



# S2300 Wood Heater Manual Installation and Operating Instructions

**Please read this entire manual before installation. Save these instructions.**



## **SAFETY NOTICE**

- ▶ **CAUTION: HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.**
- ▶ **IF THIS HEATER IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT.**
- ▶ **CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.**
- ▶ **FAILURE TO COMPLY WITH OWNERS' MANUAL INSTRUCTIONS WILL VOID YOUR WARRANTY!**

**WARNING: FOR INSTALLATIONS IN MOBILE HOMES, DO NOT INSTALL IN SLEEPING ROOM.**

**This wood heater needs periodic inspection and repair for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual.**

**California Prop 65 Warning:** This product can expose you to chemicals including glass wool fiber and carbon monoxide which the State of California has determined can cause cancer, birth defects, and other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## **GENERAL INFORMATION**

Congratulations on your purchase of the Sierra Stove. We are confident that your new stove will provide you with years of safe, comfortable and efficient heating.

Your Sierra Stove is a free-standing/mobile home approved wood fueled heating appliance tested to the ICBO TL-130. Safety testing is according to UL 1482-2011(R2015) and UM 84. HUD standards as a Room Heater, Solid Fuel Type, Also For Use In Mobile Homes.

This manual describes the installation and operation of the Sierra S2300 wood heaters.

## **EMISSION CERTIFICATION STATUS**

The S2300 model meets the U.S. Environmental Protection Agency's emission limits New Source 2020, ASTM E3053-2017 and EPA Alternate Test Method (ATM) 125 for cordwood. Under specific test conditions this heater has been shown to deliver heat at rates ranging from 11,000 to 45,500 Btu/hr capable of heating approximately 2,100-2,600 square feet. Actual heat output and space heated is determined by: climate, home construction, species and moisture content of wood.

This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual

Please read this entire manual before you install and use your new room heater. Failure to follow instructions may result in property damage, bodily injury, or even death.

Save these instructions for future reference.

## **SAFETY NOTICE**

If this appliance is not properly installed, a house fire may result. For your safety, follow the installation instructions. Check with local building or fire officials about restrictions and installation inspection requirements in your area.

Installation into mobile homes require outside combustion air and special hearth attachments. For Mobile Homes, a Combustion Air Kit P/N 11069 is available from your dealer.

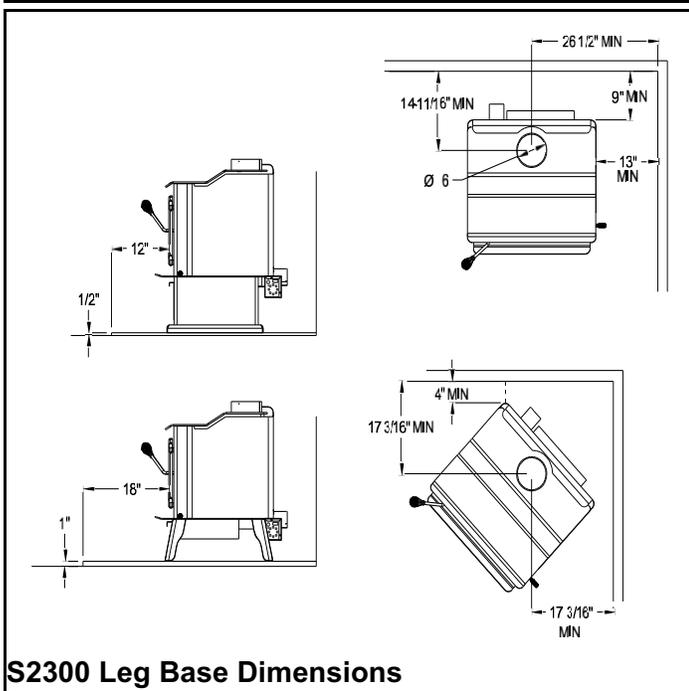
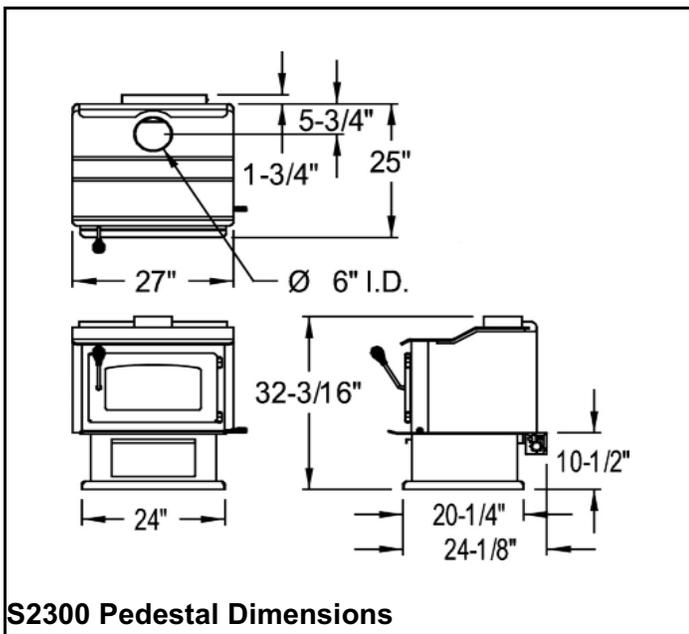
It is best to have a professional install your Sierra Stove. If you prefer to install it yourself (see Installation Instructions), be sure to obtain the proper permits. Have the local building officials inspect the stove and chimney pipe for safety and code compliance after the installation is complete.

**DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.**

**PLEASE LEAVE THIS MANUAL WITH THE OWNER !!**



F21-669



**OVERALL DIMENSIONS**

**ACHIEVING PROPER DRAFT**

Draft is the force which moves air from the appliance up through the chimney. The amount of draft in your chimney depends on the length of the chimney, local geography, nearby obstructions and other factors. Too much draft may cause excessive temperatures in the appliance. An uncontrollable burn or a glowing red stove part or chimney connector indicates excessive draft. Inadequate draft may cause back puffing into the room and plugging of the chimney. Symptoms of inadequate draft include leaking of smoke into the room through the appliance and/or chimney connector joints. A minimum draft of .06wc is required for proper operation.

