

Wonderfire

Senator / Liberty

INSET LIVE FUEL-EFFECT APPLIANCES

MODELS

NATURAL GAS
9500260

PROPANE
9500261

GB

IE

INSTALLATION INSTRUCTIONS
(Please leave with the User)

These instructions have been written to ensure the proper installation of this fire.
Please read them carefully before attempting to install the fire.

IMPORTANT NOTES

The Gas Safety (Installation & Use) (Amendment) Regulations 1990 require that no person shall carry out any work in relation to a gas fitting unless he is competent to do so. CORGI is the body approved by the Health & Safety Executive to maintain a register of competent Gas Installers.

In addition, installation must be carried out in accordance with the Building Regulations issued by the Department of the Environment and the Building Standards Regulations issued by the Scottish Development Department, and with these instructions.

If the appliance is to be installed using a masonry chimney previously used for solid fuel the chimney must be swept prior to installation.

The minimum height of the chimney or flue must be 3m (10ft) from the hearth to the point of termination of the flue.

The chimney or flue must have any damper or restrictor removed, or permanently secured in the fully open position.

It is recommended that a fireguard complying with BS6539 or BS6778 be fitted for the protection of young children, the elderly, or the infirm.

In accordance with BS5871 Part 2, ventilation is not normally required for this appliance. However, any requirement relating to other appliances which may be in the same room must be taken into consideration.

This appliance is for use on the gas supplied.

Note that certain soft wallcoverings such as vinyl materials may stain when heated.

Must be installed in accordance with the rules in force.

RELATED DOCUMENTS

BS 5440 Part1, 1990
BS 5440 Part 2, 1989
BS 715, 1986
BS 6461 Part 2, 1984

BS 5871 Part 2, 1990
BS 1251, 1987
BS 6461 Part 1, 1984

Removal of the gas control

Remove the burner assembly in accordance with the instructions on Page 16.

Taking care not to damage the ceramic components, invert the burner assembly and disconnect the thermocouple nut from the gas control.

Disconnect the pilot supply pipe at the gas control end. Disconnect the main burner supply pipe at the gas control end. Disconnect the inlet pipe at the gas control end.

Remove the gas control retaining locknut from the control mounting brackets and withdraw the control. Re-assemble in reverse order.

Removal of the main burner injector

Remove the burner assembly in accordance with the instructions on Page 16.

Taking care not to damage the ceramic components, invert the burner assembly and disconnect the main burner supply pipe from the injector end, taking care to support the turning action by retaining the injector position using a suitable spanner on the square end. Unscrew the injector.

Re-assemble in reverse order, ensuring the correct alignment of the injector firing down the centre-line of the venturi.

Assembly of the Firefront/Outer Case

In the event of damage to the Outer Case, the individual castings may be replaced as follows.

Remove the damaged Outer Case as described on Pages 14/15. Dis-assemble the case into the five cast components by removing the nuts holding the assembly. Remove the damaged component, and replace the new one in position.

Carefully replace and tighten the nuts without damaging the painted/enamelled finish by use of undue pressure.

Re-install the Outer Case following the instructions on Page 14/15.

NOTE

Liberty is a one piece casting with only the control door access casting being replaceable as an individual item.

Check the injector and venturi for linting or obstruction. If there is a need to remove the injector, please see Removal of Components.

Check the injector remains aligned correctly to fire centrally into the venturi. Adjust the injector position as required.

Check the smooth operation of the control tap, the integrity of the gas train, and the piezo ignition lead and connections.

Remove any deposits or debris from around the pilot light, and check that the piezo generator is sparking correctly by operating the combined tap and piezo control.

Place the burner assembly to one side taking care not to damage the ceramic components.

Inspect the flue/chimney

Remove the four retaining screws from the appliance sealing flange (Figure 4 Page 5) or alternatively slacken the cable adjuster and remove the cable nipples, if fitted (Figure 5 Page 5).

Carefully slide the appliance out of the fireplace opening, ensuring no damage occurs to the hearth material.

Inspect the general condition of the flue and remove any deposits or debris from the fireplace opening or flueways.

Repair any cracking in the flueway before reassembling. Inspect the condition of the rope seal and also ensure this is correctly positioned to ensure an effective seal. Ensure the rope seal is fully intact before re-fitting.

Re-install the appliance in accordance with the installations instructions contained herein. Care must be taken to ensure the correct appliance sealing and fuel-bed layout.

Commission the fire in accordance with the Installation Instructions. Conduct a gas soundness test, and a flue spillage test to verify the safe operation of the appliance as previously described (Page 14).

Leave these instruction with the User.

REMOVAL OF COMPONENTS

Removal of the A.S.D. (Atmosphere Sensing Device)

Remove the burner assembly in accordance with the instructions on Page 16.

Taking care not to damage the ceramic components, invert the burner assembly and disconnect the thermocouple nut at the gas control.

Disconnect the pilot supply pipe at the A.S.D. end, and carefully withdraw the Assembly.

Disconnect the electrode lead at the A.S.D. end. Remove the two screws holding the pilot burner assembly to the burner tray. The pilot assembly may now be removed. Re-assemble in reverse order.

TECHNICAL SPECIFICATIONS				
Dimensions	Height	Width		Depth
	670mm	635mm		320mm
Opening required	<i>Min</i>	406mm		
	<i>Max</i>	460mm		
	Natural Gas		Propane	
	kW/hr	BThU/hr	kW/hr	BThU/h
Heat Input	<i>Max</i>	6.8	23,200	6.2
	<i>Min</i>	3.2	10,900	3.6
Supply Pressure	(G20) 20 mbar		(G31) 37mbar	
Setting Pressure (cold)				
	Main burner	17.5 mbar (+/-1 mbar)		35.5 mbar (+/-1 mbar)
	<i>Maximum</i>			
Injectors				
	Main burner	Cat 82-440		Cat 92-190
Clearances				
	To combustible side panels		100mm (4")	
	To combustible shelves		200mm (8")	
NOTE-	Shelves over 150mm (6") deep will require an additional 25mm (1") in clearance, for every additional 25mm (1") depth over 150mm.			

Location

This appliance is not suitable for installation in a room or internal space containing a bath or shower, or in a private garage.

