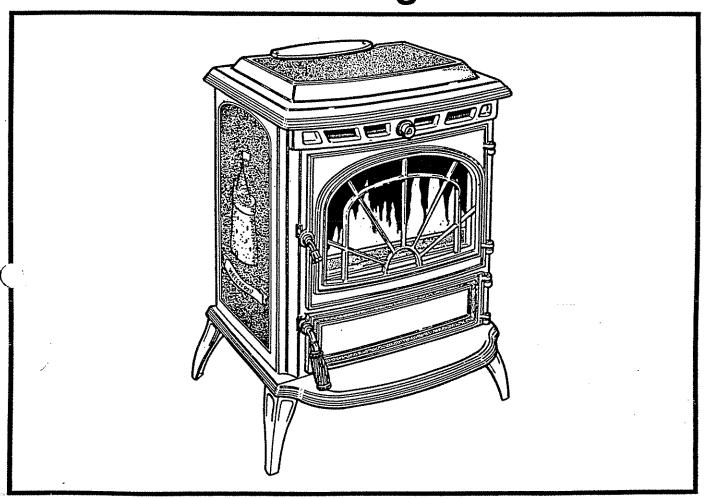
WATERFORD

Erin 90 T/V & R/V

Woodburning Stove



IMPORTANT

This stove has two U.S. Environmental Protection Agency Temporary labels on the front door. One of the labels reads; "Heat output 10,200 to 39,900 BTU's/Hr (5.7 grams per hour) 63% efficiency." This label shows the performance of the unit when connected to a Rear Exit configuration.

The second label reads; "Heat output 10,500 to 40,900 BTU's/Hr. (4.2 grams per hour), 63% efficiency. This label shows the performance of the unit when connected to a Top Exit configuration.

SAFETY NOTICE

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.

If this stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements your area. The stove must be connected to a UL/ULC listed high temperature residential type H.T. and building heat appliance chimney or an approved masonry chimney with flue liner.

MANUFACTURED BY: WATERFORD STANLEY LIMITED, BILBERRY, WATERFORD, IRELAND.

INSTALLATION & OPERATING INSTRUCTIONS

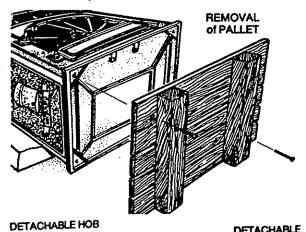
WATERFORD ERIN 90 WOODBURNING STOVE INSTALLATION & OPERATING INSTRUCTIONS

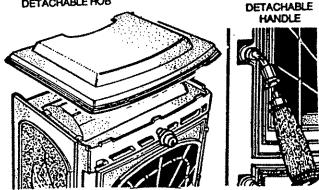
GENERAL

When installing, operating and maintaining your Waterford Erin 90 T/V & R/V Stove respect basic standards of fire safety. Read these instructions carefully before commencing the installation. Fallure to do so may result in damage to persons and property. Consult your local Municipal office and your insurance representative to determine what regulations are in force. Save these instructions for future reference.

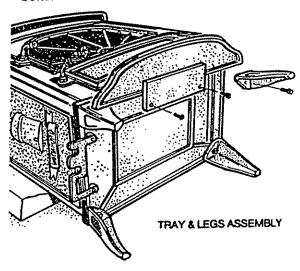
PRE-INSTALLATION ASSEMBLY

- (a) After removing the stove from it's packing, open the ashpit door (item 9 in exploded view) and remove the contents.
- (b) Open the firedoor (item 8) using the detachable handle - found in the ashpan (item 36) and remove the contents of the firebox, leaving the bricks in place.
- (c) Remove the ash lip (item 19) from the rear of the stove if you have not already done so. Remove the loose fitting hob and place on a non-abrasive surface.
- (d) Place the plastic packing on the ground at the back of the stove and lay the stove on it's back on top of the packing.
- (e) Remove the wooden pallet by taking out the two retaining screws from the base of the stove.





