Multi-Fuel, Biomass Stove Owner's Manual

TransNorth Ltd.
72 Copernicus Blvd, Unit # 3,
Brantford, Ontario
519-751-2111
https://transnorth.ca/

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Congratulations !!

You are now the proud owner of an original SEDORE multi-fuel biomass stove. You are never again limited to burning just one type of fuel. Your new SEDORE stove is Underwriters Laboratories of Canada (ULC) listed and can burn any of 15 different types of fuels.

Your SEDORE stove is approved to burn the following fuels:

1) Hardwood
2) Softwood
3) Wood chips
4) Sawdust
5) Shavings
6) Cob corn
7) Kernel corn
8) Recycled cardboard cubes
9) Treesaver firewood
10) Recycled hardwood cubes
11) Barley
12) Oats
13) Wood pellets
14) Sunflower seeds
15) Sunflower tops

Your new SEDORE woodstove burns with an entirely different principle from conventional air-tight stoves, surpassing air-tight stoves in performance.

This manual will, step-by-step, explain the burning principles of the SEDORE, and cover many questions you may have. You may be thinking because the SEDORE burns differently, that it is complicated. Actually, the opposite is true. Your SEDORE is very easy to operate, and can be left unattended most of the time.

Now, put your feet up and relax and take some time out to read through this booklet carefully. It will orient you to how to get the most out of your new stove and cover most of the problems that may arise.

It usually takes about three weeks after starting your new SEDORE stove, before you will feel completely comfortable with it. This is normal, don't worry. After reading this booklet, you will be able to identify and quickly resolve any problems that may occur.

In addition, there are many excellent videos on the internet showing the operation and maintenance of the SEDORE woodstove. However, if something should arise that you don't know or can't find the answer to, don't hesitate to call us at (519) 751-2111.

Many owners of SEDORE woodstoves only light their stove on the first cold day of the year. Because of the length of burn of each fill-up, the SEDORE only needs attention morning and night, so you can, if you wish, keep your stove going straight through the winter until it is no longer needed in the late spring.

Finally, most owners of SEDORE woodstoves have some form of back-up heat. However, if your SEDORE is centrally located in your home, or if you have devised a system of moving the heated air throughout your home, and if you have purchased the correct size of stove for your home, the SEDORE can become your primary source of heat.

The Sedore woodstove has been listed to CAN/ULC-S627-M93

Manufactured by:
RDJ Bailey Metal Works Inc., Box 310, 75 South Service Rd, St. Marys, Ontario, Canada, N4X 1B2
519-349-2130

Distributed by:
TransNorth Ltd., 72 Copernicus Blvd, Unit # 3, Brantford, Ontario, Canada, N3P 1K5
519-751-2111

Sedore History

The Sedore Multi-Fuel, Biomass Stove was invented and patented by Ernest Sedore in 1978, a Canadian inventor with numerous designs and patents in many fields. Some of his more notable inventions are certain types of heavy duty snow blowers and heavy duty fork trucks. One of his most successful inventions was a new type of log splitter.

Having been raised with wood heat, Ernest was familiar with many of the common designs on the market and he felt he could do better.

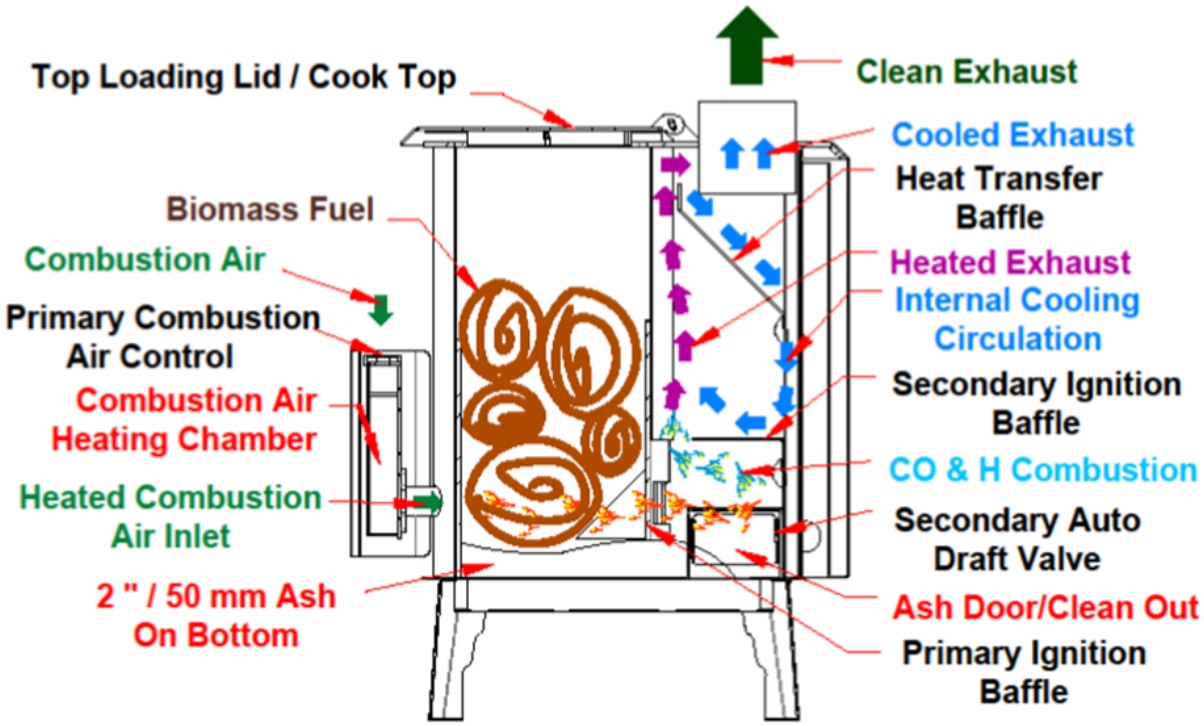
He wanted a unit that would burn cleanly, as well as one that was easy to operate and refuel. This meant that his unit had to be top loading and allow the fuel at the bottom of the pile to burn efficiently while allowing new fuel to drop down into the burning area as needed. After many prototypes and failures he finally had the “Eureka” moment – Multi-Fuel/Biomass burning stove of this type need to have corrugated interior walls so that the interior combustion and air circulation would continue with any size and type of fuel – and at all stages of the fire.

This thoughtful design worked amazingly well and before long Ernest had his patents and started producing the Sedore Multi-Fuel/Biomass Stoves. At first the word was spread by mouth – and it still continues that way today! Once someone sees the Sedore burn, they quickly understand that this is a Multi-Fuel/Biomass burning stove that will do the job in REAL winter weather.

RDJ Bailey Metal Works Inc. holds the patented designs and manufacturing rights from Ernest Sedore. TransNorth Ltd. is proud to distribute Sedore Stoves across Canada where they were first invented.

Ernest Sedore with original Sedore Stove

How it Works



The intake air is admitted through the holes in the crests of the corrugated front wall. This provides a cross draft, which makes the fuel burn only at the bottom of the firebox, or fuel load. As the fuel burns, it's being lowered from above into the burning area. This is how such long burn times are accomplished. The heat output can be regulated from low to high; depending upon the amount of air entering the stove.

The SEDORE stove will not produce creosote, unless operated with an internal stack temperature below 300 F. Internal stack temperatures should not be confused with external. Typically the internal stack temperatures will be double the measurement taken with an external (magnetic) thermometer.

The Sedore Stove is continuously conditioning the fuel load above the burning portion of the front chamber, which will preheat and dry the fuel above, before it reaches the burning area.

The front and sides of the firebox do not need firebricks to prevent warping, because of the added strength corrugations', and 5/16th inch baffle plates provide. The corrugations also provide a more efficient heat transfer, due to the increased surface area, and steel transfers heat much better than firebrick, providing a more efficient and even transfer.

The top loading feature provides easier fuel loading, no stooping or bending, and access to the firebox is visible, providing the ability to fill it completely, for extended burn times. There's also no coals or ashes to spill on the floor, when loading the fuel. To prevent smoke escaping when the lid is opened, it's recommended to only open the lid, when the stove needs more fuel.