Your Sierra Stove must not be connected to a chimney serving another appliance. Multiple appliances on a single flue may cause flue gases to be drawn into the house through an unused opening, or in the form of poor draft and rapid creosote accumulation.

The Sierra Stove will not smoke if installed according to manufacturer's specifications and with a listed chimney.

A scheduled plan for cleaning the chimney must be observed. A build-up of resins from wet or green wood can cause a flue fire (see Maintenance Section).

Special methods are required when passing chimney through a wall or ceiling. See Pipe Instructions Manual and/or local building codes.

**Do Not Over-fire this Heater:** Attempts to achieve heat output rates that exceed heater design specifications can result in permanent damage to the heater. **A glowing stove or connector pipe is hazardous!**

**HEARTH PROTECTION**

Floor protection and/or hearth extension is required for the Sierra Stove. All floor protection materials must be non-combustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Floor protector must be a 1/2" minimum thickness, non-combustible material having an equal or better insulating value (lower "k" value) at "k"= $\leq 84$ . It must extend from beneath the heater to the front, sides, and rear as indicated. Any organic materials (i.e., plastics, wood, paper products, etc.) are combustible and must not be used. The floor protector specified may include some form of thermal designation such as an R-value (thermal resistance), k-factor (thermal conductivity), or C-factor (thermal conductance). The easiest means of determining a proposed alternate floor protector that meets the requirements listed in this manual is to follow this procedure:

- 1) Convert specification to R-value:
  - i) R-value given - no conversion needed.
  - ii) k-factor is given with a required thickness (T) in inches:  $R = 1/k \times t$
  - iii) C-factor is given:  $R = 1/C$
- 2) Determine the R-value of the proposed alternate floor protector.
  - i) Use the formula in step (1) to convert values not expressed as "R".
  - ii) For multiple layers, add R-values of each layer to determine overall R-value.
- 3) If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

Floor Protection must be provided in the following areas:

- Under the unit
- 12" (Pedestal) and 18" (Leg) in front of the unit.
- 8" from the sides of the door opening
- Where horizontal venting is used, under the connector and 2" beyond each side.

**SPECIAL FEATURES**

Your Sierra Stove is equipped with a special design to meet clean air standards. Please follow the starting instructions carefully to ensure you are using your woodstove in the clean, efficient manner for which it was designed.

A special drafting pattern is employed in your Sierra Stove which provides an "air-wash" across the inside face of the glass thereby reducing the frequency with which the glass requires cleaning. Proper usage of these controls is discussed in the Starting Instructions section.

Your Sierra Stove may be configured as a free-standing heater or a fireplace insert. The free-standing unit has bases that include pedestal and standard iron legs. **All units are approved for mobile home installations with outside air.**

## **BREAK-IN PERIOD**

Your Sierra Stove has been painted with the highest quality silicone stove paint and has special break-in procedures to for proper curing.

- \* Ventilate the house. It takes heat to activate the silicone resin and this process gives off carbon dioxide smoke.
- \* Don't touch the surface. It will be soft and gummy during the curing phase. Once cured, it will not be soft again.
- \* Most stoves cure with three burns. The first two should be 250°F for 20 minutes, or about half of a normal fire. Let the stove cool down between burns. The last fire should be 500°F to 700°F for at least 45 minutes. The point being, cure slowly without a hot fire.
- \* Curing can usually be observed by the effect of the paint turning flat as the heat radiates out from the hotter parts of the stove.

## **OPERATING AND SAFETY TIPS**

Always exercise caution when operating your stove and follow these important safety tips.

1. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids well away from the heater while it is in use.
  2. A glowing red stove is dangerous! Never fire your stove to over 1000°F surface temperature. Never stoke up the fire so hot that it changes color of the surface of the stove. Cool the fire quickly by closing the stove door and bottom air control. The fire should die down once deprived of oxygen. If the fire doesn't die, call the fire department for assistance.
- CAUTION:** In airtight stoves after closing the bottom air control, volatile gases are still given off by the wood smoldering in the firebox. A sudden burst of oxygen caused by opening the draft control or door while stove is smoldering will ignite the volatile gases and may result in a sudden burst of flame with a muffled report. This may sound very similar to a gas furnace igniting. Always increase the air intake gradually. Do not open it all the way until you see flame in your firebox. Always open bottom air intake before you open the door.
3. Never hang clothes near the stove to dry as they may catch fire. Keep furniture, drapes, wood supply and any other combustibles 3 feet away from your woodstove.
  4. Never burn garbage in your woodstove. By garbage we mean: plastics, aluminum wrappers, slick paper magazines or styrofoam of any kind. Garbage fouls your chimney and the air.
  5. Use caution when loading fuel into stove after it is already burning vigorously. Avoid resting fuel against the glass as this will cause dirty spots.
  6. Burn dry wood only. Do not use coal as fuel.
  7. Educate your children to the dangers associated with fire, and the presence of the hot appliance. Child guards are available through your dealer. Never allow a child to operate your woodstove.
  8. Combustion Air: Fire consumes oxygen, therefore a fresh outside air source must be provided in order to maintain a healthy atmosphere within the house. Open a window slightly when operating the Sierra Stove.
  9. Disposal of Ashes: Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or the ground, away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

10. Flue Fires: Always a potentially dangerous situation, a flue fire can usually be controlled by depriving the fire of oxygen. Accomplish this by closing the stove door tightly and closing draft regulator snugly. The Fire Department should always be called to avoid letting the situation get out of control. Flue fires can be avoided by maintaining your chimney (See Creosote and Maintenance).