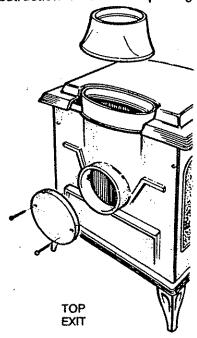
(f) Fit the four legs (item 2) to the base (item 1) of the stove with the four 5/6" x 5/46" screws provided. Fit the ash lip with the two 3/4 x 1/4" screws provided. Fit the tool carrier to the left side of the base with the two 3/4 x 1/4" screws provided. Tighten all screws. Stand the stove upright taking care not to strain the back leg bolts.



THIS STOVE MAY BE CONNECTED TO EITHEF A TOP OR A REAR EXIT

TOP FLUE EXIT

Take the top flue spigot (item 6). Place a small amount of fire cement on the inside flange of the flue outlet (item 18) before fitting it to the stove Push the flue spigot (item 6) into place, making sure that it is fully sealed to the stove. Any excess cemen on the inside of the flue spigot should be removed to prevent any obstruction of the flue passage.

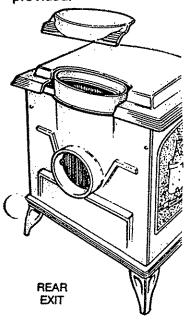


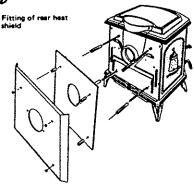
REAR FLUE EXIT

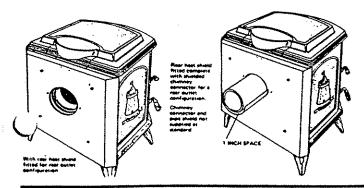
Fit the top cover plate (item 5) to the stove with the screws holding on the rear exit cover plate (item sq.). Make sure that all the sealing rope is properly aled to the stove flue outlet (item 18).

HEAT SHIELD

Fit the rear heat shield as follows: Screw the four $4" \times 1/4"$ tie bolts (item 69) to the back plate (item 23). Fit the four 2" spacers (item 70) over the tie bolts. Fit the inner heat shield (item 75) without the blanking plate (item 72) onto the four tie bolts. Now fit the four 1" spacers (item 71) over the tie bolts and fit the outer heat shield panel (item 76) without the blanking plate (item 72). Tighten the whole assembly together using the four 1/4" nuts provided.

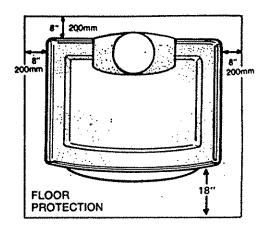






FLOOR PROTECTION

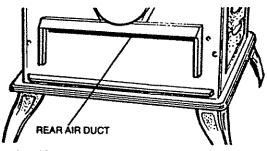
When installing this heater on a combustible floor, a floor protector, consisting of a layer of non-combustible material at least 3/8" thick or 1/4" thick covered with 1/8"sheet metal is required to cover the area under the heater and to extend to at least 18" at the front and 8" to the sides, and embers which may fall out from the door when stoking or fuelling.



LOCATION

There are several conditions to be considered when selecting a location for your Waterford Erin 90 T/V & R/V Stove.

- (a) Distance from a safe chimney.
- (b) Position in the area to be heated central locations are usually best.
- (c) Allowance for proper clearances to combustibles.
- (d) Obstruction in the ceiling, upper floor or roof, for example, ducting plumbing, electrical fittings and wiring, overhead fixed furnishings etc.



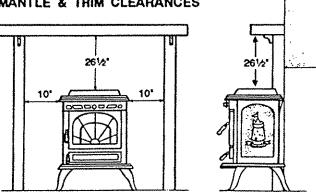
WARNING

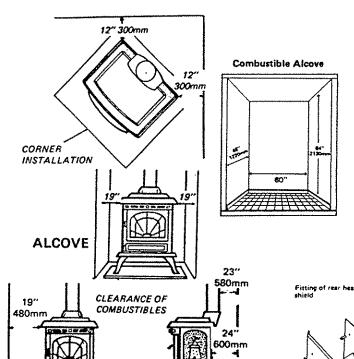
DO NOT OBSTRUCT FREE AIR SUPPLY TO THE SECONDARY AIR DUCT AT THE REAR OF THE STOVE.

