____
Dealership purchased from: _____	Dealer phone: _____
Notes: _____	

Listing Label Information/Location

The model information regarding your specific appliance can be found on the rating plate located in the control area of the appliance. See sample rating plate below for locations of specifications.

CF-20-LP (NG)

CF-1224-LP (NG)

CF-2424-LP (NG)


Model	Gas Type	Orifice Size	Serial Number													
 <p>LISTED DECORATIVE OUTDOOR GAS-FIRED FIREPLACE Crystal Fire</p> <p>Model Crystal Fire CSA 4.96 U.S. (3rd Ed.), Gas-Fired Outdoor Fireplace For Canada CR-97-003, Outdoor Gas Fireplaces Type of Gas: Natural Gas, Propane Gas</p> <p>ORIFICE SIZE: NG = #31 LPG = #43 Min. Gas supply for Input Adj. Max. Inlet Supply Pressure Manifold Pressure</p> <p>WARNING: Must Not Be Used For Cooking. WARNING: For Outdoor Use Only. If stored indoors, detach and leave cylinder outdoors. MINIMUM CLEARANCES: Top: 6 Ft. (72") Sides: 2 Ft. (24")</p> <p>Minimum clearance from sides and back of unit to adjacent combustible construction below top of unit, 24 inches from sides and 24 inches from back. Minimum horizontal clearance from sides and back of unit to adjacent vertical combustible construction horizontal clearance from sides and back of unit to adjacent vertical combustible construction extending above top of unit, 24 inches from sides and 24 inches from back.</p>	<p>LPG</p> <table border="0"> <tr> <td>11.0</td> <td>in. w.c. (2.7kPa)</td> </tr> <tr> <td>14.0</td> <td>in. w.c. (3.5kPa)</td> </tr> <tr> <td>10.0</td> <td>in. w.c. (2.5kPa)</td> </tr> </table>	11.0	in. w.c. (2.7kPa)	14.0	in. w.c. (3.5kPa)	10.0	in. w.c. (2.5kPa)	<p>MFG. DATE DATE DE FAB. XX/XX Natural Gas and Propane Gas</p> <p>Input 60,000BTU (17.5 kW)</p> <table border="0"> <tr> <td>NG</td> <td>7.0</td> <td>in. w.c. (1.7kPa)</td> </tr> <tr> <td>14.0</td> <td>in. w.c. (3.5kPa)</td> </tr> <tr> <td>3.5</td> <td>in. w.c. (.87kPa)</td> </tr> </table>	NG	7.0	in. w.c. (1.7kPa)	14.0	in. w.c. (3.5kPa)	3.5	in. w.c. (.87kPa)	<p>The Outdoor Greatroom Company 2015 Silver Bell Rd., Suite 195 Eagan, MN 55112</p> <p>Serial #</p>
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1

Listing and Code Approvals

A. Appliance Certification

MODEL: CRYSTAL FIRE CF-20-LP, CF-1224, CF-2424-LP

LABORATORY: Underwriters Laboratories, Inc. (UL)

TYPE: Decorative Gas-Fired Outdoor Fireplace

STANDARD: IAS US requirements for Outdoor

Gas Fireplaces, Draft 4-96 and CSA requirement for Outdoor Gas Fireplaces, CR-97-003

The Crystal Fire has been tested in accordance with IAS US requirements for Outdoor Gas Fireplaces, Draft 4-96 and CSA requirement for Outdoor Gas Fireplaces, CR-97-003 for Canada and has been listed by Underwriters Laboratory (UL) for installation and operation as described in these installation and operating instructions.

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code ANSI Z223.1 or CAN/CGA-B149.1, National Gas Installation Code or CAN/CGA-B149.2, Propane Installation Code.

B. BTU Specifications

Model	Max Input BTUH	Orifice Size	
		LP	NG
CF-20-LP	60,000	#43	#31
CF-1224	55,711	#39	#30
CF-2424	75,825	#36	#17

2 Getting Started

This appliance is a Decorative Gas Appliance for **OUT-DOOR USE ONLY** and **MUST NOT** be used for cooking.

Place the Crystal Fire on a flat and stable surface in an outdoor location such as a patio or deck. This location must be adjacent to the gas supply line or LP gas supply cylinder. **DO NOT** locate the appliance where it can get excessively wet or submerged in water.