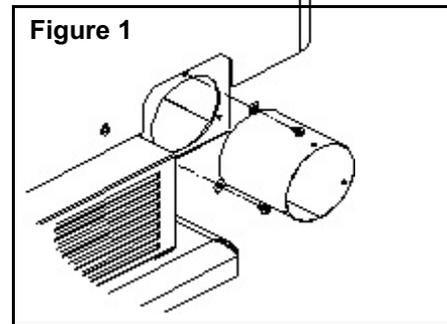
11. Smoke Detectors are a very good investment for the protection of your family and home.

12. Build fire directly on the fire bricks of the stove. Do not use grates or andirons to elevate wood.

## **INSTALLATION INSTRUCTIONS:**

### **MOBILE HOMES**

#### **S2300 FREESTANDING HEATER**

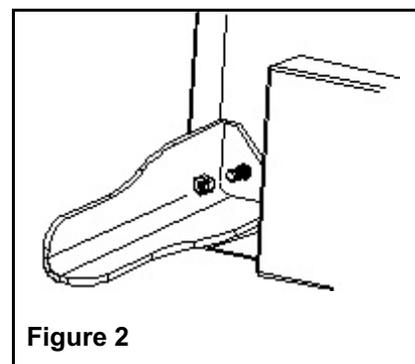


Correct installation of the Sierra Stove employing outside air requires the use of one of the approved chimney systems and the Sierra Mobile Home Kit.

**CAUTION: THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL, AND CEILING/ROOF MUST BE MAINTAINED.**

**Mobile Home Kit - This kit (available through your dealer) contains:**

1	Pedestal cover plate with nut & washer (for grounding wire)
1	Vent collar trim band with two #8 x 1/2" screws
1	Air intake hose with screen
1	1/4 x 3" lag bolts for anchoring pedestal



Proper installation requires a minimum 6" listed Class A all fuel chimney or tile lined masonry chimney. Chimney connectors must be 6" in diameter and constructed of 22 or 24 gauge aluminized steel, black steel, or stainless steel. Discharging into a larger chimney system may create draft problems. Your chimney should extend a minimum of 3-feet above your roof and at least 2-feet higher than any obstacle within 10-feet of the chimney.

## STEP BY STEP INSTALLATION

We suggest that you purchase a chimney kit from your local dealer designed for mobile home installations. These kits normally supply all required parts including roof flashing and spark arresting termination. This will simplify the chimney system installation.

Note: For mobile home and or installations utilizing the

The following materials will be helpful during your installation:

Carpenter's Level	Roof Cement (Cold)	Power drill
Masonry Hole Saw	#8 Copper Wire	5/16" drill bit
1/4" Masonry Drill Bit	Silicone Caulking	Plumb bob
Adjustable Wrench	Nails	Tape Measure
Tin Snips	1/4" bolt & washer	Duct Tape

reduced clearances (**Figure 1**), the use of an air cooled chimney connector or wall shielding is required. Refer to installation code NFPA 211.

1. Measure ceiling height, plus attic, plus three feet above roof and two feet above highest point of roof that is within ten feet of the chimney. Deduct height of the Sierra Stove and this will tell you if you need extra pipe in addition to what is supplied in chimney manufacturers mobile home kit.

2. Place the hearth pad on the floor in the desired location. Verify the chimney will be able to pass through the ceiling and roof between the trusses. When the desired location is decided, check for proper side clearances from a combustible walls and ceiling. Check the roof to see that there are no roof obstructions that will be in the way of the roof flashing.

3. Locate combustion air duct inside the pedestal area on the hearth pad so as to miss any obstruction, such as heat ducts, plumbing, floor joists, frame or outriggers.

Note: Some pre-cast hearths require that the combustion air intake aperture be cut out at the time of installation. If the hearth you have purchased does not have a pre-cut 4 1/4" hole in it, then the proper tools would be a masonry hole-saw or a circular saw with which to accomplish this task.

4. Cut a 4 1/4" diameter hole through the floor. Insert the combustion air duct (with screen up, covering the top of the hole). Fasten the duct to the floor with nails. Then go under the home and seal around the outside of the air duct with duct tape. This will hold the air duct in place and keep the plastic sheeting under your home from tearing away from the air duct.

5. Now place the hearth pad over the air intake duct hole. Be sure the hole in the pad lines up with the air duct hole in the floor. You are now ready to place a #8 copper grounding wire in position by feeding it down through the air intake duct. Lay out a sufficient length of wire across the hearth pad (toward the rear wall), in such a manner that you have access to the end of it, even after placing the stove on the pad (**Figure 3**).

6. Set stove on hearth pad. Feed the #8 Copper grounding wire up through one of the 2" holes in the bottom of the stove's pedestal (**Figure 3**). Carefully measure once more to make sure that both stove and pad are placed to meet proper clearances to combustibles. Using a 5/16" metal drill bit, drill one hole on each side of the pedestal flange for the anchor bolts to pass through (**Figure 3**). Mark and drill the two anchor holes with the 1/4" Masonry drill bit. Bolt down the stove using the two 1/4" x 3" lag bolts provided. The #8 copper wire should now be attached to the grounding lug on the inside of the pedestal cover plate using the hex nut and star washer provided. The loose end of this #8 copper wire (which is hanging down through the air intake duct) must be secured to the steel frame beneath the home using a 1/4" self-tapping bolt and star washer.

**CAUTION:** Combustion air must be taken from outside of the mobile home and must not be obstructed by any brush, snow or any form of debris.

7. With the stove set in place, locate the center of the chimney by using a plumb bob and cut an appropriately sized hole (refer to approved chimney system installation instructions) through the ceiling and roof. Be careful to avoid all electrical conduit and air duct work in the attic area.