MINIMUM CLEARANCES TO COMBUSTIBLES

From the front of stove		48" -	. •	1200mm
From back of stove		24"	-	600mm
From the side of stove		19"		480mm
From corner installation		12"	-	300mm
From the flue pipe				580mm
Mantle clearance	26	1/2"	+	675mm
Side trim, which extends				
less than 2" from the face				
of the fire place		10"	-	250mm

MANTLE & TRIM CLEARANCES



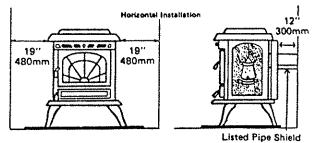


If the stove is to be installed using the rear exit option then the UL/ULC listed Optional rear heat shield must be fitted together with a listed pipe shield fitted from the heat shield to the back wall on the underside of the chimney connector.

(See horizontal installation).

Rear Exit

12" - 300mi From back of stove 19" - 480m: From side of stove



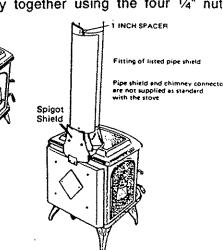
REDUCED CLEARANCES:

Under certain conditions the minimum clearance may be reduced by means of:

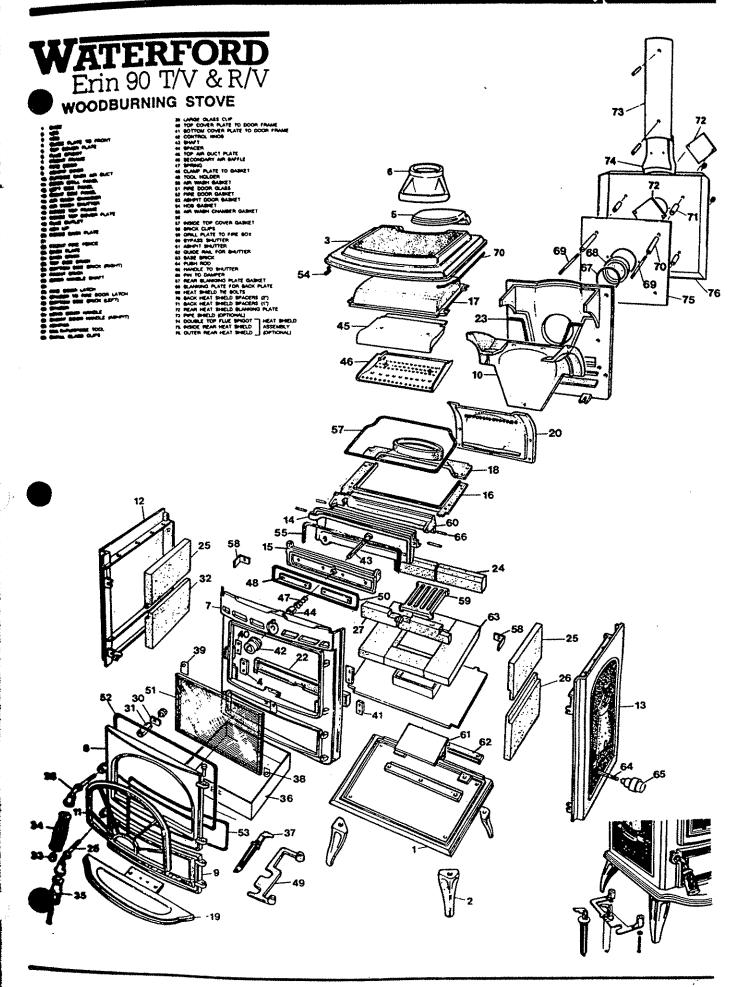
- Listed Waterford rear heat shield assembl installed in accordance with the manufacturer instructions.
- Shields constructed in accordance wit NFPA211(USA)Can3-B365 installation code fc solid fuel fired appliances.
- (c) Fitting the listed Waterford Heat Shield an chimney connector pipe shield.