A. Design and Installation Considerations

When planning an appliance installation, it's necessary to determine the following information before installing:



- Where the appliance is to be installed. **See Sections 3 and 4.**
- Gas supply piping. **See Section 4.**
- Framing and finishing details. **See Sections 3 and 4.**



B. Tools and Supplies Needed


Before beginning the installation be sure that the following tools and building supplies are available.

- Gloves
- Safety glasses
- Flat blade screwdriver
- Non-corrosive leak check solution
- Wrenches
- One AAA Battery




CAUTION
Check building codes prior to installation. <ul style="list-style-type: none">• Installation MUST comply with local, regional, state and national codes and regulations.• Consult insurance carrier, local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

 WARNING
 Asphyxiation Risk <ul style="list-style-type: none">• This gas appliance is for outdoor use in a well-ventilated space.• This unit must not be installed inside an enclosed structure or unvented appliance.



CAUTION
 Sharp Edges <ul style="list-style-type: none">• Wear protective gloves and safety glasses during installation. 


 WARNING
Do NOT burn solid fuels in this gas appliance.

C. Inspect the Appliance and Components

 WARNING
 Inspect appliance and components for damage. Damaged parts may impair safe operation. <ul style="list-style-type: none">• Do NOT install damaged components.• Do NOT install incomplete components.• Do NOT install substitute components.  Report damaged parts to dealer.

- Carefully remove the appliance and components from the packaging.
- Report to your dealer any parts damaged in shipment.
- Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.

 WARNING
 The Outdoor Greatroom Company disclaims any responsibility for, and the warranty will be voided by, the following actions: <ul style="list-style-type: none">• Installation and use of any damaged components.• Modification of the burner assembly.• Installation other than as instructed by the Outdoor Greatroom Company.• Installation and/or use of any component part not approved by The Outdoor Greatroom Company. Any such action may cause a fire hazard.

 WARNING
Do NOT use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.



WARNING

Verify sparker is producing spark prior to turning gas on.

D. Step by Step Lighting Instructions (for use with an Outdoor Greatroom firepit table)



Step 1. Remove access panel and locate LP tank.



Step 4. Make sure electrode is sparking.



Step 2. After verifying shutoff valve is in the "OFF" position, turn gas on at tank.



Step 5. Turn shut-off valve to "ON" position.



Step 3. Make sure AAA battery is installed in sparker by unscrewing the rubber sparker cup. Begin pressing sparker

3

Framing and Clearances

Note:

- Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY.
- Illustrations/diagrams are not drawn to scale.
- Actual installation may vary due to individual design preference.

WARNING



Fire Risk

Provide adequate clearance:

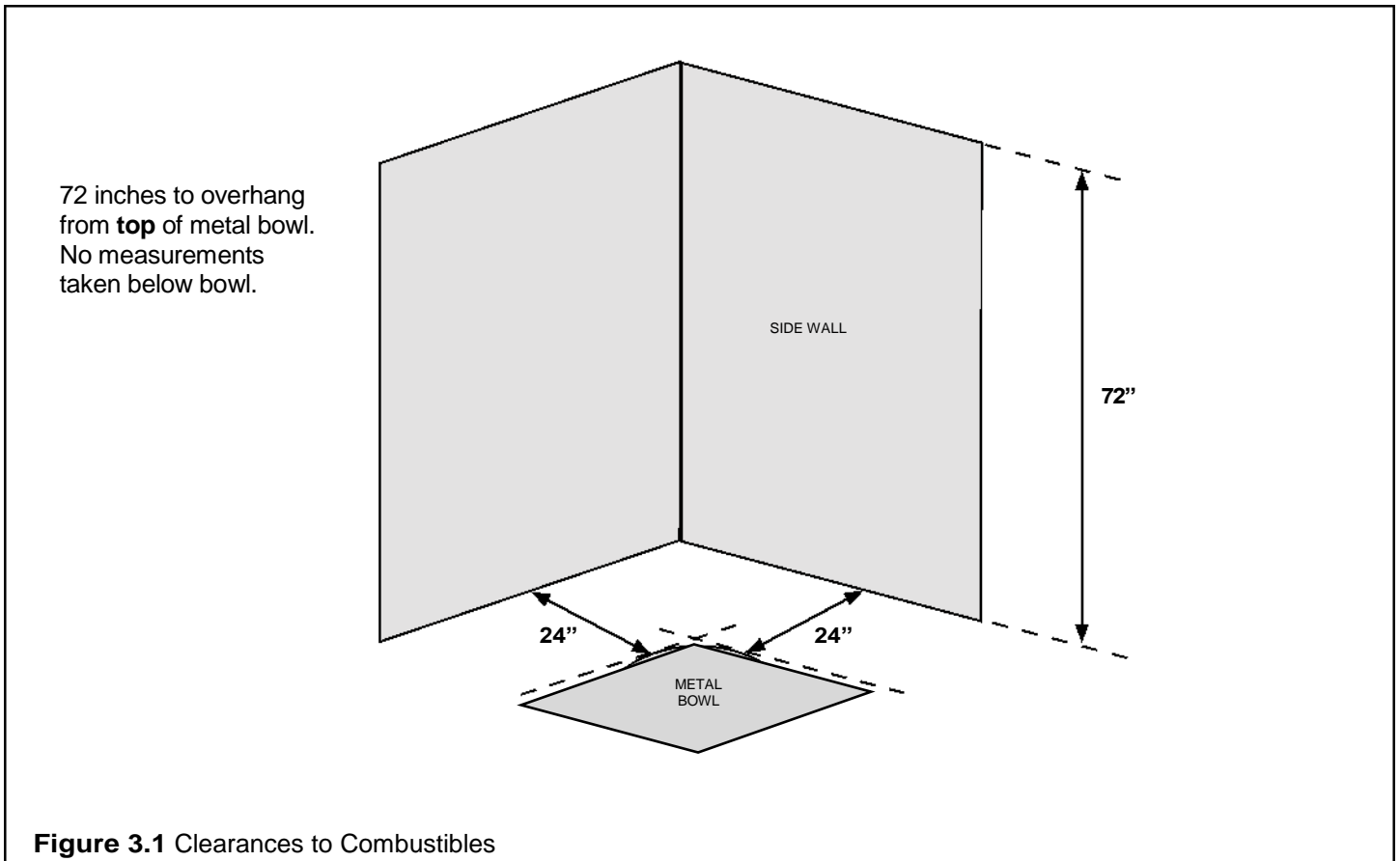
- Around air openings.
- For service access.

Locate appliance away from traffic areas.

A. Select Appliance Location

When selecting a location for your appliance it is important to consider the required clearances to walls (See Figure 3.1).

B. Clearances to Combustibles



C. Framing Enclosure for LP Gas Supply System

If you build an enclosure for an LP gas cylinder, follow these recommended specifications and local codes:

Ventilation

Enclosures must be ventilated by openings at the level of the cylinder valve and at floor level. Effectiveness must be determined with the cylinder(s) in place.

- One side of the enclosure must be completely open or,
- For an enclosure having four sides, a top and a bottom:
 - At least two ventilation openings at cylinder valve level shall be provided in the side wall, equally sized, spaced at 180 degrees (3.14 rad), and unobstructed. Each opening must have a total free area of not less than 1/2 square inch per pound (3.2 sq. cm/kg) of stored fuel capacity and not less than a total free area of 10 square inches (64.5 sq. cm).
 - Ventilation opening(s) must be provided at floor level and shall have a total free area of not less than 1/2 square inch per pound (3.2 sq. cm/kg) of stored fuel capacity and not less than a total free area of 10 square inches (64.5 sq. cm). If ventilation openings at floor level are in a side wall, there must be a least two openings. The bottom of the openings must be at floor level and the upper edge can't be more than 5 in. (127 mm) above the floor. The openings must be equally sized, spaced at 180 degrees (3.14 rad) and unobstructed.
 - Every opening must have minimum dimensions to permit the entrance of a 1/8 inch (3.2 mm) diameter rod.

Accessibility

- Cylinder valves must be readily accessible for hand operation. A door on the enclosure to gain access to the cylinder valves is acceptable, provided it is non-locking and can be opened without the use of tools.
- The design of the enclosure must be such that:
 - The LP gas supply cylinder(s) can be connected, disconnected and the connections inspected and tested outside the cylinder enclosure.
 - Those connections which could be disturbed when installing the cylinder(s) in the enclosure can be leak tested inside the enclosure.
 - Be certain to mount or set the LP gas cylinder on a flat stable surface and retain it to prevent it from tipping.