This appliance is suitable for the following:-

- 1 Minimum flue height of 3m (10ft)
- 2 A masonry chimney with a minimum diameter of 175mm (7") free from any obstruction, and with any damper or restrictor plate in the chimney removed or secured. A masonry chimney having a correctly installed flexible flue liner to BS715 and with a minimum diameter of 125mm (5") is also acceptable. Check that the relevant flat surface area is available - see figures below. Note that there may be a need to locally remove the fireplace materials to ensure the outer case can easily be installed.

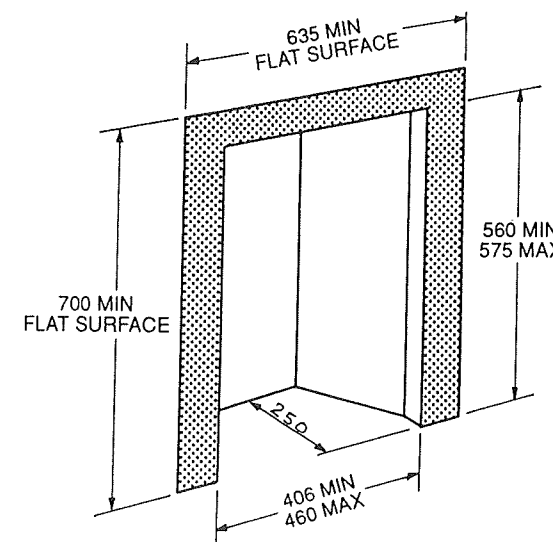


Fig 1A. With chairbrick removed

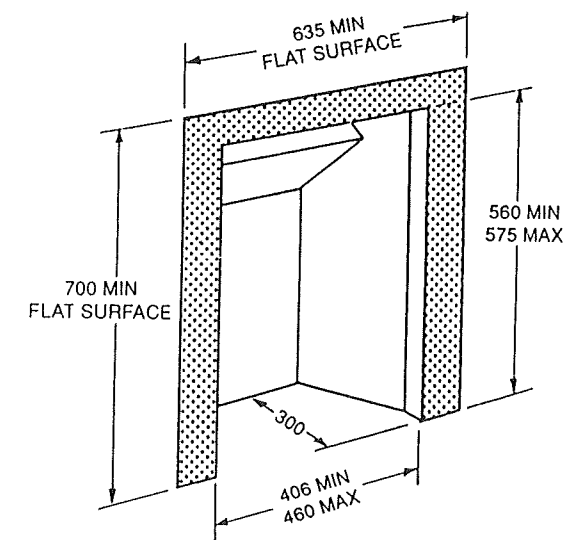


Fig 1B. With chairbrick in place

3 Firebrick (chairbrick) removal will usually be required unless the dimensional requirements in Figure 1 can be met.

4 A sheet metal flue system conforming with BS4543 or BS715, the flue diameter being a minimum of 5" (see Figure 2 below) with a minimum internal depth of 250mm. Incombustible mineral wool insulation of not less than 50mm thickness must be applied to the top surface of the system firebox, as shown in Figure 2 below.

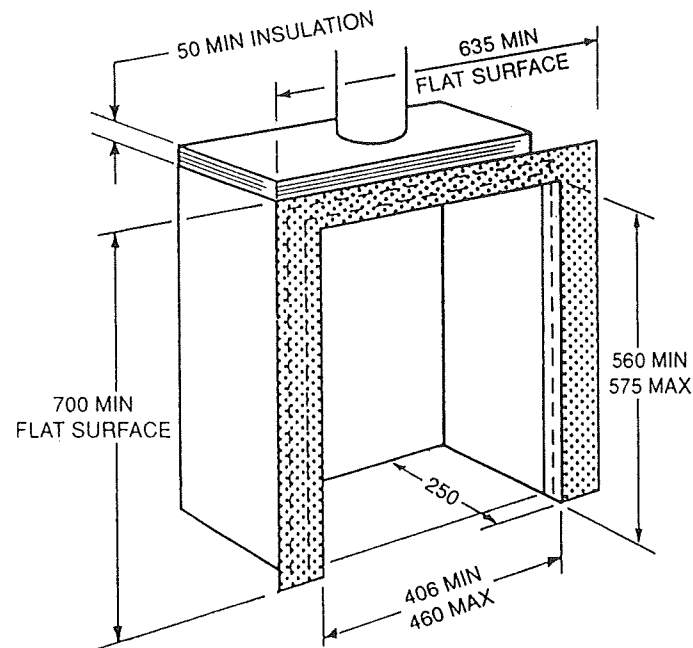


Figure 2 - Selkirk recessed factory-made flue system (Part No 04905) & 5" flue arrangement

Hearth requirements

The appliance must be mounted on a non-combustible hearth in accordance with Figure 3 below, being a minimum thickness of 12.5mm (1/2"). The upper surface of the hearth must be 50mm (2") above floor level, or alternatively, be provided with an upstanding edge of 50mm in height.