The Sedore stove will produce the same amount of heat with one piece of wood, as it will with the firebox filled. When your stack temperature starts to drop off, means it's time to reload the fuel. The lid can be raised anytime, to top off the fuel load but the following procedures must be followed carefully.

Open air intake fully, and wait for 3-5 minutes. Next, lift the lid up about an inch until the lid latch stops the upward travel and hold it there. You should shortly hear the fire take off. Hold the lid in this position until all smoke has cleared the firebox, approximately 30-60 seconds. Once you've seen that the smoke has cleared the firebox, open the lid slowly and place fuel into the firebox as quickly as possible. Close the lid and reset the air intake.

Adding fuel when the firebox is above half full, or more, is the most difficult time to add fuel without getting smoke escaping. When you open the lid in this situation, the stove suddenly gets unlimited air in to a previously controlled fire and the entire firebox of fuel will start to burn. With the lid closed the stove is taking in air through the air intake only, which provides controlled air to the bottom of the firebox and thus containing the fire at the bottom and no higher than the air intake tubes. When the lid is opened, suddenly the fire gets unlimited air and everything in the firebox wants to burn. Again it is best not to add fuel to the stove until it runs low of fuel, but if you must top it off, follow the above procedures, and add the fuel as quickly as possible. Smoke at the time of refueling, is not an issue because there will not be an excessive amount from a low fuel load.

The stove's corrugated walls provide a means of surrounding the unburned fuel with heat and air, and pulling this mixture of smoke, steam and gasses through the hot coals, over and over until, the smoke and gasses are burned. The only escape for any smoke or gases is through the cast iron secondary ignition plate (baffle), where any remaining smoke or gasses are re-burned, by passing through the extreme temperatures' of the ignition plate (baffle).

"This is what makes the SEDORE stove run so clean and efficiently."

Safety Notices

Be sure to read this entire manual before you install or use your new Sedore woodstove.

If the Sedore woodstove is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Failure to follow these instructions may result in property damage, bodily injury, or even death.

It is recommended that you have your new Sedore woodstove installed by a professional installer of solid fuel burning appliances.

Extremely hot while in operation! Keep children, clothing and furniture away. Contact may cause skin burns.

Avoid creating a low pressure condition in the room where the stove is operating. Operating an exhaust fan or a clothes dryer could create a low pressure area, causing poisonous gases to come out of the stove into the room.

You can prevent low pressure conditions by providing adequate combustion air within 24” (610mm) but not closer than 12” (305mm) from the stove.

Do not use chemicals or fluids to start the fire. Some fuels will, during combustion, separate carbon monoxide and generate it in the burn chamber. Carbon monoxide is toxic, so please follow the guidelines in this manual for proper operation of your Sedore woodstove.

If you for some reason experience smoke “roll-out” from the stove, it may activate smoke detectors if installed in the house.

Installation

If this solid fuel room heater is not properly installed a house fire may result. For your safety, carefully review and follow the installation instructions. Contact the local building or fire officials about restrictions and installation inspection requirements in your area.

Reminder:

Your local officials have final authority in determining if a proposed installation is acceptable. Any requirement, that is requested by the local authority having jurisdiction, that is not specifically addressed in this manual, defaults to CAN/CSA-B365-M and local Building Codes in Canada.

Assembly before Installation

The Sedore woodstove may be shipped with hardware inside the stove.

Installation

Installation will be covered in the following 3 sections:

- Chimney & Chimney Connector
- Connecting to the Chimney
- Clearances to Combustibles

Chimney & Chimney Connector

The chimney connector is a single walled pipe used to connect the stove to the chimney. The chimney connector must be 6” (152mm) in diameter, with a minimum thickness of 24 gauge black steel. Aluminum and galvanized steel pipe is not acceptable for use with the the Sedore wood-stove. These materials cannot withstand the extreme temperatures of a wood fire and can give off toxic fumes when heated.

Do not use the connector pipe as a chimney. Each chimney connector or stove pipe section must be installed to the stove flue collar and to each other with the male (crimped) end toward the stove. This prevents any amount of condensed or liquid creosote from running down the outside of the pipe or the stove top. All joints, including the flue collar connection must be secured with three sheet metal screws.

For the best performance, the chimney connector should be as short and direct as possible, with no more than two 90°elbows. If you require a 90° turn, it is recommended that you use two 45° elbows to improve air flow.

The maximum horizontal run is 36” (915mm) and a recommended total length of stove pipe should not exceed 10 feet.

Always slope horizontal runs upward 1/4” (6,35mm) per foot toward the chimney.

No part of the chimney connector may pass through an attic or roof space, closet or other con-cealed space, or through a floor or ceiling.

All sections of the chimney connectors must be accessible for cleaning.

Where passage through a wall or partition of combustible construction is desired, the installation must conform with CAN/CSA-B365.

CAUTION: Do not connect this unit to a chimney flue servicing another appliance.

Chimneys

There are two types of chimneys suitable for the Sedore woodstove:

1. A code- approved masonry chimney with a flue liner.

2. A prefabricated chimney complying with the requirements for Type HT (2100°F) chimneys per ULC S629.

The chimney size should not be less than the cross-sectional area of the flue collar, and not more than three times greater than the cross-sectional area of the flue collar.

When selecting a chimney type and the location for the chimney in the house, keep this in mind: it is the chimney that makes the stove work, not the stove that makes the chimney work. This is be-cause a chimney actually creates a suction, called “draft”, which pulls air through the stove.

Several factors affect draft: chimney height, cross-sectional area (size), and temperature of the chimney, as well as the proximity of surrounding trees or buildings. As a result, a short masonry chimney on the exterior of a house will give the poorest performance. This is because it can be very difficult to warm the chimney thereby creating inadequate draft. In extremely cold northern areas it may be necessary to reline the chimney or extend its height to help establish draft. Conversely, a tall masonry chimney inside the house is easier to keep warm and will perform the best. Finally, a chimney that goes straight up works best. If you have an offset or elbows in your chimney you may have to add height to compensate.

Symptoms you may experience if your chimney is too low include:

- It takes longer than five minutes to get to the required 550°F stack temperature.
- You burn through your load of fuel faster than the quoted times.
- Stack temperature runs too low (around 100°F)

If you know you must go higher with your chimney, but you are not sure how high, you could temporarily fasten a piece of stovepipe on top of your chimney. When you have found the correct height, replace this with proper insulated chimney.

CSA CAN-B365 gives the necessary chimney national requirements for Canada. However, many local codes differ from the national code to take into account climate, altitude, or other factors.

Notice: It is important that you check with your local building officials to find out what codes apply in your area before installing your new Sedore woodstove. Remember: Your local inspector has the final authority in approving your installation. It is always best to consult with them prior to the installation.

Masonry Chimneys

When installing the Sedore woodstove into a masonry chimney you must conform to all of the following guidelines:

The chimney flue size should not be less than the cross-sectional area of the stove flue collar.

The cross-sectional area of the flue of a chimney with no walls exposed to the outside below the roofline shall not be more than three times the cross-sectional area of the stove flue collar.

The cross-sectional area of the flue of a chimney with one or more walls exposed to the outside below the roofline shall not be more than two times the cross-sectional area of the stove flue collar.

Larger chimney flues should be relined with a listed or code approved liner.

The masonry chimney must have a fireclay liner or equivalent, with a minimum thickness of 5/8” (16mm) and must be installed with refractory mortar. There must be at least 1/4” (6,35mm) air space between the flue liner and chimney wall.

The fireclay flue liner must have a nominal size of 8” X 8”, and should not be larger than 8” X 12”. If a round fireclay liner is to be used it must have a minimum inside diameter of 6” (157mm) and not larger than 8” (208mm) in diameter. If a chimney with larger dimensions is to be used, it should be relined with an appropriate liner that is code approved.

The masonry wall of the chimney, if brick or modular block, must be a minimum of 4”(106mm) nominal thickness. A mountain or rubble stone wall must be at least 12” (310mm) thick.

A newly-built chimney must conform to local codes and in their absence must recognize national regulations. When using an existing chimney, it must be inspected by a licensed professional chimney sweep, fire official, or code officer, to ensure that the chimney is in proper working order.

