Fire Chief

$9.95

Outdoor Woodburning Furnace
Model FCOS2200D
Owner's Manual

MADE IN USA

Volume I
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Manufactured by: **Victorian Sales**
1808 Larkin Williams Road
Fenton, MO 63026
636.343.4747 or 800.875.4788

PRODUCT FABRICATION SERVICE PFS INSPECTED
UL391 Tested by PFS

Congratulations!

You have selected the finest quality outdoor wood burning furnace, manufactured with pride in the USA. Please take a few moments to carefully read the owner's manual. By taking the time to familiarize yourself with your new Fire Chief Outdoor Furnace, you will be able to look forward to years of trouble-free, dependable service.

Installation

First: Check Local Codes. The installation must comply with all local rulings and requirements.

- ***This furnace is an outdoor hot air furnace and must not be installed in a building of any kind.***
- ***This furnace must be connected to a grounded electrical circuit.***
- ***This furnace requires a back-up electric generator, 2000 watts minimum in case of power failure.***
- ***Always have a properly installed and functioning smoke detector installed in your home.***
- ***To prevent accidental injury, do not allow anyone who is unfamiliar with the furnace to operate it.***
- ***Spend time familiarizing yourself with your Fire Chief Furnace, especially the different settings and the effect they have on burn patterns. It is impossible to state how each setting will affect your furnace due to variations in settings, fuels and temperatures.***

Transportation Damages

Every effort has been made to insure that your Fire Chief will arrive in perfect condition. Any visible damage should be noted on the freight bill at the time of delivery. If upon unpacking your Fire Chief you find damage had occurred during transit, notify your supplier immediately. Your supplier will advise you as to what actions must be taken to correct the problem.

Disclaimer Notice

The listed BTU rating of your new Fire Chief was obtained under ideal laboratory testing conditions. The actual BTU output you experience may vary somewhat depending on the type, condition and moisture of the fuel used; damper adjustment; chimney type and other variable factors. Therefore, the manufacturer disclaims any guarantee as to the BTU output or capacity of your furnace. Victorian Sales will void and disclaim any responsibility for the following: installation of a furnace that has been altered or modified in any way; installation of the furnace other than as instructed in this manual; installation and or use of any component or part not approved by Victorian Sales for use on this furnace. Be sure to complete and return your warranty card within thirty (30) days of purchase in order to receive warranty coverage on your furnace.

Manufacturer's Notice

Please be advised that we periodically make changes to improve our products. Therefore the information in this manual may not be completely compatible with your Fire Chief.

THIS IS AN OUTDOOR
WOOD BURNING FURNACE
AND SHOULD NOT BE ALTERED IN ANY WAY!

Table of Contents

ALWAYS KEEP YOUR WOOD COVERED YEAR ROUND. DRY WOOD WILL PRODUCE MORE BTU OUTPUT AND LONGER BURN TIMES.

GENERAL INFORMATION

The Fire Chief OS2200D is an airtight central solid fuel outdoor furnace engineered to provide the most viable solution to the ongoing problem of homeowner utility dependence. The OS2200D is designed to accommodate the heating requirements of the average sized home, even during winter's coldest months. Constructed of high grade, heavy gauge steel and is continually welded to assure the utmost in structural strength. The insulated 11 cubic foot firebox will accommodate a log up to 32" length. In addition, the heat exchanger is lined with firebrick to ensure many years of energy efficient service.

The design of the secondary combustion chamber increases fuel efficiency by creating a "secondary burn" of smoke and wood gases before they are vented up the chimney. By sending the gases back through the secondary combustion chamber less fuel is wasted, the furnace burns at a higher efficiency and for longer burn times.

The cast iron door is custom fitted to provide an air tight seal, greatly extending the burn time and insuring maximum efficiency in fuel consumption. The heavy duty cast iron grates aid in convenient ash removal and reduces maintenance; the insulated wrap around sides are designed for maximum heat transfer. The weather-resistant service door offers protection for the fuel and ash door from the elements.

For total comfort and convenience, we added a thermostatically controlled 1800 cfm. circulation blower system. The blower draws the cold air from the home, across the heat chamber before going through the hot air duct and returning the warmed air to your home. This fully automatic blower furnishes rapid heat disbursement to your home, minimizing recovery time. Average burn time per load of fuel is six to twelve hours depending on wood type and condition, desired temperature within the home and amount of fuel. We have incorporated all of these features as standard equipment, offering you the most efficient, durable and affordable appliance possible. *Abnormally cold weather could reduce the burn time.*

The FCOS2200D is a wood burning furnace - it can not be turned *"off and on"* to control the furnace temperature like gas or electric furnaces. Once the fire is established, it has to burn, until it burns itself out.

INCLUDED WITH YOUR OS2200D FIRE CHIEF FURNACE:

- ***1 10" X 25' Insulated Flexible Heat Duct***
- ***2 10" Starter Collars***
- ***2 Clamps***
- ***1 12" Starter Collar for Cold Air Return***
- ***1 Owner's Manual with Warranty Card***
- ***1 Electrical Control Kit (shipped on top of the furnace)***

Electrical Control Kit Contains:

- ***8 1/4" Bolts***
- ***4 1/4" Nuts***
- ***8 #10" Screws***
- ***4 #10 X 3/4" Screws***
- ***2 #8 X 1/2" Screws*** *(Attached to Fan Limit Control Cover)*
- ***1 Fan Limit Control*** *(with Wire Conduit and 90° Elbow attached)*
- ***1 Blower Motor with Brackets***
- ***1 Blower Housing Cover with Control Center***
- ***1 Wall Thermostat*** *(you must purchase 2- wire Thermostat wire)*

GENERAL INFORMATION, cont.

Before beginning your installation, consult with local authorities regarding the codes governing all such installations. **DO NOT** connect your Fire Chief OS2200D Wood Furnace to any flue that services **ANY** other appliance.

Your Fire Chief OS2200D must be placed outdoors on a level, non-combustible base, preferably a 4' X 8' concrete pad, as close to the home as clearances to combustibles permit - do not place the furnace more than 40' from the house. The furnace must be connected to a grounded electrical circuit with access to a backup generator (2000 watt minimum). If locating the furnace more than 10' (ten feet) from the home, a minimum of 6' (six feet) of Class "A" HT 2100 All Fuel 6" Chimney Pipe is required.

Maintain the following clearances - Sides of furnace, 12"; Rear of furnace, 12"; Front of furnace, 36"; Heat Duct, 6" for the first 16" from the rear of the furnace and 3" thereafter. Maintain the "10/2 Rule" for the flue - the flue must be 2' (two feet) higher than any part of the building or peak of the roof within a horizontal distance of 10' (ten feet). The 2 ft. height does not include the cap. ***REFER TO PAGE 6 FOR COMPLETE INSTRUCTIONS.***

Class "A" HT 2100 All Fuel 6" Chimney Pipe is recommended for optimum performance and must maintain a 2" clearance from combustibles. The OS2200D ships with a SuperPro2100/Super Max™ six inch adaptor plate attached to the top of the furnace for your convenience as well as brackets to attach guy wires to the four corners of the furnace to secure your chimney system.