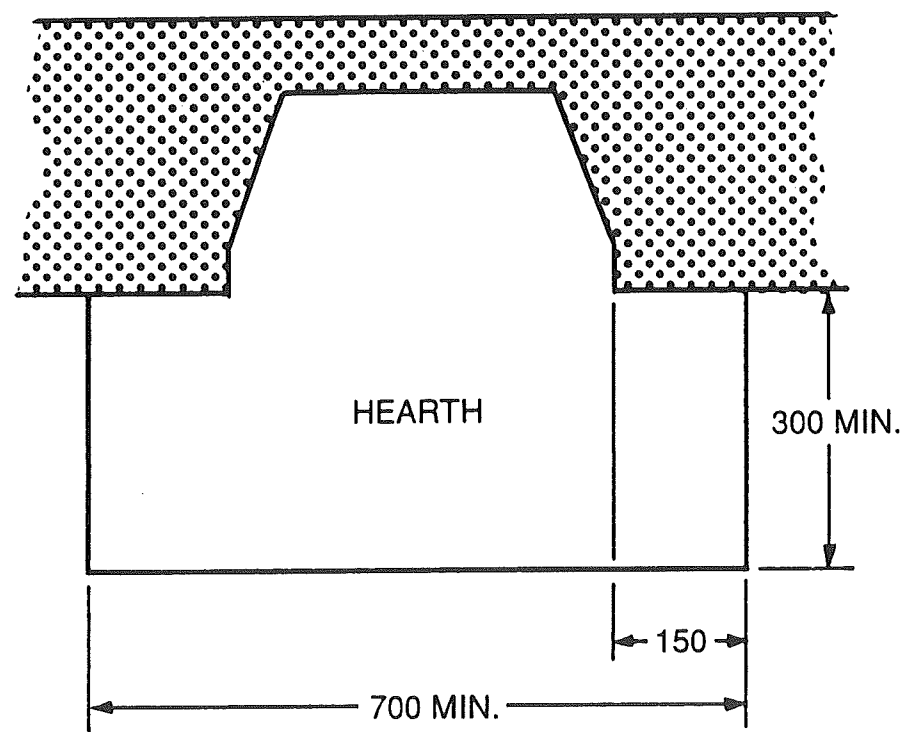


Figure 3 - Hearth dimensions

CONSUMER BRIEFING

Once the appliance has been fully installed and commissioned, instruct the User on its correct operation.

The cleaning procedures recommended in the Users Instructions should be explained in detail, and coal placement explained. The consumer must be warned not to vary the coal layout, and of the dangers of adding extra coals, or of operating the appliance without the glass panel in place.

Explain how the firefront may be removed and refitted, and suggest that the elderly or infirm request assistance in the event the firefront requires removal.

Inform the consumer that any servicing is to be carried out by a CORGI installer. These Instructions should be left with the consumer.

Explain that the appliance is fitted with an A.S.D. (Atmosphere Sensing Device). If the appliance closes down after a period of operation for no apparent reason, the consumer should be informed to stop using the appliance, until the installation and appliance have been thoroughly checked.

SERVICING INSTRUCTIONS

Glass Panel

Occasional cleaning of the inside of the glass panel may be required between services. Instructions for this procedure are contained in the Users Instructions.

Regular Servicing

Allow the appliance to cool completely if it has been operating. Isolate the gas supply to the appliance prior to commencing work.

HANDLE ALL CERAMIC FUEL-BED COMPONENTS TENDERLY

Senator uses a fuel-bed assembly which has been proven in more than 100,000 applications throughout the world. All the ceramic parts are safe to handle, and are designed to be easily replaced by the installer, serviceman, or consumer.

The fourteen (14) individual dress coals (Figure 15 Page 11) should be removed, noting their approximate positions to facilitate replacement, and then placed on a piece of newspaper. Any deposits can be carefully removed from the surface of the coals using a soft brush (such as a paint brush).

The two parts of the porcelain ceramic front coals (Figure 12 Page 9) and the moulded ceramic coal matrix (Figure 12 Page 9) should now be removed from the burner surface, noting their positions and location to simplify replacement. They may be cleaned with a soft brush.

The burner surface, three flue outlet ports and firebox surfaces may be CAREFULLY cleaned by the use of a vacuum-cleaner USING ONLY A SOFT BRUSH ATTACHMENT. Remove only loose particles, and ensure that the burner surface, burner ports, and moulded shapes are not in any way damaged by the cleaning action.

Inspection of the burner

Disconnect the gas supply from the gas inlet fitting at the front of the burner assembly. (Figure 10 Page 8).

Remove the two burner assembly retaining screws, and slide the assembly out of the firebox, taking care not to damage any ceramic component. Any deposits or debris should be carefully removed with a SOFT BRUSH.

The burner slots should be inspected to ensure they are clear of debris, and any blockages carefully removed. On no account should tools be used which may enlarge or damage the burner slots.

The burner surface should be inspected for damage. Consult the manufacturer for advice if in any doubt if damage is present. Any surface crazing of the ceramic surface of the burner, matrix, and fuel components is usual and is no cause for concern.

Assistance will also help avoid damage to the firefront component itself, the painted or enameled finish, the fire surround and fireplace components, and will avoid possible injury to yourself. You may wish to utilise the cardboard packaging again, to avoid damage to the hearth or firefront component.

Note the the firefront has two lugs cast into the rear of the mantle shelf, and two steel lugs attached to the rear of each vertical column which locate into the slots in the sheet metal. Carefully lift the firefront into a position square to the sealing flange of the appliance, some 1" (25mm) above and away from the four location slots formed in the sheet metal of the chassis sealing frame (Figure 22 below).

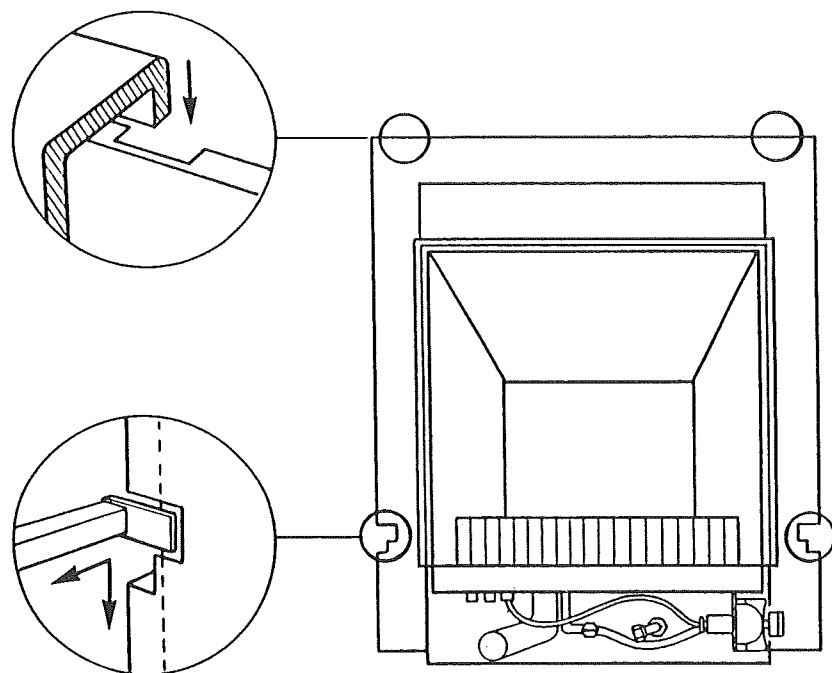


Figure 22 - Install the firefront into the slots provided

Holding the firefront a little above the top surface of the chassis sealing flange, locate the fixing lugs into the slots provided in the sealing flange, push carefully towards the fireplace, and GENTLY lower the component onto the hearth ensuring that no damage occurs to the finish of the facia, or to the hearth material itself.

