

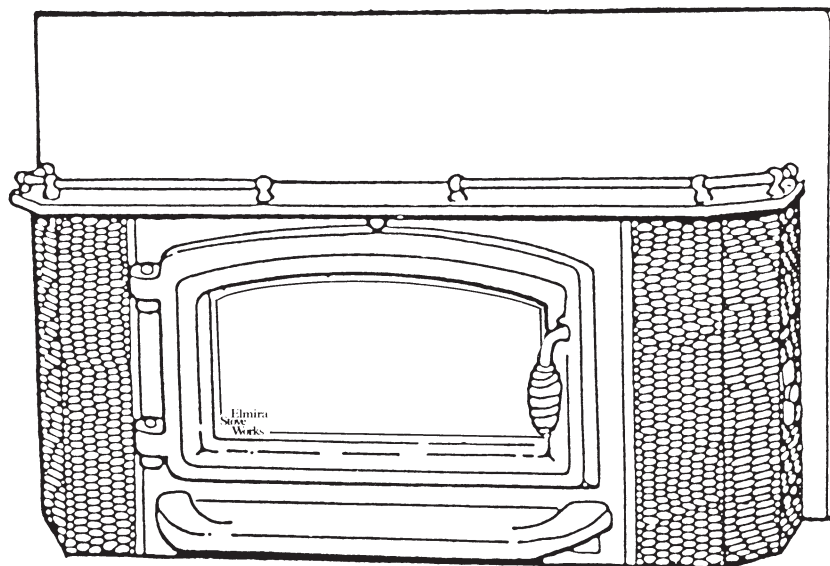
The Elmira Insert is listed to  
ULC Standards S - 628 & UL 907  
by Warnock Hersey Professional  
Services Ltd.



NOTE: WARNOCK HERSEY  
N.R.B. NUMBER IS 219

# Elmira Stove & Fireplace

## Owner's Manual for the FIREPLACE INSERT 1600 SERIES



### GENERAL INFORMATION

**“SAFETY NOTICE:** Your new Insert will give you many years of service and pleasure however, to ensure safe and trouble free operation, be sure to read these instructions carefully before commencing installation. Failure to do so could result in a fire hazard. Consult your dealer or local fire building official if any questions arise.