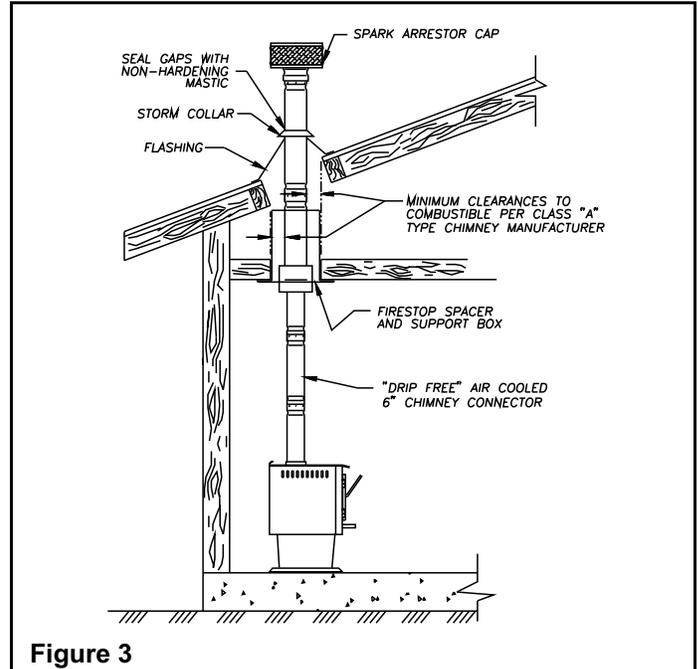
## CHIMNEY INSTALLATION

This room heater must be connected to (1) a chimney complying with the requirements for Type HT chimney in the Standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance, UL 103, or (2) a code-approved masonry chimney with a flue liner. If a masonry chimney is used refer to NFPA 211 and (**Figure 4 & 5**) for proper installation methods.

Most chimney systems a joist shield must be installed around the chimney where it passes through the attic space of the home. **Follow chimney manufacturer's installation instructions carefully and refer to Figure 1.**

**SPECIAL NOTICE:** When using Simpson Duravent chimney and DVL two-wall interior chimney it is imperative to suspend the Cathedral Support Box not less than Three inches below the ceiling level. The Cathedral Support Box takes the place of the joist shield for this brand of chimney.

In all cases, be sure that the Joist Shield for Cathedral



Support Box protects the entire section of chimney which is exposed in the attic area. The Joist Shield for Cathedral Support Box must extend upward at least to a level even with the roofing material, but not more than two inches above the roof line into the roof flashing unit.

Offsets of 15 degrees and 30 degrees in the chimney system are available from the manufacturers of several of the approved chimney systems and may be used with your Sierra Mobile Home approved stove if needed. Place the first piece of chimney onto the stove. The vent collar is designed to accept all of the approved pipe systems in an "inside the collar" (drip-free) fit. Be sure to fully seat this first section on the stove. Drill (3) holes through outer pipe skirt and vent collar, then secure with (3) sheet metal screws. Each connector must be secured by (3) sheet metal screws. Follow approved chimney system installation instructions to complete assembly of chimney through roof.

### CAUTION

1. Use only an approved chimney system.
2. Do not intermix pipe systems.
3. No single-wall stove pipe may be used.

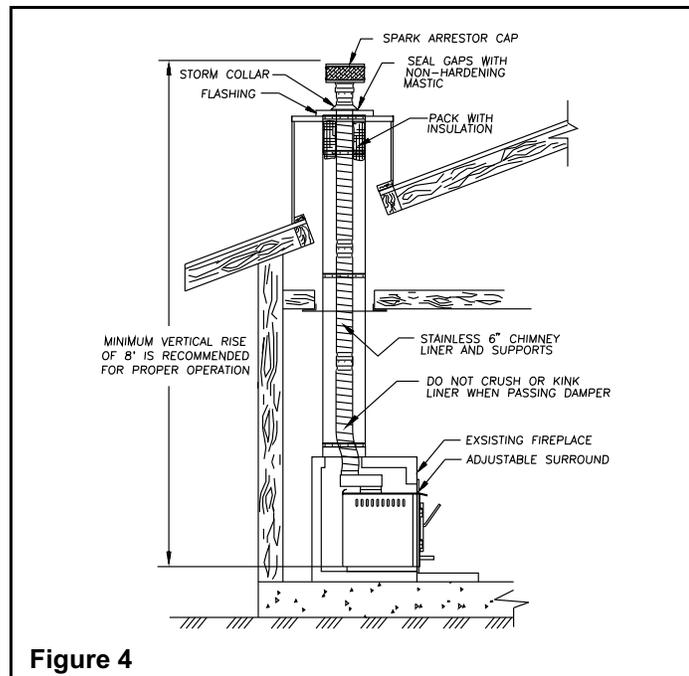
**ATTENTION:** Be sure to secure the cover plate with grounding lug on the back of the pedestal so that the room air intake aperture is covered (**Figure 3**).

**NOTE:** Before transporting a mobile home, you are required to remove the round top and all pipe extending above the roof flashing, so that the overall height is less than 13 feet, 6 inches. Be sure joints are secure when pipe is reassembled. At the time the house is set up, all weather seal plastic should be removed from air intake vent (beneath the home) and chimney extensions reinstalled on the roof.