Always secure chimney with guy wires. SuperPro/SuperMax™ Chimney Pipe is readily available from your Fire Chief dealer. Attach the appropriate chimney pipe lengths to the adaptor, finishing with the rain cap. Your furnace requires its own chimney system and can not share a flue with any other product. If using chimney pipe other than SuperPro/SuperMax, the 6" adaptor will have to be replaced in order to fit the chimney pipe you are using. Contact your dealer for details.

If you choose to use single wall stainless, the flue temperature will be reduced which promotes the formation of creosote, possibly creating a fire hazard. If you use single wall stainless pipe, minimum clearance is 18" from combustibles.

DO NOT use Galvanized or Black Pipe to vent your furnace.

Once you have met local requirements governing the installation and positioning of the furnace, install the Electrical Control Kit. Open the **Electrical Control Kit** and confirm that all items were shipped with your OS2200D. Install the **Electrical Control Kit**. ***REFER TO PAGE 8 FOR COMPLETE INSTRUCTIONS.***

After installing the chimney and Electrical Control Kit, you are ready for the initial firing of your OS2200D. **DO NOT connect the furnace to your duct work at this time. Build a small fire - DO NOT fill the firebox to full capacity during the initial firing.** Your new furnace has a protective coating of oil or paint on the surface which could produce smoke or odors during the initial firing and will burn off. Allow adequate ventilation during this initial break-in firing to let any odors escape. This initial firing allows the metals to cure. After successfully completing the initial firing, you are ready to attach the flexible hot air duct and cold air return to complete your installation. ***REFER TO PAGE 9 FOR COMPLETE INSTRUCTIONS.***

GENERAL INFORMATION, cont.

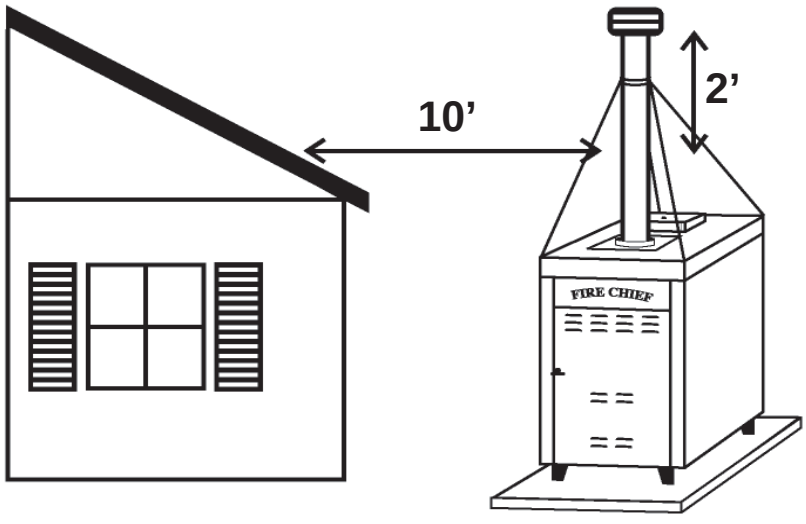
You must install the wall thermostat for the furnace to operate. When the wall thermostat calls for heat, the butterfly damper in the natural draft tube opens, allowing combustion air to flow into the firebox. This causes a hotter fire increasing the heat in the heat chamber. When the home reaches the selected temperature on the wall thermostat, it will cause the butterfly damper in the natural draft tube to close and the fire in the firebox will reduce to a low burn until the thermostat calls for another heat cycle. The fan limit control is factory pre-set at 170° as the "ON" temperature setting and 110° as the "OFF" temperature setting. This means when the heat chamber reaches 170°, the blower will turn "ON"; when the chamber cools to 110°, the blower will turn "OFF". This process is called a heating cycle.

By-Pass Damper:

The By-pass damper has several purposes; starting the fire, improving the efficiency and cleaning the chimney. When starting a fire in your OS2200D, you must pull the rod out, for a stronger draft during ignition. Once the fire has started, close the by-pass damper, which allows the secondary combustion chamber to engage increasing the furnace's operation to peak efficiency. If the bypass rod is not closed during operation, the furnace's efficiency will be greatly reduced allowing the heat to escape up the chimney. Finally, when cleaning the chimney, the rod must be pulled out to allow any build-up in the chimney to fall into the firebox.

Furnace Chimney Location: ***Requires Class "A" HT 2100 All Fuel 6" Chimney***

The furnace requires a minimum of 6' (six feet) of chimney. When positioning the furnace maintain the "10/2 Rule" for the chimney - In order to determine proper chimney height above the roof, measure from the side of the chimney horizontally. As you move up the chimney, the length of the measurement increases. Once this measurement reaches 10 feet, this height on the chimney is your base height. The chimney must be 2 feet taller than the base height. If the chimney is closer than 10 feet from the peak of the roof, the chimney must be 2 feet higher than the peak of the roof. The 2 feet above the base height does not include the cap. The furnace must be placed on a level, non-combustible surface or 4' X 8' concrete pad. ***See Diagram below.***



NOTE: When positioning the furnace - the roof is not level. The roof of the furnace slopes to the rear, approximately 1/2", to allow for rain/snow run-off.

GENERAL INFORMATION, cont.

Wood Storage: ***Keep wood covered at all times.***

We can not over emphasize the importance of keeping your **wood supply covered at all times**. Wood stored/stacked, uncovered, exposed to rain and snow has a higher moisture content, causing the formation of creosote, it smokes, takes longer to ignite and produces poorer fires with lower sustained BTU output. Unseasoned wood ends up costing more in time trying to achieve and maintain proper temperatures in the firebox while using more wood with less heat output. Covering the woodpile will keep it dry and offer you the hottest fires with the greatest BTU output. If you store the wood near your furnace, be sure to maintain proper clearance from the furnace to prevent a fire hazard. **Remember, keeping your wood dry will produce hotter fires and increased BTU output.**

IMPORTANT FACTS ABOUT INSTALLING AND OPERATING YOUR FIRE CHIEF OS2200D

• **ALWAYS** consult local building inspectors for codes concerning the installation of your furnace.
• **ALWAYS** have access to a backup generator, 2000 watt minimum.
• **USE** Class "A" HT 2100 All Fuel 6" Chimney for your Fire Chief OS2200D.
• **NEVER** use galvanized pipe in your flue connection.
• **INSPECT** the flue periodically for structural integrity.
• **CLEAN** the flue regularly to prevent creosote accumulation.
• **NEVER** use chemicals or gasoline to start or maintain your fire.
• **NEVER** burn garbage, oil, trash or gasoline in your furnace.
• **NEVER** leave the ash pan or fuel door open during operation.
• **REMOVE** ashes on a daily basis - before they reach the grates - to insure proper air flow.
• **NEVER** use wet, unseasoned wood or wood exposed to a recent rainfall - *doing so causes a rapid accumulation of hazardous creosote, a proven cause of flue fires.*
• **NEVER** burn plastics, wood products containing glue, paraffin or those treated with chemical preservatives in your Fire Chief Furnace. *The combustion of these substances may release harmful, toxic gases.*
• **NEVER UNPLUG THE FURNACE FROM THE POWER SOURCE. THIS WILL CAUSE THE FURNACE TO OVERHEAT.** If it is too warm in the house do the following: Lower the temperature on the thermostat; reduce the spin drafts to allow less flow of air to the fire box; use less fuel (wood).
• **NEVER leave the ash or fuel door open to attempt to regulate the fire** - this will overheat the furnace and void the warranty.

