

SUPA 500

Coal Effect Gas Fires

Installation and Servicing Instructions

All Instructions to be handed to the user for safekeeping

Revision C 12/6/96

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1.0 IMPORTANT NOTES

This fire is an Inset Live Fuel Effect Gas Fire with additional convected warmth designed to work on Natural Gas. For use in G.B and I.E only.

It is the requirements of the law that ALL Appliances & Fittings using gas are installed by a Competent person (such as one having CORGI registration) and in accordance with the Gas Safety (Installation & Use) Regulations of 1994 (as amended), the relevant British Standard installation specifications, Codes of Practice, and in accordance with the Manufacturer's Instructions. The Installation shall also be carried out in accordance with the various recommendations contained in the following Regulations:

- 1)The Building Regulations issued by the Department of The Environment and the Building Standards (Scotland) (Consolidation) Regulations issued by the Scottish Development Department.
- 2)BS5871 part 2
- 3)BS5440 part 1
- 4)BS8303
- 5)BS6891
- 6)BS6461 parts 1&2
- 7)Relevant rules in force in I.E

Failure to comply with these Regulations could lead to Prosecution and deem the warranty invalid.

THIS APPLIANCE IS FREE OF ANY ASBESTOS MATERIALS.

OVERALL DIMENSIONS

HEIGHT =590 mm

WIDTH =580 mm

DEPTH =255 mm

2.0 Appliance Data

See badge on appliance for current data.

Gas Group	G20 (NATURAL) CAT I2H
Electric - Piezo spark ignition	
Inlet Pressure	20 mbar
Nom. energy input (Gross)	8.75 kW
Min. energy input (Gross)	3.5 kW
SETTING PRESSURE +/- 0.75 mbar	16.1 mbar COLD
Main Burner Injector	Stereo size 95
Inlet connection 8mm compression	

Above rates achieved with the appliance fitted into a conventional builders opening.

This appliance is for use only with the gas type and at the pressure indicated on the appliance data badge.

3.0 GENERAL INSTALLATION REQUIREMENTS

This appliance must not be installed in a room containing a bath or shower or where steam may be present. The fire has been designed to fit into a Builders opening.

The flue must have an effective height of no less than 3 metres, measured from the base of the hearth to the top of the flue. Any flue damper plates or restrictors shall be removed and no restrictor plate shall be fitted. Where removal is not practical, the damper / restrictor must be fixed in the fully open position.

A Natural Draught Flue system is required and unless new, the flue or chimney should be swept prior to installation. The flue must be checked prior to installation by using a smoke pellet (or similar) to ensure proper draw and that leakage is not evident at any joints. Repair and re-test as necessary before appliance is installed.

It is possible to use this appliance with a 'Lightweight' surround and back panel set providing the set has a heat rating of 150 C minimum.

The flue must only supply the one appliance (e.g. not shared with a gas back boiler). There should be no other openings in the fireplace or flue except the one in which the appliance is installed and the one to allow dispersal of the flue gases to the outside air.

3.1 SITE REQUIREMENTS

The fire opening should be inspected and repairs made where necessary. The opening should be 510 to 540mm wide and 560 to 570mm high. For overall depth see Fig 2., and the notes on dimension "X". Any combustible side walls must be 500mm from the radiant heat source.

This appliance requires a **Natural Draught Flue system** which may be one of the following:

- 1) 225mm (9in) x 225mm (9in) brick or stone.
- 2) 175mm (7in) minimum diameter lined brick or stone.

There should be no other openings in the fireplace or flue other than the catchment opening and the flue terminal to allow the dispersion of flue gasses.

This appliance must only be installed on to a non-combustible wall or surface with a flat area 30mm wide minimum required around face of opening onto which the frame of the appliance can be sealed, see fig 3:

This appliances requires a hearth with a non combustibile top surface at least 12mm thick. The top surface should be 50mm above the surrounding floor level or be surrounded by a fixed fender or raised edge 50mm high, see Fig 1.

Any existing under grate draft device must be sealed off.

Fig. 1

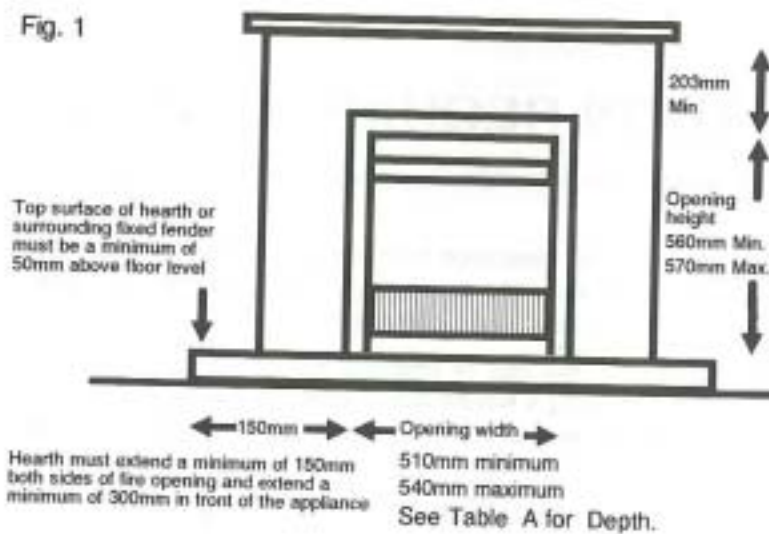
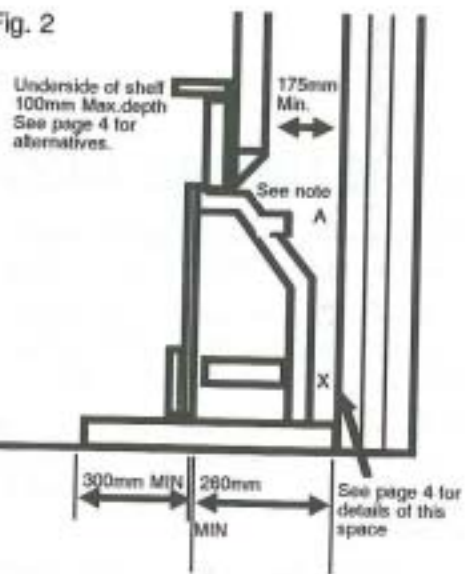