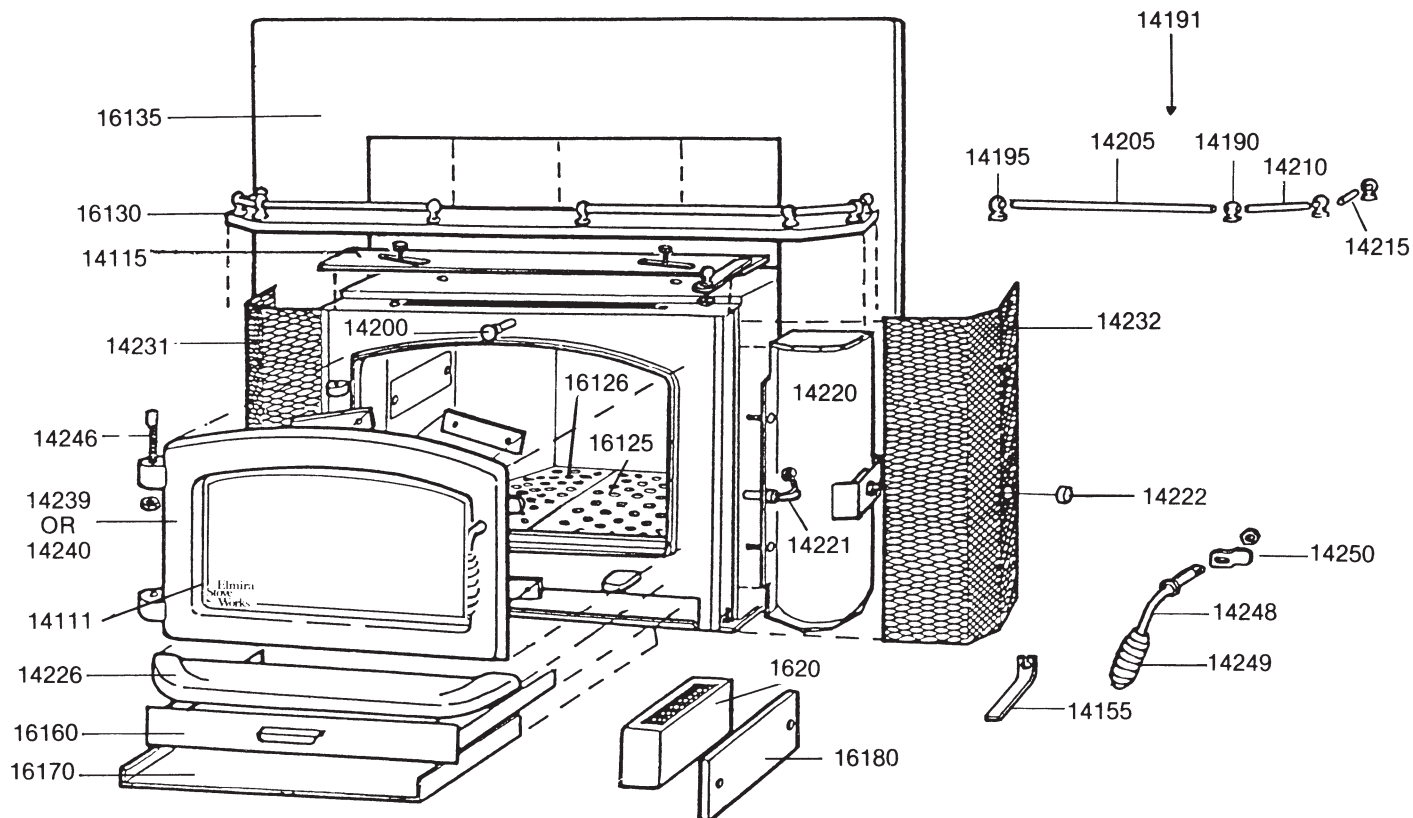
**SAVE THESE INSTRUCTIONS  
FOR FURTHER REFERENCE**

# FIREPLACE INSERT PARTS CHART

## 1600 Series

**PLEASE IDENTIFY PARTS ORDER WITH MODEL  
AND SERIAL NUMBER OF UNIT.**

(Serial and Model # are located behind left screen)



1620	Combustor Package	1	14221	Heat Sensor	1
16125	Cast Grate — Right	1	14222	Switch Knob	1
16126	Cast Grate — Left	1	14223	Blower Switch	1
16130	Cooking Surface	1	14226	Ash Catch	1
16135	Flange Plate	1	14231	Left Screen	1
14155	Control Tool	1	14232	Right Screen	1
16160	Ash Pan	1	14239	Outer Door Frame — Black	1
16170	Ash Pan Cover	1	14240	Outer Door Frame — Gold	1
16180	Combustor Cover Plate	1	14111	5 M.M. Etched Glass "ESW"	1
14190	Two-Hold Railing Knob	4	14246	Hinge Pins c/w Washer & Nuts	2
14191	Railing Set Complete	1	14248	Steel Handle c/w Nut	1
14195	One-Hole Railing Knob	4	14249	Spring Handle	1
14200	Damper Knob	2	14250	Door Latch	1
14205	12 13/16" Rod	2	14251	Glass Retainers	6
14210	5" Rod	2			
14215	4 9/16" Rod	2			
14220	Blower Assembly c/w Knob	1			

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## SAFETY

**CAUTION** — Hot while in operation. Do not touch, keep children, clothing and furniture away. Contact may cause burns.

Install and use only in accordance with manufacturers installation and operating instructions.

Contact your local Building or Fire Officials about restrictions and installation in your area.

## CONTENTS INCLUDE

- A. Insert Body
- B. Cooking Surface
- C. Faceplate
- D. Decorator rail set
- E. Two side screens
- F. Blower & Switch Knob
- G. Two cast iron grates
- H. Ash catch
- I. Ash pan
- J. Ash pan cover
- K. 4 — 5/16" x 1" bolts and washers  
2 — 3/8" x 2 1/4" bolts and washers
- L. Fiberglass Insulation
- M. Insulation Retaining Wire
- N. Damper Tool
- O. Levelling Bolts — 2 — 3/8" x 2" and 2 — 3/8" x 4"
- P. Roll of Foil 17" x 29"

**NOTE:** Catalytic combustors and the direct flue connection are options, available from your dealer.

## UNPACKING

The Elmira Insert is shipped in one box. Inspect the carton for visible shipping damage. Report any damage to your carrier before unpacking.

Cut the strap around the Insert and remove the cardboard box. The Insert body is fastened to the shipping pallet by two screws, one in each corner. Remove the screws and lift the Insert from the pallet. The door is packed inside the firebox. Carefully remove the door and place it in a safe place to avoid scratching or breakage of glass during installation. Remove all the other contents from the firebox and place in a convenient place for installation.

**NOTE:** The Insert is shipped with the cooking surface installed but it may be removed for ease of handling and installation. Reach into the firebox, remove the 2 — 3/8" x 2 1/2" bolts, and lift off the cooking surface.

## INSTALLATION THROUGH A FIREPLACE OPENING

**NOTE:** Most areas require that a direct flue connection be installed with the Insert. A direct flue connection package may be purchased from your dealer. The Insert is intended for use only in masonry fireplaces constructed in accordance with all national and local building code standards. It is not to be installed in factory built or zero-clearance fireplaces.

The Insert requires minimum fireplace dimensions of 21 1/2" high, 27 1/4" wide, and 18 1/2" deep.

If the fireplace opening exceeds 44" wide and/or 30" high, you may order a custom faceplate from your dealer.

Do not remove bricks or mortar from the fireplace structure.