Always keep your wood covered year round.
Dry wood will produce more Btu output
and a longer burn time.

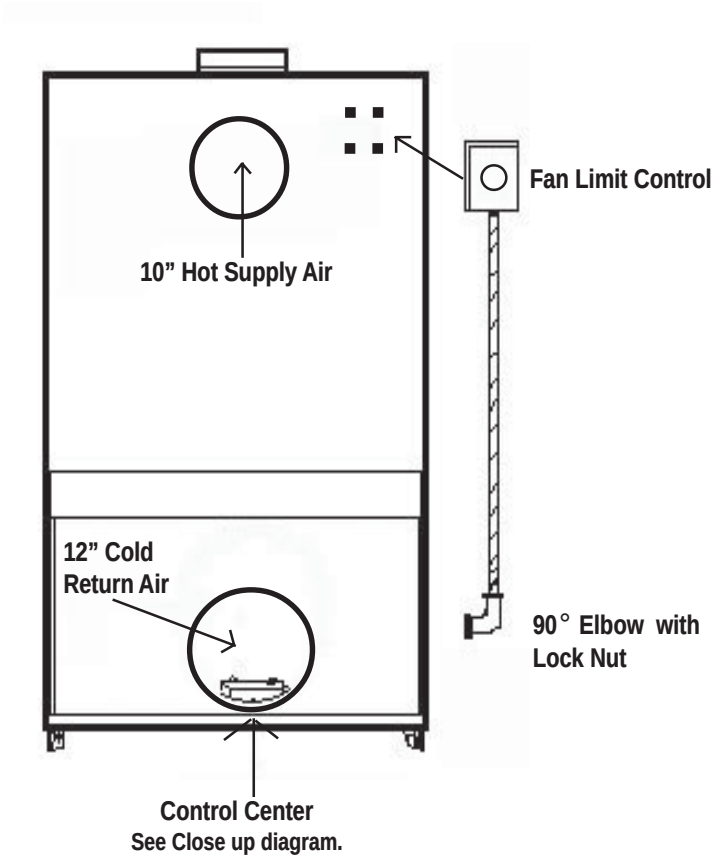
INSTALLATION OF ELECTRICAL COMPONENTS

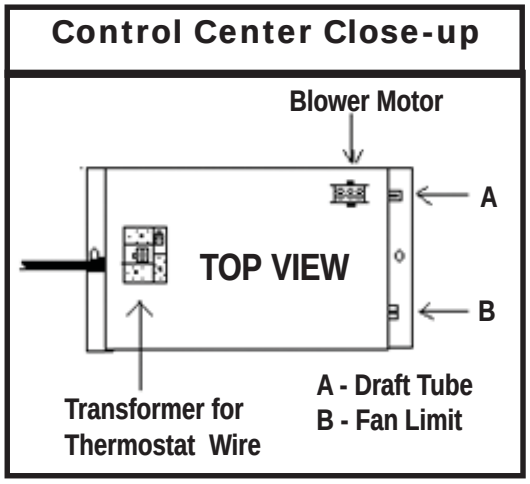
You must install the electrical components on your OS2200D

1 - Install the blower brackets onto the blower housing using 4 - 1/4" bolts and screws;
2 - Attach the blower to the back of the furnace using the 4 - 1/4" bolts;
3 - Mount the blower housing cover with 8 - #10 screws;
4 - Align the fan limit control box with the gasket to the 4 holes on the back of the furnace with 4 - #10 X 3/4" screws for a watertight seal;
5 - Mount the cover on the fan limit control box with 2 - #8 X 1/2" screws;
6 - Pass the wire conduit thru the hole on the side of the blower housing cover and re-install the locking nut and 90° elbow;
7 - The control center is already installed on the bottom of the blower housing; insert the 2-prong plug from the natural draft into the control center;
8 - Insert the 3 prong plug from the fan limit into the control center;
9 - Insert the 6-prong plug from the blower motor into the control center.

Run the thermostat wire *(not supplied)* from the two posts located on top of the control center transformer. ***Note:*** *You may run the thermostat wire and power cord thru the return cold air duct or you may access the hole from the bottom of the blower housing cover. The hole must be sealed afterward regardless of routing choice.*

Connect the 10" starter collar to the heat supply vent of the furnace. Connect the 12" starter collar to the cold air return on the back of the blower housing cover.





HOT AIR DUCT INSTALLATION

Hot Air Duct : ***Included with your OS2200D - 25' of ten inch I.D. flexible insulated hot air duct with 2 clamps, two 10" starter collars and one twelve inch starter collar.***

The 10" insulated flex hot air duct is for indoor use only. Outside the house, you must use 10" galvanized pipe, wrapped with weatherproof UV-jacketed insulation for protection from the sun's UV rays. The 12" return air may be galvanized pipe. The 12" return air must be attached to the home so as not to pressurize the home.

NEVER reduce the 10" hot air or 12" return air as this will effect the air flow and the furnace will not operate properly.

NEVER draw cold outside air into the blower housing - by doing so, the furnace's heat chamber will not reach the necessary temperature to heat the home.

The duct work should be designed so the external static pressure does not exceed .02 water column inches while developing air velocities of 600 feet to 1,000 feet per minute in the main trunk duct and 400 feet to 600 feet per minute at the registers. ***The heat outlet should never be less than ten inches (10") round or 79 square inches.***

The Fire Chief OS2200D must be installed with a cold air return system. The system must be a minimum of twelve inches (12") to readily transfer the cold air back to the furnace. If desired, a cold air filter box may be constructed with a minimum opening of 225 square inches.

A basement window is an excellent location for running the hot air duct vent as well as the vent for the cold air return. The cold air is an integral part of the system and must be used when installing the furnace - failure to use the cold air return will pressurize the home causing the furnace not to work properly. If a basement is not available, you may access the home through a window, wall or crawl space for both the plenum and air return.

Burying Duct Work: ***DO NOT BURY FLEXIBLE DUCT SUPPLIED WITH FURNACE.***

To bury the duct work below ground, use schedule 40 or 80 PVC or black plastic culvert pipe with smooth inner walls. Dig a trench to accommodate both the heat duct and the return air duct. The trench must be a minimum of 24" deep. To further insure efficiency, minimize heat loss and prevent moisture formation, line the trench with 1" (one inch) pink styrofoam insulation sheeting on the sides and bottom of the trench. The duct run should not exceed 40 feet If the run exceeds 40 feet, you run the risk of reducing the furnace's efficiency and air flow.

DO NOT USE FLEXIBLE HOT AIR DUCT INSIDE PVC OR CULVERT PIPE.