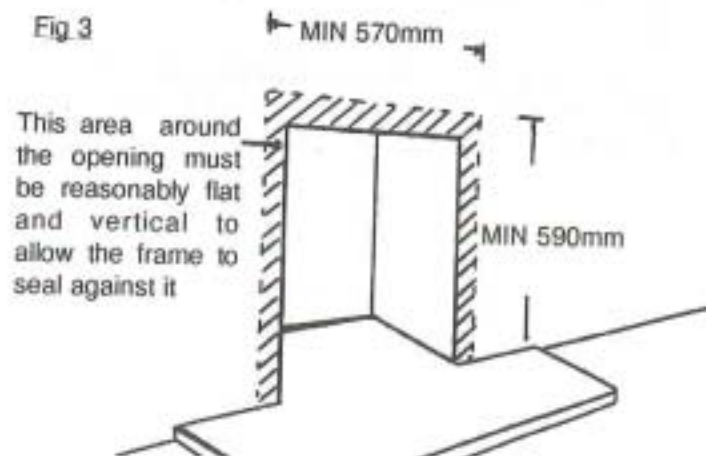
Fig. 2



NOTE A.

To enable the products of combustion to be cleared properly up the flue the spigot on the back of the appliance must have a minimum clearance of 50mm between it and the back wall of the fire opening or any other obstruction. The area immediately above the spigot must form a smooth path for the products of combustion to reach the flue.

Fig. 3



This appliance is suitable for use with a non combustible fireplace set (Min 150 C rating) so long as it is correctly sealed to the wall.

A wooden shelf may be fitted above the fire so as it complies with the dimensions of those given below:

MAX depth of shelf	Minimum distance from inside edge of fire frame to underside of shelf
100mm (4in)	203mm (8in)
150mm (6in)	305mm (12in)
203mm (8in)	356mm (14in)

A non combustible shelf may be fitted to within 10mm of the top edge of the fire frame.

Combustible material (such as wood) may be fitted to within 100mm (4in) of either side of the frame of the box so long as it projects no further forward than 100mm (4in).

As with all heating appliances, decorations, soft furnishing and wall coverings (Including flock vinyl, blown vinyl and embossed paper) positioned too near the appliance may discolour or scorch.

3.2 DEBRIS COLLECTION SPACE

In accordance with BS 5871 part 2 minimum debris volumes are required behind the installed appliance. these are shown in table A below stated as the minimum dimension for X in Fig.2 on page 3.

A minimum clear space of 50mm must be maintained between the appliance outlet spigot and any surface of the fire opening to allow the products of combustion an adequate flow path.

	Debris Volume	Void Behind Box	Total depth from front flange to rear of builders opening.
New or unused block, Concrete or clay lined flue.	2 Litres	10mm Minimum	260mm Minimum
Previously used or masonry flue	12 Litres	65mm Minimum	315mm Minimum

3.3 VENTILATION

Purpose provided fixed ventilation is required to be fitted in accordance with BS5871 part 2 sec 8. or other relevant rules in force. A free air vent area of 11.25 cm² (Equivalent hole diameter of 38mm) is required. For installation in I.E 100cm² ventilation is required.

4.0 COMPONENT CHECK LIST

QTY	ITEM
1	High-Tech gas fire with convection box
1	Moulded, ceramic fibre combustion matrix
2	Multi coal sections
29	Individual coals
1	Set of manufacturer's instructions (two parts)
1	Cable fitting kit
1	Grommet
1	Cast front fret with matching ash pan cover
1	Length of foam sealing strip
1	Black deflector baffle and two securing screws

5.0 FLUE SPIGOT RESTRICTOR

There is a metal plate supplied in the appliance pack. It should be attached initially when the appliance is fitted to maintain correct flue flow and appliance efficiency.

Secure in place across the outlet ports as shown with the self tap screws provided. The plate will block off the lower part of the flue ports leaving 30mm exposed at the top.

If spillage is detected when commissioning the fire this restrictor should be removed and the test repeated. If spillage is still detected disconnect the appliance and examine the flue system.

For details of spillage test see label on appliance or page 13 of these instructions.

