



ROBINSON WILLEY

ATHENA LF

Cat I_{2H} G20 at 20mbar in GB and IE



FOR USE WITH NATURAL GAS ONLY

Installation & Servicing Instructions

G.C. No. 32 170 19

 Product Code No. A88028

The Data Badge and Serial Number are located on the left hand side of the back panel.

PLEASE LEAVE THESE INSTRUCTIONS WITH THE USER

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INTRODUCTION

NO COMPONENT OF THIS FIRE IS MANUFACTURED FROM ASBESTOS OR ASBESTOS RELATED PRODUCTS.

The ATHENA L.F. is an open fronted inset live coal effect gas fire specially designed for Pre-Cast Flue application and is also suitable for use with Brick Chimneys, twin walled or insulated Metal/Pre-fabricated Flues of 125mm minimum diameter and Flueboxes conforming to the constructional requirements of BS 715. It is fitted with a combined flame supervision and oxygen depletion monitoring device. The fire is for hearth mounting only on a non-combustible hearth. The fire is for use on Natural Gas only.

GENERAL INSTALLATION REQUIREMENTS

In your own interest and that of safety, it is the law that all gas appliances are installed by competent persons in accordance with the current Gas Safety (Installation and Use) Regulations. **Failure to install appliances correctly could lead to prosecution.**

The installation MUST be in accordance with these installation instructions, all the relevant parts of the Local and National Building Regulations or Building Standards (Scotland) (Consolidation) Regulations and the relevant recommendations of the current editions of the following British Standards:

B.S. 5871 : Part 2
B.S. 5440 : Parts 1 & 2
B.S. 6891
B.S. 6461 : Parts 1 & 2
B.S. 715
B.S. 1251
B.S. 1289 : 1975
B.S. 1289 : Part 1 : 1986
B.S. 1289 : Part 2 : 1989

Any other relevant British Standard Code of Practice and/or Local Building Regulations and in accordance with the rules in force.

1.0 TECHNICAL DATA

1.1 DIMENSIONS

<i>(Overall)</i>	<i>mm</i>
Height	682
Width	635
Depth	115
Forward Projection	100
Height to top of flue aperture	529
Weight	18 Kg

1.2 INPUTS AND PRESSURES

Maximum Heat Input (Gross)	6.0 kW	20470 Btu/h
Minimum Heat Input (Gross)	2.3 kW	7848 Btu/h
Supply Pressure	20.0 mbar	
Setting Pressure Cold	13.0 mbar ± 1mbar	
Gas Rate Adjustment	NONE	

1.3 BURNER AND CONTROL DETAILS

Main Burner	NRW 992174
Pilot Burner	SIT OP 9063
Injector (Main Burner)	Bray Cat 82/440
Ignition	Battery Operated Electronic Ignition. Battery Size 9V MN1604 or 6LR61
Control Tap	Concentric (with FSD) Model Number TESA 2762-025
Spark Gap	3.0mm to 5.0mm
Control Knob Settings	OFF, HIGH, MED, ECON, PILOT

2.0 CONDITIONS OF INSTALLATION

2.1 SITING GENERAL

This fire is suitable for hearth mounting only on a non-combustible hearth at least 13mm thick and measuring at least 630mm wide by 330mm deep. Its top surface should preferably be 50mm above the floor level in order to discourage the placing of carpets or rugs over it. It **MUST NOT** be fitted directly on a combustible wall. The fire should be installed so that no part of a combustible wall i.e. not part of the fire surround but a full wall at 90° to the fire is less than 500mm from the radiant source. If this is not possible the combustible side wall must be suitably protected.

FIREPLACE OPENING

The front opening of the fireplace must be between 305mm and 457mm wide and between 560mm and 585mm high (see Section 2.2). If the opening is greater it must be bricked up until the opening is a maximum of 585mm high and 457mm wide, alternatively a non-combustible infill panel may be used to achieve the required dimensions.

DO NOT USE THE BACK OF A FIRE SURROUND OR MARBLE TO ACHIEVE THE ABOVE DIMENSIONS.

There must be a minimum flat surface area around the fireplace opening shown by the dotted lines in fig. 1 to ensure a good seal between the fireplace and the fire. This area should be sound enough to take the wall plugs and screws supplied for front fixing. Ensure that the base of the fireplace is level with the hearth and reasonably flat to prevent the fire rocking. Purpose built ventilation bricks or additional air vents are not normally required in the room in which the fire is fitted unless specified by the rules in force.

IMPORTANT: When fitting any heating appliance or wallpapering a room in which one is fitted, soft wall coverings such as heat sensitive wallpapers may become heat damaged or discoloured especially in the area above the fire. Please bear this in mind when installing or decorating.