## PREPARING THE FIREPLACE

1. Clean out the inside of the fireplace (see maintenance instructions for handling of hot ashes.)

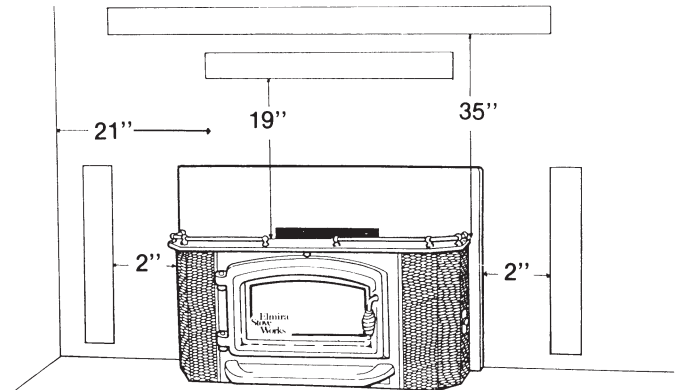
2. Check to be sure the chimney and fireplace are clean and in good condition. Have a qualified mason repair any structural damage or deterioration before installing the Insert. Mortar cracks in the fireplace system can cause air leaks resulting in a smoke filled room.

3. If your fireplace has an ash dump or outside air inlet, pack it with fiberglass insulation.

**IMPORTANT: REMOVE THE EXISTING FIREPLACE DAMPER OR LOCK IT IN THE OPEN POSITION.**

## INSTALLATION CLEARANCES

Minimum side wall clearance	21"
Minimum top wood trim clearance	19"
Minimum side wood trim clearance	2"
Minimum mantle clearance	35"



Do not place combustible materials (i.e. drapes, furniture, bookshelves) within 36" to the front and 36" to the sides of the Insert.

A 3/8" piece of asbestos millboard or equivalent must extend 8" to each side of the Insert and 16" in front of the Insert.

## INSTALLATION

1. Place a 19 1/2" x 20" piece of fiberglass insulation on each side of the Insert. Place the 28" x 41" fiberglass insulation on the top and back of the Insert body. Place the foil cover over the top of the fiberglass.

2. Secure the fiberglass insulation in place by tying wire (supplied) to the washers on the side of the firebox. Loop wire around the back of the firebox and fasten to the washers on opposite side. Tie wires to the top washers on the firebox and fasten to lower horizontal wire on back. Cut away the insulation and foil blocking the flue with a sharp knife. (See Figure 1)

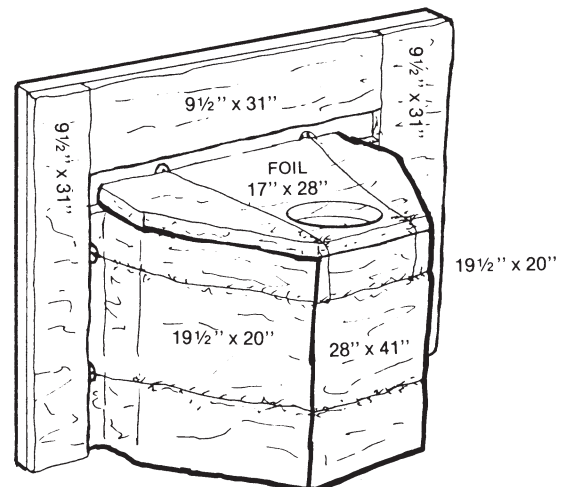


FIGURE 1

3. Thread the 3/8" x 2" leg bolts into the bottom front of the Insert, the 3/8" x 4" bolts into the rear. These leg bolts should be installed to form a 3/8" air space under the Insert.

Measure drop between the fireplace floor and the fireplace Hearth. If the floor and Hearth are level, no levelling is required. If a drop does exist, adjust the rear levelling bolts to compensate for this drop. This procedure insures that the Insert is installed in a level position. (See Figure 2).

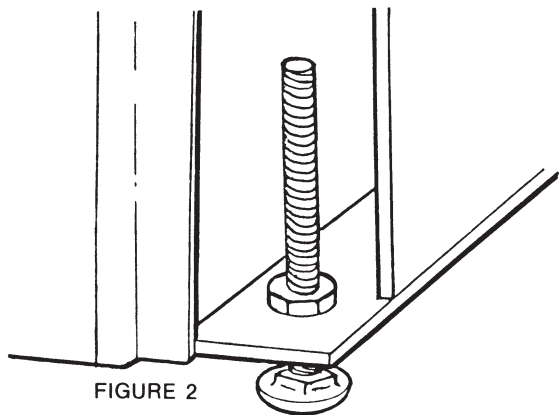


FIGURE 2

### INSTALLATION INSTRUCTIONS FOR THE DIRECT FLUE CONNECTION

Please follow these instructions exactly to ensure a safe installation.

In most areas a direct flue connection must be installed. If it is required in your area, purchase and install a positive, direct flue package — available from your dealer.

