

IMPORTANT:
THESE INSTRUCTIONS ARE TO REMAIN
WITH THE HOMEOWNER



SAFETY NOTICE

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

INSTALLATION AND OPERATING INSTRUCTIONS



**TESTED and LISTED to CAN/ULC S628
and UL 1482**
Meets the Environmental Protection
Agency's May 2015 Particulate
Emission Standards



**Model:
NEO 2.5 INSERT
Series: A**

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PLEASE SAVE THESE INSTRUCTIONS

NOTE: WE STRONGLY RECOMMEND THAT SMOKE DETECTORS BE INSTALLED.

If smoke detectors have been previously installed, you may notice that they are operating more frequently. This may be due to curing of stove paint or fumes caused by accidentally leaving the fire door open. Do not disconnect the detectors. If necessary, relocate them to reduce their sensitivity.

SAFETY NOTICE: If this stove is not properly installed, a house fire may result. For your safety, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in you area.

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.

WARNING

Surfaces of this fireplace insert can be extremely hot when in operation and will cause severe burns when touched. Do not touch any part of the unit except the door handle and the primary air control located underneath the ashlip. Keep children away. Never allow children to touch the unit. Unit may still be hot even without visible flame or embers.

! WARNING



HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.

Safety

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, OR EVEN DEATH.

We strongly recommend that smoke detectors be installed. If smoke detectors have been previously installed, you may notice that they are operating more frequently. This may be due to curing of stove paint or fumes caused by accidentally leaving the fire door open. Do not disconnect the detectors. If necessary, relocate them to reduce their sensitivity.

SAFETY NOTICE: If this stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Consult local building or fire officials about restrictions and installation inspection requirements in your area. The services of competent installer, certified by the Wood Energy Technical program (WETT) - in Canada, Hearth Education Foundation (HEARTH) - in U.S.A. (or equivalent) are strongly recommended.

Dimensions

Clearances

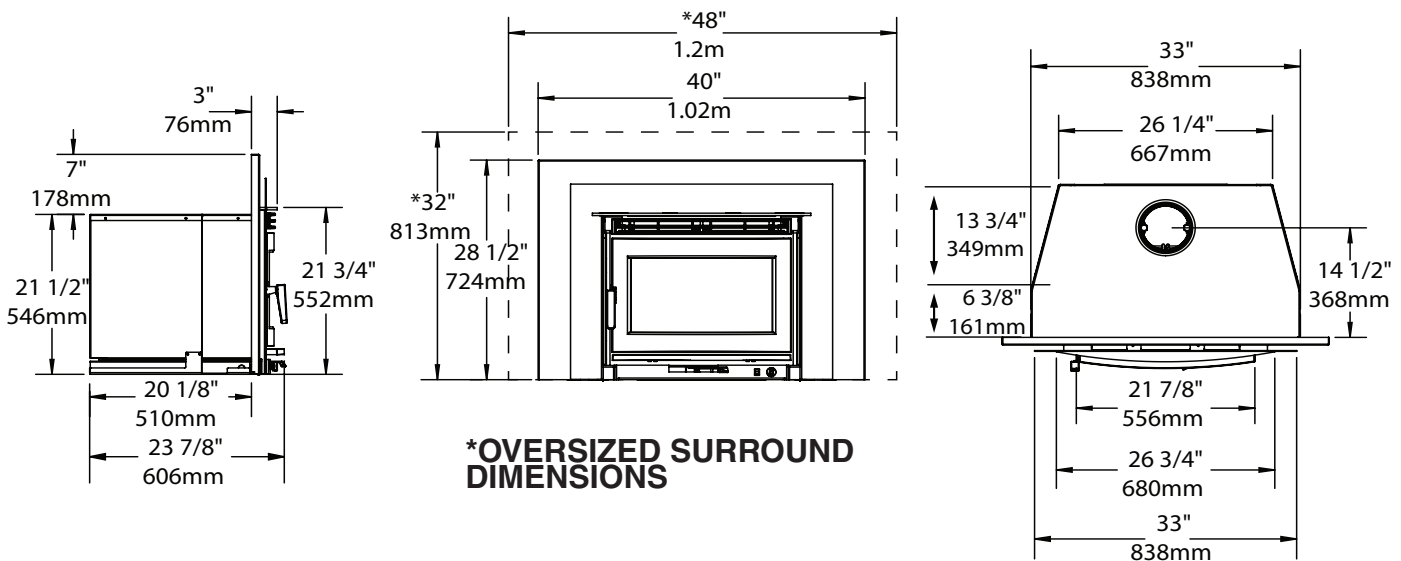
Masonry or Factory Built Fireplace

The minimum required clearances to surrounding combustible materials when installed into a masonry or factory built fireplace are listed below and in Fig. #1.

Minimum Clearances to Combustibles

| | |
|--|----------------------|
| Adjacent Sidewall..... | **16 1/2 in.(419 mm) |
| | *15 in.(381 mm) |
| Mantel(measured from surround brow)..... | 16 in.(406 mm) |
| Top Facing..... | 16 in.(406 mm) |
| Side Facing..... | **13 in.(330 mm) |
| | *11 1/2 in.(292 mm) |
| Ceiling..... | 68 in.(1.7m) |

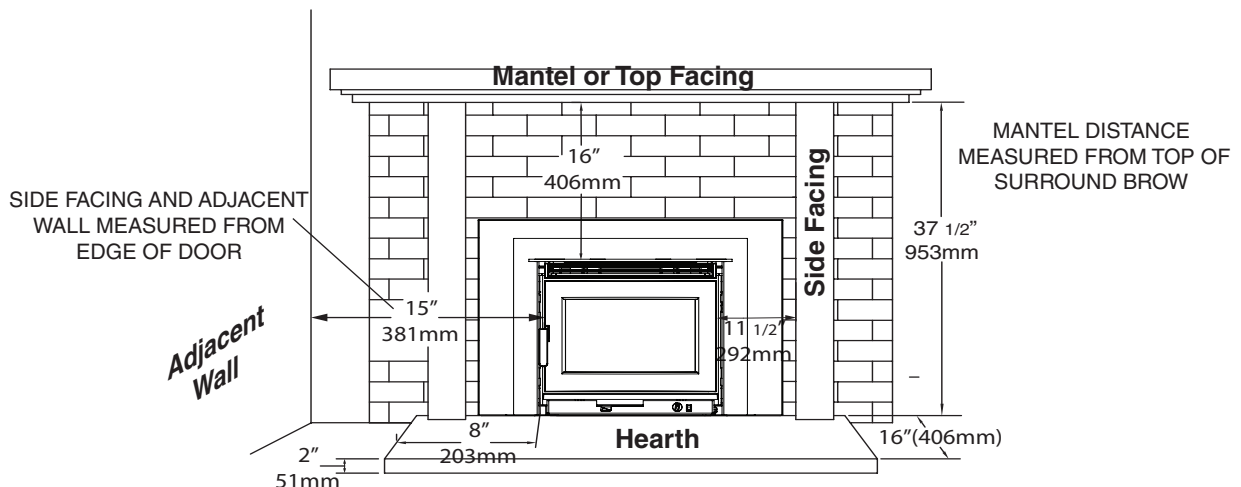
**Measured from door opening.
* Measured from edge of door.