### INSTALLATION INSTRUCTIONS SITE-BUILT HOMES

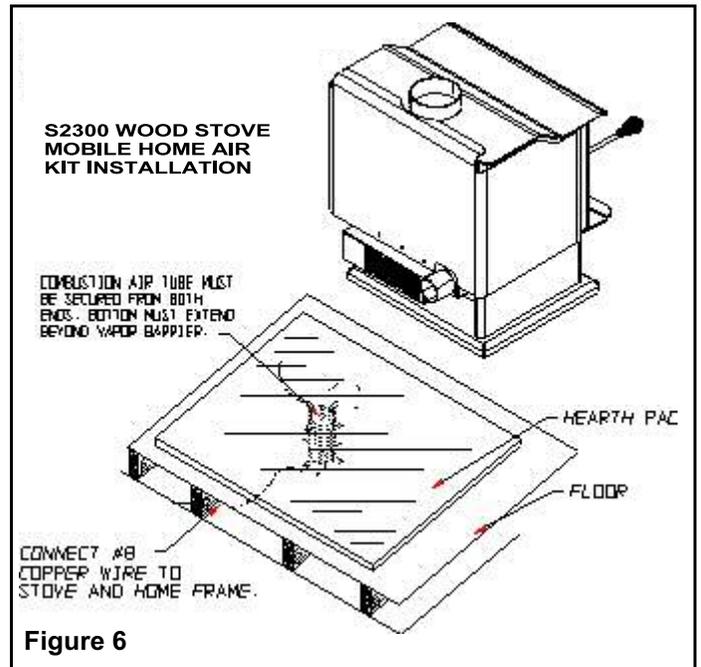
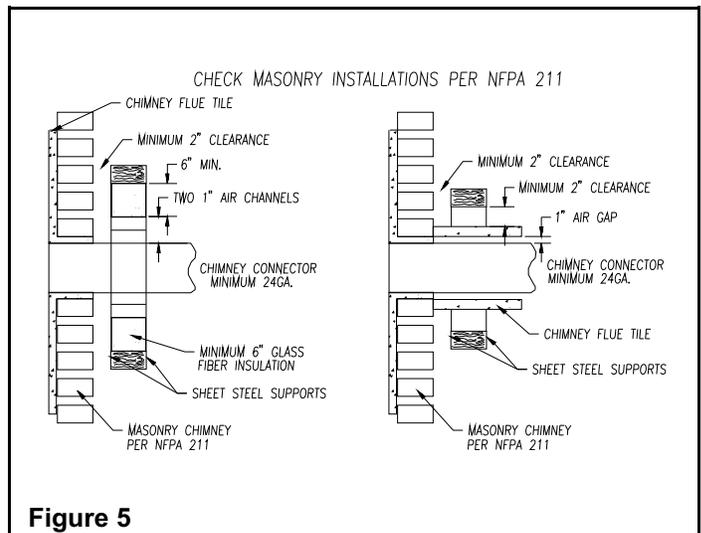
Sierra Products, Inc. recommends that you install outside air in all instances where feasible. The installation method employing room air is adequate, but not optimum.

To correctly install your new Sierra Stove in a site-built home at regular clearance, you must observe the appropriate clearances from (**Figure 1**). You will not need the Mobile Home Kit for this installation. The installation instructions for this application are essentially the same as those in the Mobile Home Reduced Clearance section. The exception is that you do not need to install the mobile home kit, therefore it is not necessary to cut a hole in the floor or the hearth pad. Follow the instructions included in your approved pipe kit for proper chimney pipe installation.



### BLOWER INSTALLATION INSTRUCTIONS

A room air circulation blower P/N 11047 is available from your local dealer. Install blower assembly per the installation instructions included with the kit.



### CORDWOOD FUEL LOADS

#### Cordwood Fuel - General Requirements

Use DRY WOOD only in your wood stove. The wood should have dried for 9 to 15 months, such that the humidity content (in weight) is reduced below 20% of the weight of the log. It is very important to keep in mind that wood cut for one, two or even more years is not necessarily dry if it has been stored in poor conditions. Under extreme conditions, it may rot instead of drying. This point cannot be overstated as the vast majority of the problems related to the operation of a wood stove is caused by the wood used was too damp or had dried in poor conditions. These problems include:

- ignition problems
- creosote build-up causing chimney fires
- low energy yield
- blackened windows
- incomplete log combustion

Smaller pieces of wood will dry faster. All logs exceeding 6" in diameter should be split. The wood should not be stored directly on the ground. Air should circulate through the cord. A 24" to 48" air space should be left between each row of logs, which should be placed in the sunniest location possible. The upper layer of wood should be protected from the elements but not the sides.

## Wood Heat Value: Sorted By Btu Content

Common Name	Lb/ cord	MBTU/ cord
<b>High</b>		
Osage Orange (Hedge)	4,728	32.9
Hickory, Shagbark	4,327	27.7
Hop Hornbeam (Ironwood)	4,267	27.3
Beech, Blue (Ironwood)	3,890	26.8
Birch, Black	3,890	26.8
Locust, Black	3,890	26.8
Hickory, Bitternut	3,832	26.7
Locust, Honey	3,832	26.7
Apple	4,100	26.5
Mulberry	3,712	25.8
Oak, White	4,012	25.7
<b>Medium High</b>		
Beech, European	3,757	24
Maple, Sugar	3,757	24
Oak, Red	3,757	24
Ash, White	3,689	23.6
Birch, Yellow	3,689	23.6
<b>Medium</b>		
Juniper, Rocky Mtn	3,150	21.8
Elm, Red	3,112	21.6
Coffee tree, Kentucky	3,112	21.6
Hackberry	3,247	20.8
Tamarack	3,247	20.8
Birch, Gray	3,179	20.3
Birch, White (Paper)	3,179	20.3
Walnut, Black	3,192	20.2
Cherry	3,120	20
Ash, Green	2,880	19.9
Cherry, Black	2,880	19.9
Elm, American	3,052	19.5
Elm, White	3,052	19.5
Sycamore	2,808	19.5
Ash, Black	2,992	19.1
Maple, Red	2,924	18.7
Fir, Douglas	2,900	18.1

## Medium Low

Boxelder	2,797	17.9
Alder, Red	2,710	17.2
Pine, Jack	2,669	17.1
Pine, Norway (Red Pine)	2,669	17.1
Pine, Pitch	2,669	17.1
Catalpa	2,360	16.4
Hemlock	2,482	15.9
Spruce, Black	2,482	15.9
Pine, Ponderosa	2,380	15.2

## Low

Aspen, American	2,290	14.7
Butternut (Walnut, White)	2,100	14.5
Spruce	2,100	14.5
Willow	2,100	14.5
Fir, Balsam	2,236	14.3
Pine, White (Eastern, Western)	2,236	14.3
Fir, Concolor (White)	2,104	14.1
Basswood (Linden)	2,108	13.8
Buckeye, Ohio	1,984	13.8
Cottonwood	2,108	13.5
Cedar, White	1,913	12.2

## Building Your Fuel Load

Cordwood stoves require three loadings for proper operation. This includes kindling, starting load, and large load for long burn. For best performance the kindling load will provide heat for starting flue draft. Starting load provides firebox heat and coal bed for the large long burn load.