All four fixing lugs should locate into the slots, and the firefront should sit squarely on the hearth, locating against the vertical surface of the fireplace.

Note: If the gas supply is across the hearth, ensure that the supply pipe is located through the purpose-provided slot in the firefront casting.(Figure 23 below). The installation is now complete, please brief the consumer.

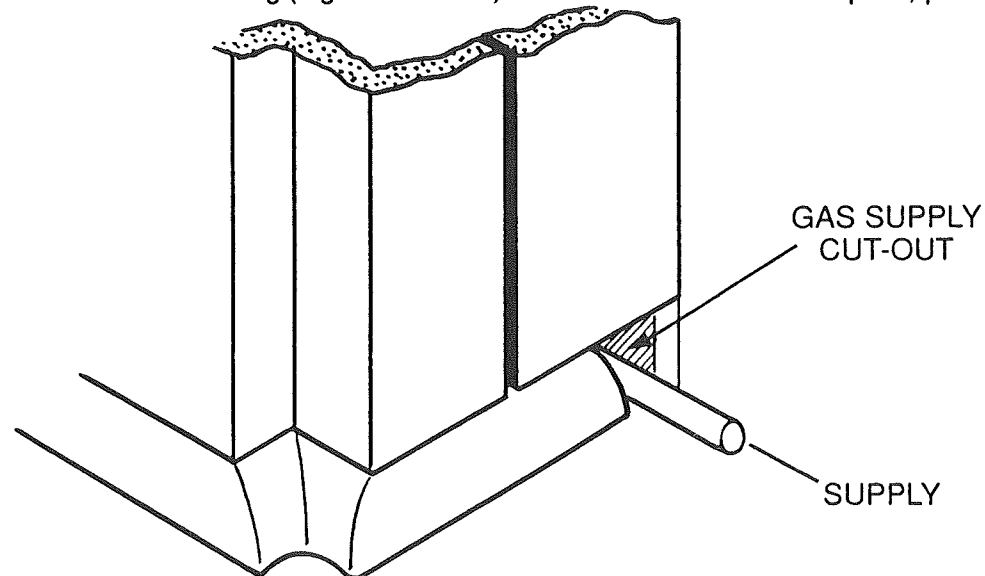


Figure 23 - Ensuring an exposed gas supply enters correctly

On no account must the appliance stand on combustible materials or carpets, or be fitted to a combustible wall.

Any underfloor air supply in the fire opening must be sealed with a non-combustible material to prevent draughts.

Fire surround

This appliance may be installed with a surround with a minimum approved temperature rating of 150°C if fitted in accordance with these instructions.

The fire surround must be sealed to the wall and a suitable fireplace opening should be constructed which will provide a sealed joint from the opening to the flueway with all joints being smooth and fully sealed. See previous Figures for dimensions.

The surface area of the fireplace which is in contact with the sealing flange of the appliance must be clean, smooth and flat, in order to provide a proper seal between the fireplace and the appliance. If necessary, the faces should be made good to ensure the sealing process.

The fireplace floor (internal hearth) should be reasonably flat, and made of non-combustible materials.

CONTENTS OF THE PACKAGES

Box 1 of 2

1 no. Cast-iron firefront (or outer-case), fully assembled, with gas control access door.

Box 2 of 2

1 no. Inset Live Fuel-Effect heat engine comprising fully assembled firebox, heat exchanger, glass panel, flame sensing device, ignition system, and ceramic burner system.