REAR HEAT SHIELD

If the stove is to be connected to a top flue ex then the rear heat shield assembly must be fitted as follows: Screw the four 4" x 1/4" heat shield tie bolts (item 69) to the back plate (item 23). Fit the four 2" spacers (item 70) over the heat shield tic bolts. Fit the inner heat shield (item 75) complete with rear heat shield blanking plate (item 72) onto the four heat shield tie bolts. Now fit the four 1 spacers (item 71) over the tie bolts and fit the oute heat shield (item 76) complete with heat shield blanking plate (item 72) and the double top flue spigo shield (item 74) over the tie bolts and tighten the whole assembly together using the four 1/4" nutprovided.

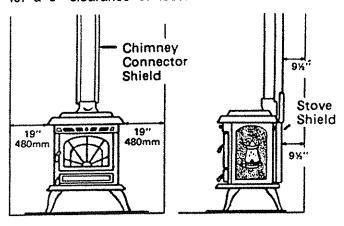


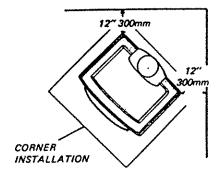
When the Waterford listed heat shields are use: together with a listed pipe shield using the top ex option the clearances may be reduced to 91/2". (Pipe shield and heat shields are not supplied as standard)



DOUBLE WALL CONNECTORS

Double wall chimney connectors may be substituted for the shielded pipe provided it is UL/ULC listed for a 9" clearance or less.





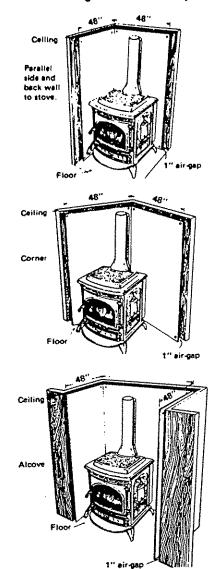
WALL PROTECTORS

Materials and products listed for the purpose of reducing clearance to combustibles shall be installed in accordance with the conditions of the listing and the clearances may be reduced by the percentage reduction as stated in the wall shield of the manufacturer's instructions.

For clearance reduction systems using an air space :etween the combustible wall and the wall protector, adequate air circulation shall be provided by one of the following methods.

- Adequate air circulation may be provided by leaving all edges of the air protector open with at least a 1* air gap.
- If the wall protector is mounted on a single flat wall away from corners, adequate air circulation may be provided by leaving bottom and top edges or only the side and top edges open with at least a 1" air gap.
- Wall protectors that cover two walls in a corner shall be open at the bottom and top edges with at least a 1" air gap.
- 4. All clearances shall be measured from the outer surface of the combustible material to the nearest point on the surface of the Erin 90 T/V & R/V disregarding any intervening protection applied to the combustible material.

When using a manufactured wall shipld system observe local building codes and by-laws.



CHIMNEY

The Waterford Erin 90 T/V/ & R/V is a radiant roon heater and must be connected to a chimney of the proper size and type capable of providing at adequate continuous draught of 0.04 wg minimum it is best to connect to a chimney of the same size as the stove spigot. Connection to a larger size may result in somewhat less draught. Do no connect to a chimney serving another appliance

Minimum chimney height is 14'10" from floor on which stove is installed. An existing masonry chimne should be inspected and if necessary repaired be a competent mason or relined using an approve relining system. The stove must be connected to a chimney with a minimum continuous draught conductions will result in pocperformance.

Note: Connection to type "B" Gas Vents approve for connection to a certain gas burning applianc will only result in a fire.