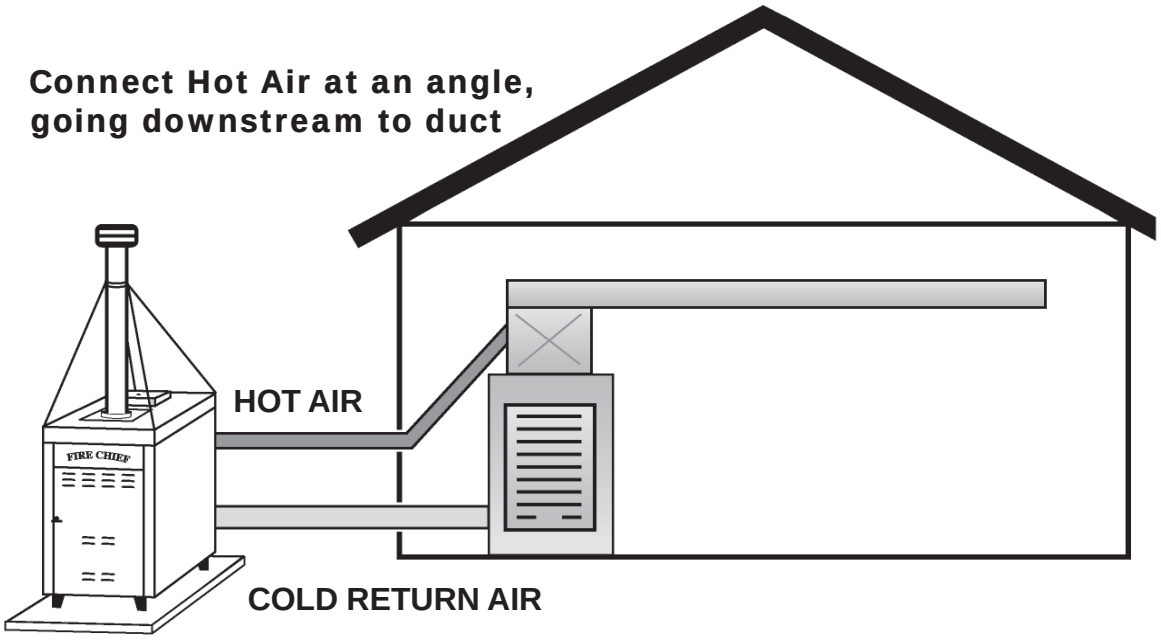
Always keep your wood covered year round. Dry wood will produce more Btu output and a longer burn time.

TYPES OF INSTALLATION

Central Duct Connections: *Installation should be done by a qualified professional. Maximum run 40' - a duct run in excess of 40' will greatly restrict the air flow and heat output - therefore, is not recommended. When connecting the OS2200D to a central duct system, avoid 90 degree elbows - as with any furnace, the more turns and branches in the ducting the less air flow delivery.* **DO NOT USE FLEX DUCT OUTSIDE.**

Run 10" insulated hot air duct from the outside furnace through a window or wall of the house. **Attach the insulated flexible hot air duct**, furnished with the furnace, to the central duct system of the home. Connect the duct with a 45° elbow or at an angle so the hot air from the OS2200D is delivered down stream. This will insure proper air flow into the duct system. Avoid delivering the hot air through the air conditioning coil as this will cause an obstruction reducing the amount of heat output. **Do not reduce the size of the hot air duct.** As with any furnace, the greater run, turns and branches in the ducting the less air flow and heat output delivered. Use of 90° elbows is not recommended.

The 12" cold air return duct must run to the house to prevent pressurization of the home. Failure to connect the cold air return will cause the furnace not to operate. **Never reduce the size of the return**. Reducing the size of the cold air return will restrict the hot air flow and put excess pressure on the blower motor. You may terminate the cold air return where you enter the house - this will provide adequate circulation within the home. *See diagram below.*

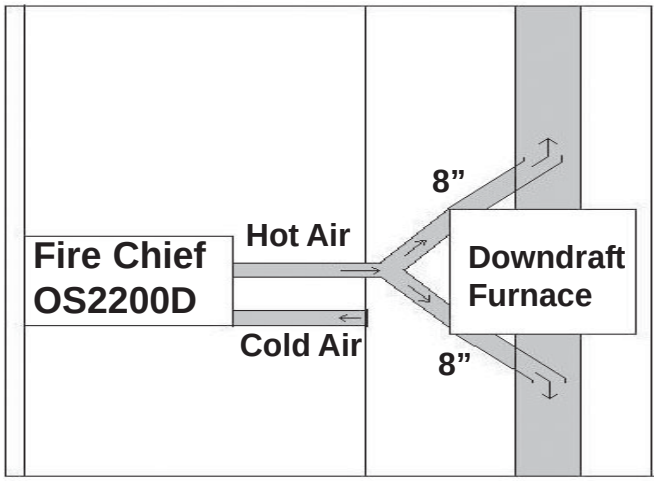


THE 10" FLEX DUCT MUST NOT BE EXPOSED TO THE OUTDOORS. IT IS FOR INDOOR USE ONLY.

TYPES OF INSTALLATIONS, Continued

Mobile Home Down Draft Furnace Connections: *Installation should be done by a qualified professional. Maximum run 40' - a duct run in excess of 40' will greatly restrict the air flow / heat output and is not recommended.* Both the hot air duct and cold air return duct may be accessed through the floor in a mobile or modular home.

In a mobile home, with a down-draft furnace, do not attach the hot air duct from the OS2200D to the hot air plenum, doing so will cause the heat to rise through the central furnace instead of going through the duct work. Split the hot air supply of the OS2200D by using a "Y" and install one branch into each of the hot air ducts, be sure both are pointing downstream. (*See diagram - maximum reduction for each "Y" duct run, 8").*

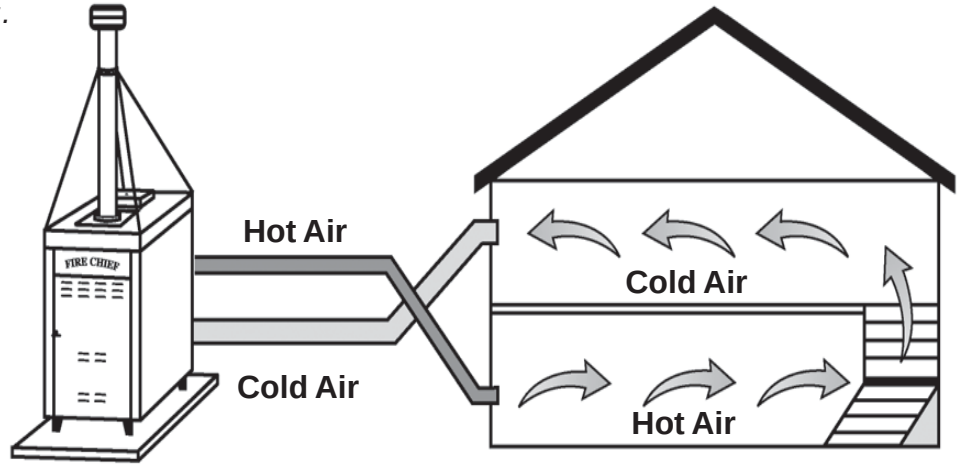


No Duct work Installation Connections: ***Installation should be done by a qualified professional. Cold air return must be installed in all installations, even those without duct work.***

When there is no duct system to connect to the hot air flex duct, keep the following in mind:

1. You must separate the hot air duct from the cold air return - ideally, locate each at opposite ends of the home, if you do not the air will not flow evenly throughout the home. This method will work well on homes built on concrete slabs and create a good air flow.