1 no. Bag containing 14 individual shaped dress coals

2 no. Porcelain moulded front coal-pieces with pilot-viewing cut-out

1 no. Matrix

4 no. Fibre wall plugs

4 no. Fixing screws

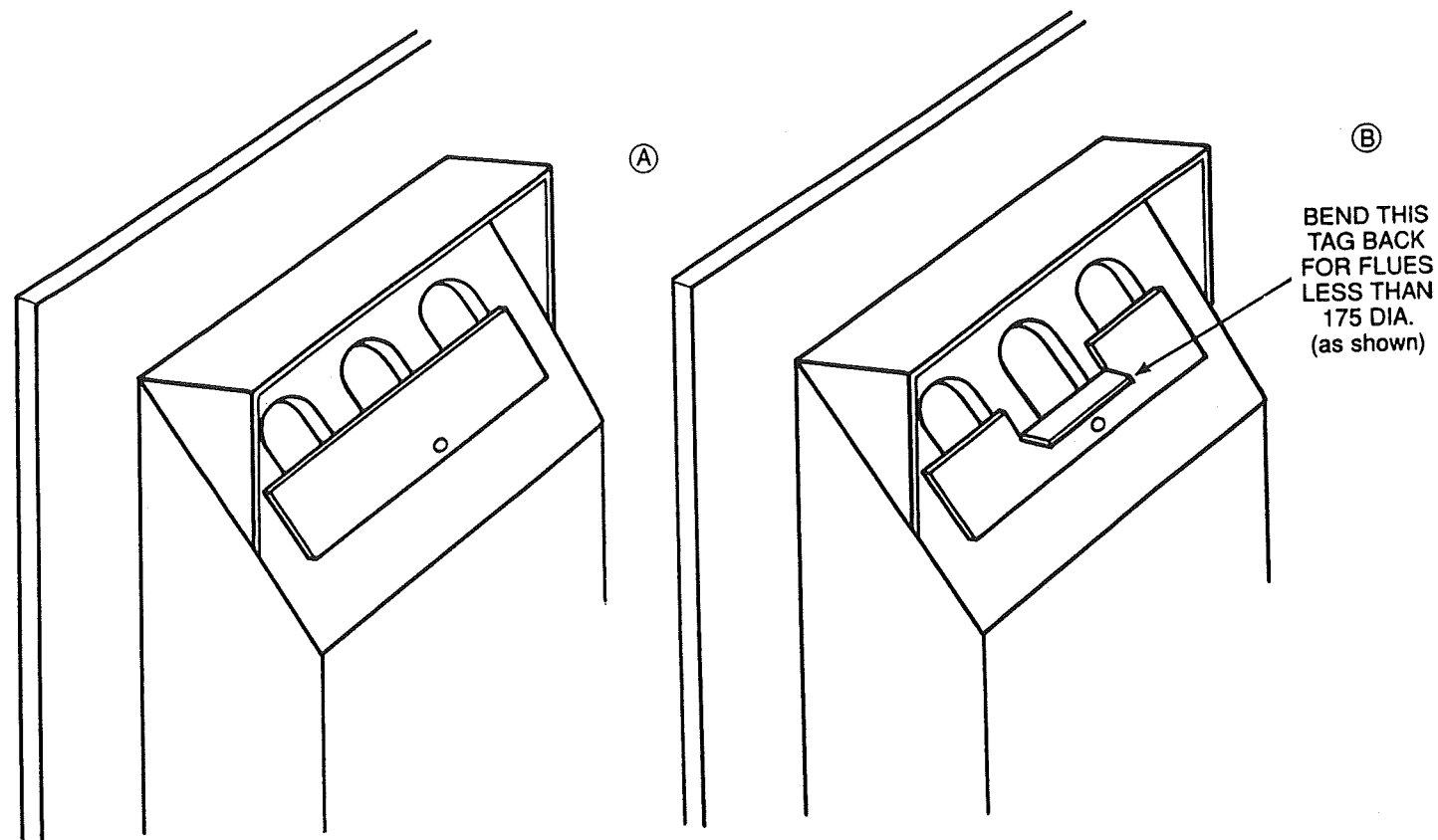
4 no. Eyebolts

2 no. Fixing cables

2 no. Adjusters

1 no. Users Instructions

Remove the contents carefully. Note the weight of each part of the appliance stated on the outside of each box. When handling take care not to damage any ceramic parts, the enameled or other any other cast-iron components, the glass panel, or the porcelain front coals.



Figures 7 & 8 - Restrictor position "A" for 175mm flues, Restrictor position "B" for 125mm flues

Note that the correct positioning of this restrictor is important (Figures 7 & 8 above). Failure to position the restrictor correctly could cause spillage, or reduce the efficiency of the appliance. Check that the sealing rope is correctly fitted onto the rope retaining tags at the rear of the appliance sealing flange.

Take the cardboard internal packaging mentioned earlier, and place it flat on the hearth to protect against damage. Place the appliance on the cardboard where marked, and offer it up to the fireplace opening - sliding the appliance and cardboard together. Carefully lifting the appliance slightly, remove the cardboard. Ensure that the sealing rope will effectively seal against the vertical plane of the fireplace.

If a concealed gas pipe fixing is to be used, offer the gas pipe through the appropriate grommet.

Screw retaining method

Carefully manoeuvre the appliance into the fireplace opening, remove all of the cardboard pad, and fix through the appliance sealing flange to the vertical plane of the fireplace, using the screws supplied. Take care to ensure the appliance is secured evenly in order to provide an effective seal. Do not overtighten, as this may cause damage to certain fireplace materials, such as marble or conglomerates.

Cable retention method

Assemble the cable through the eyelets and fit adjusters in accordance with Figure 9 overleaf. With the adjusters screwed-in fully, carefully manoeuvre the appliance into the fireplace opening. Take up any slack on the cables, and tighten cable nipples into position.

Tighten the appliance into the fireplace opening by turning the adjuster nuts to compress the sealing rope sufficiently to provide an effective seal. Do not overtighten.

If the sealing rope does not fully compress, then the adjusters and nipples may require to be slackened, and the cable pulled up tighter before retightening the adjuster. Do not cut off any excess cable, instead coil up the cable against the flange, as it may be required for servicing purposes.

OPERATION OF THE FIRE

Before installing the cast-iron firefront (outer case) please observe the Important Notes on Page 1 of the Users Instructions, before attempting to operate this appliance.

Read these instructions thoroughly before operating the fire for the first time. Ensure the gas supply is purged of air before attempting to light the fire for the first time.

The Gas Control

This fire is controlled by a four-position gas control mounted on the lower right-hand side of the appliance, behind the flush-fitting access door. In addition to the OFF position, there is a PILOT LIGHT position, and two HEAT CONTROL positions (see Figure 17 below).

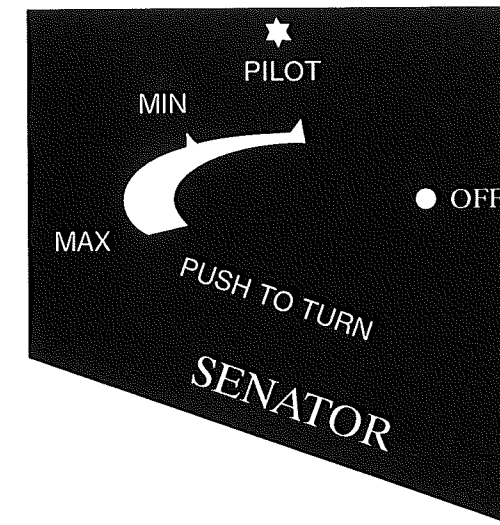


Figure 17 - Ignition and heat control positions

Ignition of the fire is by piezo which ignites the pilot flame. The main burner is lit from this pilot.

Lighting the Pilot

Ensure that the gas supply is on. Turn the gas control knob to the OFF position. Depress the control knob and turn anticlockwise until the PILOT position is reached. Ignite the pilot flame. Keep the knob depressed.

Observe the pilot flame is alight by viewing the lower edge of the fuel-bed on the left-hand side of the fire, through the cast iron fretwork above the fender. (Figure 18 below).