Minimum Clearances

- There must be a minimum clearance of 2 in. (50.8 mm) between the lower surface of the floor of the LP gas supply cylinder enclosure and the ground.


4 Gas Information


A. Fuel

Before making gas connections ensure appliance being installed is compatible with the available gas type.

B. Gas Pressure

Proper input pressures are required for optimum appliance performance. Gas line sizing requirements need to be made following NFPA54.

 **WARNING**



Fire Risk

Explosion Risk

Verify inlet pressures.

- High pressure may cause overfire condition.
- Low pressure may cause explosion.
- Verify minimum pressures when other household gas appliances are operating.

Install regulator upstream of valve if line pressure is greater than 1/2 psig.

Pressure requirements for appliance are shown in table below. Minimum pressures must be met when other household gas appliances are operating.

Pressure	Natural Gas	Propane
Minimum Inlet Pressure	7 in. w.c.	11 in. w.c.
Maximum Inlet Pressure	10.5 in. w.c.	14 in. w.c.

The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressures in excess of 1/2 psi (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).


C. Gas Connection


Note: Have the gas supply line installed in accordance with local building codes, if any. If not, follow ANSI 223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter.)

Note: A listed (and Commonwealth of Massachusetts approved) 1/2 in. (13 mm) T-handle manual shut-off valve and flexible gas connector are connected to the 1/2 in. (13 mm) control valve inlet.

- If substituting for these components, please consult local codes for compliance.

- Incoming gas line should be piped to the 1/2 inch connection on the manual shutoff valve.


 **WARNING**



Fire Risk


Explosion Risk

- Gas build-up during line purge may ignite.
- Purge should be performed by qualified technician.




- Ensure adequate ventilation.
- Ensure there are no ignition sources such as sparks or open flames.

- A small amount of air will be in the gas supply lines. When first lighting appliance it will take a short time for air to purge from lines. Subsequent lighting of the unit will not require such purging. **Never allow the ON/OFF valve to remain in the open position without pressing and continuing to hold igniter button FIRST.**

 **WARNING**

CHECK FOR GAS LEAKS





Fire Risk

Explosion Risk

Asphyxiation Risk

- Check all fittings and connections.
- Do not use open flame.
- After the gas line installation is complete, all connections must be tightened and checked for leaks with a commercially available, non-corrosive leak check solution. Be sure to rinse off all leak check solution following testing.





Fittings and connections may have loosened during shipping and handling.

D. LP Gas Supply

- The pressure regulator and hose assembly supplied with LP models must be used. Replacement pressure regulators and hose assemblies must be those specified in this manual.
- The LP gas supply cylinder used with LP models must be constructed and marked in accordance with the specifications for LP gas cylinders of the U.S. Department of Transportation (DOT).
- Cylinders must be stored outdoors in a well ventilated area out of the reach of children. Disconnected cylinders must have threaded valve plugs tightly installed and must not be stored in a building, garage or any other enclosed area.
- Storage of this appliance indoors is permissible only if it has been disconnected from its fuel supply (natural gas line or LP gas cylinder).
- The LP gas cylinder supply system must be arranged for vapor withdrawal.
- The LP gas cylinder used must include a collar to protect the cylinder valve.
- When an LP model is not in use, the LP gas must be turned off at the supply cylinder.
- The specific size and capacity of the cylinder(s) to be used: 20 lb. or hard plumbed to propane tank.

5

Appliance Setup

A. Burner Assembly

All Models

- Check for damage. Do not use damaged components.
- The hose assembly must be replaced prior to the appliance being put into operation if there is evidence of excessive abrasion or wear, or if the hose is damaged. The replacement hose assembly specified by the manufacturer.
- The burner must be replaced prior to the appliance being put into operation if it is evident that the burner is damaged. The replacement burner assembly specified by the manufacturer.
- Position the assembly in the desired location. This location must be adjacent to the gas supply line. You must have easy access to the gas valve control knob after it is installed and connected to the gas supply because the ON/OFF gas valve is used to turn the burner on and off.