CHIMNEY TYPES: USA ONLY

The stove must be connected to a UL listed residential type HT and Building Heating Appliance chimney installed in accordance with the manufacturers tructions or a masonry chimney constructed in accordance with NFPA211 Chimney Vents and Solid Fuel Burning Appliances.

CHIMNEY TYPES: CANADA ONLY.

The stove must be connected to an Underwriters Laboratories of Canada labelled factory built 650°C chimney, installed in accordance with the manufacturers instructions or in a lined masonry chimney acceptable to the Authority having lurisdiction.

CHIMNEY CONNECTOR

The chimney connector is a smoke pipe used to connect the Waterford Erin 90 T/V & R/V Stove to the chimney described above. The chimney connector must be made of Corrosion Resistant Steel, 24 gauge or heavier (Black or Blued or equivalently treated steel). Be sure to fasten the chimney connectors together and also to the flue outlet of the stove through the two holes provided, use at least two screws for each joint. Be sure that the joints are tight and fully secured.

HIMNEY CONNECTOR USA ONLY

Connectors should maintain a pitch or rise of at least 1/4" to the foot from the stove to the chimney. It should be installed so as to avoid sharp turns or other construction features that would create excessive resistance to the flow of flue gases. It should be securely supported with joints fastened with sheet-metal screws, rivets, or other approved means. The entire length of a connector should be readily accessible for inspection, cleaning, and replacement.

The connector may pass through walls or partitions constructed of combustible materials provided the connector is either listed for wall pass-through or is routed through a device listed for wall pass-through and is installed in accordance with the conditions of the listing. Any unexposed metal that is used as part of a wall pass-through system and is exposed to flue gases shall be constructed of stainless steel or other equivalent material that will resist corrosion, softening, or cracking from flue gas at temperatures up to 982°C.

CONNECTING TO MASONRY CHIMNEY

The connector to a masonry chimney must extend improve the wall to the inner face or liner but not beyond, and must be firmly cemented to masonry.

The connector may pass through walls or partitions constructed of combustible material to a masonry chimney provided the connector system selected is installed in accordance with the proper clearances and conditions.

(See figures A, B, C, D page 8)

THIMBLES

Thimbles for chimneys or vent connector should be of fire clay (ASTM c 315, Specifications for Clay Flue Linings) galvanized steel of minimum thickness of 24 gauge, or material of equivalent durability. Thimbles should be installed without damage to the liner. The thimble should extend through the wall to, but not beyond, the inner face of the liner and should be firmly cemented to masonry.

Thimbles should be located to provide adequate pitch or rise of chimney or vent connectors and, where the ceiling above the appliance is constructed of combustible material, the location of the thimble should provide minimum clearance required for the connector as specified in Section under minimum clearances to combustibles.

Insulation material used as part of wall pass-through system should be of non-combustible material and should have a thermal conductivity of 1.0 Btu.in./ft.F (4.88kg.cal/hr.m.C) or less. All clearances and thicknesses are minimums; larger clearances and thicknesses are acceptable. Any material used to close up an opening for the connector should be of non-combustible material. A connector to a masonry chimney, except for system 2 (Under heading Chimney Connector Systems, Thimbles and Clearances), shall extend to piece through the wall pass-through system and the chimney wall to the inner face of the flue liner, but not beyond.

CHIMNEY CONNECTOR SYSTEMS, THIMBLES, AND CLEARANCES FROM COMBUSTIBLE WALLS

- Minimum 3½" thick brick masonry wall framed into combustible wall with a min. of 12" brick separation from clay liner to combustibles. Fire clay liner (ASTM C315 or equivalent) min. 5/8" wall thickness, should run from outer surface of brick wall to, but not beyond, the inner surface of chimney flue liner and should be firmly cemented in place.
- 2. Solid insulated listed factory-built chimney length of the same inside diameter as the chimney connector and having 1" or more of insulation with a min. 9" air space between the outer wall of the chimney length and combustibles. The inner end of the chimney length shall be flush with the inside of the masonry chimney flue and shall be sealed to