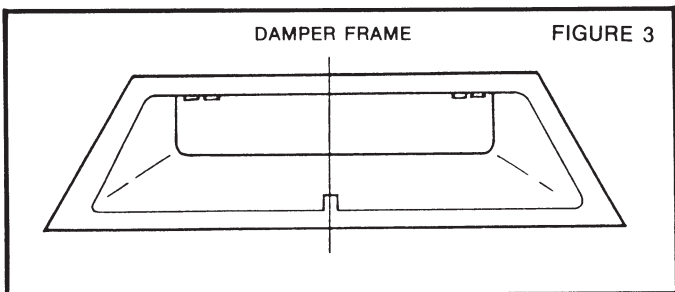
### TOOLS AND SUPPLIES REQUIRED FOR INSTALLATION

Tin Snips	Electric Drill
Measuring Tape	5/32" bit
Marking Pen	Medium Philips screwdriver
Medium Slot screwdriver	5/8" wrench

The following steps outline the installation of the direct flue connection into the chimney flue.

4A. Remove or lock open existing cast fireplace damper.

4B. Measure the cast damper frame located in the throat of the fireplace. (See Figure 3).

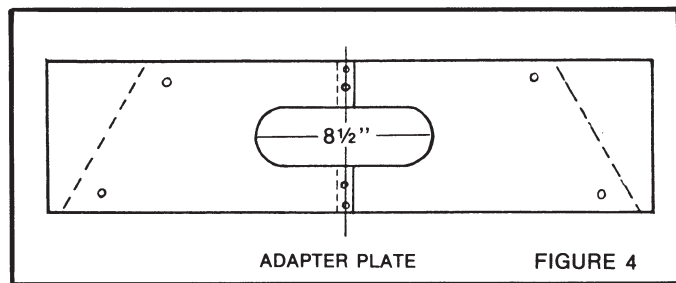


DAMPER FRAME

FIGURE 3

4C. Remove any projections existing on the surface of the damper frame (eg. mounting brackets, damper linkage, etc.) If projections can't be removed, notch out adapter plate at step 4E.

4D. Overlap the two adapter plates so that the Oval hole in the center of the plates measures 8 1/2". Drill two 5/32" pilot holes 2 1/2" from the edge of the bends and bolt the two pieces of metal together with two of the 1/2" x 8" self tapping screws provided. (See Figure 4)



ADAPTER PLATE

FIGURE 4

4E. Mark the center line on the adapter plate as shown on figure 4. Transfer the information from figure 3 to the plate.

4F. Cut along lines with a tin snip and notch out any projections if required. (Before cutting make sure that flanges of adapter plate are facing down.) (See Figure 5)

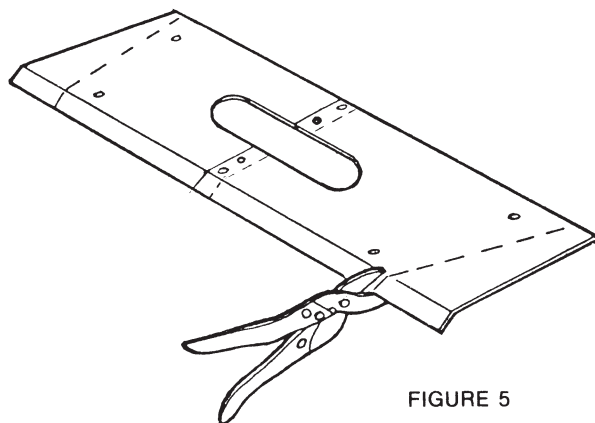


FIGURE 5

4G. Trial fit the adapter plate to the damper frame and trim if necessary.

4H. Drill 6 — 5/32" holes through the adapter plate and cast damper frame so that the 1/2" x 8" screws will hold the plate to the frame. (You may use a stick cut to length to hold the adapter plate in place while drilling the 6 holes.)

4I. Bolt the adapter plate securely in place. Then remove half of the adapter plate so you can see to install the flex pipe into the flue liner.

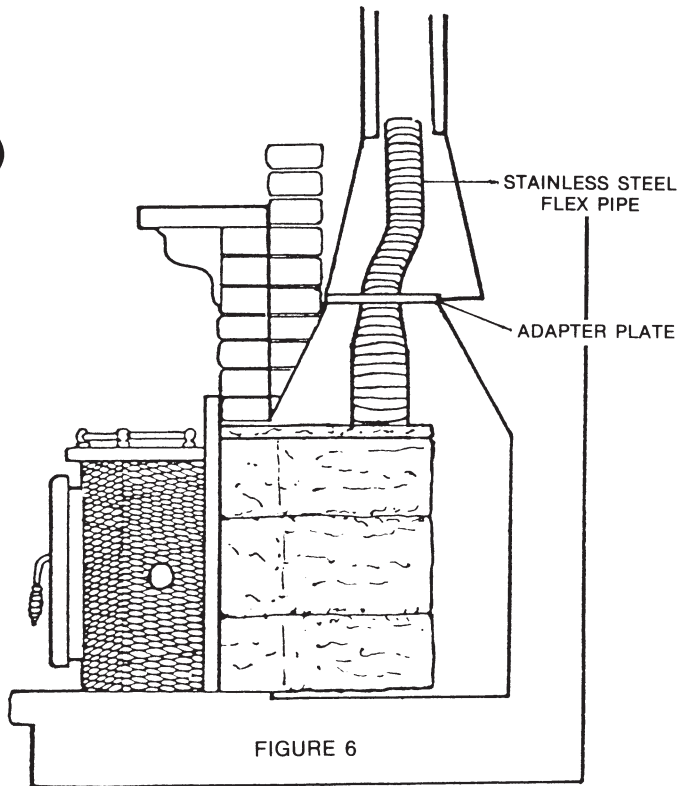
4J. Push oval end of flex pipe through the damper hole into the flue liner until the end of the round pipe measures 22" from the fireplace floor.