***OVERSIZED SURROUND DIMENSIONS**

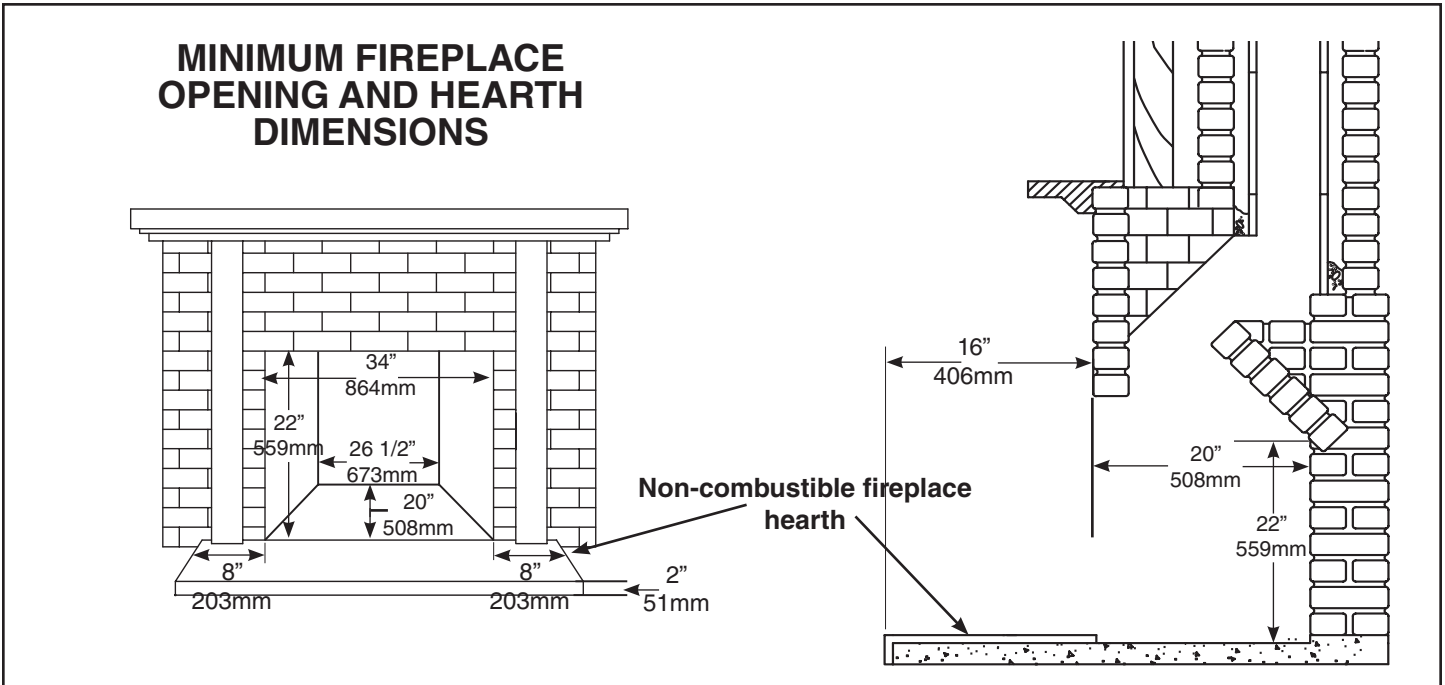
Fig. # 1

MINIMUM 68" FROM BASE OF UNIT TO CEILING



★ Fireplace hearth requirements: (Measured without the insert)

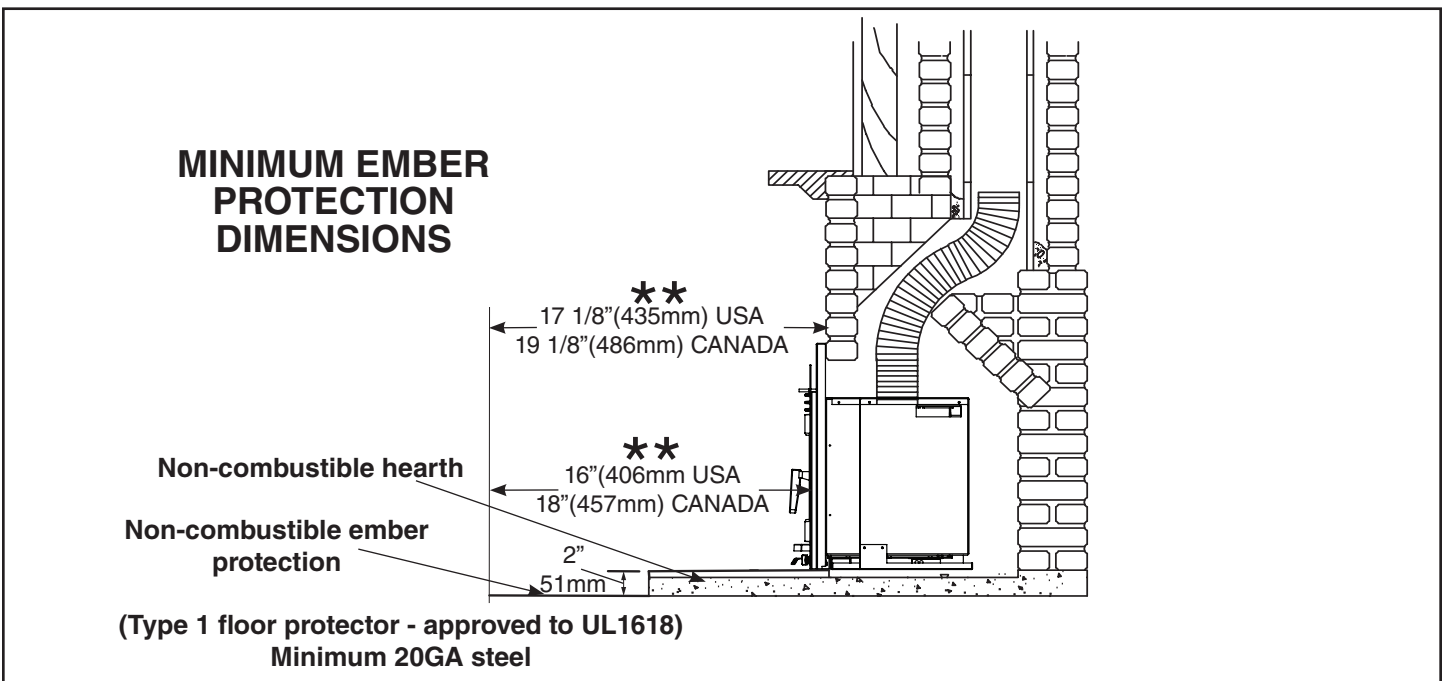
The hearth must be raised 2”(51mm) above an adjacent combustible floor and must extend 16”(406mm) in front and 8”(203mm) beyond each side of the fireplace opening.



★★ Ember protection:

Combustible floor in front of the fireplace insert must be protected from hot embers by non-combustible material extending 16”(406mm) (USA) and 18”(457mm) (CANADA) to the firing side and 8”(203mm) to other sides of the unit.

Consult CAN/CSA-B365 Installation Code for Solid-Fuel-Burning appliances and equipment in Canada, and N.F.P.A. 211 Standard for chimneys, fireplaces, vents and Solid-Fuel-Burning appliances in USA.



Creosote Formation and Need for Removal

When wood is burned slowly, it produces tar and other organic vapours, which combine with expelled moisture to form creosote. The creosote vapours condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

1. Highest smoke densities occur when a large amount of wood is added to a bed of hot coals and the air inlet is closed. The heated wood generates smoke, but without ample air, the smoke cannot burn. Smoke-free, clean burning requires small fuel loads, two or three logs at a time or 1/4 to 1/2 of a fuel load and leaving the air inlet relatively wide open, especially during the first 10 to 30 minutes after each loading, when most of the smoke generating reactions are occurring. After 30 minutes or so, the air inlet can be turned down substantially without excessive smoke generation. Wood coals create very little creosote-producing smoke.
2. The cooler the surface over which wood smoke is passing, the more creosote will be condensed. Wet or green wood contributes significantly to creosote formation as the excess moisture that is boiled off cools the fire, making it difficult for the tars and gasses to ignite, thus creating dense smoke and poor combustion. This moisture-laden smoke cools the chimney, compounding the problem by offering the smoke the ideal place to condense.

In summary, a certain amount of creosote is inevitable and must be lived with. Regular inspection and cleaning is the solution. The use of dry, seasoned wood and ample combustion air will help to minimize the buildup.