No other appliance can be vented into the same flue.

An airtight clean-out door should be located at the base of the chimney.

Prefabricated Chimneys

If a prefabricated metal chimney is to be used it must be a chimney type that is tested and listed for use with solid fuel burning appliances. That means a chimney that is tested to the High Temperature Standard ULC S-629 for Canada.

The manufacturer's installation instructions must be followed precisely. Always maintain the proper clearance to combustibles as established by the pipe manufacturer. This clearance is usually a minimum of 2" (56mm), although it may vary by manufacturer or for certain chimney components.

Chimney Height

Whether a masonry chimney or prefabricated metal chimney is used it must be the required height above the roof line.

The requirement is:
The chimney must be at least 3 feet higher than the highest point where it passes through the roof and at least 2 feet higher than the highest part of the roof or structure that is within 10 feet of the chimney, measured horizontally.

Chimneys shorter than 20 feet may not provide adequate draft. This could result in smoke spilling into the room from the stove when loading the stove, or when the door is open. In addition, inadequate draft can cause back puffing, which is a build up of gases inside the firebox.

Other times, chimney height can create excessive draft which can cause high stove temperatures and short burn times. Excessive drafts can be corrected by installing a butterfly damper. If you suspect you have a draft problem, consult a wood-burning specialist. We recommend wood-burning specialists who are certified by Wood Energy Technical Training (WETT).

Wall Pass-Throughs

When your installation unavoidably requires the chimney connector to pass through a combustible wall to reach the chimney, always consult your local building officials, and be sure any materials to be used have been tested and listed for wall pass-throughs. In Canada, the standard has been established by the Canadian Standard Association. The installation must conform to CAN/CSA-B365, Installation Code for Solid Fuel Burning Appliances and Equipment. Before proceeding be sure to consult your local building inspector.

Common Method:

This method requires the removal of all combustible materials from at least 18" (457mm) around the chimney connector's proposed location. With a 6" (157mm) round liner the minimum area required would be 43" x 43" square (1092x1092mm).

It is important to remember to locate the pass-through at least 18” (457mm) from the ceiling to maintain the proper clearance to combustibles.

The space that is cleared of combustible materials must then remain empty. Sheet metal panels can then be used to cover the area. However, when using a panel on both sides of the wall each cover must be installed on non-combustible spacers at least 1”(25,4mm) from the wall. If one panel of sheet metal is to be used it may be installed flush to the wall.

Consult your local building inspector or CAN/CSA-B635 for other approved wall pass-through methods.

Connecting to the Chimney

Masonry Chimney Thimbles

When installing a Sedore woodstove into a masonry chimney through a “thimble”(the opening through the chimney wall to the flue), the thimble must be lined with ceramic tile or metal and be securely cemented in place.

The chimney connector/stove pipe must slide completely inside the thimble to the inner surface or the flue liner. It may be necessary to make use of a thimble sleeve (a pipe with a slightly smaller diameter than standard stove pipe). This special pipe can be easily installed into a thimble.

Make sure the connector pipe or thimble sleeve does not protrude into the flue liner, thereby restricting the area the smoke has to flow through. This bottle-neck will have a negative affect on the chimney system.

The chimney connector should be sealed at the thimble with refractory cement and the stove pipe leading to the stove should have a minimum of three screws.

Do not connect this stove to a chimney flue servicing another appliance of any kind.

Prefabricated Chimneys

When installing the Sedore woodstove to a prefabricated metal chimney always follow the pipe manufacture’s instructions and be sure to use the components that are required. This usually includes some type of “smoke pipe adapter” that is secured to the bottom section of the metal chimney and allows the chimney pipe to be secured to it with three sheet metal screws.

Clearances to Combustibles

Floor Protection

Floor protection under the stove must be a UL 1618 Type I Ember Protector composed of non-combustible material for protection from radiant heat, sparks, and embers.

Individual sections of floor protection must be mortared together to prevent sparks from falling through to combustible materials. Any carpeting must be removed from under the floor protection.

The Sedore woodstove must be installed on a non-combustible surface extending: A minimum of 20 1/2” (520.70mm) in front of the stove, (measured from the legs). And 17 1/8 ” (231.90mm Canada) on the right, and left side, (measured from the legs), and 8" (171.45mm) from the back of the stove (measured from the legs). This will result in a minimum floor protection of 56”W x 52”D (1066.8mm x 1320.8mm) with a Minimum R-value of 1.1.

Floor protectors come with various types of specifications. To convert a floor protector’s specification to an R-value, do one of the following:

- If the R-value is given, use that value (no conversion needed).
- If a K-factor is given with a required thickness (T) in inches, use this formula:
  R-value = 1/K x T
- If a C-factor is given, use the formula:
  R-value = 1/C

To determine the R-value of the proposed alternate floor protector:

- Use either the K-factor or the C-factor formula explained above to convert specifications not expressed as R-values.
- For multiple layers of floor protectors, simply add the R-values of each layer to determine the overall R-value of the layers.

If the overall R-value of your setup is greater than the R-value of the specified R-1 requirement, then your setup is acceptable.

Non-Combustible Material	Thickness	R-value
Gypsum or plaster board*	0.5”	0.45
Wallboard, Wonderboard, or Durock*	0.5”	0.20
Ceramic board (Fiberfrax or Micor)*	0.5”	1.10
Nominal solid clay brick*	1”	0.20
Ceramic wall or floor tile*	0.25”	0.01
Mineral wool insulation*	1”	3.12
Cement mortar**	1”	0.20
Horizontal still air**	0.125”	0.92

** Check manufacturer’s specifications.*
*** According to ASHRAE Handbook of Fundamentals 1977*

Clearances to Walls & Ceilings

The following clearances have been tested to ULC standards and are the minimum clearances specifically established for the Sedore woodstove.

The following diagrams give the required clearances you must maintain when installing the Sedore woodstove near combustible surfaces.

A combustible surface is anything that can burn (i.e. sheet rock, wall paper, wood, fabrics etc.). These surfaces are not limited to those that are visible and also include materials that are behind non-combustible materials.

If you are not sure of the combustible nature of a material, consult your local fire officials. Contact your local building officials about restrictions and installation requirements in your area. *Remember:* "Fire Resistant" materials are considered combustible; they are difficult to ignite, but will burn. Also "Fire-rated" sheet rock is also considered combustible.

Using Shields to Reduce Clearances

Pipe shields: When using listed pipe shields to reduce the connector clearance to combustibles, it must start 1"(25,4mm) above the lowest exposed point of the connect pipe and extend vertically a minimum of 25" (635mm) above the top surface of the stove.

Double wall pipe: Listed double wall pipe is an acceptable alternative to connector pipe heat-shields.

Wall-Mounted Protection: When reducing clearances through the use of wall mounted protection: refer to CAN/CSA-B365, Installation Code for Solid-Fuel Burning Appliances and Equipment, also for acceptable materials, proper sizing and construction guidelines.

Note: Accessories for wood stoves for clearance reduction have been developed by many manufacturers. If not following the methods of the installation codes, be sure that any accessory you choose has been tested by an independent laboratory and carries the laboratory's testing mark. Make sure to follow all of the manufacturer's instructions.

Fuels

Wood

Wood is probably the most popular fuel. Well seasoned hardwood will give you the longest burn time. Seasoned wood is wood that has been cut and split and allowed to dry for one year. Some good hardwoods are maple, beech, oak, ash, elm and birch. You can burn softwoods in your new SEDORE stove. However, softwood won't give the length of burn that hardwood will. Some softwoods are cedar, pine, spruce and poplar. You can expect 12-18 hours burning time on just one fill-up of wood, depending on its degree of dryness.

If you are able to store your wood indoors, you will get the absolute longest burn times. However, most of us cannot store our winter's supply of wood indoors. Try to have at least one day's supply of wood inside. The reason for this is that it takes heat energy to warm the wood to burning temperature - so you will lose some heat energy warming the wood. If the wood is already room temperature you will get more heat from your stove. You will get the most heat, and longest burns out of a complete load of seasoned hardwood. However, green and wet wood will still burn in the SEDORE stove as long as it is put on top of dry wood, as it will dry out before it reaches the bottom.