**NOTE:** Normally the smoke chamber between the damper and the flue tile is curved. You may have to prebend the flexpipe to fit.

4K. Rebolt the other half of the adapter plate securely in place with metal screws provided.

4L. Lift the Insert onto the hearth and walk it 16" into the fireplace opening. If a direct flue connection is being installed, pull the direct flue connection into the Insert flue collar. (See Figure 6)

5. Lower the faceplate straight down over the Insert. Pack the rear of the faceplate with the fibreglass insulation provided. Fasten right and left side of faceplate to the sides of the stove with the 5/16" x 1" bolts provided. If the cooking surface was previously removed do not tighten bolts until after cooking surface has been installed.



**NOTE:** It is important that the fibreglass insulation is well packed between the faceplate and fireplace facing. In most cases the fibreglass insulation provided is more than enough, however rough fireplace facings may require additional fibreglass. If more bat style fibreglass insulation is required, make sure it does not have paper backing. If air is drawn in around the faceplate it will result in heat loss from your house and may effect the draw of the chimney, a sluggish fire and/or a back puff smoking problem.

6. If previously removed, place the cooking surface on the Insert so that the welded nuts of the cooking surface line up with the bolt holes in the top of the stove. Bolt cooking surface to the stove from inside of the firebox with the 2 — 2¼" bolts and washers provided and fasten the two plates at the ends of the cooking surface to the stove with the 4 — 5/16" x 1" bolts. Make sure the faceplate and cooking surface are aligned with front of the stove. Now tighten all eight bolts.

#### FINAL ASSEMBLY INSTRUCTION

1. If marks have occurred during shipping or handling, now is a good time to retouch or repaint with the spray paint provided. Remove door, mask areas around stove and follow directions on spray can.

2. After paint has dried thoroughly, install decorator rail set and two damper knobs.

3. Screens should snap into channels tightly. If screens slip down in the channels or rattle when the blower runs, remove screen and spring to slightly more than 90 degrees and reinstall.

4. Install the door and ash catch. If adjustment is required see page 5.

5. Install blower control knob extension onto shaft. Then install blower knob onto extension.

#### OPTIONAL CORNING CATALYTIC COMBUSTORS

The catalytic combustors will increase heat output up to 50% at high burn or reduce wood consumption by up to 1/3. Because catalytic combustors generate extra heat by burning 90% of the creosote and pollutants that means less chimney cleanings.

The above information on catalytic combustors is published in the Corning brochure #CCB-84-1 available from your dealer.

#### HOW A CATALYTIC COMBUSTOR WORKS

Secondary combustion in a regular wood stove occurs very rarely because it only happens at approximately 1100° F if there is secondary air and not at all without it.

The catalytic combustors will start a secondary burn at 600° F and very quickly temperatures above the combustors will accelerate to 1100 - 1200° F creating extra heat from what normally escapes up the chimney in unburned gasses and creosote.

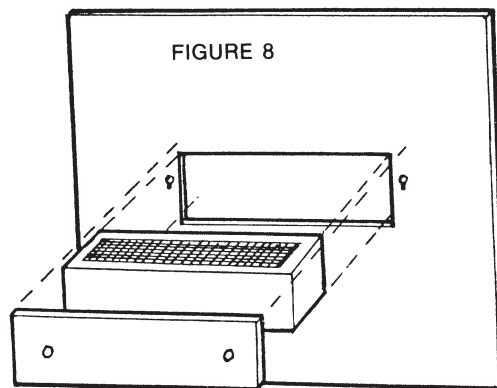
For full details see the manual with combustor package.

**NOTE:** Stove operation with or without catalytic combustors will be the same.

To purchase a catalytic combustor package for your Insert order part # 1620 from your dealer.

#### INSTALLATION OF THE CATALYTIC COMBUSTORS

Remove the combustor covers on the side firebox walls. Place a catalytic combustor unit in each side making sure the stainless steel screen is facing the bottom of the stove. Replace combustor covers making sure cover bolts fit securely into the keyhole slots. (See Figure 8)



#### BLOWER OPERATION

Your Insert is equipped with a three speed blower (Hi-Med - Low). The centre position (Medium) is an automatic position and will only activate after the Insert is hot. When first starting your Insert, turn the switch to medium (centre), the blower will **not** function, this allows the Insert to accumulate heat. After approximately 1/2 hour you may turn the blower to low and heat will be distributed to the room. Later turn the blower to any speed for the desired output. When left at medium the blower will automatically shut off when the fire dies down.