Chimney Fires

The result of excessive creosote buildup is a chimney fire. Chimney fires are dangerous. Chimney inside temperatures can exceed 2000°F (1093°C). This causes much higher than normal temperatures in the chimney and on its exterior surfaces thus ignition of nearby or touching combustible material is more likely during a chimney fire. Proper clearances are critical during such a fire.

Chimney fires are easy to detect; they usually involve one or more of the following:

- Flames and sparks shooting out of the top of the chimney
- A roaring sound
- Vibration of the chimney

In Case of a Chimney Fire

1. Prepare to evacuate to ensure everyone's safety. Have a well understood plan of action for evacuation. Have a place outside where everyone is to meet.
2. Close air inlets on stove.
3. Call local fire department. Have a fire extinguisher handy. Contact your local fire authority for further information on how to handle a chimney fire. It is most important that you have a clearly understood plan on how to handle a chimney fire.
4. After the chimney fire is out, the chimney must be cleaned and checked for stress and cracking before starting another fire. Also check combustibles around chimney and the roof.
 - The services of a competent or certified installer, (certified by the Wood Energy Technical Training program (WETT) - in Canada, Hearth Education Foundation (HEARTH) - in U.S.A.,) are strongly recommended.

Avoiding a Chimney Fire

There are two ways to avoid chimney fires:

1. Do not let creosote build up to a point where a big chimney fire is possible.
2. Have your chimney swept annually or when buildup occurs, whichever happens first.
2. If the chimney liner has build up, do not have fires in the heater that may ignite the creosote and create a chimney fire. These are hot fires, such as when burning household trash, cardboard, Christmas tree limbs, or even ordinary fuel wood; (eg. with a full load on a hot bed of coals and with the air inlet wide open).

Operation

CAUTION: 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.

CAUTION: Hot while in operation. Keep children, clothing and furniture away. Contact may cause skin burns.

Your PACIFIC ENERGY heater is designed for many years of trouble free operation. Over firing the appliance will shorten the life of the product. Failure to rectify an over firing condition can be hazardous and may void the manufacturer’s warranty.

NOTE: Left and Right as referred to in this manual are considered your left and right when facing the front of the woodstove.

Wood Selection

This heater is designed to burn natural wood only. Higher efficiency and lower emissions generally result when burning air-dried seasoned hardwoods, as compared to softwoods or too green or freshly cut hardwoods.

Wood should be properly air dried (seasoned) for six months or more. Wet or undried wood will cause the fire to smoulder and produce large amounts of creosote. Wet wood also produces very little heat and tends to go out often.

DO NOT BURN :

- | | |
|--------------------|----------------|
| -Salt water wood * | -Treated wood |
| -Wet or green wood | -Coal/charcoal |
| -Garbage/Plastic * | -Solvents |

* **These materials contain chlorides which will rapidly destroy metal surfaces and void warranty.**

Do not burn anything but wood. Other fuel, e.g. charcoal, can produce large amounts of carbon monoxide, a tasteless, odourless gas that can kill. Under no circumstances should you attempt to barbecue in this heater.

How to Test Your Wood

Add a large piece of wood to the stove when it has a good large bed of coals. It is dry if it is burning on more than one side within one minute. It is damp if it turns black and lights within three minutes. If it sizzles, hisses and blackens without igniting in five minutes it is soaked and should not be burnt.

WARNING: Do not use grates or andirons to elevate the fuel. Burn directly on the firebricks. Replace broken or missing bricks. Failure to do so may create a hazardous condition.

Your PACIFIC ENERGY heater is designed for many years of trouble free operation. Over firing the appliance will shorten the life of the product. Failure to rectify an over firing condition can be hazardous and may void the manufacturer’s warranty.

Lighting the Fire

WARNING: Never use chemicals or any other volatile liquid to start a fire.

- 1) Adjust air control to “High” position(all the way to the left) and open door.
- 2) Place crumpled newspaper in the centre of the heater and criss-cross with several pieces of dry kindling. Add a few small pieces of dry wood on top.
- 3) Ignite the paper and close the door.
- 4) After the fire has established itself, open the door and add a few small logs. Close door.
- 5) Begin normal operation after a good coal base exists and wood has charred.

Normal Operation

- 1) Set air control to desired setting. If smoke pours down across the glass (waterfall effect), this indicates you have shut the control down too soon or you are using too low a setting. As every home’s heating needs vary (i.e. insulation, windows, climate, etc.), the proper setting can only be found by trial and error and should be noted for future burns.
- 2) To refuel, adjust air control to “High” position(all the way to the left), and give the fire time to brighten. Open door slowly, this will prevent backpuffing.
- 3) Use wood of different shape, diameter and length (recommended 18”(457mm)). Load your wood and try to place the logs so that air can flow between them. Always use dry wood.
- 4) Do not load fuel to a height or in such a manner that would be hazardous when opening the door.
- 5) For extended or overnight burns, unsplit logs are preferred. Remember to char the wood completely on “High” setting before adjusting air control for overnight burn.

WARNING: Always keep loading door closed when burning. This heater is not designed for open door burning.

Restarting After Extended or Overnight Burns

- 1) Open door and rake hot embers towards the front of the heater. Add a couple of dry, split logs on top of embers, close door.
- 2) Adjust air control to "High" position(all the way to the left) and in just a few minutes, logs should begin burning.
- 3) After wood has charred, reset air control to desired setting.
- 4) When burning at a slow rate for extended periods, occasionally maintain a strong fire under supervision for a couple of hours to remove firebox and chimney of deposits as well as any of the deposits on the glass.

WARNING: This method is not a substitute for regular chimney inspections and cleaning.

- 5) To achieve maximum firing rate, set control to "High" position(all the way to the left). Do not use this setting other than for starting or preheating fresh fuel loads.

DO NOT OVERFIRE THIS HEATER: Attempts to achieve heat output rates that exceed heater design specifications can result in permanent damage to the heater and chimney.

WARNING: No alteration or modification of the combustion air control assembly is permitted. Any tampering will void warranty and could be very hazardous.

Over Firing

Over firing can be caused by operating the unit with the door open, damage to door gaskets allowing excess air to enter the firebox, the use of kiln dried lumber, mill ends or paper waste and prolonged or continual use on a high burn setting.

Average Heat Output Calculation

Seasoned wood has approximately 7500 BTU's per pound.

The calculation is as follows:

$$\frac{\text{Amount of wood in lbs. X 7500BTU's}}{\text{Burn rate in Hrs.}} \times .8(80\% \text{ Avg. Efficiency})$$

Experience will give you the right settings for proper combustion and efficient burning. Remember the correct air inlet setting is affected by variables such as type of wood, outside temperature, chimney size and weather conditions. With practice, you will become proficient in operating your heater and will obtain the performance for which it was designed.

Proper Draft

- 1) 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.
- 2) Too much draft may cause excessive temperatures in the appliance. An uncontrollable burn or a glowing red stove part or chimney indicates excessive draft.
- 3) Inadequate draft may cause backpuffing into the room and plugging of the chimney. Smoke leaking into the room through appliance and chimney connector joints indicates inadequate draft.

Ash Removal

Whenever ashes get 3 to 4 inches deep in your firebox, and when fire has burned down and cooled, remove excess ashes. Leave an ash bed approximately 1 inch deep on the firebox bottom to help maintain a hot charcoal bed.

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 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. Other waste should not be placed in this container!

Maintenance

1. Burn wood only, dry and well seasoned. The denser or heavier the wood when dry, the greater its heat value. This is why hardwoods are generally preferred. Green or wet wood will cause a rapid buildup of creosote. If you feel it is necessary to burn wet or unseasoned wood, do so only with the air inlet set open enough to maintain a good strong fire and fairly high chimney temperatures. Do not attempt to burn overnight using green or wet wood. Wet wood can cause up to 25% drop in heater output, as well as contributing significantly to creosote buildup.

WARNING: Never use chemicals or any other volatile liquid to start a fire. Do not burn garbage, or flammable fluids such as gasoline, naphtha, or engine oil. We strongly recommend that smoke detectors be installed.