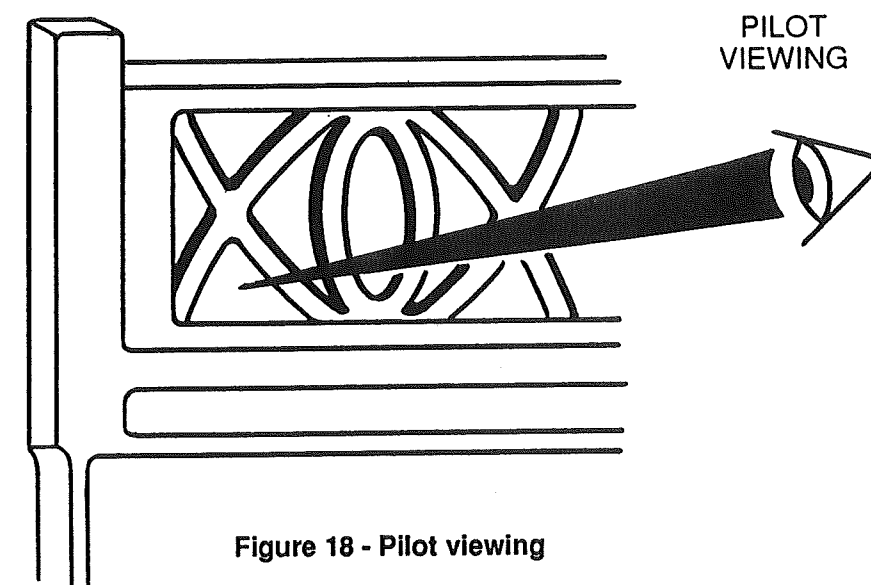


Figure 18 - Pilot viewing

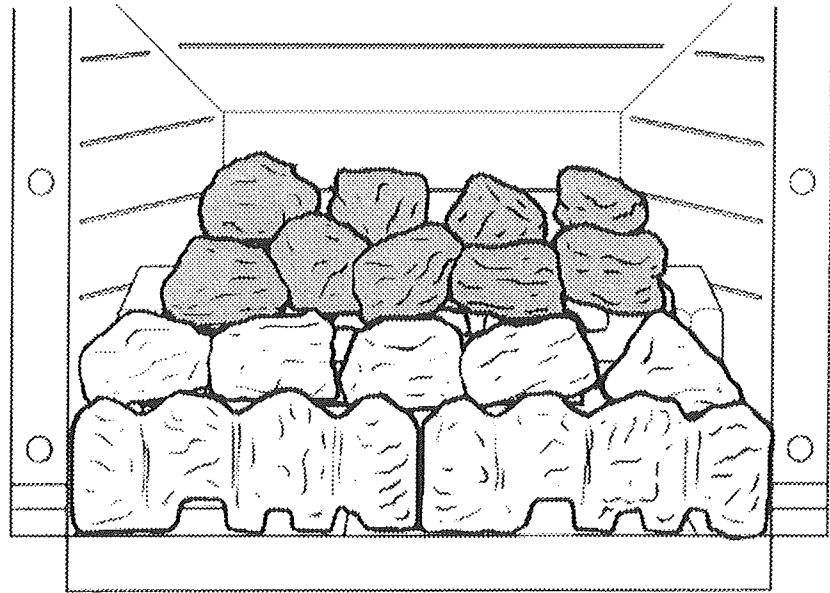


Figure 15 - Placing the remaining dress coals in two rows of five (5) and four (4)

INSTALLING THE GLASS PANEL

Take care when handling the glass panel

Take the glass frame assembly and offer up centrally to the fabricated steel firebox. Insert the lower corners of the frame assembly into the U channel locations on the firebox. Line up the upper location points and with the thumb screws provided tighten the upper section of the glass assembly onto the firebox. To ensure a tight seal is achieved, the use of a flat headed screwdriver will be required in order to bed down a new seal.