IMPORTANT NOTE

Plaster Applied Directly to Pre-cast Flue Blocks.

Some Pre-cast flues built to B.S. 1289:1975 may have plaster applied directly to the flue blocks.

A recommendation was made, in the revision B.S. 1289 part 1:1986, **NOT** to apply plaster directly to the flue blocks, otherwise cracking of the plaster could occur.

It is not recommended to install this fire into such installations, unless remedial action is taken.

2.2 FLUES AND CHIMNEYS

2.2.1 SITE REQUIREMENTS FOR 228mm BY 228mm (9in BY 9in) BRICK CHIMNEY/178mm (7in) STONE OR LINED CHIMNEY AND 125MM (5in) DIAMETER FLUE

The minimum dimensions for the fireplace opening for a brick chimney are as shown in Fig. 1. It will not normally be necessary to remove any chair brick provided the minimum depth is obtained. A chimney previously used to burn solid fuel must be swept prior to installation.

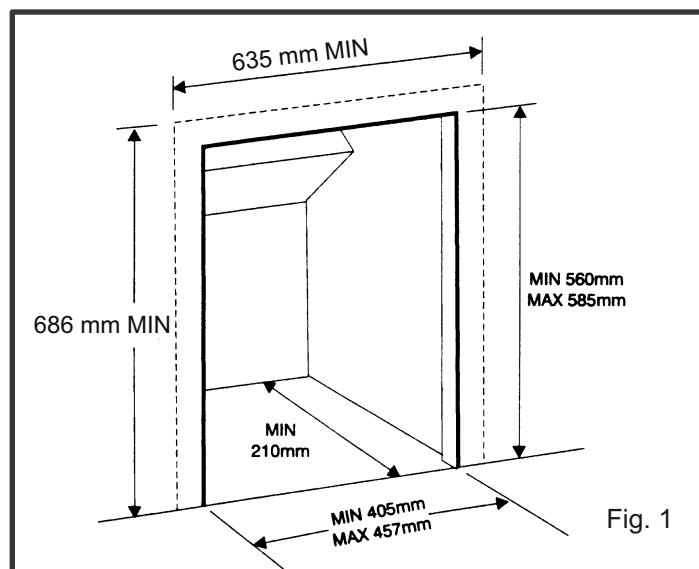
The chimney must be inspected to ensure that:

- It serves only one fireplace.
- It is properly sealed so that combustion products do not escape from the flue into the room.
- It is not blocked by paper, rubble etc.
- Any restriction such as damper, register plate, etc. must be removed or secured in the fully open position.
- Any underdraught ventilation or additional air supply entering the fireplace or on the hearth must be sealed off.
- It must have at least 3 metre effective flue height.
- It must have a positive updraught.

CHECK THE FLUE FOR GOOD DRAUGHT

Apply a lighted paper or smoke match to the top of the opening in the fireplace. Observe if there is a definite flow into the chimney and if so proceed with fitting the fire. If no flow is indicated, warm the chimney for several minutes and then re-check. If downdraught is observed a suitable terminal must be fitted and the chimney re-checked. If persistent no-flow or downdraught condition is observed

DO NOT FIT THE FIRE, SEEK EXPERT ADVICE.