2. Remove ashes frequently. Embers can roll out the door and create a fire hazard. Maintain a 1”(25mm) minimum ash base.
3. If glass becomes darkened through slow burning or poor wood, it can readily be cleaned with any fireplace glass cleaner when stove is cold. Never scrape with an object that might scratch the glass. The type and amount of deposit on the glass is a good indication of flue pipe and chimney buildup. A light brown dusty deposit that is easily wiped off usually indicates good combustion and dry, well-seasoned wood and therefore relatively clean pipes and chimney. On the other hand, a black, greasy deposit that is difficult to remove is a result of wet and green wood and too slow a burning rate. This heavy deposit is building up at least as quickly in the chimney.

WARNING: Only use materials supplied by the manufacturer when doing maintenance or replacements.

4. DOOR GASKET - The gasket used by Pacific Energy (7/8” medium density fiberglass rope) requires only light pressure to seal. This will prolong seal life. It is important that the door seal be maintained in good condition. Periodically inspect seals and replace if necessary. Follow instructions included in the WODC.WDGKIT obtainable from your nearest Pacific Energy Dealer.
5. DOOR GLASS - Do not slam loading door or otherwise impact glass. When closing door, make sure that no logs protrude to impact the glass. If the glass gets cracked or broken, it must be replaced before using the stove. Replacement glass can be obtained from your Dealer. The size required is 18”(457mm) x 10-1/4”(260mm) x 5 mm. Only ceramic glass may be used. **Do not substitute with any other type.**

To remove broken glass, remove the door gasket and then undo the eight screws securing the gasket guides and glass retainers. Remove all particles of glass. Be careful as they are very sharp. Install new glass complete with gasket. Replace glass retainers and gasket guides then install new door gasket as per instructions provided with the door gasket kit.

WARNING: Do not overtighten, tighten screws very carefully.

- Do not clean glass when hot
 - Do not use abrasive cleaners on glass
6. Do not store wood within heater installation clearances, or within the space required for fuel loading and ash removal. Keep the area around the heater clean and free of all loose combustibles, furniture, newspapers, etc.
 7. Establish a routine for the fuel, wood burning and firing technique. Check daily for creosote buildup until experience shows how often you need to be cleaning to be safe.
 8. Be aware that the hotter the fire, the less creosote is deposited. Weekly cleaning may be necessary in mild weather, even though monthly cleaning is usually enough in the coldest months when burning rates are higher.
 9. Instruct all members of your family on the safe operation of the heater. Ensure they have enough knowledge of the entire system if they are expected to operate it. Stress the section on chimney fires and the importance of following the steps outlined in “In Case of Chimney Fire”.

Blower Maintenance

The blower requires occasional cleaning to prevent buildup of dust and hair. More frequent cleaning may be required if conditions are dusty or pets are present. This service is best performed by a qualified service technician.

Baffle Removal

The baffle may be removed from the firebox to clean and inspect the chimney liner.

DO NOT OPERATE WITH BAFFLE OR INSULATION REMOVED.

Removal

Remove retaining pin at the back top of the firebox, just under the baffle. Lift baffle up and pull forward to disconnect from the supply tube. Tilt baffle sideways to drop down and remove from firebox. Re-install baffle assembly by reversing order.

NOTE: IN THE EVENT OF DAMAGE OR FAILURE OF ANY COMPONENT OF THIS UNIT, CONTACT YOUR NEAREST PACIFIC ENERGY DEALER. ONLY USE ORIGINAL PACIFIC-ENERGY PARTS AND COMPONENTS WHEN REPLACING.

WARNING: Sweep/Clean chimney with baffle installed or be sure to plug the top of the baffle tube in the back of the firebox before sweeping or cleaning. Failure to prevent ash or soot from falling into the baffle tube will cause incorrect operation and will lead to premature burn out of the tube or baffle.

Blower Replacement

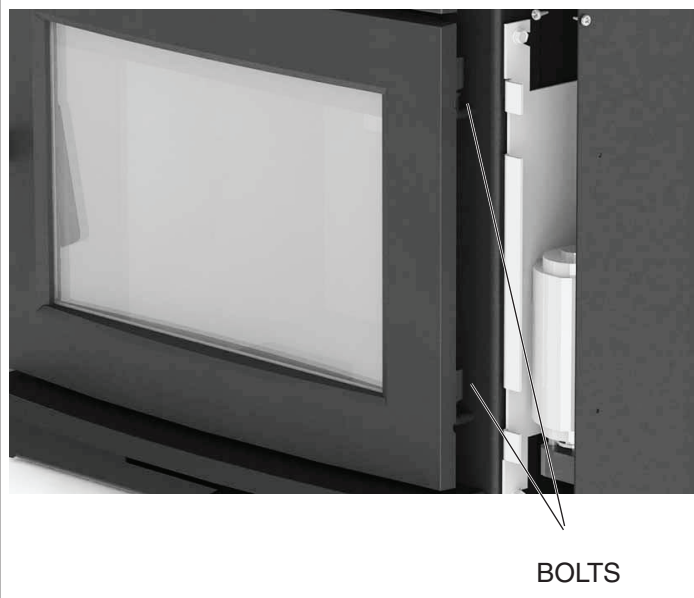
1. Remove the surround front and back. Set them aside carefully to avoid damage.
2. Remove the surround mounting bracket by removing the two screws securing the bracket to the side casing of the unit. Fig. #2

Fig. # 2



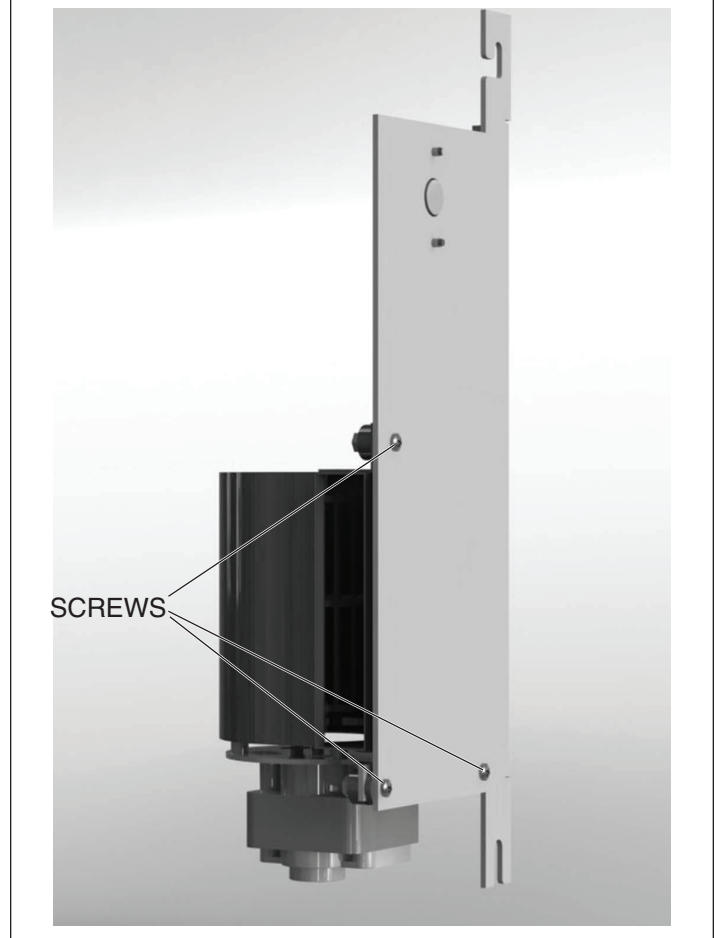
3. With a 3/8" (10mm) wrench, loosen the two bolts securing the blower mounting bracket to the unit. Fig. #3

Fig. # 3



4. Disconnect the two wires leading to the blower motor.
5. Pull the blower mounting bracket bottom out first and then lift the blower up and back to remove from the bolts. If replacing the right side blower, then disconnect the two wires leading to the thermo-switch at this time as well..
6. Remove the three screws securing the blower to the mounting bracket and replace the blower. Fig. #4

Fig. # 4



7. Reverse all previous steps to reinstall the new blower.

Power Cord Position

The power cord for the NEO 2.5 Insert comes factory set to exit the right side of the unit. If you desire, the cord can be switched to exit to the left of the unit. The cord will lose approximately 12"(305mm) of length when exiting the left side of the unit.