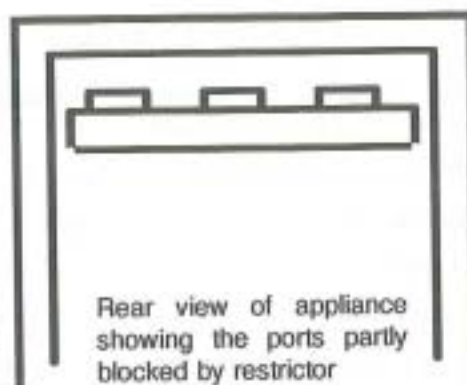


FIG 4

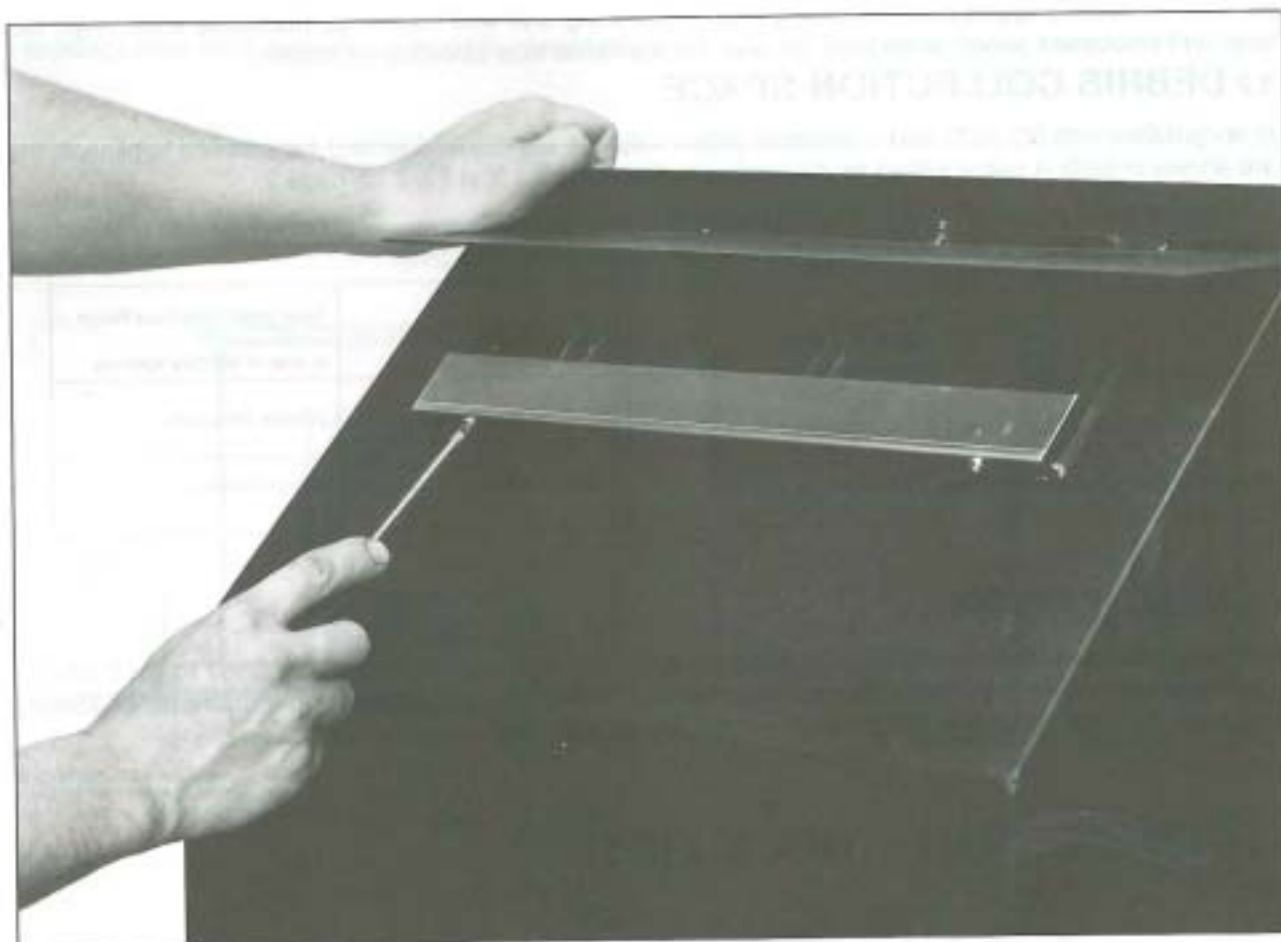


FIG 5

Fitting the flue spigot restrictor prior to appliance installation.

6.0 CONVECTION BOX INSTALLATION

Ensure that the **gas supply is isolated** before you commence installation of appliance.

Having prepared the installation site as detailed on pages 2 through 4, remove the fire from its carton. With a dust sheet or similar laid out on the floor, stand the appliance in front of you, unscrew the screws securing the control plate and remove it carefully. Lift out the burner tray. Place the screws, control plate, firetray, ceramic matrix and coals all safely to one side where they won't get lost or damaged.

A knock out hole is provided in the rear of the box for use where concealed pipework is required. Knock out the hole and fit the rubber grommet supplied in the bag with these instructions (unless already factory fitted). A hole can be pierced through the grommet with something like a screwdriver. The hole made should be just sufficient to push the 8mm supply pipe through. **Do not use the appliance with this hole unsealed, if the hole is inadvertently opened, reseal with a complete grommet.**

Protect any decorative hearth to avoid scratching while pushing the box in and out of the opening. Part of the packaging is ideal as a hearth saver pad.

Before running the gas supply into the fire opening, offer up the box to the opening, making sure it fits properly, sits square onto the hearth and that the rear of the frame sits flat and square onto the opening return or against the decorative non-combustible infill panel of the fireplace.

If the fire is to be secured by two screws mark the hole points through the base of the convector box.

When you are sure that everything is going to fit and the outlet spigot is not being obstructed, carefully remove the box.

Where the fire is to be fixed by the cables, measure and mark the locations for the fixing kit, see Fig. 6 on next page. Drill the four holes with a 6mm masonry bit and fit the supplied rawlplugs and eye bolts. If the fire is to be fixed by screwing to the constructional hearth, then drill two holes (to 40mm depth min) where previously marked and fit rawl plugs.

If you have chosen to have a concealed gas pipe then this should be run into the opening now. The fireplace opening end of the sleeve through which the gas pipe has been run should be sealed. The end of the 8mm supply pipe must be covered to prevent any debris getting in whilst installation of box is underway.

Apply the self adhesive sealing strip to the back of the frame, forming a continuous seal around the entire outer edge on all three sides approximately 5mm in from the outer edge ensuring there are no gaps at corners or at base.

When fixing by the cables : Feed the tensioning cables into place as shown in Fig. 6 and ease the box back in to the fire opening keeping the cables taut and being careful to feed the supply pipe through the rear grommet if appropriate.

Ensure the fire is back fully into the fireplace opening with the sealing strip in contact with the surrounding edge. Take the tensioning bolts with their adjustment screws fully on the thread, slide them over the wires with the adjusting nut towards the back of the firebox. Pull the fixing wires tight and push the adjuster bolts tight into the holes. Slide a securing nipple on both wires and tighten them as close to the head of the adjuster bolt as possible. See Fig.6 for detail. Holding the head of the tensioning bolt with pliers use a spanner to turn the nut down the shaft tightening the cable to provide a good seal all the around the sealing strip. Repeat this a few turns a time on each of the two bolts until the seal is evenly formed. Check visually to ensure this has happened, if not, investigate and rectify the problem.