Kindling - Made from small pieces ½" diameter and 6-12" long. A hatchet works well for splitting a small piece of cord wood length wise. You'll need about 4 lbs of kindling to heat up the flue and start a small draft.



Starting Load - Made up of 2" diameter pieces 12-16" long. You'll need about 6 lbs of start up fuel to build the coal bed and warm up the stove. This will assist in getting a strong chimney draft.



Long Burn Fuel Load - Made from 14-18" long split cordwood 4-6" in diameter. Best to stack the load in the center of the firebox with 2" inches on both sides of the load for good air flow and combustion.

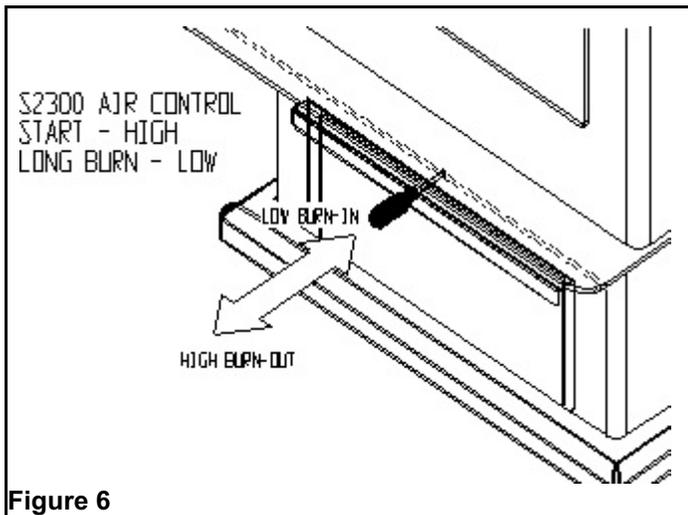


### Your First Fire

Your stove needs to be "seasoned" and the first fire should heat your stove just enough to cure the exterior paint and ceramic refractories. This is accomplished with just a kindling load and 1/2 of the start up load. Once these burn the stove paint will smoke briefly and you will notice moisture disappate from the glass. Let the stove cool for about an hour then your ready for the first full run.

### S2300 STARTING INSTRUCTIONS

1. Open door and pull air control rod (located at the front of stove) all the way out. When the air control rod is pulled out you are admitting maximum combustion air to your stove. Conversely, when the air control rod is pushed all the way in, you are admitting only a bare minimum of combustion air (**Figure 6**).



**Figure 6**

2. Crumple several sheets of newspaper into loose balls. Place these just inside the door opening (about six inches) and light. Close the door and allow these papers to burn briskly. This will preheat your chimney and help establish a good draft. Next, place several more balls of paper as you did for the pre-burn. Then place kindling wood loosely on top of the paper, add four or five wrist-sized pieces of wood to the top of the kindling, and light. Allow the door to remain open about 2" for several minutes to allow the kindling to begin to burn. Close door and allow to burn briskly. Slowly add larger pieces of cord wood to the firebox

as necessary. Once a fire is well established, the air control lever may be pushed in slowly until the desired burn rate is achieved. Be careful to retain a flame as this will produce clean combustion and clean glass.

3. When using split wood do not place flat side down as the air must be drawn around and through the pile of wood. Allow the fire to burn briskly for 30-45 minutes per day with the door closed and the dampers open. This permits the stove to reach optimum operating temperatures and will reduce the formation of creosote in the flue. As you burn your stove you will become more familiar with your individual start-up requirements.

The stove may be harder to start the first few times, but will become easier as a few ashes build up in the bottom of the firebox. This allows the air to get under the fire better.

3a. High Altitude Starting Instructions: Follow all steps above (1 through 3) however, due to the decreased density of oxygen supplied in a given volume of air at higher elevations it will be necessary to allow the stove to burn for a longer period of time with the air control rod pulled all the way out. It may also be necessary to use more kindling material in order to get a well-established fire going. As you use your stove you will become more familiar with your individual start-up requirements.

4. The best efficiency, heat control, and cleanest glass door is achieved through proper use of the draft control under the ash lip. Once the fire has burned briskly for 10-15 minutes you can then regulate the fire speed and intensity with the draft control.

**CAUTION:** Never open you air draft control suddenly if the fire has been smoldering for some time and no flame is visible. The sudden influx of air can cause ignition of wood gases which could create a loud report.

By using this control you will not only learn to regulate the temperature levels in your home but also be able to keep your glass door cleaner. Less air means slower fires and less heat, usually used when away from the home or for overnight burning. More air means faster, hotter fires and greater heat output, usually used when starting your stove in the morning.

The exact setting of this control depends upon many factors--chimney height, wind velocity and direction, type of wood and moisture content and desired home temperature.

With practice you will soon learn to keep your home at a comfortable temperature level. Your Sierra Stove is specially designed to burn clean with a constant air flow. Therefore, do not allow your stove to smoulder for long periods of time as this will cause excessive smoke emissions and creosote deposits in the chimney. The glass will also stay cleaner with small, hot fires rather than slow, smokey, smoldering fires.

5. Refueling: Before refueling your stove, pull the air control rod all the way out. This will admit maximum combustion air to the stove and ensure that no unburned gases remain in the firebox. Next, open the door slowly and verify that ashes do not block flow of air from the underfire air blast located just in the middle of the hearth just in front of the door opening. Then rake the coals level, and lay the new fuel charge on top of these glowing coals. Close the door slowly and allow the wood to burn briskly for a few minutes. Once a fire is well established, the air control lever may be pushed in slowly until the desired burn rate is achieved. Be careful to retain a flame as this will produce clean combustion, clean glass and highest efficiencies.

6. When ashes get 4 to 5 inches deep in the firebox, and when the fire has burned down and cooled, remove excess ashes. Leave about an inch of ash in the bottom of the firebox to help maintain a hot charcoal bed.