You will discover that you get more creosote when you use in green or wet wood. However, this is not a problem in the SEDORE because as long as you have placed good dry wood on the bottom of the fuel load, the rest of the load doesn't matter much because it will dry before it reaches the fire at the bottom. The creosote from the wet wood will stay in the front chamber, on the lid and upper walls, where no harm can be done - it will simply dry and fall in by itself. Caution: When loading fuel, don't put wet wood in at the bottom as the creosote can then go up the chimney.

Wood now can be cut up to 18 inches long for filling the stove horizontally. However, when a good bed of coals is established, you can put the wood in vertically. The box will hold logs vertically up to 26” long. It is helpful when burning very large chunks, to stand some smaller ones around it.

Corn

Corn starts best when thrown onto a bed of coals, so you can start the stove the same way you would start it with wood. After reaching the stack temperature, add cob corn instead of wood. Corn burns best when dried to 12%. You will get a higher heat from cob corn than wood. You can expect 10-12 hours on one fill-up of corn.

If you would like even a longer burn, you can increase the burn time a great deal if you pour kernel corn over a fill-up of cob corn. For example, it takes approximately two sacks of cob corn to fill the Model 3000 stove. On top of this you can add approximately five "milk jugs" of kernels. The SEDORE can take more than 24 hours to burn through a load like this.

Draft setting is much lower when burning corn than it is with wood because corn needs very little air once it gets going.

If you wish to burn straight kernels, you will need the hopper insert.

You can burn any of the small granular fuels, such as kernel corn, wood pellets, grains, sawdust, etc. mixed with larger fuels such as wood or corn cobs.

Recycled Fuels

There are many different types of recycled fuels available. Some of these fuels are recycled hardwood cubes, recycled cardboard cubes, Treesaver firewood, Treesaver logs and many other types. Here are a few main points of advice when burning these fuels:

- Recycled fuel nearly doubles in size when heated so never fill your stove more than 3/4 full.
- Recycled fuel burns hot—set the draft setting very low.
- Cubes tend to plug the inbound air - you will get better results if you stand wood in the front of the chamber to prevent this.

Wood Chips

As long as the chips are big enough to not smother the flames, they can be burned in the stove as is. If your wood chips are small, you can either can burn them with logs or use the hopper accessory.

Sunflower Heads

Sunflower heads burn the same as cob corn. No hopper is needed and a longer burn can be achieved when pouring straight seeds over sunflower heads - not too many, or you will smother the flame.

Other Biomass Fuels

The SEDORE wood stove will burn other biomass fuels including rice hulls, peanut shells, grass clippings, sawdust, leaves, cherry pits, etc. or any combination of these. Please proceed cautiously with these fuels as we do not have enough experience with any of these fuels to provide meaningful guidance.

Use of the Hopper Accessory

The hopper accessory is essentially a metal basket that stands in the front chamber. Any fuel that would smother the flame requires the use of the hopper, unless you mix the granular fuels with larger fuels to allow space for air flow. For example, kernel corn can be added to wood logs.

Here are some examples of fuels that require the hopper:

Hopper Required	Hopper Not Required
Sawdust	Hardwood Logs
Grains	Softwood Logs
Seeds	Scrap Wood
Wood Pellets	Corn Husks
Kernel Corn	Large Wood Chips
etc.	etc.

Operation

Before building a fire in your new SEDORE woodstove, please read the following section carefully and completely.

This stove is designed to burn the 15 natural products (identified on page 3) only. Wood that has been air-dried for a period of 6 to 14 months will provide the cleanest most efficient heat.

Do not burn:

* Coal
* Garbage
* Cardboard
* Solvents
* Treated or painted wood
* Chemical Chimney cleaners
* Colored paper
* Any synthetic fuel or logs

The burning of any of the above materials can result in the release of toxic fumes. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen-up" the fire. Always keep such liquids away from the heater at all times.

Controls

A single air control lever controls the burn time and heat output of the stove. This primary air control lever is located on the front of the stove directly above the front heat shield. The primary air lever controls the amount of air that enters the stove for combustion.

When first starting or reviving the fire: The primary control lever should be at the far right position, which allows the maximum amount of air into the stove.

The more air entering the stove, the hotter the fire, the shorter the burn time. Moving the lever to the left reduces the air-flow into the stove which prolongs the fire at a lower heat output.

Models with an ash pan will have a shaker grate control lever. This lever should be fully in (towards the stove) and the ash pan should be closed and secured in place during normal operation.

Breaking in Your New Stove

Your new Sedore woodstove is constructed of steel and stainless steel. We recommend that you complete the following steps for the proper break-in procedure:

To monitor the stove's temperature, Sedore recommends the use of a magnetic stove-top thermometer, placed directly on the stove's top plate. Do not allow the stove to exceed a 400F degree surface temperature during any "break-in fire" except the last "break-in fire" in step # 5.

1. Light a small fire (newspaper and kindling only). Allow the stove to reach a maximum surface temperature of 200° F. Burn for approximately1 hour.
2. Allow stove to cool to room temperature.
3. Light a second fire, allowing the stove to reach a maximum temperature of 300° F for 1 hour.
4. Cool the stove to room temperature.
5. Light a third fire and gradually allow the stove to reach a surface temperature of 400° F.
6. Cool stove to room temperature. This completes the "break-in" procedure.

Note: It is normal for a new painted stove to emit an odour and smoke during its first several fires. This is caused by the seasoning of the high temperature paint and will diminish with each

Starting and Maintaining a Fire

Burn only solid fuel directly on the bottom of the stove, do not elevate the fire in any way (ie. no grate is required).

STEP ONE: Mount the Thermometer
Place the magnetic thermometer, on the stovepipe 18-24 inches above the top of the stove. The reading on this thermometer will be referred to below as the external stack temperature or just the 'stack temperature'. Internal stack temperature should not be confused with external. Typically the internal stack temperature (ie. if you use a probe-style thermometer) will be double the measurement taken with an external (magnetic) thermometer.

STEP TWO: Prepare the front chamber
If you have an ash-pan, ensure that the ash shaker-grate is fully in (towards the stove) such that the openings to the ash pan at the bottom of the front chamber are blocked. Also, ensure that the ash-pan is fully in, sealed tightly to the gasket, and clipped in place. Open the stove lid and spread out approximately 2" of ash on the floor of the front chamber.

Open the adjustable draft bar until it is fully open. Place 2 or 3 pieces of small dry, split wood horizontally on top of the ash creating one loose row of wood across the bottom. Place plenty of dry kindling on top of the wood in a criss-cross pattern of layers about 8 inches deep (no higher than the nuts on the back baffle). Place some cardboard and about 4 pieces of crumpled newspaper on top of the kindling. Close the lid. The front chamber is now prepared.

STEP THREE: Prepare and light the back chamber
Open one of the side ash clean-out doors and place two or three pieces of crumpled newspaper into the rear chamber. Light the newspaper and close the ash door. (This step is very important, as it pre-heats the chimney and starts an upward draft). When the stack temperature reaches at least 100 F, you are ready to light the front chamber.

STEP FOUR: Light the front chamber
Have your hoe-poker easily at hand. Raise the stove lid. Light the newspaper you placed in the front chamber. Stand your poker on the floor in front of the stove and turn the handle inward towards the stove. Bring the lid down gently resting it on the poker. (The poker has been perfectly sized to keep the lid propped open to create an air gap during start-up.)

Always stay near your stove when you have your lid propped open. Now, watch the stack temperature rise. With proper draft (meaning your chimney height is correct, see section on chimneys) you will reach a stack temperature of 550F in about 5 minutes. If it takes longer to reach a stack temperature of 550F, either you put wet wood on the bottom under the kindling or your draft is insufficient.