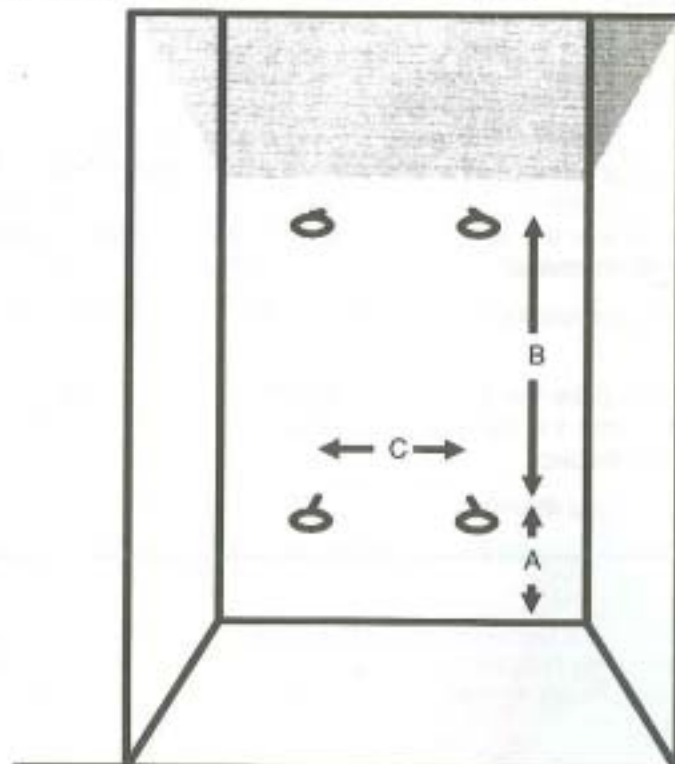
When fixing by screws : Ease the box back into the opening, feeding the gas pipe through as necessary. Replace the fire tray and screw two screws down into the previously installed plugs. Check that the box seals are evenly formed, and adjust as necessary.

The brass frame can now be placed over outer frame of box. You may prefer to leave this until after the fire has been installed, thereby reducing the possibility of marking the polished surfaces.

The brass frame is supplied covered with a protective, plastic film, this film must be carefully peeled off before commissioning fire.

INSTALLATION OF CABLE SECURING SYSTEM

SUGGESTED POSITIONS FOR FIXING EYELETS IN REAR OF THE FIREPLACE OPENING.



Drill four suitable holes in the back wall of fireplace opening to accommodate the Rawlplugs provided.

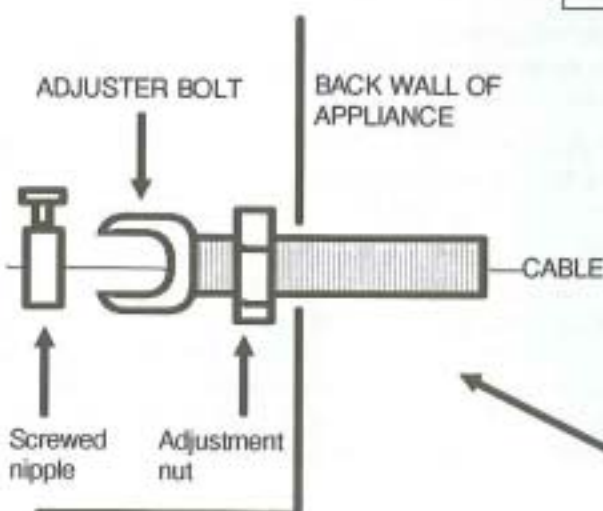
The bottom two holes should be between 40 and 60mm (A) off the floor and centred between 240mm and 260mm apart (C).

The top two holes should be similarly spaced between 350mm and 400mm above the bottom two (B).

If the construction or configuration of the fireplace does not allow the suggested arrangement to be used, the installer should carefully fit the eyelets so as to allow the cables to tension and secure the appliance in the configuration shown below.

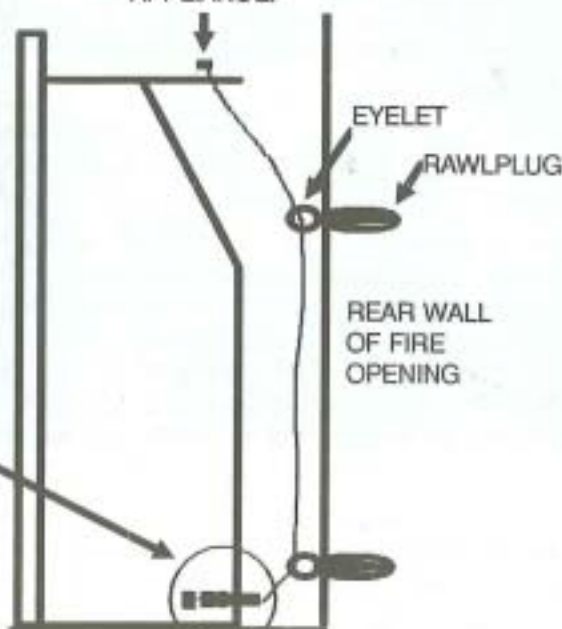
When the cable is fully tensioned the rear of the appliance outer frame must abut the face of the fireplace opening and seal evenly around the whole of the sealing face.

Fig. 6



With both tensioning cables hooked into back of case, threaded through the eyelets and tensioning bolt, ensure appliance is pushed well into and centered in the opening, pull cable taut through adjustment bolts and screw both end nipples into position. Hold head of adjuster bolt with pliers and turn adjustment nut with a spanner a few turns at a time each side, until the cable is fully tensioned. Visually inspect seal for obvious gaps and re-seat appliance until no gaps are apparent.

NIPPLED CABLE END LOCATED THROUGH SLOT IN TOP OF APPLIANCE.



DO NOT CUT OFF SURPLUS CABLE. Coil remaining cable neatly and push out of sight, up into the convection space. This will facilitate removal and refitting of appliance during servicing.