LP Gas Models

- Make sure the tank valve is turned completely off (clockwise).
- Ensure the tank valve has the proper external mating threads (tank valve marked "USE WITH TYPE 1").
- Inspect the hose shipped with the appliance for any damage. Do not use if there is evidence of damage.
- Connect the end of the hose onto the ON/OFF gas valve of the appliance. Make sure it is secured tightly.
- Connect the regulator assembly to the tank valve. Hand tighten only (clockwise). Do not use a wrench to tighten! Use of a wrench may damage the quick closing nut and result in a hazardous condition.
- Position the hose out of pathways where people might trip over it or in areas where the hose might be subject to accidental damage.

B. Glass Installation

Spread glass out evenly over burner area, use all glass supplied for best affect.

Keep glass clear of spark location to avoid accidental blockage.

6

Operating Instructions

A. Before Lighting Appliance



WARNING

Confirm sparker is producing spark prior to turning gas on.

LP (Propane) and NG (Natural Gas)

Before lighting this appliance, ensure both the LP tank valve and the manual shutoff valve are closed. Open the LP tank valve first, THEN the manual shutoff valve. This is required due to built-in safety features of your LP tank.

Before operating the appliance, have a qualified technician:

- Inspect the burner. Remove or clean any debris that may have fallen on the appliance. If a thorough cleaning is required, remove the glass material and wipe off burner surface making sure all burner ports are free of debris. If there is any evidence that the burner is damaged, replace it with an approved replacement part.
- Check the air shutter adjustment.
- Ensure that there are no gas leaks. Inspect all gas supply lines. If there is evidence of excessive abrasion wear, or any damage, replace those components with approved replacement parts.
- Ensure that the flow of combustion and ventilation air is not obstructed.



WARNING

Improper installation, adjustment, alteration service, or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.



WARNING



Fire Risk

Burn Risk

HOT! DO NOT TOUCH.

SEVERE BURNS MAY RESULT.

CLOTHING IGNITION MAY RESULT.

Glass and other surfaces are hot during operation and cool down.



- Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are in the area of the appliance.
- Clothing or other flammable materials should not be hung from the appliance, or placed on or near the appliance.
- Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required as necessary. It is imperative that control compartment, burners and circulating air passageways of the appliance be kept clean.

B. Lighting the Appliance

FOR YOUR SAFETY, READ BEFORE LIGHTING

WARNING!

If you do not follow these instructions exactly, a fire or explosion may result causing property damage personal injury and/or loss of life.

A. This appliance must be lit manually. When lighting, follow these instructions exactly.

B. Before lighting, smell all around the appliance area for gas. Be sure to smell next to the base of the appliance because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electric switch, do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to turn the gas control knob or valve. Never use tools. If the valve will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use the appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance, and to replace any part which has been underwater.

E. The gas pressure regulator provided with this appliance must be used. This regulator is set for an outlet pressure of 3.5 inches water column.

LIGHTING INSTRUCTIONS

1. Stop! Read the safety information above.

2. Find the manual gas control valve.

3. Find automatic spark push button and depress it, make sure you see the spark, if not, light with a match place burning match in the middle of where ports are present. Do not hold the match in your hands.

4. For a natural gas appliance turn on the ON/OFF valve slowly at the appliance. For an LP appliance turn the valve on the LP tank counterclockwise all

the way and then turn on the ON/OFF valve slowly at the appliance.

5. If the burner does not light before the match goes out, immediately turn the gas valve to "OFF".

6. Wait at least five minutes to clear out any gas. Then smell for gas, including the base of the appliance. If you smell gas, **STOP!** Follow "B" in the safety information above. If you do not smell gas, repeat Step 4.

TO TURN OFF GAS TO APPLIANCE

• Turn the ON/OFF valve to the "OFF" position at the appliance for a natural gas appliance.



• For an LP appliance, turn the ON/OFF valve to the "OFF" position at the appliance, and then with a Type I or II Connection turn the valve at the LP cylinder clockwise to the "OFF" position when the appliance is not in use.

• Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

C. After the Appliance is Lit

Initial Break-in Procedure

When you light the appliance, you may notice that it produces heat which may have an odor or smell. If you feel this odor is excessive it may require an initial three to four hour continuous burn on high.