STEP FIVE: Add fuel
When the stack temperature has reached 550F, and has started to fall, it is time to add more fuel. You can fill the front chamber right to the top as long as the lid will close completely. When reloading the stove while it is still hot and a bed of hot embers still exists, follow this reloading procedure:

- Always wear insulated fire-retardant gloves when tending to the stove.
- Push the air control lever to the full open position (far right).
- Wait a few seconds before opening the lid.
- Use a poker to distribute the hot embers equally around the firebox.
- Load the fuel, usually with smaller logs first.
- Wipe off the ledge to ensure any debris is cleared off to ensure a tight seal.
- Close the door. Be sure to latch the door tightly.
- Wait 5-10 minutes to ensure the new fuel has fully ignited before adjusting the air to the desired heat setting.

CAUTION: Leaving the Sedore stove lid &/or the ash-pan (on models with this feature) open can cause over-firing of the stove resulting in injury, damage to the stove, and voiding of the manufacturer's warranty.

STEP SIX: Optimize the Burn
The stack temperature will start dropping as soon as you close the lid. Allow it to drop at least 50 degrees on its own, then you can close down the draft bar.

Your stack temperature will continue to drop and after about 15 minutes it will settle down to the target of 150-200F. If after 15 minutes your stack temperature has not dropped below 200 F, you will know that you are giving too much air for the fuel you are burning, and you will need to close the draft bar a little. If your stack temperature settles down to below 150 F after the lid has been down for a length of time, you are giving too little air, and need to open your draft bar a little.

The following are approximate settings for the draft bar for different fuels:

1/2 Open	Hardwood
1/4 Open	Cob Corn, Sunflower Tops
1/8 Open	Wood Pellets, Treesaver Firewood, Recycled Hardwood Cubes

CONGRATULATIONS! You have just started your stove from a cold start all on your own. If you are burning wood you can expect your load to last from 10-14 hours. However, sometimes your first load may burn through a little quicker as a good bed of coals must be established to have the SEDORE operate to maximum efficiency.

Differences versus air-tight stoves

The SEDORE stove burns differently than any other stove. If you have been accustomed to a conventional air-tight stove, you are probably used to putting paper on the bottom of the stove, kindling on top of the paper, and wood on top of that, and then when you light it, whatever is in the stove is on fire. The result: high heat for a short period of time, then the heat dies down until you refuel again. And a lot of heat is lost up the chimney because the stovepipe stays hot all the time.

The SEDORE stove works on an entirely different principle. If you tried to start it, the way you would an air-tight, it just wouldn't go. Why? Because the front chamber has a down-draft! That's why you light it upside-down from a conventional woodstove. So even though you fill your stove right up to the top, the whole fuel pile is never on fire. All the burning is being done at the bottom of the fuel pile only. The result is a steady even heat that tends itself for anywhere between 10-14 hours on just one fill-up of wood. All the burning in your new SEDORE is being done at the bottom of the fuel load.

In other words, the whole fuel load is never on fire. The SEDORE stove burns only at the bottom of the fuel pile because that is the only place it is being supplied air. The only way a fire could possibly burn up in your SEDORE is by leaving the lid of the stove up for an unreasonably long time. If that ever happens, simply close the lid and the pile will go out except for at the bottom where it is supposed to be.

Because the fire is at the bottom of the fuel pile, a fairly constant heat is retained during the burning of the entire load of fuel. Even when there is only one piece of wood left in the stove, the room temperature will not drop, nor the stack temperature, as there is not much more than that burning even when you have a full load. Even when you just have a bed of coals left in your stove, there will still be a good heat coming from it, and this will not drop until you let this burn down unreasonably low.

Questions & Answers

How and when do I add more fuel?

This is a good question. As you probably know, the front chamber has the smoke and gases trapped and is continuously re-burning it. Your SEDORE stove needs very little attention. Most owners check their stove in the morning, after work, and before going to bed. It is up to you if you would like to "top-up" your stove whenever you are near it, or if you want to wait until you have burned your load of fuel. Just follow the reloading procedure for clearing the front chamber of gases and smoke, and go ahead and add fuel whenever you want.

If you have burned down to a bed of coals, pile these coals up under the baffle, with your hoe-poker, blocking the exit, and add the new fuel to the front of the coals. Go ahead and fill your stove up, open draft bar fully for awhile, and if it doesn't seem to catch well, you may have burned down a little too low. In this case, you will have to bring it up to stack temperature by standing the poker on the floor in front of the stove and propping the lid up with it, the same as in the starting instructions. When stack temperature has reached 550F, take poker out and let down. As in the starting instructions, don't close the draft bar down until the stack temperature has dropped 50 degrees.

How do I know if I'm giving the stove too much air?

When your stack temperature is 150-200°F, the temperature on the lower side of your stove will be running somewhere between 400-800°F, which is a good burning temperature.

If your stack temperature is above 200F, simply close the draft bar a little. If your stack temperature drops down to 100F or less, open your draft a little until you are running fairly steadily between 150-200F.

Remember, the only time, with the SEDORE stove that your stovepipes can get hot is if you are giving it too much air for the fuel you are burning, or when you raise the lid. Each time you raise the lid (ie. to refuel) your stack temperature will rise. This is normal and nothing to worry about. When you close the lid, this temperature will fall back down in a minute or so.

How do I prevent smoke from entering the room when I lift the lid?

Smoke will definitely come into the room if you just lift the lid up. What you must do is change the order of the draft in the front chamber. This is easy to do by following these three simple steps:

1. Open the draft bar completely.

2 Crack the lid about 1/2". Count to ten slowly (this allows the draft to suck the smoke out of the burning chamber and up the chimney).

3. Now, open the lid up the rest of the way very slowly, so you don't cause a suction that will pull the smoke back.

These three simple steps will allow you to clear the burning chamber of smoke and allow you to open the lid whenever you want.

What is the best way to re-fuel if the front chamber is partially full?

Adding fuel when the firebox is above half full, or more, is the most difficult time to add fuel without getting smoke escaping.

With the lid closed the stove is taking in air through the air intake only, which provides controlled air to the bottom of the firebox and thus contains the fire at the bottom and no higher than the air intake tubes. When the lid is opened, suddenly the fire gets unlimited air and everything in the firebox wants to burn.

Again it is best not to add fuel to the stove until it runs low of fuel, but if you must top it off, follow the above procedures, and add the fuel as quickly as possible. Smoke at the time of refueling, is not an issue because there will not be an excessive amount from a low fuel load.

How and when do I empty the ashes?

You will discover your new SEDORE stove produces much less ash than a standard air-tight stove. This is because the smoke and gases are trapped in the front chamber where they are burned, instead of just going up the chimney as in a standard air-tight. The ashes are very easy to clean out.

Because of the direction of the draft from the front to the back, ashes will be automatically swept into the back chamber. If you take a scoop or two out every day from the side ash removal doors, you will seldom have to follow the below procedures.

Remember, you want to always retain a bed of ashes 2-3 inches deep in the front chamber, at all times. In fact, you don't have to do anything about the ashes until they are interfering with the air intake holes.

For your protection always wear safety gloves when handling ashes.

A.) If you have a side clean-out model, follow these steps:

- Wait until your stove has burned down to a bed of coals.
- Bring coals to the front with your hoe-poker.
- Push extra ash through the back, under the baffle.
- Push coals back and block the passage under the baffle.
- Open the draft fully and add new fuel to the front and top of these coals.
- Scoop the ashes out of the side clean-out door and into a metal container.

B.) If you have an ash pan model, follow these steps:

- When ashes have built up to the air holes, you know you have to get rid of some.
- Simply push and pull the shaker-grate a few times and the ashes will fall through to the ash pan below.
- Never take the ash pan out until you are down to a bed of coals, and never with the lid up. (The ash pan can be extremely hot, so wear gloves).
- Dispose of ashes in a safe container until cool.
- Replace and lock the ash pan in place

Ashes should be placed in a metal container equipped with a tight sealing lid. The container should be placed on a non-combustible floor or on the ground, well 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.

Can I get creosote in my stovepipe and chimney with the SEDORE woodstove?

The answer to this question is yes. Although the SEDORE woodstove is designed to re-burn the smoke and gases, thus preventing creosote. There are certain conditions, which when not corrected will allow the smoke to go straight through unburned.

These are the three main reasons for creosote buildup in stovepipes or chimneys:

1) Chimney not high enough. Without enough height to your chimney the whole burning process will not work correctly.