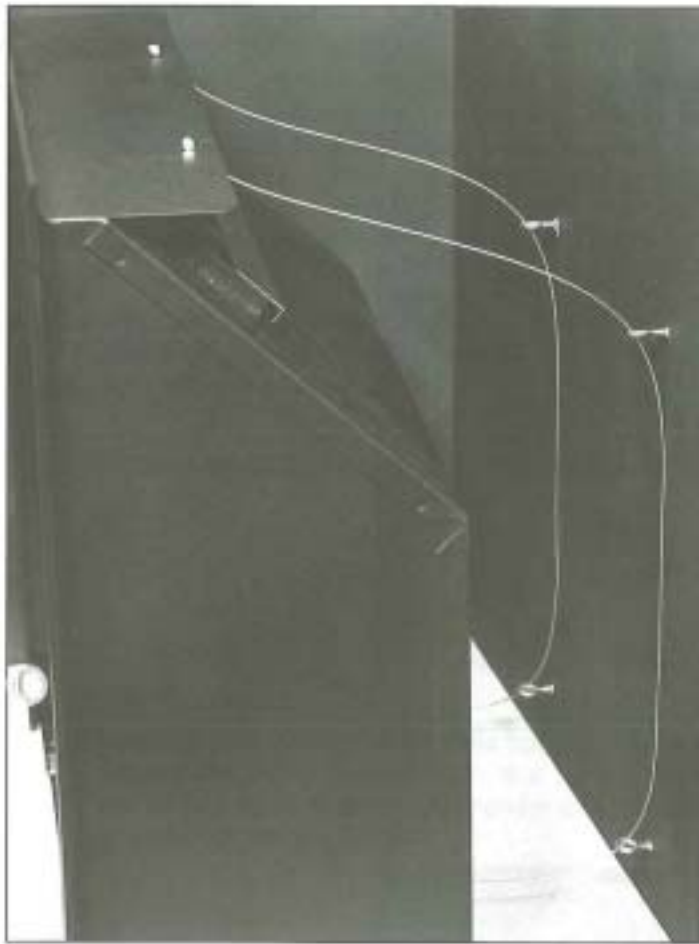


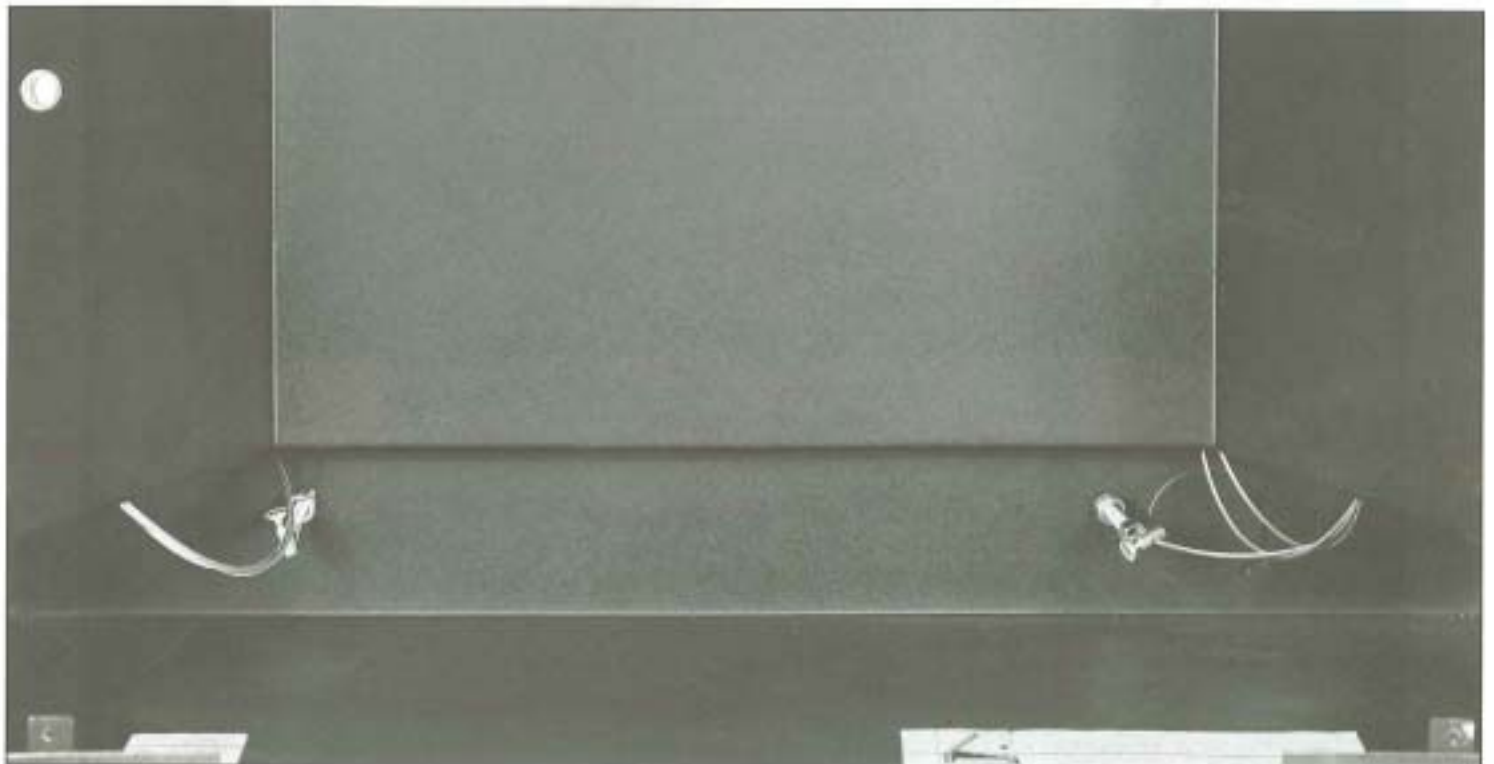
FIG 7 Cable securing system threaded through eyelets ready to pull appliance back into the opening.