Follow these instructions to switch the cord direction.

1. Remove the two screws securing the control assembly to the unit and then disconnect the wires leading to the right side blower. Fig. #5
2. Remove the power cord from the slot in the right side end of the control assembly. Fig. #6
3. Remove the two screws securing the backing plate with the strain relief in it and rotate 180 degrees. You will lose approximately 12"(305mm) of cord length when switching to the left hand side.
4. Engage the power cord in the slot on the left side end of the control assembly.
5. Reconnect the wires to the right side blower and reinstall the control assembly on the unit.

Fig. # 5

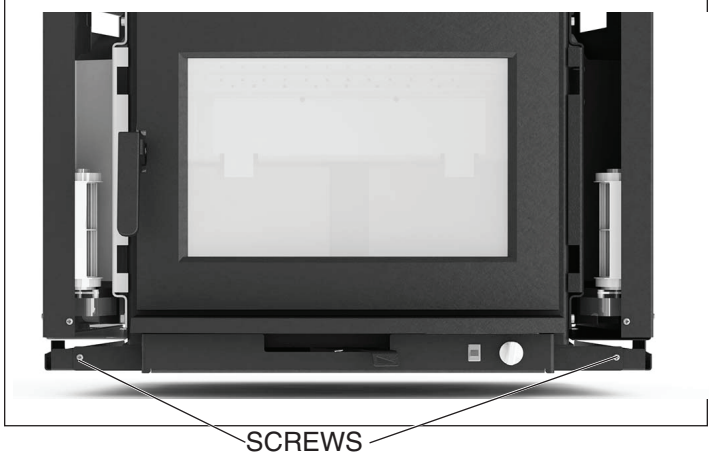


Fig. # 6

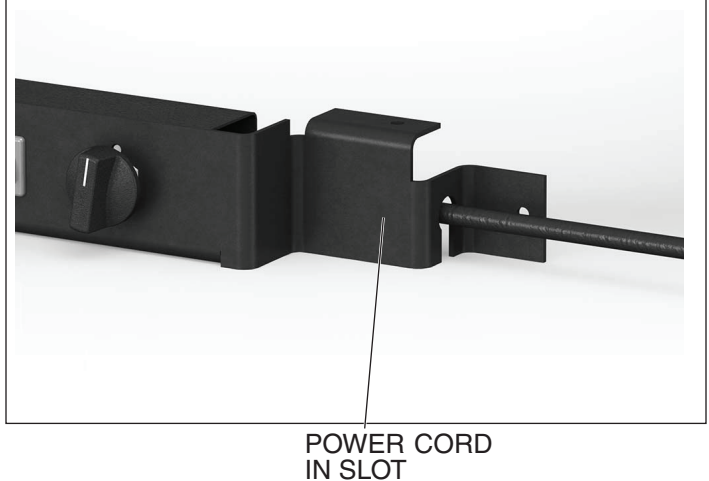
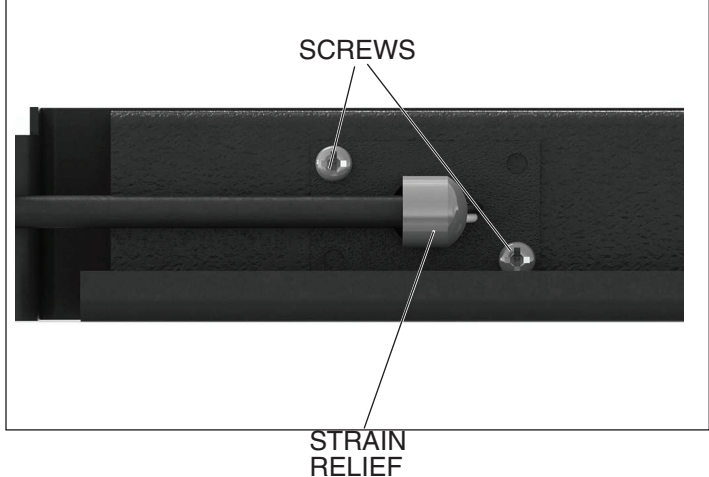


Fig. # 7



Maintenance Checks

Check the following parts for damage such as cracks, excessive corrosion, burned out sections and excessive warping: (See website for descriptions and more detail)

Weekly:

- Firebrick - Visual, for cracking.
- Door Gasket - sagging, placement, damage.
- Top heat shield and mounting bolt. (visible above front edge of baffle.)

Monthly

- Brick rail tabs and brick rails.
- Air riser tube in the back of the firebox.
- Back side of airwash chamber.
- Baffle locking pin.
- Boost tube cover.

When Cleaning the Chimney System:

- Top baffle board/blanket.
- Top heat shield and mounting bolt.(visible above front edge of baffle.)
- Baffle.
- Brick Rails.
- Manifold.

Blower:

- The blowers should be cleaned out a minimum of every six months by using a vacuum on the blower wheel intake openings to remove any dust and debris. See “Blower Replacement” section on page 13 for instructions on how to access the blowers.

Baffle:

- Some warping of the baffle is normal(up to 1/4” or .65cm).
- Replace if the baffle has permanent warping greater than this or has cracking or breakage.
- Please contact your Dealer if you experience any of the damage listed above. Continuing to operate your stove with broken parts may accelerate damage to other parts and may void your warranty

Installation

Your Insert is designed to be installed into a masonry or factory built zero-clearance fireplace. The masonry fireplace must be built according to the requirements of the **Standard of Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances, N.F.P.A. 211** (Latest Edition) or applicable National, Provincial, State or local codes. The installation shall conform to **CAN/CSA-B365, Installation Code for Solid-Fuel-Burning Appliances and Equipment**. The factory built zero-clearance fireplace and its chimney must be listed per UL 127 or ULC S610 standards.

In Canada: This fireplace insert must be installed with a continuous chimney liner of 5 1/2" (140mm) to 6" (150mm) diameter extending from the fireplace insert to the top of the chimney. The chimney liner must conform to the Class 3 requirements of CAN/ULC-S635, Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents, or, CAN/ULC-S640, Standard for Lining Systems for New Masonry Chimneys.

Use a minimum .016" thick or 27GA Stainless steel liner.

Warning: Under no circumstances is this heater to be installed in a makeshift or "temporary" manner.

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

Fireplace Specifications

Your fireplace is required to have the following minimum sizes:

| | |
|--------|--------------|
| WIDTH | 34" (864 mm) |
| HEIGHT | 21" (534 mm) |
| DEPTH | 20" (508 mm) |

Chimney height 15'(4.5m) (minimum).

A metal tag is provided and is to be fastened to the back wall of the fireplace, if the fireplace has been modified to accommodate the insert.

Into a Masonry Fireplace

Inspect your fireplace for cracks, loose mortar or other physical defects. If repairs are required, they should be completed before installing your insert.

The fireplace chimney must be suitable for wood burning use. Check for creosote build up or other obstructions, especially if it has not been in use for some time.

The existing fireplace damper is to be locked open or removed completely.