2. In homes with a basement, you may run the hot air duct to the basement and pull the cold air return from the main floor, this will create a perfect air flow, since hot air rises. The cold air return must be connected, even if the home does not have duct work - if you do not connect the cold air return, the furnace will not be able to heat the home. *See diagram below for homes with no duct work and a basement.*



OPERATION

Starting your first "real fire: *Set the wall thermostat to 90°. Check to be certain the spin drafts are wide open to allow oxygen into the firebox.*

Place several crumpled newspapers on the grate with some dry kindling layered on top of the papers, ignite the newspaper. When the kindling is burning, add several small pieces of wood - allow the wood to fully engage in flames. After about 20 minutes the fire should be established, allowing you to add more wood - do not overload and smother the fire. Add more wood slowly so the flames have time to engulf the fresh wood. Once the fire is burning and there is a glowing ember bed, adjust the drafts to achieve the desired burn pattern. Learning how to adjust the drafts to maintain the desired temperature for your home may take a few days. After a short time you will know which settings and adjustments work best for your home. Set the wall thermostat to the desired home temperature. Over-firing by overloading/over-fueling the furnace causes the metal to superheat and expand, then cool rapidly which causes cracking, therefore voiding the warranty. Over-firing or abuse can easily be determined upon inspection.

Caution: **NEVER** use chemicals or gasoline to start or maintain your fire. Do not burn oil, garbage, trash, plastic or any fuel other than wood in your furnace, doing so will void the warranty.

Fuel Recommendations: ***MAXIMUM Log Size 32"; heat resistant gloves are recommended.***

We advise using only dry, seasoned hardwoods in your Fire Chief OS2200D rather than highly rosined woods such as pine. Firewood should be cut at least one full season prior to the time of its intended used for optimum heat output. Firewood should be stacked to provide a free flow of air between the logs, thus allowing more rapid seasoning of the wood. If wood is stored outdoors, it should be completely covered year round to protect it from moisture and exposure to the elements.

Use extreme caution when opening the doors during operation, temperatures can exceed 300° - wait at least 10 (ten) seconds after releasing the first latch, then proceed to the fully open position. The dual latch system has been incorporated as a safety feature - designed to eliminate the possibility of gaseous ignition. Heat resistant gloves are recommended when opening the fuel doors, regulating the spin draft or emptying the ash pan.

Ash Removal: ***Heat resistant gloves are recommended.***

Remove the ashes from your Fire Chief OS2200D at least once a day - or as often as necessary to ensure the ashes do not accumulate to the height of the grates. If ash build-up occurs at grate level, it will cause premature failure of the grates, voiding the warranty on the grates. The air flow was designed to keep the grates cool in addition to providing the firebox with warmed air for better combustion. If the ash level is improperly maintained, the firebox will be starved for air, greatly reducing the efficiency and heat output of your furnace. Place hot ashes in a covered, air tight metal container - place the container on a non-combustible surface. Discard the hot ashes in a safe manner.

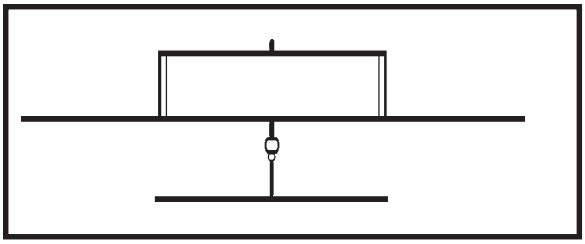
Always keep your wood covered year round. Dry wood will produce more Btu output and a longer burn time.

FCOS2200D HEAT DUMP SYSTEM - HEAT FUSE LINK

Your OS2200D has an automatic safety feature - **Heat Dump Release System**. In case of power failure, the Heat Dump Release will open the spring loaded lid when the internal furnace temperature reaches 370°. The heat sensitive fuse link, located within the top of the heat chamber, causes the lid to open, allowing excess heat to escape. The butterfly damper inside the natural draft tube will close restricting the air entering the fire chamber. This safety feature is designed to activate before any extreme heat can damage the furnace

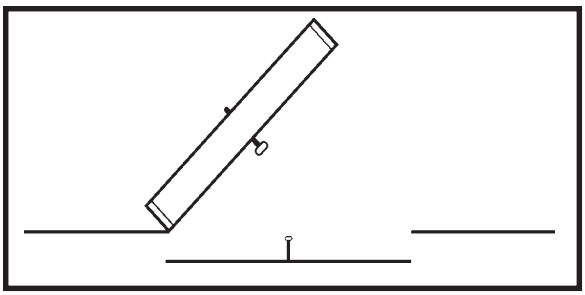
In Case of Power Failure: ***Connect to Generator immediately. If the Heat Dump Release lid should open, do not continue to burn the furnace. DO NOT UNPLUG THE FURNACE. Close the draft dampers and set the wall thermostat to the lowest temperature. DO NOT add any fuel(wood) - allow the fire to die. After the electricity is restored, replace the fuse link before resuming normal operation.***

Replacing the Heat Fuse Link: Remove the acorn nut on top of the release lid and pull the bolt down thru the lid. Removed the separated fuse links and connect the new fuse link to the shaft inside of the furnace heat chamber. Connect the opposite end of the fuse link to the bolt that goes thru the lid. Feed the bolt through the lid and replace the acorn nut onto the bolt on top of the lid. ***As a precaution, keep a replacement on hand.***



Heat Dump Lid "CLOSED" - indicating NORMAL OPERATION.

NOTE: Do not allow snow or ice to build up on lid.



Heat Dump Lid "OPEN" - indicating POWER LOSS.

THIS IS VERY IMPORTANT: ***NEVER*** *disengage this safety feature or fail to connect the fuse link as this will void all warranties.* ***NEVER*** *lay anything on top of the release lid. The area must be kept free of any objects or obstructions. A visual inspection by factory personnel can easily determine if the furnace over-heated and proper steps were followed.* ***If the furnace is found to be deliberately or improperly used, all warranties will be void.***

To order a replacement Heat Fuse Link: Call 800.875.4788. The first fuse link will be replaced at NO CHARGE. ***To receive the heat fuse link at no charge, the warranty card must be completed and returned to us within thirty (30) days of furnace purchase.*** Cost for each additional heat fuse link, $4.95 - Part Number: **FCFUSELINK** - Heat Fuse Link.