FIG 8 Tensioning bolt extended, firmly securing the appliance into the opening with the sealing strip compressed between the fire-box frame and the fireplace.



FIG 9

Surplus cable must not be cut off as it will prevent the fire being properly refitted after servicing. Coil up surplus cable and tuck the coils up into the convection gap.

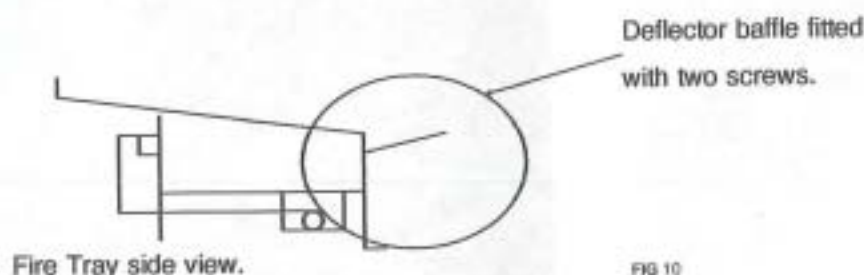


INSTALLATION continued

If a concealed gas supply has been incorporated into the installation, ensure the 8mm supply pipe is in the correct position to locate with the gas inlet on right hand side of gas control valve. Replace burner tray. Connect the 8mm copper pipe from your adjacent gas supply point to the appliance inlet connection. See page 15 Figs. 20, 21, 22, for suggested pipe routes. The appliance should be fitted with rigid or semi rigid pipe being 8mm in diameter. Ensure all pipes are thoroughly purged to clear any debris before connecting to the appliance. Re-fit data badge with the screws ensuring it is centralised around control knob. Secure burner tray to the convector box with the two screws through the front legs.

A gas cock or other means of isolation must be fitted on the inlet supply pipe. Please ensure you use as short a run of 8mm pipe as possible, as an excessive 8mm pipe run could result in pressure drop. A continuous length of pipe should be used to connect between the isolation cock and burner inlet, no joins may be made within the void behind the appliance.

Fit the deflector baffle to the front of the fire tray. The two screws provided should locate it securely as shown in the diagram below.



6.2 COAL LAYOUT

The coals can now be assembled. Follow the photograph sequence and text shown below.

Fig. 11

Locate Ceramic pad at front of tray. The pad should be pushed back to the position shown. Centralise, leaving the front slot clear and all the gauze holes in the burner top showing clearly.

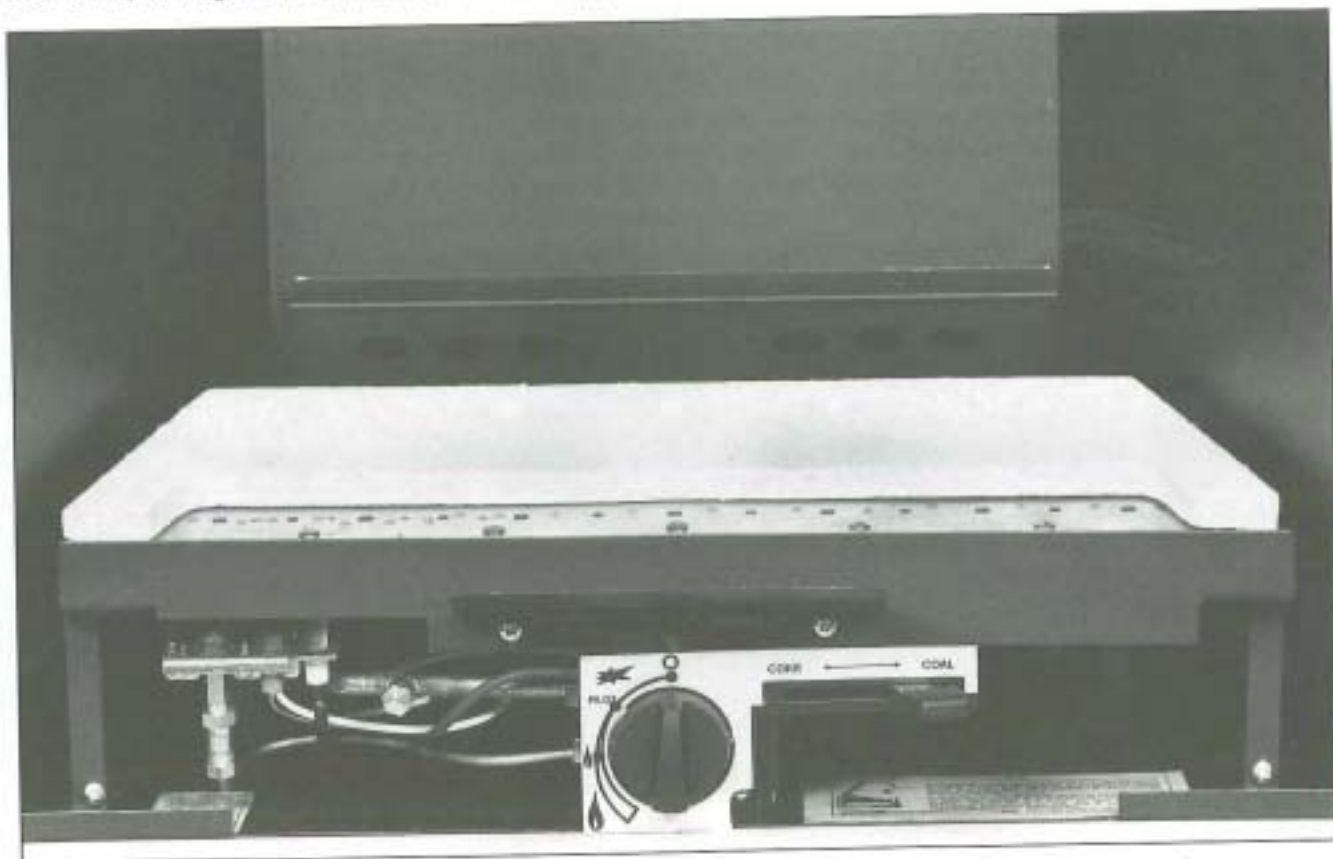


Fig. 12

Place matrix in position on burner plate and ceramic pad. Slide back to rearmost position. Centralise the matrix and ensure the front slot is clear.