**NOTE:** To have blower shut off automatically, set switch at medium.

Plug the power cord into a 110 volt receptacle **ONLY**.

**NOTE:** Make sure there is power at the receptacle.

#### IMPORTANT PRECAUTIONS

Do not store combustible materials within 48" of the Insert. Operate this Insert with the door closed only.

**CAUTION:** This Insert is designed to burn wood only. DO NOT burn coal. Open doors slowly to allow gasses to escape up the chimney. DO NOT burn garbage. Never use gasoline, lantern fuel, kerosene, engine oil, charcoal lighter fluid or similar fluids to start or freshen up a fire. Keep all such liquids well away from the Insert while in use.

DO NOT burn salt water drift wood as it will corrode the heater.

For your protection install a smoke alarm near your Insert.

If your house is well insulated and a furnace fan is running, smoke from the stove may be drawn into the room. Slightly open a window or door to solve this problem.

**CAUTION:** NEVER start a fire with volatile liquids such as gasoline or lighter fluid. Never leave aerosol containers or any flammable liquids on the cooking surface or near the fireplace.

### COMBUSTION AIR CONTROLABILITY

If the combustion air control has little effect on dampering the fire, probably the reason for it is that the chimney is higher than 20 feet or that it has excess draft. (Normal chimney draft should be  $-.05$ ).

Some symptoms of excessive draft are:

1. Wood burning too rapidly
2. No heat output from unit
3. No control of fire
4. Firebox starting to warp

Solutions to excessive chimney draft are:

Remove the Insert. Close the fireplace damper up to two thirds and lock in place.

An easy way to test for excess chimney draft is to reduce the top chimney opening.

Place a steel plate over 2/3's of the chimney opening. When the door of the Insert is opened, no smoke should spill into the room but neither should smoke escape up the chimney top until proper draft is established.

Consult your dealer for a permanent remedy.

### FIRING YOUR INSERT

**NOTE:** Build small fires at first to allow the paint and brick to cure. An odour may be noticed during this curing process but will disappear quickly.

**CAUTION:** Use control tool (part # 14155) to operate damper controls.

1. Open the air intake control by sliding the control knob located at the top right of the door fully to the right. This allows the maximum amount of air into the combustion chamber. As the air intake control knob is pushed to the left, less air is allowed into the firebox and the fire will burn slower.

**NOTE:** When the air intake control is fully open air sweeps down across the glass creating a wash of air in front of the glass and blocks smoke from clouding it. As the air intake is closed, less air washes the glass and the glass will become smokey. (See Figure 9)

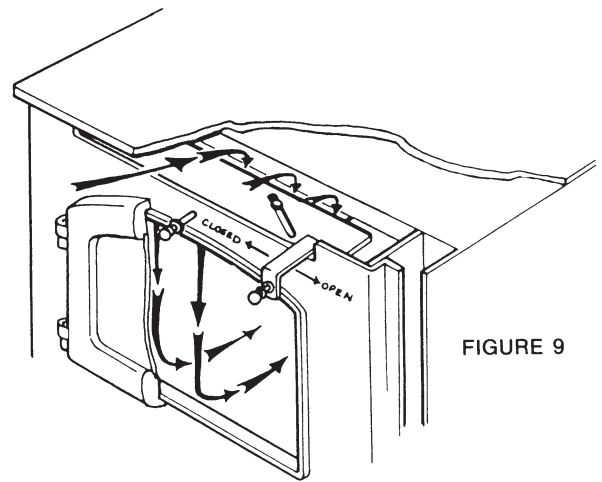


FIGURE 9

2. Open the bypass damper (pull) located over the center of the door. When the bypass damper is open gasses will be exhausted directly up the flue. (See Figure 10)

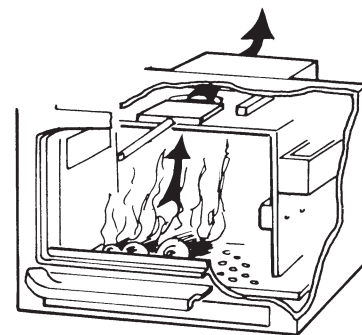


FIGURE 10

When the bypass damper is closed hot gasses will be funnelled through the combustor chambers "igniting" the combustors if installed. Even without combustors installed, hot gasses will give additional heat when funnelled through the combustor chambers. (See Figure 11)

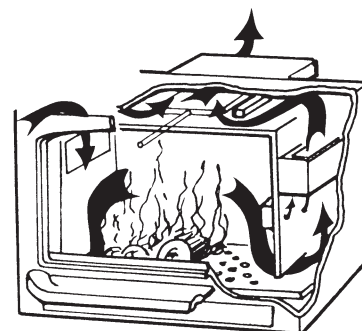


FIGURE 11

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**NOTE:** Make sure ashpan, combustor coverplate and grates are in place. Build fire directly on grates.