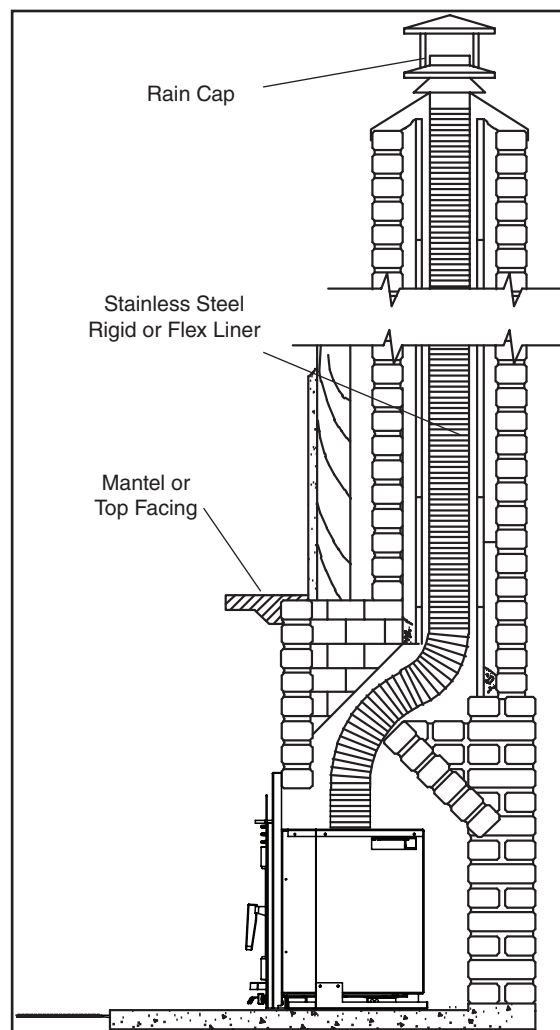
NOTE: This unit is designed to be installed on a flush hearth. If you hearth material is raised above the surface of the fireplace, you will need to provide spacers under the front edge of the unit to keep it flush with your hearth material. This will ensure the weight of the unit does not rest on the control assembly beneath the ashlip.

WARNING: Do not remove bricks or mortar from your existing fireplace.

Exception: Masonry or steel, including the damper plate, may be removed from the smoke shelf and adjacent damper frame if necessary to accommodate a chimney liner, provided that their removal will not weaken the structure of the fireplace and

Fig. #8

Full Flue Liner



chimney, and will not reduce protection for combustible materials to less than that required by the National Building Code. The Insert must be installed in accordance with local and or national building codes. The two methods of flue connection that are acceptable in most areas are:

Full Flue Liner: where a listed stainless steel rigid or flexible liner extends from the Insert flue collar to the top of the chimney.

Direct Flue Connection: where a listed stainless steel rigid or flexible liner extends from the Insert flue collar to the first chimney flue liner tile.

Note: A clean-out door may be required under local codes, when a direct flue connection is used. Consult local codes.

Pacific Energy highly recommends the use of a full liner as the safest installation and providing optimum performance. When connected to a full liner, the Insert is able to draft correctly and will prevent problems such as difficult start-ups and smoking out the door.

Full Flue Liner -(Required in Canada)

- 1) Measure the chimney height from the top of the existing flue to the floor of the hearth. This will allow extra length of liner for flashing and rain cap.
- 2) Feed the stainless steel liner from top of the chimney, through the damper area and into the fireplace cavity.

- 3) Attach a stove connector to the bottom of the liner. Attach the NEO Insert removable flue collar to the chimney connector using 3 stainless steel screws.
- 4) Push the Insert into position inside the fireplace and attach the flue collar to the opening in the top of the insert firebox with. Use the rear adjusting legs to level the Insert.

Note: It is necessary to get access to the connector and removable flue collar through the flue outlet of the Insert, the baffle should be removed (see Baffle Removal section page 8).

- 5) Measure, trim and shape a top flashing to fit the existing chimney flue. Plan for a 1" (25mm) to 1-1/2" (38mm) overlap on each side. Place flashing over top of the liner and seat firmly against the tile.
- 6) Screw flashing collar to liner. Caulk gap around flashing with RTV silicone.
- 7) Attach a rain cap to the end of the liner. A storm collar may be used if desired.

Consult your local Dealer about relining your fireplace chimney.

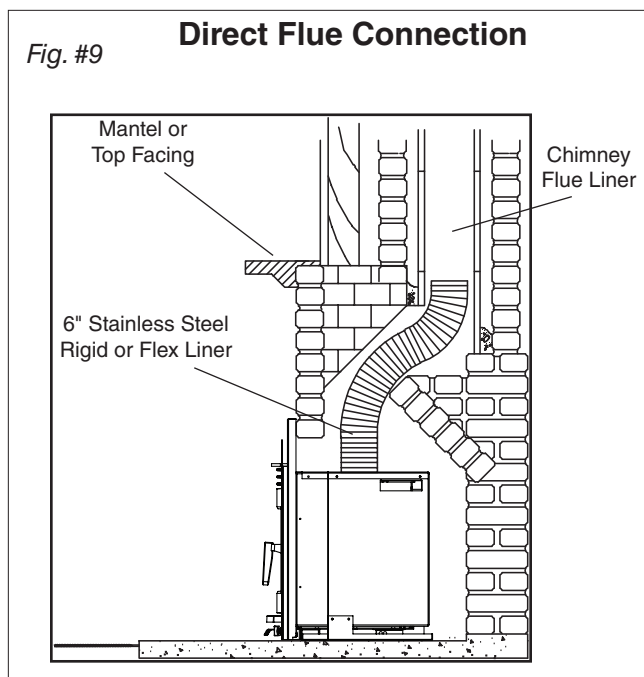
Direct Flue Connection - (USA only)

- 1) Measure from the first chimney flue liner to the top of the Insert. Allow extra length of liner to insert into flue tile.
- 2) Feed the stainless steel liner through the damper area and into the first chimney flue tile. Seal around pipe.

Note: A clean-out door may be required under local codes, when a direct flue connection is used. Consult local codes.

- 3) Push the Insert into position inside the fireplace and attach the NEO Insert removable flue collar to the liner. Use the rear adjusting legs to level the Insert.

Note: It is necessary to get access to the removable collar through the flue outlet of the Insert, the baffle should be removed (see Baffle Removal section page 8).



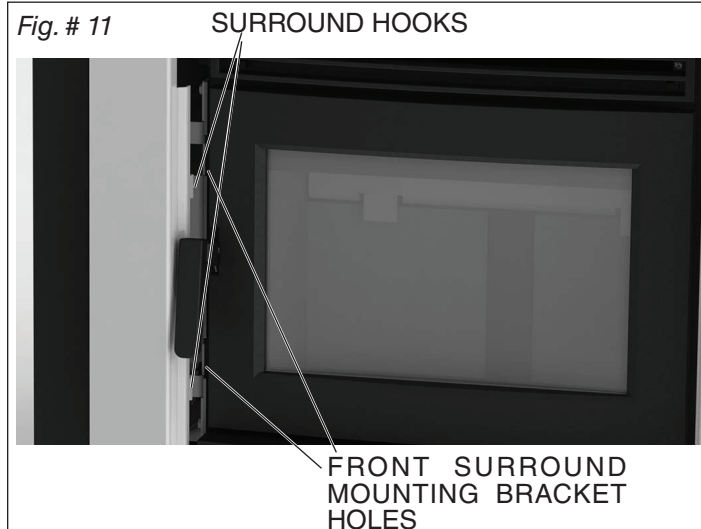
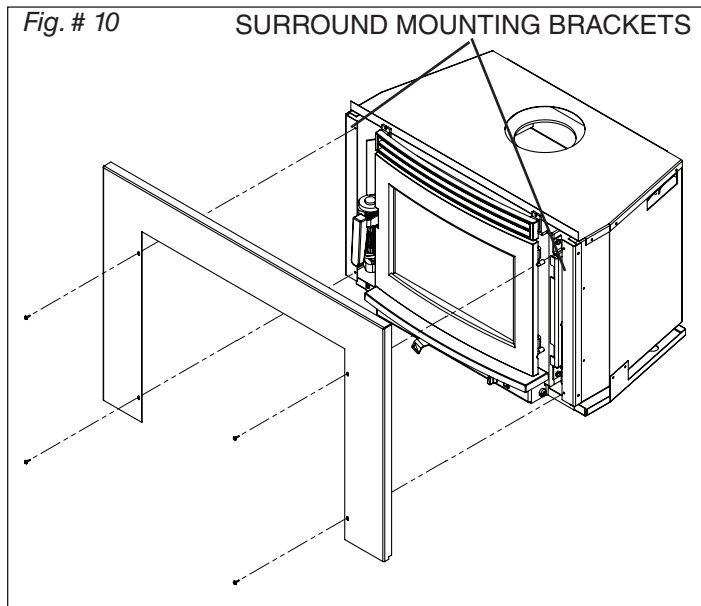
Into a Factory Built Fireplace