Maintenance of the FCOS2200D

At the beginning of each heating season, take time to thoroughly check your furnace and chimney system. Make sure there are no leaks where the metal panels are joined or at the caulk lines. Should you find a leak, hi-temp silicone will correct the problem. Check the doors for signs of rust. Should rust develop, lightly sand or steel wool the surface and follow-up with black, high temperature paint to keep the doors looking new. Check the gaskets. If they are frayed and burnt, replace the gasket. Check the firebricks for breakage or crumbling and replace as needed. Check the chimney pipe for signs of creosote formation, if you find creosote, thoroughly clean the chimney system - replacing the chimney cap securely so rain or snow does not run down the chimney into the firebox - if the cap is removed for any length of time when the furnace is not in use, cover the pipe so no moisture gets into the firebox. Check the chimney pipe for holes or loosened connections - replace and secure as necessary. Check the grates for signs of wear and replace as needed. Check the heat duct and cold air return to be sure they have not come loose or been damaged. If so, tighten or replace as needed. Check the duct work for any air leaks that will affect the furnace's performance - airtight duct work increases efficiency and furnace performance while delivering higher BTUs. Remove any accumulated ashes at the end of the season. By following these procedures your furnace will provide many years of trouble-free service.

ALWAYS:

- ☺ **Locate the OS2200D on a level, solid, non-combustible surface.**
- ☺ **Follow local codes concerning installation requirements.**
- ☺ **Connect power cord to a grounded 110 outlet.**
- ☺ **Connect cold air return to the house.**
- ☺ **Use Class "A" HT2100 All Fuel 6" Chimney.**
- ☺ **Follow guidelines within this manual regarding burn procedures.**
- ☺ **Operate furnace with fuel door and ash drawer closed.**
- ☺ **Inspect the furnace several times a year to insure furnace caulking is adequate.**
- ☺ **Inspect chimney pipe for creosote formation.**
- ☺ **Use dry, seasoned hardwood - maximum length, 32" - always keep your wood covered.**
- ☺ **Have access to a backup generator in case of power failure, minimum of 2000 watts.**

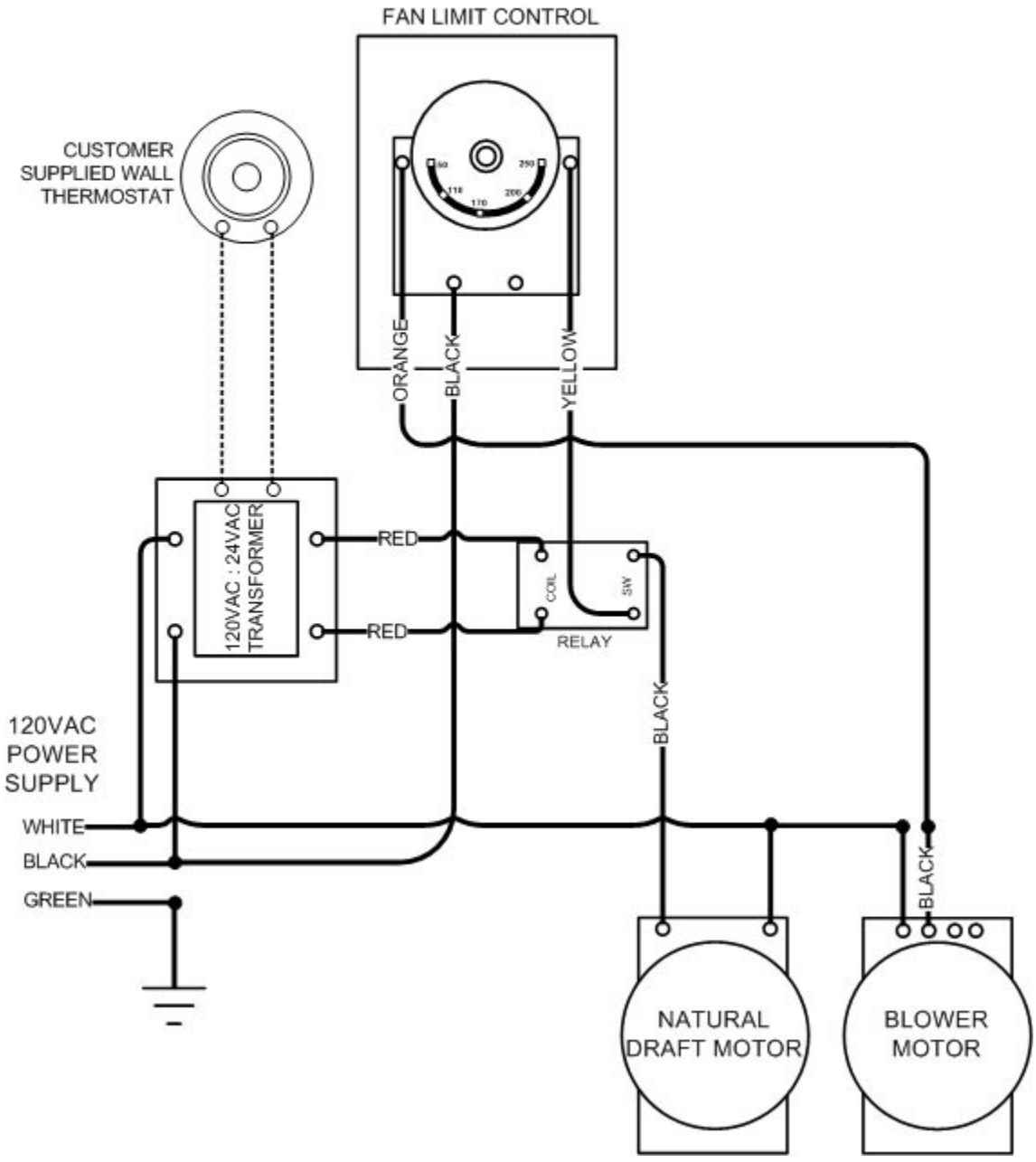
NEVER:

- ☹ **Never allow anyone to operate the furnace who is not familiar with the unit.**
- ☹ **Operate furnace with spin draft wide open unattended.**
- ☹ **Operate with the fuel door and ash drawer open.**
- ☹ **Use gasoline, oil or any other flammable liquid to start or maintain the fire.**
- ☹ **Burn garbage, plastic, wood containing glue, paraffin or treated with chemical preservatives.**
- ☹ **Operate your furnace without a backup power supply (generator).**
- ☹ **Fuel your furnace with wet, unseasoned wood.**
- ☹ **Use 90° angles when running duct work.**
- ☹ **Operate the furnace without the chimney attached.**
- ☹ **Alter the furnace in any way.**