2) Burning the SEDORE stove in an air-tight house without an outside air-feed (the air in the house will actually become a vacuum).

3) Burning wet or green wood on the bottom of fuel load. If you put wet or green wood half way up your fuel load, it doesn't do much harm, other than make more creosote go on the underside of the lid and sides of the burning chamber, however you must have dry wood in the bottom. When green wood is put in the bottom, creosote can then go in your pipes.

Remember, each time you raise the lid of your SEDORE woodstove, you clear the burn chamber of smoke, and it goes up the chimney. Wherever unburned smoke goes, so does the creosote. So some creosote buildup in the chimney is inevitable.

Most of the creosote from the smoke will remain in the front chamber where it simply dries and falls into the fire chamber where it will be burned.

After a few weeks of burning your new SEDORE woodstove, take your inside pipes down and check them until you are sure of the method of burning in your stove.

The general rule is the "junkier" the stuff is that you are burning, the more creosote you will get, but it will stay on the upper walls and the underside of the lid, where it will simply dry and fall off. In other words don't worry about creosote in the burning chamber, as no harm can be done.

There is one other reason for creosote in the chimney with this stove and that is having a chimney cap that has a band in it. If you have one of these, cut the band out and you should be fine.

Can I burn green wood?

Yes, green and wet wood will burn in the SEDORE stove as long as it is put on top of at least half a load of dry wood (or other dry fuel), as it will dry out before it reaches the bottom.

You will discover that you get more creosote when you use green or wet wood. However, this is not a problem in the SEDORE because as long as you have placed good dry fuel on the bottom of the fuel load, the rest of the load doesn't matter much because it will dry before it reaches the fire at the bottom. The creosote from the wet wood will stay in the front chamber, on the lid and upper walls, where no harm can be done - it will simply dry and fall in by itself. Caution: When loading fuel, don't put wet wood in at the bottom as the creosote can then go up the chimney.

Maintenance

Ash Removal

For your protection always wear safety gloves when handling ashes.

Ash removal will be required periodically depending on how frequently the stove is used. Conveniently, the Sedore woodstove is equipped with dual ash removal doors for easy ash removal while the stove continues burning without the need for opening the stoves lid.

The ash doors are located on the lower rear of the right and left side of the stove. To open the ash doors, move air intake bar fully open, then lift either ash door from its brackets. Only remove one ash door at a time to avoid total loss of draft. Remove ash door and place it close by. Slide a metal ash bucket under the lip and use the ash removal tool to pull the ashes from the stove. When finished removing the ash, replace the ash door into its bracket.

A.) If you have a side clean-out model, follow these steps:

- Wait until your stove has burned down to a bed of coals.
- Bring coals to the front with your hoe-poker.
- Push extra ash through the back, under the baffle.
- Push coals back and block the passage under the baffle.
- Open the draft fully and add new fuel to the front and top of these coals.
- Scoop the ashes out of the side clean-out door and into a metal container.

B.) If you have an ash pan model, follow these steps:

- When ashes have built up to the air holes, you know you have to get rid of some.
- Simply push and pull the shaker-grate a few times and the ashes will fall through to the ash pan below.
- Never take the ash pan out until you are down to a bed of coals, and never with the lid up. (The ash pan can be extremely hot, so wear gloves).
- Dispose of ashes in a safe container until cool.
- Replace and lock the ash pan in place

The ashes should be placed in a metal container equipped with a tight sealing lid. The container should be placed on a non-combustible floor or on the ground, well 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.

Caution: Only use a vacuum for this job if the vacuum is specifically designed for ashes.

Chimney System

The Sedore woodstove is designed to burn cleanly and efficiently when used according to the guidelines in this manual. In order to maintain proper performance, you should inspect the chimney and chimney connector at the beginning of each heating season and then, twice per month during the heating season. Clean the chimney whenever creosote and fly ash accumulation exceeds 1/4 inch in any part of the system.

Chimney brushes are available from your local hardware supply store. They can also refer you to a reputable, professional chimney sweep who will have all the equipment to ensure a complete and proper job. Failure to keep the chimney system free of creosote and build up could result in a serious chimney fire.

Creosote

When wood is burned slowly, it produces tar and other organic vapours which combine with expelled moisture to form creosote. These creosote vapours condense in the relatively cool chimney flue of a slow burning fire. The creosote that accumulates in the chimney flue is highly flammable and is the fuel of chimney fires.

To prevent a chimney fire, the creosote needs to be removed by brushing the chimney and flue connector. The frequency of creosote removal will depend on how you operate your stove. It is important to inspect the flue after every two weeks of use. An accumulation of 1/4” or more on the sides of the flue or connector is considered hazardous and should be removed.

Chimney Fires

In the event that creosote in your chimney or flue connector ignites, the resulting fire is often accompanied by a roaring noise and a crackling sound as flakes of burned creosote break loose. If you suspect you are having a chimney fire, immediately close the air control lever and make sure the stove lid is closed. This will starve the chimney fire of oxygen. Call the fire department and get everyone safely out of the house.

Trying to extinguish the fire in the stove will not help. In fact, it can make matters worse by introducing more oxygen through the lid, which then supports the fire in the chimney. When the roaring and crackling sounds have stopped, you should resist the temptation to open the lid and look at the fire. The fire may have suffocated, but could rekindle when you open the lid.

After a chimney fire, do not use your stove until the chimney and the flue connector have been cleaned and inspected to ensure that no damage has occurred.

Stove Maintenance

As with your car, regular maintenance will prolong the life of your stove. The following procedures do not take long and are generally inexpensive, but when performed consistently, will help ensure many years of reliable performance.

Gaskets

Gasket kits includes all the gasket material necessary to replace the gasket on the stoves lid or ash pan. To check the seal, close the lid on a dollar bill and slowly try to pull the dollar bill free. If it can be easily removed then the seal is too loose. Check several spots around the lid. If the lid gasket needs replacement, scrape out the old gasket and cement and clean the area with a wire brush. Apply a small bead of high temperature silicon cement and push in the new gasket. After closing the lid wipe clean any excessive cement that has come from beneath the gasket. Inspect the stove: Using a strong light inspect the stove inside and out for cracks or leaks.

Accessories

Only use accessories that are specifically designed for the Sedore woodstove. The following and more accessories can be viewed and ordered at www.transnorth.ca or by calling us at 519-751-2111.

Hopper

The hopper accessory is a metal basket that stands in the front chamber and contains granular fuels. Any fuel that "flows" in the burn chamber and would smother the flame requires the use of the hopper (unless you mix the granular fuels with larger fuels to allow space for air flow. For example, kernel corn can be added to wood logs).

Here are some examples of fuels that require the hopper:

Hopper Required	Hopper Not Required
Sawdust	Hardwood Logs
Grains	Softwood Logs
Seeds	Scrap Wood
Wood Pellets	Corn Husks
Kernel Corn	Large Wood Chips
etc.	etc.

Water Coil

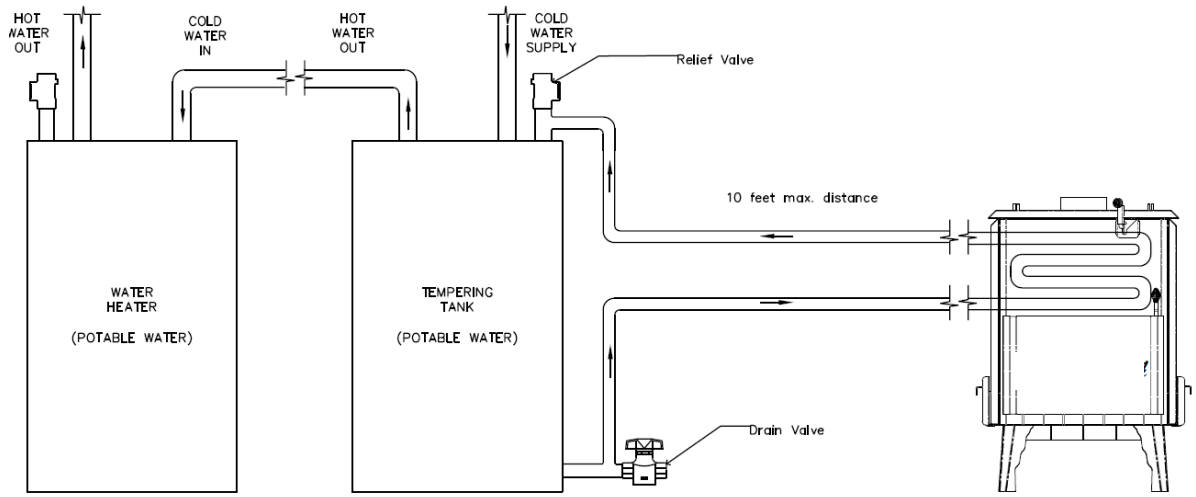
The water coil accessory allows you to heat water or glycol in the SEDORE woodstove and may be used for either domestic hot water or radiant heating systems. Thermal-siphoning is recommended. Installation by a qualified heating contractor is also recommended.