2.2.2 PRE-CAST FLUE OF MINIMUM SIZE (Fig. 2)

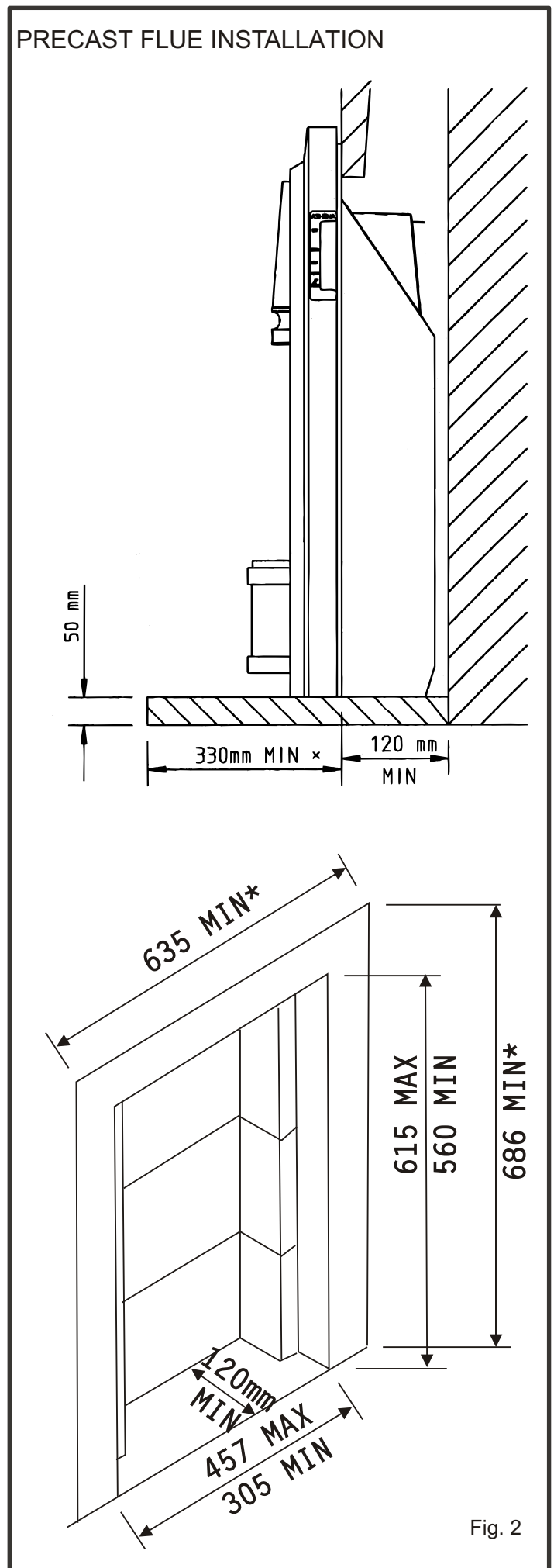
This fire can be installed into a properly constructed pre-cast flue conforming to B.S. 1289 : 1975 or B.S. 1289 : Part 1 : 1986 or B.S. 1289 : Part 2 : 1989 of at least 3 metres effective height and having flueways of at least 198mm by 67mm or equivalent cross-sectional area with no dimension less than 63mm. The fireplace opening width must be between a maximum 457mm and a minimum 305mm. The fireplace opening height must be between a maximum of 585mm and a minimum 560mm and a depth of at least 120mm above the hearth level.

NOTES:

1. The minimum dimensions for the flat area around the opening are 686 mm high x 635 mm wide.
2. The flue spigot restrictor **MUST NOT** be fitted.

Ensure that any mortar fangs between the blocks do not protrude into the flueways and if raking blocks are used they are fitted according to the manufacturers instructions and mortar is not allowed to drop down and accumulate in the raked portions.

CHECK THE FLUE FOR GOOD DRAUGHT AS DETAILED IN SECTION 2.2.1.