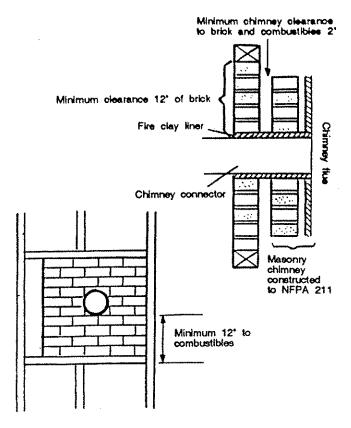


Figure A

the flue and to the brick masonry penetration with nonwater-soluble refractory cement. Supports should be securely fastened to wall surfaces on all sides. Fasteners between supports and the chimney length shall not penetrate the chimney liner.

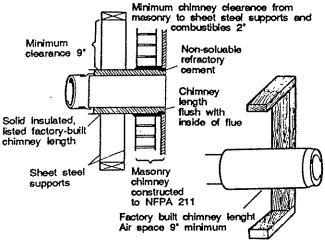


Figure B

3. Sheet steel chimney connector, min. 24 gauge in thickness, with a ventilated thimble, min. 24 gauge in thickness, having two 1" air channels, separated from combustibles by a min. of 6" of glass fibre insulation. Opening should be covered and thimble supported with a sheet steel support, min. 24 gauge in thickness. Supports should be securely fastened to wall

surfaces on all sides and should be sized to fit and hold chimney section. Fasteners used to secure chimney sections should not penetrate chimney flue liner.

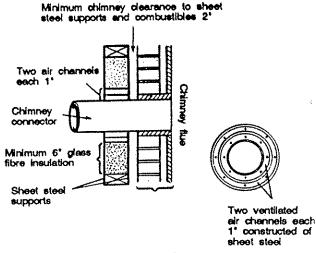
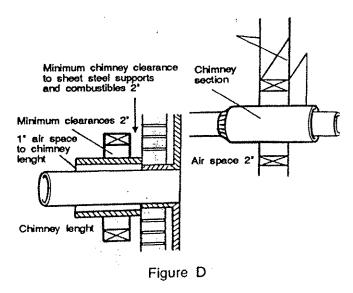


Figure C

4. Solid insulated listed factory-built chimney length with an inside diameter 2" larger than the chimney connector and having 1" or more of insulation, serving as a pass-through for a single wall sheet steel chimney connector of min. 24 gauge thickness, with a min. 2" air space between the outer wall of chimney section and combustibles. Min. length of chimney section shall be 12". Chimney section concentric with and spaced 1" away from connector by means of sheet steel support plates on both ends of chimney section. Opening shall be covered and chimney section supported on both sides with sheet steel supports of min. 24 gauge thickness.

Supports should be securely fastened to wall surfaces on all sides and shall be sized to fit and hold chimney section. Fasteners used to secure chimney sections should not penetrate chimney flue liner.



MASONRY FIRE PLACE

The stove may be installed on the hearth extension of a masonry fireplace. In Canada a continuous liner must be provided from the flue collar of the rove to the top of the chimney. In the USA a intinuous chimney flue is required. A minimum clearance of 26 1/2" (675mm) is required to combustible mantle and a minimum clearance of 10" (250mm) to side trim, which extends less than 2" (50mm) from the face of the fireplace. (See section under Minimum Clearances to Combustibles).

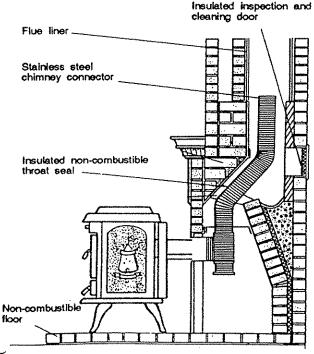
Before the Installation, the entire fireplace system should be inspected for condition and code compliance prior to connecting to the fireplace chimney. Older fireplaces and chimneys may not have been constructed to current-day codes.