	WARNING
	Fire Risk High Temperatures
Keep combustible household items away from appliance.	
<ul style="list-style-type: none">• Do NOT obstruct combustion and ventilation air.• Do NOT place combustible items on top of or near appliance.• Keep furniture, draperies away from appliance.• Do NOT use gasoline, lantern fuel, kerosene, charcoal lighter fluid, or similar liquids in this appliance.• Combustible materials, flammable liquids, or vapors may ignite.	

7

Finishing

A decorative surround can be made from noncombustible material (such as bricks, landscape blocks, rocks, etc.) or various models of fabricated surrounds are available (see Figures 7.1-7.3)



Figure 7.1 Sierra Surround



Figure 7.2 San Juan Surround



Figure 7.3 Chat Fire Granite Top Surround

8 Converting to Natural Gas

Crystal Fire Natural Gas Conversion Kit (Part # 2006-330)



Step 1. Shut off gas supply at tank or source.



Step 4. Remove brass orifice from flex line.



Step 2. Shut off gas valve at appliance.



Step 5. Follow the above steps 3 and 4 in reverse order with new natural gas orifice. Set shutter opening to closed position. No screen showing for Natural Gas.



Step 3. Remove shutter screw and slide off.

9 Troubleshooting

With proper installation, operation and maintenance your Crystal Fire will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service person in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide should only be used by a qualified service technician.





Symptom		Possible Causes		Corrective Actions
1.	Crystal Fire won't light.	A.	No LP in tank, or NG main not turned on.	Check the LP (propane) tank. You may be out of gas. Or check Natural Gas valve at main.
		B.	Plugged burner orifice.	Check the burner orifice for stoppage. Remove stoppage.
2.	Low flames or won't stay lit.	A.	Manual shutoff valve (on/off control knob) open or not in-stalled between LP tank and appliance.	Close LP tank and manual shutoff valves. Open LP tank valve first, THEN the manual shutoff valve.
3.	Blue Flames	A.	This is a result of normal operation and flames will begin to yellow as unit is allowed to burn for 20-40 minutes.	Do nothing.
		B.	Improper air/fuel mixture related to air shutter position.	Close air shutter.
4.	Metallic noise	A.	Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the appliance.	Do nothing.

10 Maintaining and Servicing the Appliance

Although the frequency of appliance servicing and maintenance will depend on use and the type of installation, a qualified service technician should perform an appliance check-up annually.

Storage of an appliance indoors is permissible only if the cylinder is disconnected and removed from the appliance.

 WARNING
Risk of injury or property damage
Before servicing:
<ul style="list-style-type: none"> • Turn off utilities to appliance. • Ensure appliance is completely cooled.

 WARNING	
	Annual inspection by qualified technician recommended.
	Check:
	<ul style="list-style-type: none"> • Obstructions of combustion and ventilation air. • Condition of burner assembly. • Burner ignition and operation. • Burner air shutter adjustment. • Gas connections and fittings.
	Risk of:
	<ul style="list-style-type: none"> • Fire • Delayed ignition or explosion • Exposure to combustion fumes • Odors

Maintenance and Service Tasks

Inspect	Maintenance Tasks	
Burner Assembly	1	Remove decorative glass and examine burner. Vacuum and wipe out as needed. Use caution when cleaning these areas.
	2	Inspect for warping and corrosion. Repair as necessary.
	3	Check the hose connecting the LP gas cylinder to ensure it is not damaged. Replace as necessary.
	4	Verify air shutter area is clean.
Burner ignition and operation	1	Verify all gas connections are tight and leak-free.
	2	Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
	3	Inspect for flame problems.
	4	Verify air shutter is clear of dust and debris.
	5	Inspect orifice for soot, dirt or corrosion.
	6	Verify manifold and inlet pressures. Adjust regulator as required.
Gas Hose with Regulator	1	The gas hose with regulator supplied with the appliance must be used. The replacement must be those specified by the appliance manufacturer.