Fig. 13

Locate the two multi coal sections upright into the slot at the front of the burner tray. Ensure that the coal shapes are facing forward. Note that the legs of these coals are an interference fit into the slot in the burner and some material will chamfer off when they are pushed into position. Do not alter the slot width to make the coals a loose fit.



FIG 14

Place the front two rows of 8 coals in position as shown. The extreme end coals should rest against the convector box sides.



Back Row of 6 coals. Place the coals as shown, at a reasonably even spacing.



FIG 16

Third row of 7 coals. Check that the centre coal sits back onto its pad correctly and allows the flames free movement from the matrix aperture.



NOTE : Coals **must not** be crammed together or inserted into the holes in the matrix. A well laid, generously spaced coal layout will give the best results.

Coals need not be arranged exactly straight and parallel but may be rotated within their location axes to give a good visual effect.



FIG 17

FIREFRONT :

Unwrap the firefront and screw in the two finials provided as shown in the photograph. Place the firefront and ashpan cover in position immediately in front of the fire.



FIG18

Attach pressure gauge to the test nipple which is located on the pipe just to the left of the gas control. After testing ensure the sealing screw is refitted correctly and that it is tested with leak solution.

6.3 TESTING & COMMISSIONING

Turn on and test the gas supply for any leaks, test the fire tray and its supply for leaks. When this appliance is first used any protective oils coating the heat exchanger may burn off. It is advisable to ventilate the room during this period (up to one hour).

6.3.1 Lighting the pilot

The pilot is visible through the underside of the left hand front coal section. Push in and turn the control knob to the spark position and hold there for a couple of seconds to allow the gas to come through. Now continue turning anti clockwise through the spark click to the pilot position and ensuring the pilot has lit, keep the control knob pressed in for approximately 10 seconds. Now release the knob and the pilot should stay alight, if the pilot is extinguished repeat procedure. To achieve the high position push in the control knob slightly and continue turning anti clockwise to the high position and the main burner should ignite in approx. 3 seconds. To achieve the low position keep the control knob pressed in and continue turning in the clockwise movement to the low position. When turning the burner up from pilot to low or high there may be an audible ignition noise which is normal and does not indicate any problem. To turn to the pilot position from the high or low setting press the control knob in and turn the knob clockwise to the pilot position and release, to turn the fire to the off position keep the knob pressed in and continue turning to the off position and release.

If pilot becomes extinguished intentionally or otherwise, wait three minutes before relighting. If the reason for extinguishing of the fire is not readily apparent, seek expert advice.

6.3.2 Setting pressure

Remove the screw from the pressure test point, which is situated at the front centre beneath the tray and connect your pressure gauge. Light the fire and compare the pressure to that stated on page 2 of these instructions. If the pressure measured is within the tolerance stated, then the gas installation is satisfactory. The fire is manufactured and preset to achieve these setting pressures. Remove your pressure gauge and replace the screw in the pressure test point. Light the fire and check the pressure test point for gas soundness. See photograph on page 12.

6.3.3 Spark failure See SERVICING section, page 14.

6.3.4 Testing for Spillage

Close all doors and windows to the room containing the appliance. When the fire has been running on high for at least five minutes, take a smoke match, light it and using a smoke match tube, hold it at the top edge of the fire opening, 60mm in from either side, 25mm down and 25mm inside the hood. The smoke from the match should be drawn back into the fire and up the flue. If test fails, try again after fire has been running on full for a further ten minutes. When the test has been completed satisfactorily, repeat again with any extractor fans fitted to the premises switched on to highest extract setting.

ANY SPILLAGE DETECTED BY THE ABOVE PROCEDURE MAY INDICATE THERE IS A FAULT IN THE FLUE OR INSUFFICIENT VENTILATION IS PRESENT. If the problem cannot be rectified immediately then expert advice should be sought. Inform the user, disconnect the fire from the gas supply and affix label. **NOTE :** If spillage occurs with the spigot restrictor fitted, remove it and repeat test.

Smoke match and tube in position. **SPILLAGE TEST DIAGRAM**



1. LEAVE FIRE RUNNING ON HIGH FOR 5 MINS TO HEAT FLUE
2. AFTER 5 MINS LOCATE THE HEAD OF THE LIT SMOKE MATCH IN SMOKE MATCH TUBE AS ILLUSTRATED, 60mm IN FROM EITHER SIDE, 25MM BELOW AND 25MM INSIDE HOOD. CHECKING MOST OF THE SMOKE IS BEING PULLED INWARD TOWARDS THE FLUE.
3. IF MOST OF THE SMOKE IS BLOWING BACK INTO THE ROOM THEN SPILLAGE IS OCCURRING. ALLOW A FURTHER 10 MINUTES AND RETEST. IF SPILLAGE STILL OCCURS SEEK EXPERT ADVICE. DO NOT LEAVE THE FIRE CONNECTED IF THE PROBLEM CANNOT BE RECTIFIED IMMEDIATELY.

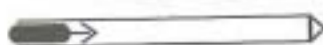
 Cross section of smoke match tube. Made from 10mm dia tube, sealed at one end. Tube crimped to stop match sliding down inside. Match shown in position.



FIG 19

Testing For Spillage.

For details of this procedure please refer to the text or the label attached to the fire.

Briefing the customer

All instructions must be handed to the user for safe keeping. After completion of the commissioning the customer should then be instructed on the safe use of the fire. Advise the customer that the flue should be checked on an annual basis and the fire serviced regularly. Frequency of service will depend on usage of the appliance but once a year should meet this requirement.