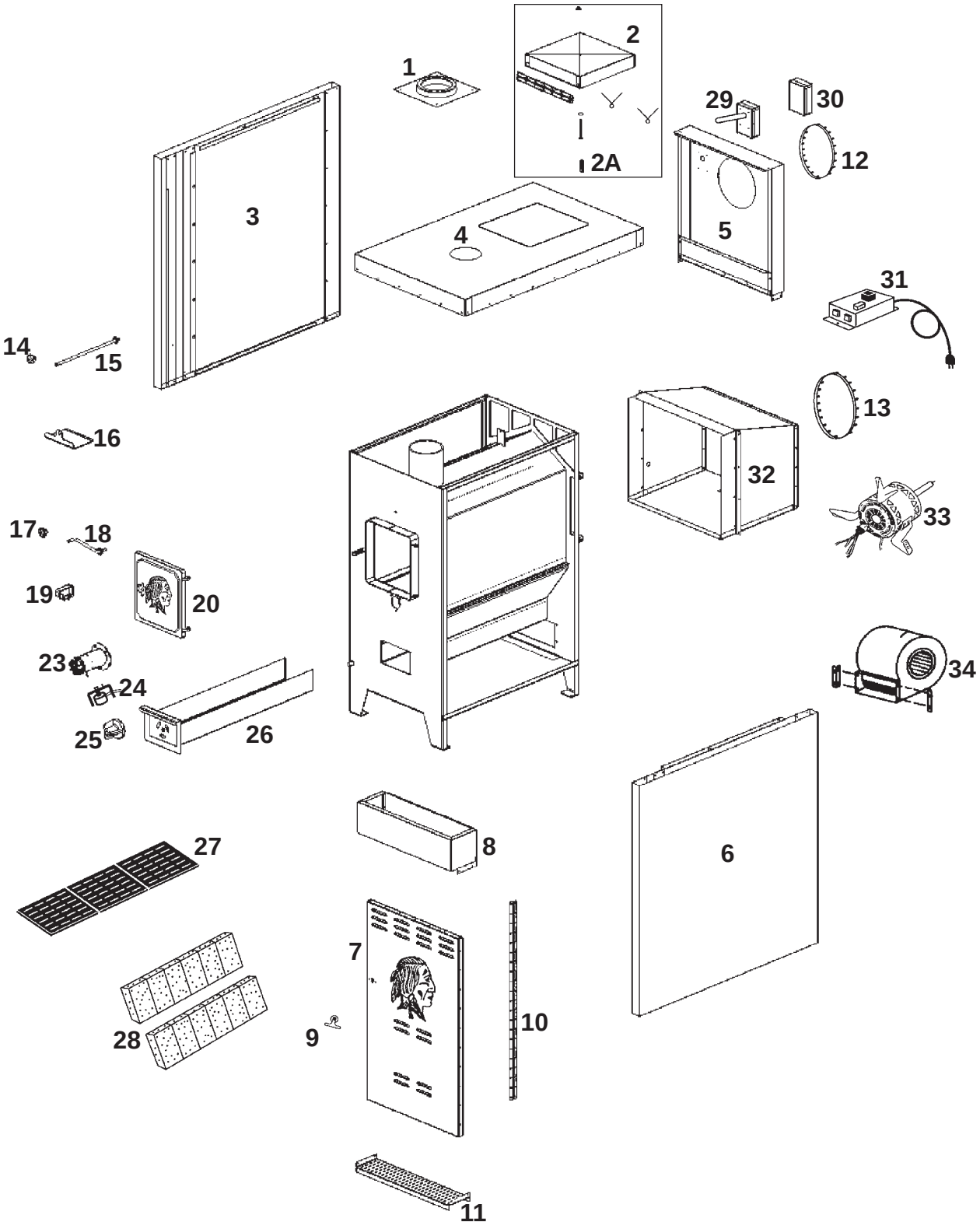
FCOS2200D

WIRING DIAGRAM

OUTDOOR FURNACE



FCOS2200D Parts Diagram



FCOS2200D Parts List

Repair Part Numbers are shown in "Bold" type.

1 Chimney Anchor Plate, 6" - **SPR6AP - *SUPERPRO 2100*** 1
2 Heat Dump - Cap with Hardware 1
2A Heat Fuse Link - **FCFUSELINK** 1

3 Left Side Panel with Insulation 1
4 Roof Panel 1
5 Back Panel 1
6 Right Side Panel with Insulation 1

7 Weather-Resistant Front Door 1
8 Face Plate Panel 1
9 Door Handle - **FCOSTHANDLE** 1
10 Hinges - **FC-CA26015041H** 1
11 Vented Bottom Panel 1

12 Starter Collar for 10" Insulated Heat Duct - **FCOS10COLLAR** 1
13 Starter Collar for 12" Cold Air Return - **SNGCLR12** 1

14 Damper Knob - **FCKNOB** 1
15 By-Pass Damper Rod 1
16 By-Pass Damper Plate 1

17 Fuel Door Knob - **FCKNOB** 1
18 Fuel Door Handle **FCFDH** 1
19 Fuel Door Latch 1
20 Fuel Door with Fire Chief Logo - **FCFD** 1
21 Fuel Door Gasket, 5/8" - **FCGSKT58 -** *Not Shown* 1
22 Hinge Pin - **FCFDP -** *Not Shown* 2

23 Natural Draft Tube - **FCNDTUBE** 1
24 Erie Motor - **FCEM** 1
25 Spin Draft with Hardware - **FCOSSD** 1
26 Ash Drawer 1

27 Wood Grates - **FCWG** 3
28 Firebrick - each: 9" X 4 1/2" X 1 1/4" - **HTFB** 16

Electrical Kit - **FCOSELECKIT** - contains all of the following items:

29 Fan Limit Control - **FCFLC8** 1
30 Fan Limit Box and Cover - **FCOSFLCBOX** 1
31 Electrical Control Center - **FC22EC** 1
32 Blower Housing Cover 1
33 Blower Motor with Capacitor - **FCOSMOTOR** 1
34 Blower Housing - **FCBH** 1
Blower Bracket - **FCOSBR -** *Not Shown* 2
Electric Cord - **FC3CORD -** *Not Shown* 1
Wall Thermostat - **FCTHERM -** *Not Shown* 1
Electrical Relay - *Not Shown* 1