Thermo-siphon is a property of physics and refers to a method of passive heat exchange based on natural convection, which circulates a substance (liquid, or gas such as air) without the necessity of a mechanical pump. This circulation can either be open-loop, as when the substance in a holding tank is passed in one direction via a heated transfer tube mounted at the bottom of the tank to a distribution point - even one mounted above the originating tank - or it can be a vertical closed-loop circuit with return to the original container. Its purpose is to simplify the transfer of liquid or gas while avoiding the cost and complexity of a conventional pump.

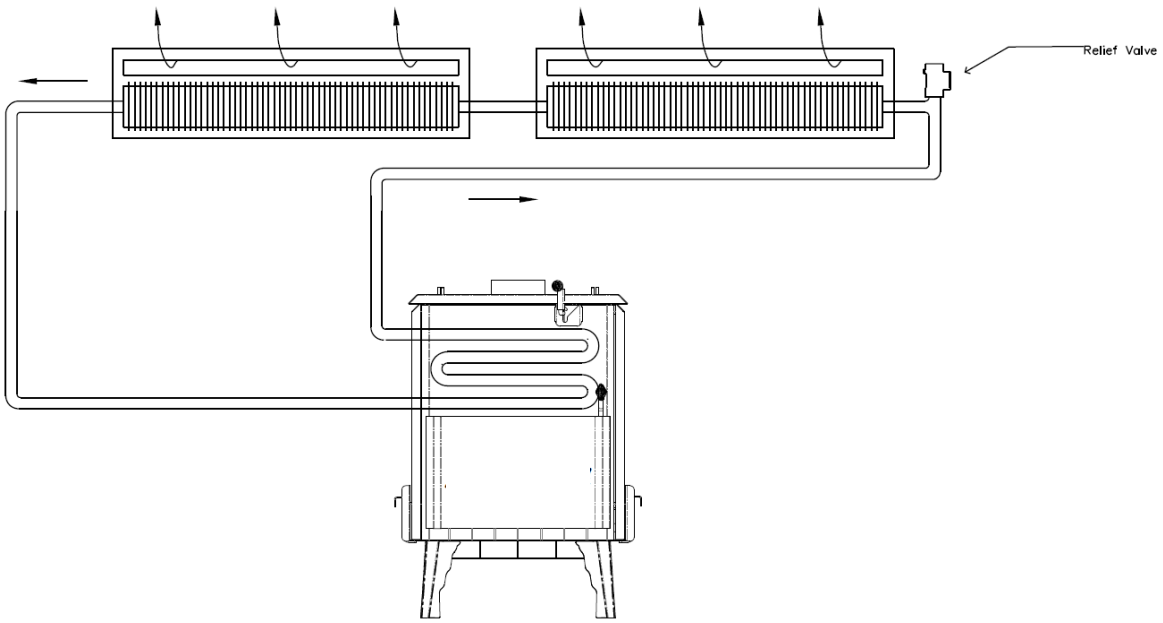
Convective movement of the liquid starts when liquid in the loop is heated, causing it to expand and become less dense, and thus more buoyant than the cooler water in the bottom of the loop. Convection moves the heated liquid upwards in the system as it is simultaneously replaced by cooler liquid returning by gravity. Ideally, the liquid flows easily because a good thermo-siphon should have very little hydraulic resistance.

The following diagrams represent thermo-siphon setups with the Sedore woodstove with the water coil accessory for domestic hot water and radiant heating.