Scratches and other superficial damage to the matt black paintwork of the appliance can be covered with matching heat proof spray paint. Only use the paint when the appliance is cold and with the gas turned off. Always mask surrounding areas to avoid contamination with overspray. Ventilate room during use of the spray. **DO NOT** attempt to spray paint or wash the artificial coals in water.

7.0 SERVICING

ENSURE THE FIRE IS SWITCHED OFF, COLD AND THE GAS SUPPLY ISOLATED.

Inspect the fire for discolouration around sealing faces and the canopy which could indicate spillage or leakage.

7.1 CLEANING THE COALS

Spread out a dust sheet to protect carpets and hearth. Carefully remove the coals and remove any dust or soot deposits using a soft brush (a paint brush). Lift out the the two multi coal sections and the matrix. Inspect all the ceramic components for signs of deterioration or damage. Where required, only use replacements from the manufacturer. Place all the components safely to one side.

7.2 REMOVING THE BURNER TRAY

To enable the tray to be withdrawn from the appliance case, unscrew the screws in the front legs. The tray may be eased up to gain access to the gas inlet connection on right of control valve. With the inlet pipe disconnected, the burner tray can be slid out of its location. Any debris or deposits should be brushed off of the tray. Any debris should be gently brushed away and linting around the air inlet cowl removed. The injector should be checked and any dirt removed from around it. The burner tray should then be replaced.

7.3 CLEANING THE GAS CONTROL

The only servicable part of the gas control assembly is the pilot light filter. To access this component, remove the control knob by pulling it forward, the pilot filter cover is the largest of the three screws visible behind the control knob and nearest the hearth. Remove the retaining screw, slide the filter out and clean away any debris that may have accumulated. The filter element should then be blown clean. This component should not normally require replacement, however if it shows signs of deterioration the genuine spare must be used. If a large amount of debris is present then the pipework and control should be thoroughly cleaned before reassembly.

7.4 PILOT ASSEMBLY

This is a factory set assembly and requires minimal maintenance. If a fault is suspected the assembly may only be exchanged with a genuine spare part. No field repairs are possible as the assembly is a tested unit. All connections should be checked for tightness and any debris brushed from around the head, probe and spark electrode. Any linting or dirt build up around the aeration hole and pilot head should also be cleaned away. To exchange the pilot assembly, remove the thermocouple nut from the rear of the gas valve and undo the tubing nut from the base of the pilot. Remove the electrode lead and two securing screws from the pilot bracket. Lift assembly away. Refitting is the reverse of removal.

7.4.1 Spark Failure

The gap between the spark electrode and the pilot should be 4mm+/- 0.5mm to produce a good spark. Normally there should be no need to adjust this. In the event of a defective igniter the pilot can be lit manually by repeating the lighting procedure except that when the knob is turned through the ignition position, light the pilot with a taper.

7.5 REMOVING THE CONVECTOR BOX

Ensure the hearth is protected with a dust sheet or similar to prevent scratching. Undo the screws in the cable securing nipples in the inside, rear bottom of the case and unroll the surplus cable left in bottom of case. This will release the case from the fireplace, note how the fixing arrangement is configured for ease of replacement.

In the case of fixing by screws, withdraw the two screws from the fire tray leg brackets.

Detach the gas piping.

Slide the fire case from the opening, taking care not to damage the hearth. Inspect the debris collection area behind and clear. If debris accumulation indicates problems with the flue, this should be rectified before proceeding further.

Check the fire sealing strip for damage and if necessary replace. Refit and tighten the appliance case into its correct position. **Ensure the grommet around the gas pipe is in place, replace if necessary.**

7.6 REASSEMBLY

Reassemble the fire in reverse order paying attention to the fuel bed layout shown elsewhere in this booklet.

Reapply gas to the fire and check thoroughly for leaks before recommissioning. See page 13 for the full commissioning procedure.

7.7 Order of servicing procedure

- 1) Lay out your dust sheet and tools
- 2) Ensure the fire is cold and the gas isolated
- 3) Disconnect and remove the fire
- 4) Remove convection box and check rubble collection space behind, clear and refit box.
- 5) Close all doors & windows, turn on any extractor fans (full extract) in room and smoke test the flue
- 6) Strip down the fire, clean & check all integral parts
- 7) Replace coals and other components, where required, only with manufacturers parts
- 8) Re-assemble and refit fire securely into position
- 9) Reconnect and turn on gas supply and test all joints for gas soundness

Fig. 20 : Plan view of pipe route for exposed RIGHT supply

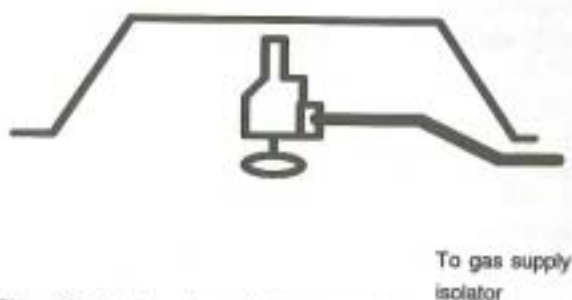


Fig. 21 : Plan view of pipe route for concealed gas supply

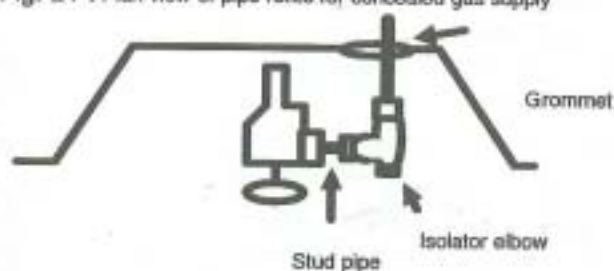


Fig. 22 : Plan view of pipe route for exposed LEFT supply



A suggested concealed connection method is shown above. If the isolator elbow, or tap is fitted elsewhere in the gas run then a compression elbow may be fitted in its place.

Whatever fittings are used it should be possible to remove the firebox over the pipework and fittings for servicing.

Ensure the grommet is seated properly to seal hole around gas inlet pipe.