35 Guy Wire D-Ring - **FCOSDRING -** *Not Shown* 4

Contact your Fire Chief Dealer for Parts.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
1. Bugs found in wood.	• Wood has rotted or has been laying around for an extended period of time.	Inspect the wood for obvious signs of insect infestation such as burrows or holes and avoid using if possible. Do not store indoors.
2. Circulation blower will not turn on.	• Defective fan limit control.	Check by rotating the knob to "ON" position, the blower should turn on. If the blower doesn't run, replace the fan limit control.
3. Circulation blower runs continuously.	• "Off" setting is too low on the fan limit control.	Pointers should be set at 110 and 170 degrees.
	• Defective fan limit.	Replace fan limit.
	• Improper wiring.	Review wiring diagram. If wired correctly, seek professional assistance.
	• Back draft damper in duct line is closed.	Open Damper.
4. Circulation blower vibrates during operation.	• Screw on squirrel cage is not tight.	Check squirrel cage alignment and position so that it does not drag on the housing during rotation; then tighten the screw sufficiently to fasten the squirrel cage securely to the shaft.
	• Balance weights on squirrel cage have become dislocated.	You may attempt to adjust the weights yourself to obtain an acceptable balance. If you are unsuccessful, contact your supplier.
	• Defective main bearings.	Return the blower to your supplier for replacement.
5. Odor detected in home during initial firing.	• There is an oily film that remained on the steel after the manufacturing process. Firing the unit has raised the temperature of the firebox to a level that is sufficient to vaporize the residue.	This odor should disappear after a few hours of usage.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
6. Smoke from the fire chamber is puffing back through draft tube.	• Chimney not high enough.	Chimney should be a minimum of 6' high.
7. Down draft on chimney caused by one or more of the following:	• Chimney blocked or dirty.	Clean chimney.
	• Chimney has a cold spot which inhibits exhaust discharge from rising properly. This symptom may occur in factory built chimneys because the insulation has settled or a seam has ruptured. In masonry chimneys, mortar loss may be causing the aspiration of cooler outside air into the stack.	Check entire chimney system for structural integrity and leakage. Correct or repair as needed.
	• There is an obstruction outside the chimney, such as a tree.	Remove obstruction.
	• Chimney is located too close to the peak of the roof or does not rise above it to provide the proper draft.	Relocate chimney termination or increase height as required.
	• Chimney is located too close to another building.	Relocate chimney termination.
	• Obstruction in chimney.	Check entire chimney system including stove pipe run. Clean chimney to remove any foreign matter.
	• Excessive ash accumulation.	Remove if necessary.
	• Creosote build-up.	Clean chimney.
8. Excessive smoke discharge from fuel door during reloading.	• Insufficient draft.	***SEE #6***
	• Obstructed chimney or clogged chimney cap.	***SEE #7***
	• Creosote build-up.	***SEE #7***
9. Flames discharging from fuel door during reloading.	• Insufficient natural draft or an obstruction in the chimney system.	Open spin drafts. ***SEE #6 AND #7***

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
9. Flames discharging from fuel door during reloading - *Continued.*	• Opening the door has provided additional oxygen which has ignited accumulated gases from partially spent fuel.	Always open the door cautiously, allowing the safety latch system to perform its designed function of containing ignition gases within the fire chamber. ***SEE PAGE 10.***
	• Fire chamber filled to capacity with unburned fuel.	Do not attempt to overload furnace.
10. Excessive dirt accumulation surrounding air registers in the home.	• Furnace is not connected to return air duct and is drawing dirt and disbursing through the home.	Check for leaks in return air duct system. Add filter system.
	• Excessive dirt accumulation in air filter.	Check and replace the filter if necessary.
11. Home does not achieve comfortable temperature.	• Improper connection to existing furnace.	Refer to information in the manual relating to the proper installation procedures or contact your local heating and cooling contractor.
	• Wall thermostat not connected.	
	• Improperly sized ducting.	Refer to information in the manual relating to proper ducting procedures or consult your local heating and cooling contractor.
	• Inadequate insulation in the home.	Provide additional insulation.
	• Spin draft not open.	Open spin draft.
12. Rapid accumulation of creosote in furnace and chimney.	• Improper connection in stove pipe causing air leakage or structural defect in the chimney itself.	Inspect the entire chimney run - from the exhaust stack of the furnace to the termination cap. Replace as necessary.
	• Fueling furnace with wet or unseasoned wood.	Completely avoid using if at all possible. If circumstances necessitate the use of wet or unseasoned wood, fuel the furnace with smaller loads. This will cause the thermostat to call for heat more often, which will initiated the running of the draft blower. Consequently, the fires will be hotter thereby reducing the accumulation of creosote.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SUGGESTED REMEDY
12. Rapid accumulation of creosote in furnace and chimney - *Continued*	• Fueling furnace with wet or unseasoned wood.	If hardwoods are not available fuel the furnace with smaller loads. This will cause the fan limit to call for heat more often, Consequently, the resultant fires will be hotter, thereby retarding the accumulation of creosote.
	• Insufficient flue draft.	***SEE #6***
	• Using uninsulated stove pipe for the chimney flue.	Uninsulated pipe used as an outside flue causes rapid cooling of the stack gases, thereby causing them to condense as creosote on the inside of the flue.
13. Heat dump lid on top of furnace has opened.	• Power failure.	**USE BACKUP GENERATOR AS POWER SOURCE IMMEDIATELY - *SEE PAGE 13***
	• Furnace has over-heated and the heat release lid has opened.	Correct the over-heating problem and restore power to the furnace. Replace the heat sensitive fuse link before firing the furnace again.

Certificate of Limited Warranty

Extent of Coverage: ***This warranty covers any Fire Chief OS2200D Outdoor Furnace sold in the United States. This warranty applies only if the Fire Chief OS2200D Furnace is installed, maintained and operated safely, in accordance with the instructions in the owner's manual and local codes. This warranty applies to the original purchaser/owner of the Fire Chief OS2200D Furnace and is not transferable. Replacement or repair parts are warranted for the remaining period of the original part.***

All warranty claims must include: **date of purchase, model and serial number of furnace, proof of purchase** (*dated invoice, bill of sale, cancelled check or payment record*) and **the name and address of the dealer** from whom you purchased the furnace.

Victorian Sales warrants the ***firebox*** and ***cast iron grates*** to be free of defects in material and workmanship for ***five (5) years*** from date of purchase. The firebox and cast iron grates warranty will be pro-rated after ***one (1) year*** at a rate of 25% of the retail cost in effect per year after the first year; 50% of the retail cost the following year and so on. Intentional misuse, abuse or burn through of cast iron components is ***not warranted***. Over firing the furnace will cause the front face to crack and is not covered by warranty. Furthermore, some aesthetic deterioration can be expected as the result of normal operation, therefore the physical appearance is not guaranteed to remain unchanged. The manufacturer warrants all electrical components ***one (1) year***. Please be advised that the firebrick and door gaskets are excluded from this warranty.

In order to exercise the aforementioned warranty, a certified professional must determine the appliance/part to be defective. He or she must submit a written statement to Victorian Sales detailing his assessment of the problem. This assessment **must** be accompanied by substantiating proof of purchase (dated *invoice, bill of sale, cancelled check or payment record*), model and serial number. Victorian Sales will then authorize repair or replacement as warranted by the submitted claim. Victorian Sales will not honor expenses incurred from any action that was not expressly consented to in writing. The owner is hereby notified that he will be obligated to assume liability for removal, reinstallation, shipping and labor cost involved in servicing/repairing or replacing the part/unit. The merchandise in question must be shipped via ***"PREPAID FREIGHT"*** to Victorian Sales. Victorian Sales will return the repaired or replacement part to the purchaser on a ***"Freight Collect"*** basis.

This warranty will be rendered null and void if this part/unit exhibits symptoms of obvious over-firing, deliberate abuse or negligence, improper installation or is used for commercial purposes.

Finally, Victorian Sales will not be responsible for any claim not stated in our warranty nor does any implied warranty extend beyond the limits stated above.

If you are unable to receive satisfactory service from your local dealer, write Victorian Sales and include all pertinent information, including a daytime phone number and a detailed description of the type of problem you are having and Fire Chief Technical Service will contact you. **Mail To: Victorian Sales 1808 Larkin Williams Road Fenton, MO 63026**

Or call 800.875.4788 - be sure to have model, serial number and purchase date.

For your convenience, you may wish to record the following information:

Fire Chief Model Number:_____

Purchase Date:_____

Serial Number:_____

Dealer where purchased:_____

Additional Service Information:

_____

_____

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_____