Your Insert may be installed into a factory built fireplace (size permitting) with the following requirements:

- 1) Inspect your fireplace for damage or other physical defects. The fireplace must be in good working condition. If in doubt about its condition, seek professional advice. Check for creosote build up or other obstructions inside the chimney, especially if it has not been in use for some time. Before installing, clean your chimney system thoroughly.
- 2) A full stainless steel rigid or flexible flue liner meeting type HT requirements (2100°F) per 1777 (U.S.) or ULC S635 (Canada) must be used for both safety and performance. The liner must be securely attached to the Insert flue collar and the chimney top.
- 3) The surround must be sealed to the fireplace front or the damper area around the chimney liner must be sealed to prevent room air entering the chimney cavity of the fireplace.
- 4) The air flow within and around the fireplace must not be altered by the installation of the Insert (i.e. no blockage of louvers or cooling air inlet or outlet ports). This includes the circulating air chambers in a steel fireplace or metal heat circulator.
- 5) Alteration of the fireplace in any manner is not permitted with the following exceptions:
 - a: external trim pieces which do not affect the operation of the fireplace may be removed and stored on or within the fireplace for re-assembly if the Insert is removed.
 - b: the chimney damper may be removed to install the liner.

Surround Assembly and Installation

- 1) Attach the surround back to the surround mounting brackets on the unit with the four screws provided. Fig. #10
- 2) Push the entire appliance back until the surround assembly is in contact with the fireplace facing.
- 3) Attach the front surround by inserting the surround hooks into the slots between the fan mount brackets and the firebox on both sides and sliding it down to engage the hooks onto the brackets. Fig. #11



Combustion Air

Consult local building codes regarding combustion air supply. Intake or combustion air can be supplied to the Insert in one of two ways:

- 1) Outside air supply: Remove the cover from ash clean out in the existing fireplace. Place a rodent screen in place of the cover. Install the Insert as described in the "Installation" section, making sure not to cover the opening of the air inlet. When the installation is complete, seal the back surround to fireplace. This will ensure combustion air is drawn from outside the house and under the unit.
- 2) Room air supply: The insert can get combustion air from the front under the firebox but it must have adequate air for combustion provided in the room the unit is installed in. This may involve providing make up air from outside the house.

Blowers

The Insert comes equipped with variable speed circulating air blowers. The blower system is thermostatically controlled for automatic operation, as well manually with a convenient bypass switch.

Blowers Operation

Automatic: To operate the blowers automatically, push the rocker switch to the "O" or AUTO position and set the fan speed control to a desired setting.

This will allow the blowers to turn on automatically once the Insert has come up to operating temperature. It will also shut the blowers off after the fire has gone out and the appliance cooled to below a useful heat output range. On and Off times will vary with installation and location of appliance.

Manual: To manually operate the blowers, push the rocker switch to the "I" or MANUAL position and set the fan speed control to a desired setting. This will bypass the temperature switch and allow full control of the blowers.

Suggested settings:

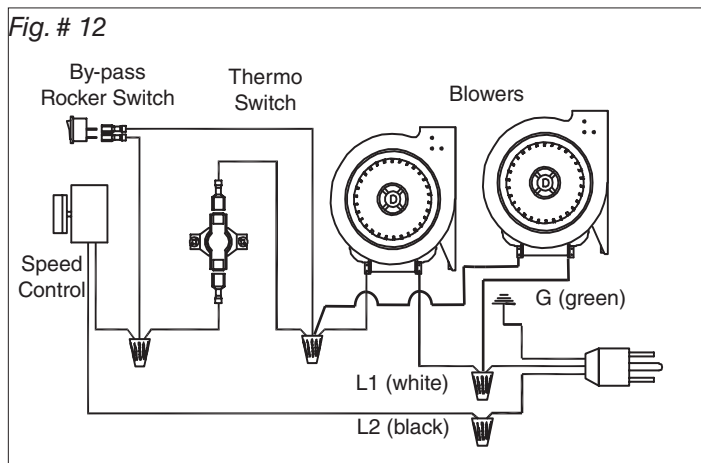
- Combustion air control setting of "Low" (all the way to the right), operate blowers speed control on "Low".
- Combustion air control greater than "Low", operate blowers speed control at desired setting.

Electrical Supply

Circulating air blower electrical rating: 115V, 60 Hz. 1AMP

For your protection against shock hazard, use only a properly grounded outlet that will accept a three-pronged plug. Do not cut or remove the grounding prong.

Consult local codes or in the absence of local codes, with the current CSA C22.1 Canadian Electrical Code and in the USA with the National Electrical Code, ANSI/NFPA 70 (latest edition).



Troubleshooting

| Problem | Cause | Cure |
|-----------------------------------|--------------------------------------|---|
| Excessive Creosote Buildup | 1) Wood is too wet | - Use dry wood(recommended moisture level <20%) |
| | 2) Turning down air control too soon | - Do not turn down until: a) there is a good bed of coals b) the wood is charred |
| | 3) Draft too low | - Chimney plugged or restricted, check flue - Improper chimney height and/or diameter - Provide outside air for combustion - Check draft in chimney and system, alter as needed. |
| Glass is Dirty | 1) See 1, 2, and 3 above | |
| | 2) Door Gasket leakage | - Replace gasket - Check door latch |
| Low Heat Output | 1) Wood may be wet | - Check wood and use drier wood if required. |
| | 2) Fire too small | - Build a larger fire - Open draft control to increase burn rate. |
| Won't Burn Overnight | 1) Air control set too high | - Set control lower |
| | 2) Not enough wood | - Unsplit wood is preferred for overnight burns |
| Stove Won't Burn | 1) Combustion air supply is blocked | - Check outside air supply for obstructions (see Combustion Air section) |
| | 2) Draft too low | - Chimney plugged or restricted Inspect and clean - Chimney oversized or otherwise unsuitable Consult Dealer |