### OVERNIGHT BURNING

To hold a fire overnight, load the firebox with a full supply of wood which has a minimum diameter of six inches.

Wood still in "the round" will burn longer than split wood. After experimenting with the slide draft for a few days, you will discover the correct setting for your home. If the fire is out in the morning and wood is burned up, open the slide draft a little more the next night.

**MORE FUEL AND OPERATION TIPS**

Fuel Sizes: S2300 takes 17" to 18" wood side to side. The ideal fuel load is about 15 lbs. Producing about 11,000 to 42,900 Btu/Hr.

"Hard" wood (oak, maple, ash, nut trees, etc.) is better for overnight burning than "soft" wood (fir, cedar, pine, spruce, etc.)

PLAN AHEAD: PUT IN NEXT YEAR'S WOOD NOW!

**Creosote Formation and the Need For Removal**

Unseasoned or wet wood contains large amounts of moisture. When this wood is heated in the fire, the water is vaporized and driven off as steam at about 212 to 300 degrees Fahrenheit. As the temperature of the wood reaches 300-600 degrees Fahrenheit the flammable liquid in the wood fiber cells is vaporized and it too is driven off as a steamy smoke.

If the temperature is high enough and there is a sufficient amount of oxygen present, the steamy flammable wood gases will ignite and burn. The burning of these gases is what is referred to as "secondary combustion" and appears as the rolling orange flame above the wood.

When there is an insufficient amount of either heat or oxygen present in the stove, this wet and steamy smoke does not ignite and burn. Instead it is drawn through the exhaust vent and into the chimney. As this steam begins to cool down in the flue it condenses as droplets of moisture on the inside walls of the chimney. This becomes creosote which is flammable and is the fuel which burns in a flue fire. It is necessary to periodically clean these deposits from your stove pipe and chimney.

**Creosote deposits are dangerous and are deemed a flue fire waiting to happen! Visually check your chimney monthly. If creosote deposits are more than 1/4" thick, remove them.**

**MAINTENANCE**

The following tips on maintenance will help you keep the Sierra Stove performing in an attractive and efficient manner.

**Glass:** In the event that you need to clean your glass, Bon Ami works very well. The "sweeps trick" is to dip a damp cloth or newspaper in the cool ashes from your firebox and clean the glass in this manner. Any creosote deposits on your glass should burn back off with a good hot fire.

**Exterior:** The exterior of the cold Sierra Stove can be cleaned with any multi-purpose household spray cleaner and rinsed with a damp cloth. Be sure to read the instructions on the cleaner for best results. Use Stove Bright paint when touching up the finish on you Sierra Stove.

**Interior:** S2300 is lined with refractory panels that meet ASTM C-155 Group-20 and ASTM C-64 specifications. The refractories have an extended life. Should any require replacement refer to **the Replacement Parts Table and Diagram on the following page.**

**Gasketing:** Door and glass gasketing must be kept in good repair to ensure that uncontrolled sources of combustion air are not admitted to the stove. Symptoms of an air leak, or faulty gasketing include: dirty appears near the edges of the glass window, short burn times, inability to control the speed of the fire. If any of these symptoms are noted, consult your nearest dealer, and replace gaskets. These gaskets are applied using standard furnace cement.

**Ashes:** Should be cleaned as frequently as they build up to approximately the level of the fire chamber opening. Be sure to leave about 1/2" of ashes for your next fire.

**Cleaning the Flue:** It is the manufacturer's recommendation that the flue be inspected monthly and cleaned NOT LESS THAN ONCE A YEAR. Either call a professional chimney sweep or you may rent or purchase the proper brushes and equipment to do this yourself.

**Gold or Nickel Doors:** Plated doors require minimum cleaning. Should cleaning be required use a mild cleaner on a soft cloth. We do not recommend the use of any type of cleanser which contains abrasive as this will permanently mar the finish.

By following the manufacturer's recommendations your Sierra Stove will give you years of service.