11

Reference Materials

A. Service Parts List

Crystal Fire

#	Description of Part	Part Number	Qty.
1	Burner Assembly	SRV-BA-CF	1
2	Flex Tube	SRV-FT-CF	1
3	Orifice - NG (#31) For CF-20-LP (NG)	NGK-CF	1
4	Orifice - LP (#17) For CF-2424 (LP- Whole house)	LPK-17	1
5	Orifice - LP (#36) For CF-2424(LP- 20lb tank)	LPK-36	1
6	Orifice - NG (#42) For CF-2424 (NG)	NGK-42	1
7	Orifice - NG (#30) For CF-1224-LP (NG)	NGK-30	1
8	Orifice - LP (#39) For CF-1224-LP (LP)	LPK-39	1
9	Orifice - LP (#43) For CF-20-LP (LP)	LPK-43	1
10	Ball Valve (LP)	SRV-BV-CF	1
11	On/Off Valve (NG)	SRV-OO-CF	1
12	Electronic Piezo	CF-Sparker	1
13	Gas Hose with Regulator	SRV-Hose-CF	1
14	Ignition Electrode	CF-Electrode	1
15	Replacement Glass for Crystal Fire	CF20-Glass	1
16	CF20 Log Set	CF20-Logs	1

B. Limited One Year Warranty



The Outdoor Greatroom Company

Outdoor Products Limited One Year Warranty

The Outdoor Greatroom Company extends the following warranty for Outdoor Greatroom outdoor products used in the United States of America or Canada. Dealers and employees of The Outdoor Greatroom Company have no authority to make any warranty or authorize any remedies in addition to or inconsistent with the terms of this warranty. This warranty gives you specific legal rights. You may also have other rights that vary from state to state.

The Outdoor Greatroom Company warrants that this Outdoor Greatroom Outdoor Product (the "Product") will be free from defects in material and workmanship for a period of one year from its date of purchase. This warranty is subject to the conditions, exclusions and limitations described below.

This warranty applies only to the original owner of the Product and is non-transferable. The Outdoor Greatroom Company obligation under this warranty does not extend to damages resulting from (1) assembly, operation or maintenance of the Product not in accordance with the Installation/Assembly Instructions, Operating Instructions and the Listing Agency Identification Label furnished with the Product; (2) installation or use which does not comply with local building codes and ordinances; (3) shipping, improper handling, improper operation, abuse, misuse, accident or unworkmanlike repairs; (4) use of fuels other than those specified in the Operating Instructions; (5) Installation or use of components not supplied with the Product or any other components not expressly authorized and approved in writing by The Outdoor Greatroom Company; and/or (6) modification of the Product not expressly authorized and approved in writing by The Outdoor Greatroom Company. Any of the circumstances described in the previous sentence voids this warranty. This warranty is void if the Product or any component has been removed, repaired, or replaced before The Outdoor Greatroom Company has been afforded a reasonable opportunity to inspect the Product.

This warranty is limited to the replacement or repair of defective components or workmanship and The Outdoor Greatroom Company may fully discharge its obligations under this warranty by repairing or replacing, at its discretion, the defective components. The Outdoor Greatroom Company will provide replacement parts at no charge and will pay reasonable and necessary labor and freight costs related to replacing or repairing defective components under this warranty. The maximum amount recoverable under this warranty is limited to the purchase price of the Product and, if The Outdoor Greatroom Company is unable to provide replacement or repair in an expedient and cost-effective manner, The Outdoor Greatroom Company may discharge all obligations under this warranty by refunding the purchase price of the Product.

EXCEPT TO THE EXTENT PROVIDED BY LAW, THE OUTDOOR GREATROOM COMPANY MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO THE DURATION OF THE WARRANTY SPECIFIED ABOVE. IN NO EVENT SHALL THE OUTDOOR GREATROOM COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY DEFECTS IN THE PRODUCT. Some states do not allow limitations on how long an implied warranty lasts, or do not allow exclusion or limitation of incidental or consequential damages, so these limitations may not apply to you.

To obtain service under this warranty, you must:

1. Send written notice of the claimed condition to: The Outdoor Greatroom Company, 2015 Silver Bell Road, #195, Eagan, MN 55122.
2. Affirm that you are the original owner of the Product.
3. Provide The Outdoor Greatroom Company reasonable opportunity to investigate the claim, including reasonable opportunity to inspect the Product prior to any repair or replacement work and before the Product or any component of the Product has been removed.
4. Obtain The Outdoor Greatroom Company's consent to any warranty work before the work is done.

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