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3. Crumple about six sheets of newspaper on the grates, cover with kindling and light. When fire is burning brightly, add larger chunks of hardwood. Close door but open ash pan a crack until fire is well established and the chimney is warm (about half an hour). Push damper closed with the tool provided and make sure ash pan door is closed tightly.

Adjust combustion damper for desired rate of burn and blower for desired heat output.

If the fire becomes sluggish or begins to die out, open the bypass damper above door for about five minutes or until the fire becomes re-established.

**CAUTION: OPEN BYPASS BEFORE OPENING DOOR. CLOSE BYPASS DAMPER AFTER FIRING. OPEN ONLY WHEN REFUELLING.**

**NOTE:** If the fire smokes when first lit, it may be because of a downdraft or cool air in the chimney. Prime the chimney by opening the bypass damper, light a torch of rolled newspaper and place into Insert flue until chimney begins to draw. Close ash pan door immediately if smoke escapes from air slot above door.

Small intense fires are preferable to large smoldering ones because less creosote will be formed.

If any part becomes defective be sure to replace with original component parts available through your dealer or Elmira Stove Works.

## BLOWER

1. The blower is equipped with perma lube ball bearings and requires no lubrication. Should you hear a noise or notice a drop in air flow, unplug the power cord, remove the control knob and screen.

2. Unscrew the self tapping bolts holding the blower in place and remove blower.

3. Carefully check fan blades for foreign materials (eg. grease, dust, etc. or loose screws on housing).

4. Clean fan blades with a small paintbrush and reinstall.

**NOTE:** It is wise to remove the blower annually for cleaning.

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## OPERATION SERVICE AND MAINTENANCE

### YOUR CHIMNEY

Before installing your Insert, check to be sure the chimney is lined with a clay flue tile, is clean, and in good repair.

The chimney is the most important element of safe, efficient, stove operation.

If the chimney does not have a clay liner, consult your dealer about installation of a stainless steel or refractory liner directly to the Insert.

Remember . . . A stove itself has no draft. A draft must be supplied by the chimney. If your stove continually smokes when lit, the chimney should be checked. If necessary, it may have to be repaired, extended or replaced. Check masonry chimneys for interior obstructions. Seal the cleanout door located near the bottom of the chimney.

If the chimney is in need of repointing between the bricks, air will enter the chimney through the mortar joints cooling the chimney, creating creosote problems and possibly a smoke filled room. If you are not sure about the condition of your chimney, consult your dealer or a qualified mason.

Some older masonry chimneys have flue areas of 8" x 12", 12" x 12", or as large as 16" x 16", and are probably unlined. These chimneys would take more than two hours to warm up and would probably smoke frequently. The solution would be to reduce the flue area by relining it or replace the chimney.

Trees, hills, overhangs or other houses near your chimney can cause a downdraft resulting in a smoke filled room. Regulations specify the chimney must extend 3' above the roof and 2' above anything within a 10' radius of the top of the chimney.

If you have any questions about the suitability of your chimney consult a professional mason, chimney sweep or your dealer.

## CHIMNEY CLEANING

A dirty chimney will result in sluggish performance from the stove, a smoking stove and possibly a chimney fire.

Check your chimney regularly for creosote formation and clean as necessary.

It is sound practice to consult a reputable chimney sweep and establish a regular maintenance schedule.

**NOTE:** When sweeping the chimney with a direct flue connection installed it is important the connecting plate be cleaned by reaching up into the flue through the Insert with a scraper or rake device or removing the Insert and plate and reinstalling it.

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## DISPOSAL OF ASHES

Ashes should be removed frequently enough to avoid spillage from the ashpan. When removing the ashpan from the Insert place it on a noncombustible surface. Place the ashpan cover on top of ashpan for final removal. Dispose of ashes into a steel container and cover with a tight fitting lid. Be sure this container does not contain or have other combustible refuse added to it.

## GLASS MAINTENANCE

This stove is equipped with Corning Pyro Ceram 5 M.M. glass which can only be broken by impact or misuse.

Do not slam stove door or impact the glass. When closing door make sure that logs or other objects do not protrude against the glass.

Never attempt to clean the glass while hot. Clean the glass with a non abrasive glass cleaner available from your dealer. Abrasive cleaners may scratch and cause glass to crack.

Inspect the glass regularly. If you detect a crack or break extinguish the fire immediately and return door to your dealer for a glass replacement before further use.

Do not use substitute materials for glass replacement. Keep fires away from the glass.

## PREVENTIVE MAINTENANCE

### STOVE MAINTENANCE

Check the door gaskets periodically for proper seal. Worn gaskets can cause air leakage into the stove resulting in lost efficiency or wasted fuel. One-half inch door seal material or window gasketing can be purchased from your local wood stove dealer.

To renew the finish on your stove, we recommend the use of Elmira, Thermolux or Forest Hi heat aerosol paint available from your dealer. Before painting, touch up the paint with either fine steel wool or sandpaper. Follow painting directions on the side of the paint can. Do not paint stove when hot.