The fireplace and chimney should be in, or brought up to, acceptable conditions and proper clearances should be met before connecting to the fireplace chimney.

The size of the flue must be considered. If the fireplace chimney is too large, a relining system may be installed using an approved relining system.

Connection to a masonry chimney may be done by breaching into the chimney from the front of the fireplace, no less than 8" above the bottom of the first flue tile, by installing a stainless steel or other listed chimney connector from the appliance's flue

tlet up through the fireplace damper and smoke mamber, terminating at the first flue tile, or by installing a stainless steel or other listed relining system from the flue outlet up the entire length of the chimney, where necessary.



BURN WOOD ONLY, DO NOT BURN COAL, SYNTHETIC LOGS OR OTHER FUELS.

Burn directly on hearth do not use a grate or elevate fire. "Never use gasoline" gasoline type lantern fuel, kerosene, charcoal lighter fluid or smaller 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. Operate stove only with fuelling door and ash pit door closed. This heater is hot whilst in operation. Keep children, clothing and furniture a safe distance away.

LIGHTING

- (a) Replace ashpan (item 36), close ashpit door (item 9), and make sure the ash box shutter (item 61) is closed by pushing in rod (item 64).
- (b) Open firedoor (item 8) and open the primary air inlet by turning the control knob (item 42) on the front of the stove, one revolution anti-clockwise, using the multi- purpose tool (item 37) provided.
- (c) Cover hearth with crumpled pieces of paper. Lay dry pieces of kindling approximately 1/2" x 1/2" x 16" long on top of the paper towards the back of the firebox. Ignite and close the firedoor (item 8). When the kindling has ignited open the firedoor (item 8) and add larger pieces of dry wood. Close the firedoor (item 8). When a hot bed of coals is established add the normal fuel of well seasoned split logs approximately 16" long. Once the logs are well lighted, adjust the primary air control knob (item 42) by turning it clockwise to give the required heat output.

Refuelling - Open the firedoor (item 8) and carefully level the embers and re-load with logs, close the firedoor.

PRIMARY AIR SETTINGS

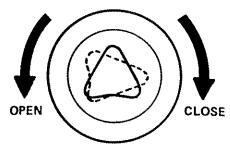
Maximum Fire. Fully Open

Between 15-20 minutes past the hour. Medium High Burn.

Between 25-30 minutes past the hour.

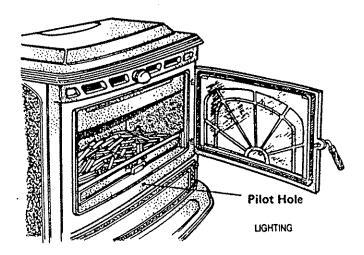
Medium Low Burn.

Low Burn. Fully closed.



IMPORTANT

Never allow a build-up of deposits in front of pliot hole in the fire chamber. Always keep clear of ash, coals, and fuel, check when lighting, re-fuelling or de-ashing. See pilot illustration.

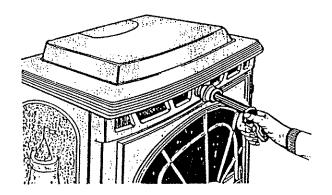


LOW OR OVERNIGHT BURN

NOTE: The duration of low or overnight burn is affected by:

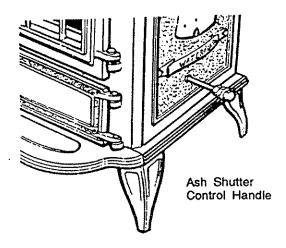
Draught conditions: Excessive draught reduces burn time. Quality of fuel load. If the stove and flue temperature at the start of a low or overnight burn are too high it will result in reducing burn time.