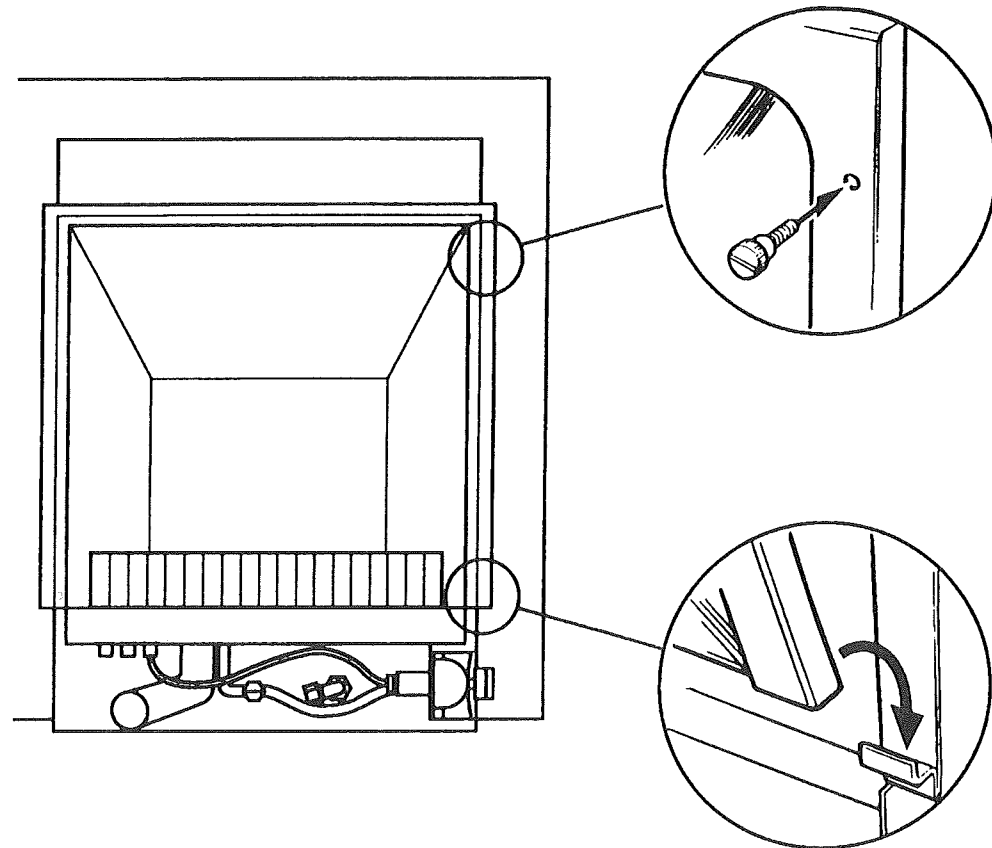


Figure 16 - The glass retaining clips

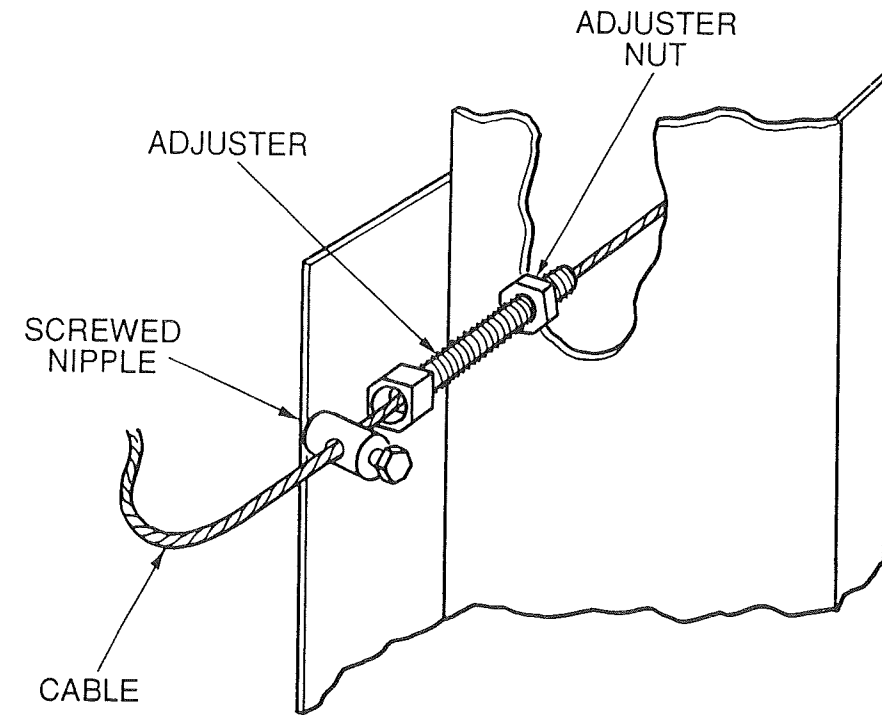


Figure 9 - Cable adjustment

GAS SUPPLY CONNECTION

Note: Before making the final connection to the gas inlet fitting, purge the supply of all air and debris.

Concealed gas connection

Replace the burner assembly into position in the firebox, without refitting the retaining screws at this stage. Cut and shape the gas supply pipe to suit the chosen direction of entry and the gas inlet fitting position. Note that the inlet fitting elbow can be loosened and swivelled to allow for left- or right-hand gas connection. See Figure 10, below. Refit and tighten the burner assembly retaining screws.

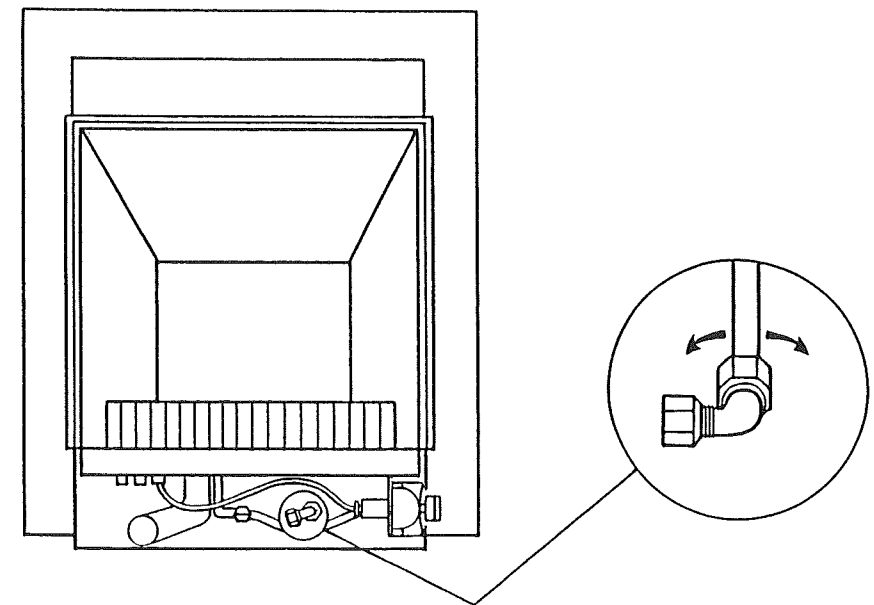


Figure 10 - Left or Right-hand connection

Exposed gas connection

Replace the burner assembly into position in the firebox, without refitting the retaining screws at this stage. Using 8mm diameter rigid or semi-rigid pipe, run the pipe from the gas inlet fitting to a supply restrictor elbow or similar adjacent to the fireplace. Figure 11 (overleaf) shows alternative supply routes for left or right-hand connection.

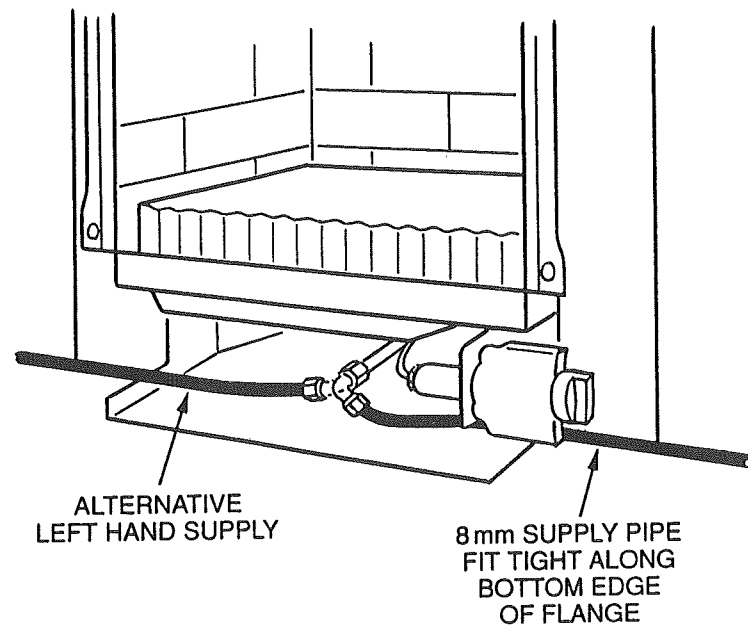


Figure 11 - LH or RH connection of exposed gas supply

Note that the pipe must exit the appliance through the slot in the outer case column, or beneath the fender, and should be routed accordingly. Refit and tighten the burner assembly retaining screws. Note: ensure the control knob is centrally located within the data badge plate.