## DOOR ADJUSTMENT

In case the door may require adjustment; you may loosen the nuts on the hinge pins and adjust to desired fit with a slot screwdriver. Retighten nuts. (See Figure 12)

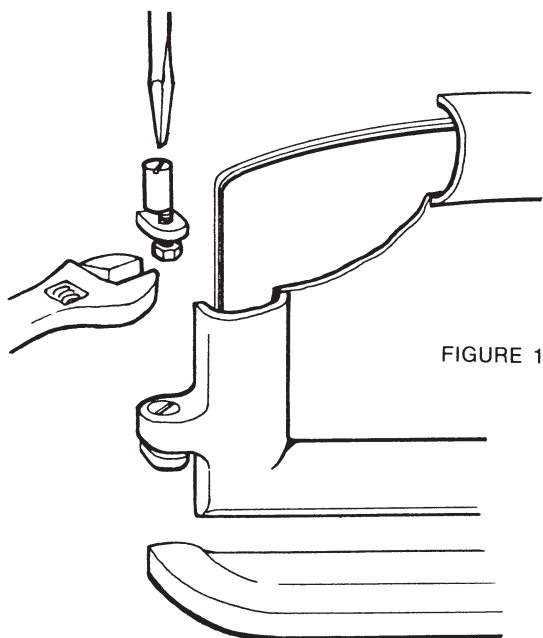


FIGURE 12

## CARE OF THE GOLD PLATED DOOR

The optional Gold Plated door, under normal use will not tarnish. Clean door with windex type liquid glass cleaner and a soft cloth. Do not use polishes or cleaners that contain abrasive agents to clean gold doors as they will mar or scratch the finish.

## YOUR WOOD

Wet unseasoned wood will give you more headaches than warmth. Green wood has too high a moisture content for satisfactory use. For instance, you can waste as much as 40 per cent of the potential heat just to drive the water out of wet wood in the form of steam. Use of the proper wood is your best safeguard against an accumulation of creosote. Select hardwood that has been seasoned at least 6 months, preferably longer. Dry and well seasoned wood will not only minimize the chance of creosote formation but will give you the most efficient fire. Even dry wood contains at least 20 percent moisture by weight, and should be burned hot enough to keep the chimney hot for as long as it takes to dry it out — about one hour. It is a waste of energy to burn unseasoned wood of any kind.

Dead wood lying on the forest floor should be considered wet and requires full seasoning time. Standing wood can be considered to be about 2/3 seasoned. To tell if wood is dry enough to burn, check the ends of the logs. If there are cracks radiating in all directions from the center, it's dry. Also bark separation is a good indication. In addition, pick several small to medium sized pieces and rap them together. If they are dry, they will sound loud and clear — like a baseball bat. A dull thud means they are still wet. If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured. Splitting of wood before it is stored reduces drying time. Wood should be stacked so that both ends of each piece are exposed to air if space is available, since more drying occurs through the cut ends than through the sides. This is true even with wood that has been split. Cover your wood pile with a tarp, plastic, tarpaper, sheets of scrap plywood, etc. Do not extend any cover down the sides or it will trap in moisture. Use smaller limbs or old shipping pallets to stack your

wood on. This allows air to circulate under the stack and prevent your wood from contacting the ground.

## CREOSOTE

When wood is burned slowly, it produces acids, which combine with available moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the flue lining. As time passes the thickness of the creosote increases and the opening through the flue decreases. This interferes with the draft through the chimney and eventually could lead to chimney fire. A slow burning or smoldering fire should not be maintained for any extended period of time. It is far better to prevent accumulation of creosote by periodically maintaining a briskly burning fire. This can be done with each new load of wood or on a once a day basis. The use of good chemical chimney cleaner can also help reduce the accumulation of creosote. It is usually the continuous burning of a smoldering fire that leads to the accumulation of creosote, resulting in a chimney fire. Creosote usually ignites by exploding. The quick, hot fire, causes a strong draft up the chimney and burns violently. A roaring sound may be produced and sparks will fly from the chimney. A chimney fire can be dangerous because sparks could land on the house roof and start a fire or heat can penetrate through the chimney to surrounding combustibles. It is a sound policy to have your chimney inspected and/or cleaned on a regular basis by a reputable chimney sweep.

## INSERT WARRANTY

MODEL .....

SERIAL .....

YOUR NEW ELMIRA INSERT is warranted by the manufacturer against defects in materials and workmanship for a prorated period of five years. The warranty does not cover glass, paint, gaskets, firebrick, or plated surface.

The blower system is warranted for one year.

Accident, abuse, misuse or shipping damages are excluded from the warranty. If any part of the Insert becomes defective during the period of this warranty, send part or stove, freight prepaid to the address on the cover for repair or replacement.

## TO VALIDATE WARRANTY

Please mail warranty card within ten days of purchase.

Your registration allows us to provide you with up-to-date Insert information available.

The serial number is located on the metal plate behind the left hand screen.