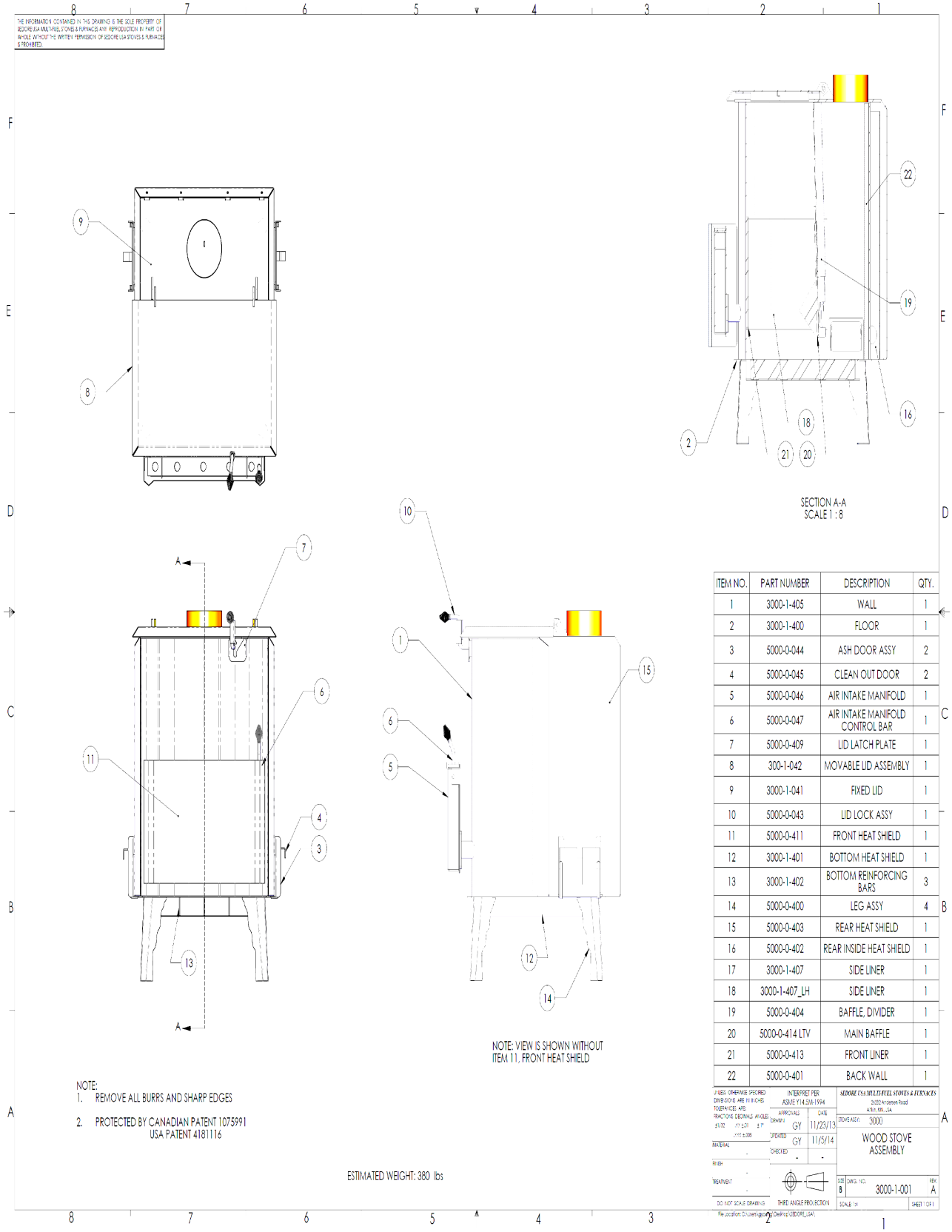
Domestic Hot Water Schematic



Radiant Heater Schematic



Parts Diagram



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	3000-1-405	WALL	1
2	3000-1-400	FLOOR	1
3	5000-0-044	ASH DOOR ASSY	2
4	5000-0-045	CLEAN OUT DOOR	2
5	5000-0-046	AIR INTAKE MANIFOLD	1
6	5000-0-047	AIR INTAKE MANIFOLD CONTROL BAR	1
7	5000-0-409	LID LATCH PLATE	1
8	300-1-042	MOVABLE LID ASSEMBLY	1
9	3000-1-041	FIXED LID	1
10	5000-0-043	LID LOCK ASSY	1
11	5000-0-411	FRONT HEAT SHIELD	1
12	3000-1-401	BOTTOM HEAT SHIELD	1
13	3000-1-402	BOTTOM REINFORCING BARS	3
14	5000-0-400	LEG ASSY	4
15	5000-0-403	REAR HEAT SHIELD	1
16	5000-0-402	REAR INSIDE HEAT SHIELD	1
17	3000-1-407	SIDE LINER	1
18	3000-1-407_LH	SIDE LINER	1
19	5000-0-404	BAFFLE, DIVIDER	1
20	5000-0-414 LTV	MAIN BAFFLE	1
21	5000-0-413	FRONT LINER	1
22	5000-0-401	BACK WALL	1

Limited Life-Time Warranty

This warranty policy applies to wood-burning products identified by SEDORE trade names, purchased in Canada as set forth below. This warranty is given by RDJ Bailey Metal Works Inc., Box 310, 75 South Service Rd, St. Marys, Ontario, Canada 519-349-2130 (“Manufacturer”).

A. LIMITED LIFETIME WARRANTY, parts only:
Manufacturer warrants, to the original retail purchaser, that those baffle and air manifold components of the SEDORE woodstove specified above will be free of defects in material and workmanship for the life of the product. This warranty is subject to the terms, exclusions and limitations set forth below.

B. LIMITED FIVE YEAR WARRANTY—Cast Iron and Steel Components:
Manufacturer warrants, to the original retail purchaser, that those components of the SEDORE woodstove specified above will be free of defects in material and workmanship for a period of five (5) years from the date of purchase. This warranty is subject to the terms, exclusions and limitations set forth below.

C. LIMITED TWO YEAR WARRANTY—Enamel Finish:
Manufacturer warrants, to the original retail purchaser, the enamel finish on cast iron components of the SEDORE woodstove specified above against peeling or fading for a period of two (2) years from the date of purchase. This warranty is subject to the terms, exclusions and limitations set forth below.

Manufacturer warrants, to the original retail purchaser, that those components of the SEDORE woodstove specified above will be free of defects in material and workmanship for a period of one (1) year from the date of purchase. This warranty is subject to the terms, exclusions, and limitations set forth below:

Manufacturer will repair or replace, at its option, any of the above components determined by Manufacturer to be covered by this warranty. You must, at your own expense, arrange to deliver or ship the component to Manufacturer and arrange for pickup or delivery of the component after repairs have been made. If, upon inspection, Manufacturer determines that the component is covered by this warranty, the repair or replacement will be made as set forth above. This warranty is not transferable and is extended only to, and is solely for the benefit of, the original retail purchaser. This warranty will be extended only upon presentation of valid proof of purchase to Manufacturer.

The warranty period for any replaced component will be the remaining unexpired portion of the warranty period for the original component.

Please retain your dated sales receipt in your records as proof of purchase.

EXCLUSIONS AND LIMITATIONS

NOTICE: This warranty is void if installation or service is performed by someone other than an authorized installer or service agency, or if installation is not in conformance with the installation and operating instructions contained in this owner's manual or local and/or national fire and building regulations. A listing of local authorized installers, service agencies and gas suppliers can be obtained from the National Fireplace Institute at http://www.nficertified.org/.

This warranty does not cover the following:
1. Repair or replacement of parts that are subject to normal wear and tear during the warranty period or to parts that may require replacement in connection with normal maintenance. These parts include paint, gaskets, burn plates, ceramic insulation blankets, skamol baffles and panels, firebricks, fire grates, or glass (Ceramic glass is warranted against thermal breakage only).
2. Damage due to incorrect installations not in conformance with the installation instructions contained in this owner's manual or local and/or national fire and building regulations.
3. Damage, including damage to enamel surfaces, caused by improper operation, over-firing, and/or misuse. Improper operation, such as burning the stove with the ash door open, can damage the stove. Over-firing occurs when any part of the stove glows red. Over-firing can also be identified by warped plates, rust-colored cast iron, paint pigment that has turned dusty white, or bubbling, cracking and discoloration of the enamel finish. Misuse includes, without limitation, use that is not in conformance with the operating instructions contained in this owner's manual.
4. Damage to enamel finish including chipping, mechanical or chemical abrasion, crazing, staining, or rust caused by high humidity or salt air environments.
5. Damage from or repair of rust. Use of a stove-top steamer can cause rust.
6. Damage due to service performed by an installer or service agency, unless otherwise agreed to in writing by Manufacturer.
7. Damage caused by unauthorized modification, use or repair.
8. Costs incurred by travel time and/or loss of service.
9. Labor or other costs associated with the repair of components beyond the warranty period.
10. Damage incurred while the Sedore product is in transit.

IN NO EVENT SHALL MANUFACTURER, ITS PARENT COMPANY, SHAREHOLDERS, AFFILIATES, OFFICERS, EMPLOYEES, AGENTS OR REPRESENTATIVES BE LIABLE OR RESPONSIBLE TO YOU FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, OR DAMAGES TO A STRUCTURE OR ITS CONTENTS, ARISING UNDER ANY THEORY OF LAW WHATSOEVER. ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WRITTEN WARRANTY. EXCEPT AS EXPRESSLY SET FORTH HEREIN, MANUFACTURER MAKES NO ORAL, WRITTEN OR OTHER WARRANTY WITH RESPECT TO SEDORE STOVES OR FIREPLACES.

Some jurisdictions may not allow the exclusion or limitation of incidental or consequential damages, or limitations on the length of implied warranties. Therefore, the above exclusions or limitations may not apply to you. This warranty gives you specific legal rights, and you may have other rights, which vary from jurisdiction to jurisdiction.

Manufacturer reserves the right to discontinue, modify or change the materials used to produce the Fireplace Insert. Manufacturer shall have the right to replace any defective component with substitute components determined by Manufacturer to be of substantially equal quality and price.

The dollar value of Manufacturer liability for breach of this warranty shall be limited exclusively to the cost of furnishing a replacement component. Manufacturer may at its discretion discharge all obligations by refunding the wholesale price of any defective part or appliance. Manufacturer shall in no event be liable for any special, indirect or consequential damage of any nature which is in excess of the original wholesale purchase price of the product. Manufacturer shall not in any event be liable for the cost of labor expended by others in connection with any defective component. Any costs or expenses beyond those expressly assumed by Manufacturer under the terms of this warranty shall be the sole responsibility of the owner(s) of the Stove or Fireplace.

No dealer, distributor, or other person is authorized to modify, augment, or extend this limited warranty on behalf of Manufacturer. NO MODIFICATION OR CHANGE TO THIS WARRANTY WILL BE EFFECTIVE UNLESS IT IS MADE IN A WRITTEN DOCUMENT MANUALLY SIGNED BY AN AUTHORIZED OFFICER OF MANUFACTURER.

An authorized installer may have been provided with certain information related particularly to the SEDORE stove; however, no authorized installer or other person who may service the appliance is an agent of Manufacturer. No inference should be made that Manufacturer has tested, certified, or otherwise pronounced any person as qualified to install or service the appliance. Manufacturer shall not be liable or otherwise responsible for any error or omission by a person installing or servicing a SEDORE Stove. If you believe your SEDORE stove is defective, you should contact the Manufacturer, who will process a warranty claim. IN ORDER TO QUALIFY FOR WARRANTY COVERAGE, MANUFACTURER MUST RECEIVE NOTICE OF A POSSIBLE DEFECT WITHIN SIXTY (60) DAYS OF THE DATE THE DEFECT IS FIRST DISCOVERED, OR REASONABLY COULD HAVE BEEN DISCOVERED.