Gas soundness check

Turn on the gas supply and conduct a gas soundness test.

ASSEMBLY OF THE FUEL-BED

HANDLE ALL CERAMIC FUEL-BED PARTS TENDERLY

Senator uses a fuel-bed assembly which has been proven in more than 100,000 applications throughout the world. All the ceramic parts are safe to handle, and are designed to be easily replaced by the installer, service engineer, or the consumer.

This fire uses a pair of hard ceramic (porcelain) moulded front coals (Figure 12 below) which should be handled with care. Viewing from the front there is a cut-out for pilot viewing.

Each piece should be placed into its correct position in turn, with the 'coal' shapes facing the installer, locating the two retaining lugs into the rectangular slots in the front edge of the burner as shown in Figure 12 below. Gently push downwards until the coal pieces are located securely, and the slotted area on their lower surface touches the burner base.

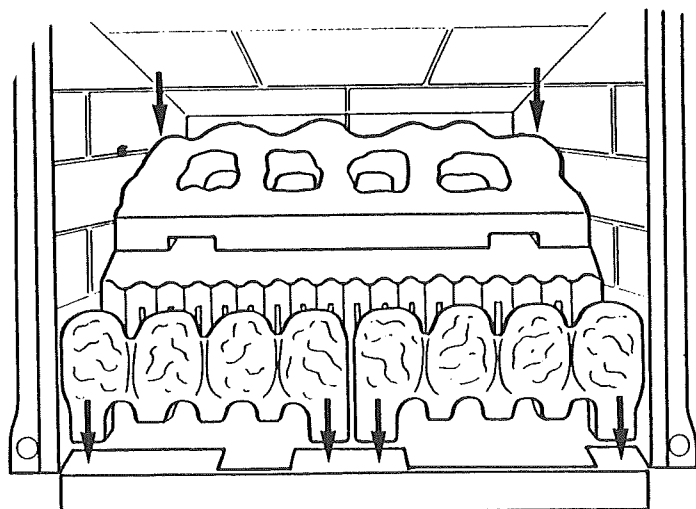


Figure 12 - Placing the front coal and moulded matrix.
The matrix must be located fully against the rear of the firebox

Place the moulded coal matrix (Figure 12 previous page) on the upper surface of the burner and locate it fully against the rear of the firebox in a central location.

Take five (5) dress coals from the bag of fourteen (14), placing them so that the most realistic surfaces may be seen from the front of the fire, and ensuring they bridge the space between the moulded front coal pieces and the front edge of the matrix, as shown in Figures 13 & 14 below.

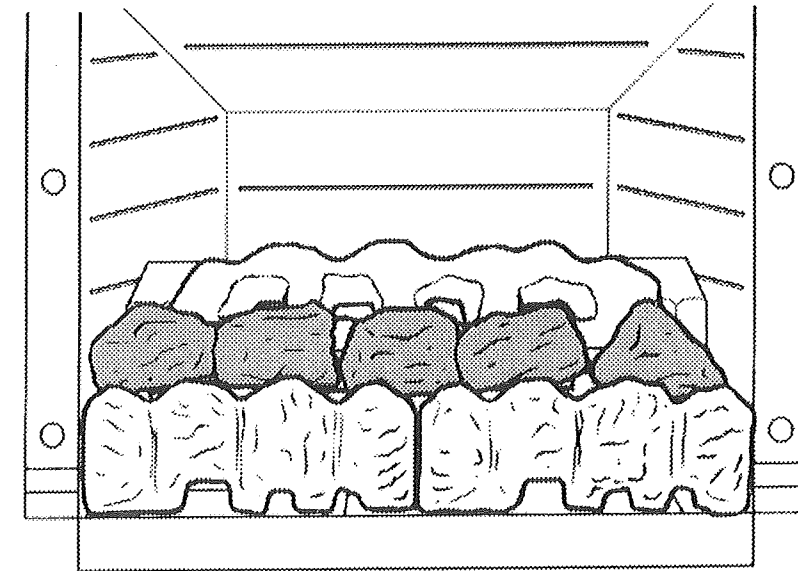


Figure 13 - Placing the first five dress coals

A random, realistic, effect may be made as it is not necessary that the shapes are all positioned in the same manner, although the coals should be generally equally spaced for the best flame effect.

Take care not to allow any part of the five dress coals to locate between the rear of the front coal pieces and the vertical serrated surface at the front of the burner. The correct position is shown in Figure 14 below.

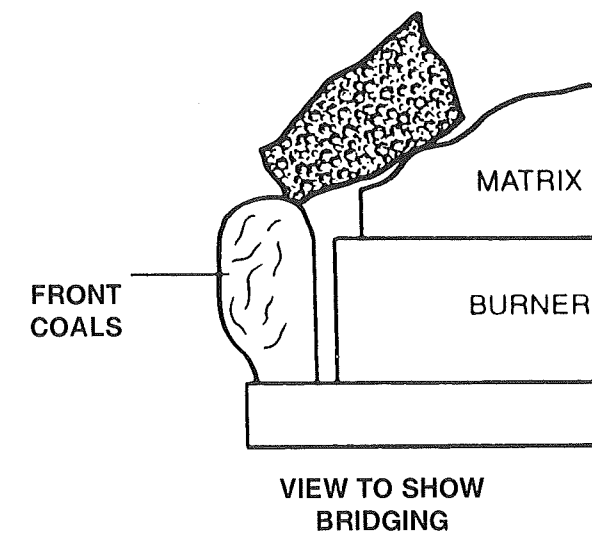


Figure 14 - Bridging the front coals and matrix with 6 dress coals

Place a further row of five (5) coals on the matrix in a random fashion above the first six coals previously placed, as shown in Figure 15 overleaf. Then place the remaining four (4) coals in a row on the surface of the matrix above the second row of coals, leaving a space between these two rows to allow the best flame effect. Ensure a generally even spacing between all the coals for the best effect.