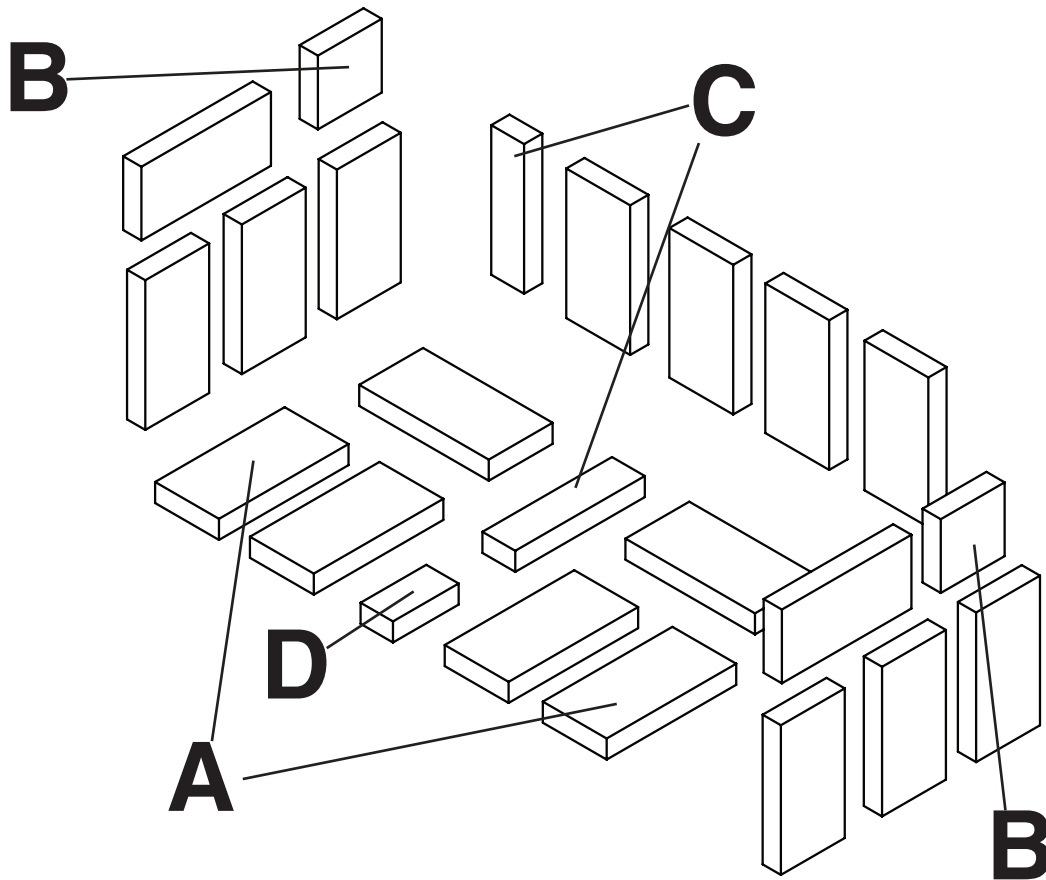
Firebrick Installation Instructions

NEO 2.5 Insert

This package contains 18 full-size firebricks, as well as 5 various cut-size bricks.

With the heater in the upright position, install firebricks as follows:

- Place 6 full-size firebricks and bricks C & D on the bottom of the heater first in the pattern shown below.
- Next, install the rear firebricks, 4 full-size, two on each side of the baffle tube.
- Then place 1 brick C in the back left corner as shown below.
- Lastly, install 4 full-size firebricks and brick B as shown on each side of the firebox.

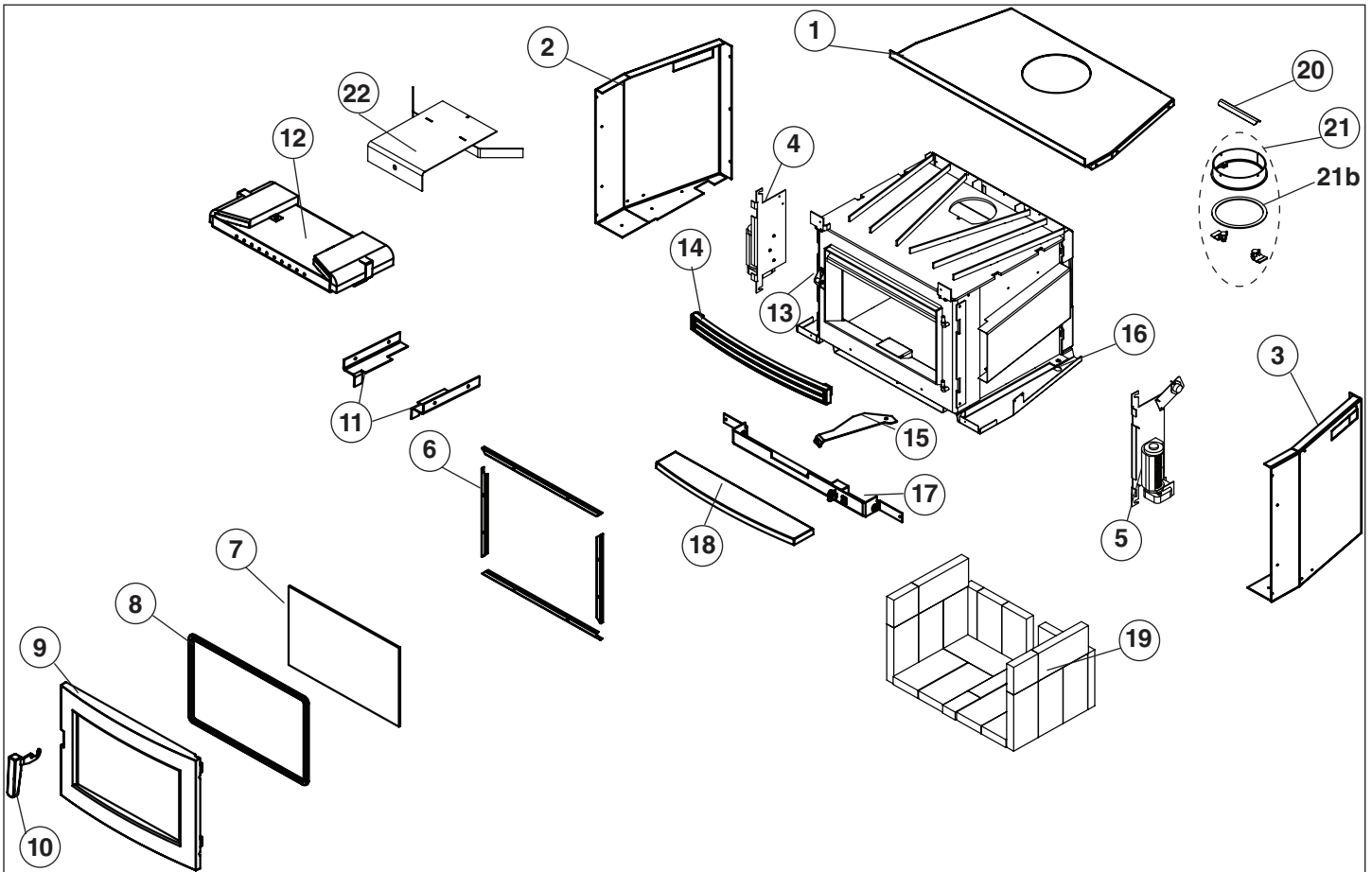


| ITEM/ ARTICLE | DIMENSIONS | PART NUMBER/ NUMÉRO DE PIÈCE |
|---------------|--|------------------------------|
| A | 9" X 4 1/2" X 1 1/4" (230 mm x 115 mm x 32 mm) | 5096.99 |
| B | 4 1/2" X 4 1/2" X 1 1/4" (115 mm x 115 mm x 32 mm) | 7847 |
| C | 2 1/4" X 9" X 1 1/4" (57 mm x 230 mm x 32 mm) | 7847.3 |
| D | 2 1/4" X 4 1/2" X 1 1/4" (57 mm x 115mm x 32 mm) | 7847.1 |



Replacement Parts

| ITEM | DESCRIPTION | PART NO. |
|--------|--|---------------|
| 1..... | Top Casing..... | 7863.5 |
| 2..... | Side Casing, LHS..... | 7861 |
| 3..... | Side Casing, RHS..... | 7861.5 |
| 4..... | Blower Assembly, LHS..... | NE25.502453 |
| 4..... | Blower Assembly, RHS..... | NE25.502454 |
| 6..... | Gasket Guide/Glass Retainer set..... | NE25.7840 |
| 7..... | Door Glass, c/w gasket..... | NE25.5034900 |
| 8..... | Door Gasket..... | WODC.NEODGKIT |
| 9..... | Door Casting, Black..... | 5037.900 |
| 10.... | Door Handle Assembly..... | NE16.7817 |
| 11.... | Brick Rail Set..... | NE25.RAILSET |
| 12.... | Baffle..... | NE25.7864 |
| 13.... | Door Catch Assembly..... | NE16.7825 |
| 14.... | Outlet Grill..... | NE25.5037902 |
| 15.... | Air Shutter Assembly..... | NE16.7826 |
| 16.... | Casing Bottom..... | NE25.7863 |
| 17.... | Blower Control Assembly..... | NE25.7833 |
| 18.... | Ashlip..... | NE25.5037901 |
| 19.... | Brick set..... | NE25.BRIC |
| 20.... | Flue Collar Handle..... | NE16.78065 |
| 21.... | Removable Flue Collar w/clamps and gasket..... | WODC.7806 |
| 21b.. | Flue Collar Gasket..... | 5067.750 |
| 22.... | Heat Shield..... | NE25.7867 |



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