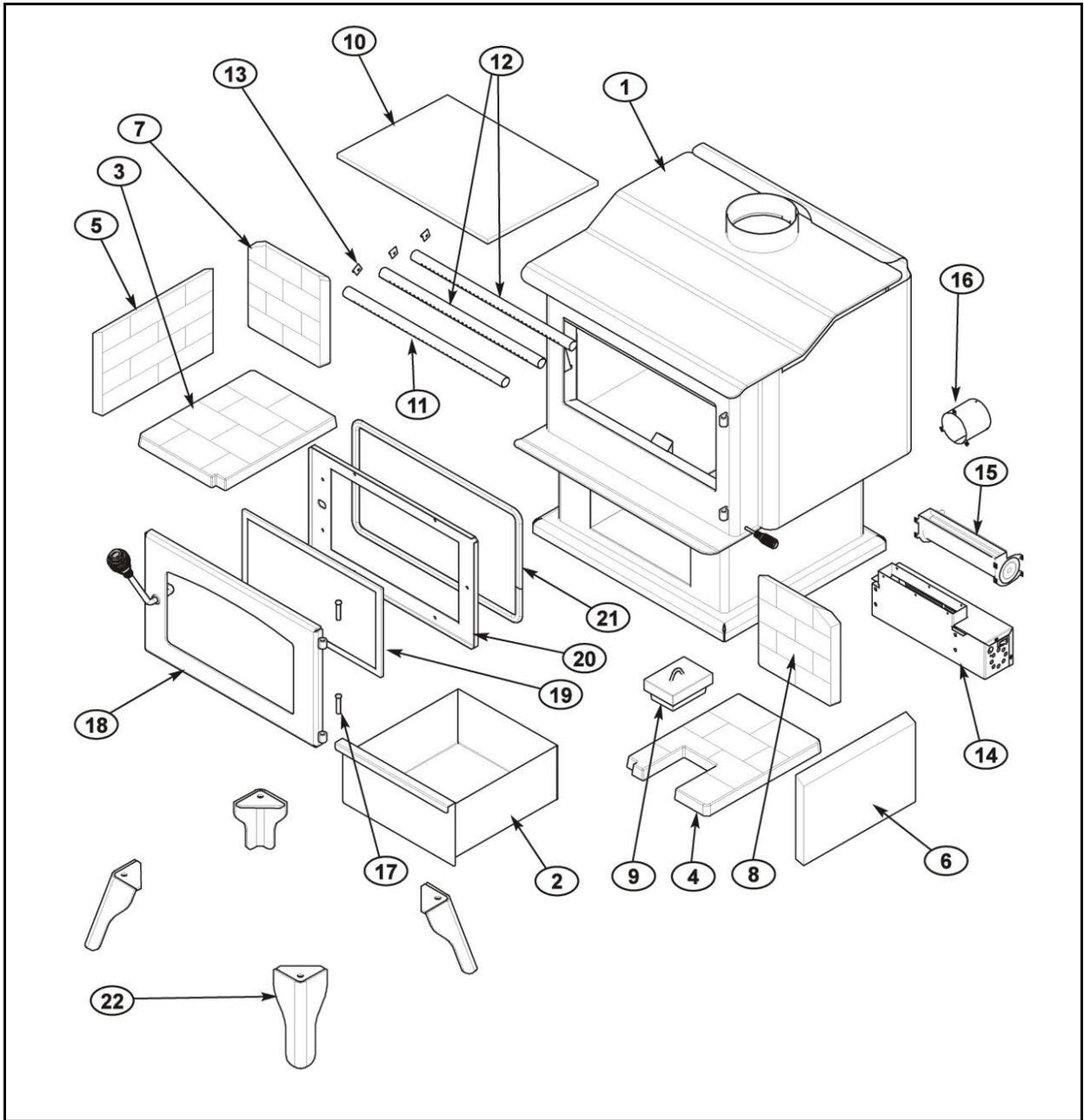
**CONSUMER PROTECTION WARRANTY**

Your Sierra Stove has a Limited Five-Year Warranty. Please read it carefully, fill out the short registration form and return it, within 30 days of purchase, to Sierra Products, Inc., 63 Laxalt Dr. Carson City, NV 89706.

Complete your warranty online [www.sierraproductsinc.net](http://www.sierraproductsinc.net)

**Replacement Parts S2300**

Item	P/N	Description	Qty
1	11041	S2300PB (Pedestal Base)	a/r
or	11043	S2300FS (Leg Unit)	a/r
2	300448	Ash Box (S2300PB only)	1
or	300453	Ash Box (S2300FS/HS only)	1
3	201857-2	Refractory Hearth LH	1
4	201857-1	Refractory Hearth RH	1
5	201855-2	Refractory Side LH	1
6	201855-1	Refractory Side RH	1
7	201856-2	Refractory Rear LH	1
8	201856-1	Refractory Rear RH	1
9	201839	Ash Dump Plug	1
10	201822	Refractory Baffle (top)	1
11	201823-1	Combustion Tube Front	1
12	201823-2	Combustion Tube Rear	2
13	201864	Comb. Tube Retainer Bkt.	3
14	11047	Blower Kit (includes blower)	1
15	110109	Blower (only) 160cfm 120vac 60hz	1
16	11069	Combustion Air Kit	1
17	110468	Door Hinge Pin	
18	201863	Standard Steel Door (black)	



Should you have a warranty claim on your Sierra Wood Stove, notify your nearest dealer, or contact Sierra Products, Inc. at [www.sierraproductsinc.net/customer-support/technical-service/](http://www.sierraproductsinc.net/customer-support/technical-service/).



Sierra Products, Inc.  
63 Laxalt Dr.  
Carson City, NV 89706  
775-241-2586

## SIERRA LIMITED FIVE, THREE, ONE, YEAR LIMITED WARRANTY

Sierra Products, Inc. (SPI), warrants to the original consumer this stove will be free of defective materials and workmanship for the following periods: *Outer structure - Limited Five Year, Interior metal construction - Three Years, All other items - One Year* from the date of purchase. This warranty does not extend to any parts worn or damaged through normal wear, abuse, accident, or neglect or warpage due to over-firing; nor does it apply if the stove has been repaired or modified unless by SPI written authorization. If the stove proves to be defective in material or workmanship within the warranty period, SPI will, at no charge, repair or replace (at its option) any defective parts, if the purchaser ships the parts or the stove, freight prepaid, to SPI or the nearest authorized service center. SPI may require the consumer to supply reasonable proof of the stove's purchase date.

**This warranty is in lieu of any other express warranty. Any implied warranties, including but not limited to any implied warranty of merchantability or fitness for a particular purpose shall not extend beyond one year from the date of purchase.**

The purchaser's sole and exclusive remedy shall be for the repair or replacement of defective parts, as provided for in this warranty. No other remedy (including but not limited to incidental or consequential damages for lost profits, lost sales, injury to person or property, or other incidental or consequential loss) shall be available to the purchaser.

Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

SPI's warranty obligation and the purchaser's rights under it can be altered only by a subsequent written agreement between SPI and the purchaser.

The remedies provided in this warranty are void unless the attached warranty registration card is received by SPI within 30 days from the date of purchase.

If you have a warranty claim or questions about the performance of your stove, you are requested to contact your dealer.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Please fill out and return the  
bottom half of the page to:  
**SIERRA PRODUCTS, INC.**  
63 Laxalt Dr.  
Carson City, NV 89706

**Fill out &  
return within  
30 days.**



### Sierra Stoves Warranty Card



Model # \_\_\_\_\_

Serial # \_\_\_\_\_

Date Purchased \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Name \_\_\_\_\_ Dealer Name \_\_\_\_\_

Address \_\_\_\_\_ City/State \_\_\_\_\_ Zip \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Mail form to: Sierra Products, Inc.  
63 Laxalt Dr.  
Carson City, NV 89706  
Att: Customer Service

I have read and understand the above warranty agreement.

Owner's Signature \_\_\_\_\_