- 1. Allow the fire bed to cool down.
- Re-load using full length wood (preferably unsplit).
- Do not pack the fuel load as high as the secondary air baffle (item 46) at the top of the firebox.
- 4. An air space is necessary between the fuel load and the secondary air baffle (item 46) to avoid impingement of the secondary air on the top of the fuel load resulting in speeding up the burn rate.
- Turn down the primary air control (item 42) to the closed position, by turning it one revolution clockwise.



DE-ASHING

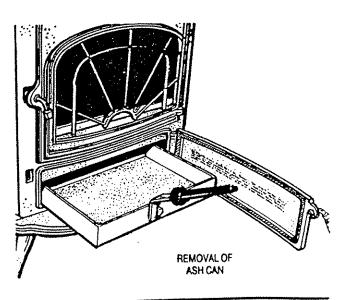
When the ash build-up becomes excessive in the fire chamber (3 1/2" (88mm) deep or so) it mus be removed by allowing the fire to burn out. Wher the fire has burned out, open the firedoor (item 8) Pull open the ashpit shutter (item 61). The contro knob (item 42) for this is on the right hand side of the stove. Rake the ash into the ashpan (item 36) through the grating in the centre of the hearth Push closed the ashpit shutter (item 61) and dispose of the ashes by removing the ashpan (item 36) fron the stove.



DISPOSAL OF ASHES

Remove ash carefully. Ashes should be placed i a metal container with a tight fitting lid. The close container of ashes should be placed on non-combustible floor, or on the ground, well awa from all combustible materials, pending final disposa If the ashes are disposed of by burial in soil cotherwise locally dispersed they should be retaine in the closed container until all cinders have thoroughly cooled.

Replace the empty ashpan (item 36) in the stove close the ashpit door (item 9) and relight the fire



MAINTENANCE

CREOSOTE - Formation and the need for removal.

or 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 twice monthly during the heating season to determine if a creosote build-up has occurred. If creosote has accumulated it should be removed to reduce the risk of chimney fire.

Inspect the chimney connector frequently. Tap the connector with your finger when the pipe is cool. If you hear a dull echo, the pipe may need cleaning. Disassemble the chimney connector and clean the sections. Replace corroded pipe sections. The fitting of a slip-joint in the stove makes the dismantling easy for cleaning and inspection of chimney and stove.

When inspecting a masonry chimney, start at the cleanout door, normally found in the basement, at the base of the chimney, or on the outside. If your himney does not have a clean-out door it must be inspected and cleaned by removing stove from mney.

GLASS REPLACEMENT

- (a) Open the firedoor (item 8) fully.
- (b) Remove the four corner screws and clips (items 38 & 39) and carefully remove the broken glass.
- (c) Clean the glass recess in the door
- (d) Attach adhesive thermal tape to the perimeter of the replacement glass
- (e) Place the thermal taped side of the glass into the firedoor recess and replace the four corner clips (items 38 & 39) and screws.

- (f) Make sure that the large corner clip (item 39) is fitted in the top right hand corner.
- (g) Tighten screws.
- (h) Replace glass only with ceramic glass 3/16" (5mm) thick.

GLASS CLEANING

The glass will clean itself when there is sufficient heat generated by the burning fuel. If a build-up of creosote occurs on the glass due to poor draught conditions, poor quality fuel or very low burning for long periods of time, it is best to clean the glass manually when glass is thoroughly cooled.

FIRE SAFETY

To provide reasonable fire safety the following should be given serious consideration.

- (1) Do not overfire the stove, if the stove or chimney connector glows, you are overfiring.
- (2) Overfiring will also damage painted or enamel finishes on the stove.
- (3) The installation of fire detectors.
- (4) A conveniently located class "A" fire extinguisher to contend with small fires resulting from burning embers.
- (5) A practical evacuation plan.
- (6) A plan to deal with a chimney fire as follows:In the event of a chimney fire:
- (a) Notify the fire department.
- (b) Prepare occupants for immediate evacuation.
- (c) Close all openings into the stove.
- (d) While awaiting the fire department watch for ignition to adjacent combustibles from overheated stove pipe or from hot embers or sparks from the chimney.