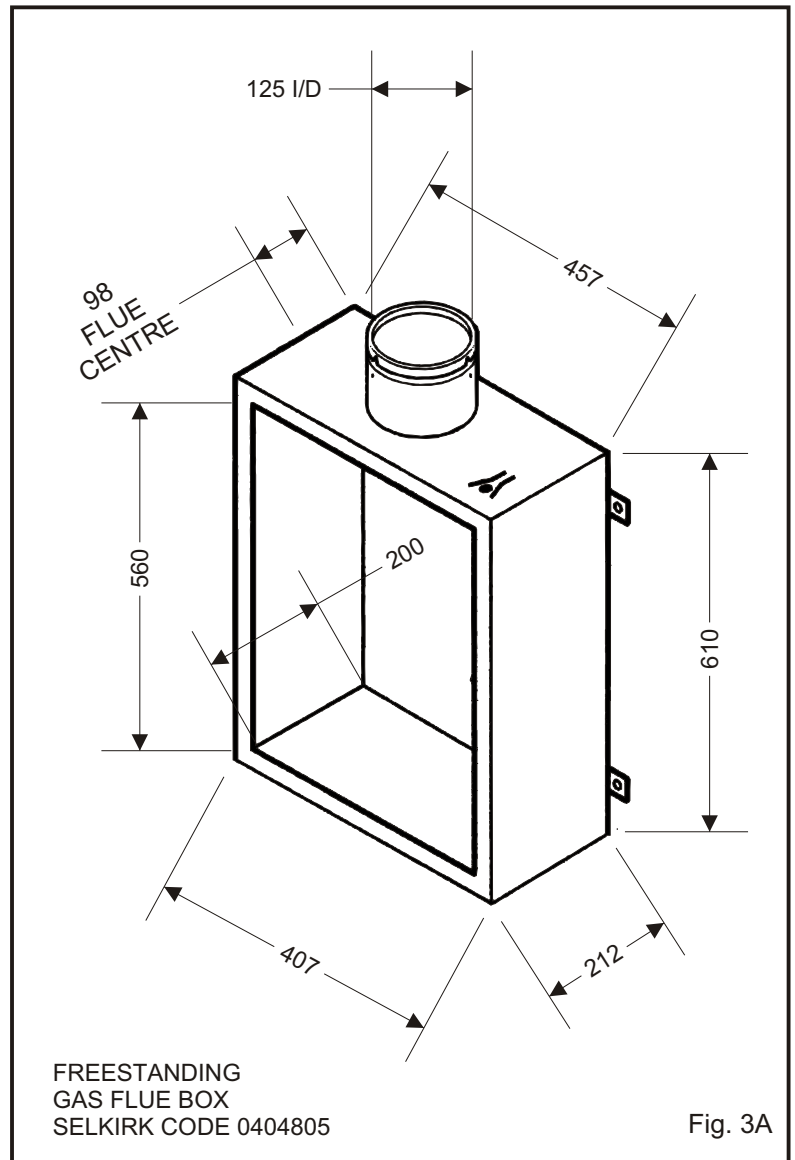


2.2.3 METAL FLUE BOX/125mm DIAMETER FLUES
(Figs. 3A and 3B)

This fire may be installed in a double walled or insulated metal box built to the requirements of B.S. 715 e.g. Selkirk, Product Code Number 0404805, using our fixing kit G.C. Number 159 634 ~~89W~~ Number 992137. The box must be lagged as detailed in Fig. 3B and mounted on a non-combustible plinth at least 25mm thick. Ensure that the base of the opening is level with the hearth. A larger box built to the requirements of B.S. 715 and insulated as in Fig. 3B may be used. The front opening must be as shown in Fig. 3A. The flue should be twin walled e.g. Selkirk IL flues, or insulated type of at least 125mm internal diameter and with a minimum effective height of 3 metres. The depth of the opening must be at least 200mm.

NOTES:

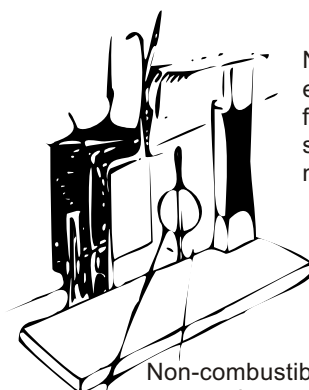
1. If the flat area around the front opening of the box is less than as specified in Fig. 1, it may be necessary to use additional sealing material to achieve a good seal.
2. The flue spigot restrictor **MUST NOT** be fitted.



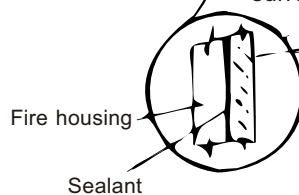
Refer to the following illustrations for configuration.

Cover the top, rear and sides of the fire housing as shown with 100mm (4in) loft insulation material as shown. If the gap between the fire housing and any combustible material is less than 100mm, squeeze the insulation material between the two surfaces.

The minimum distance from any studding or other combustible material and the flue pipe or any part of the fire housing must be 25mm (1in).



Note: The plaster board does not overlap the edge of the fire housing. Any non-combustible fire surround material used overlaps as shown. The non-combustible fire surround material must be sealed to the fire housing.



Non-combustible fire surround material

The non-combustible material must be sealed to the fire housing to form an air tight seal all around.

Fig. 3B

2.3 SHELF HEIGHT AND SIDE CLEARANCES

The fire may be fitted beneath a shelf.

2.3.1 COMBUSTIBLE SHELF

The underside of a combustible shelf not more than 150mm deep must be at least 923mm from the hearth which gives a clearance of 237mm above the fire. For deeper shelves, add 13mm shelf height for every 25mm increase in depth. For every 25mm decrease in shelf depth subtract 13mm from the shelf height.

2.3.2 NON-COMBUSTIBLE SHELF

The underside of a non-combustible shelf not more than 75mm deep must be at least 25mm above the top of the fire. This clearance is necessary for outer case removal. For deeper shelves, allow 13mm in shelf height for every 25mm increase in depth.

SIDE CLEARANCES:

A clearance of at least 25mm must be left on either side of the fire to facilitate removal of the outer case during servicing.

FIRE SURROUND:

The fire is suitable for purpose-made proprietary hearths/surrounds with temperature rating of 150°C.

3.0 INSTALLATION OF FIRE

3.1 UNPACKING

The fire is packed with the back coal and side cheeks already fitted in position. When unpacking refer to the check list to ensure that all of the components are present and undamaged. Remove the top fitment from the carton. Lift the carton surround clear of the fire. Remove the pack containing the coal bed and 9 loose coals. Remove the outer case from the fire, by lifting the it to clear the two top locating brackets. Lift the fire clear of the bottom fitment of the carton.

Take out the polythene bag containing the fire fixing kit and comprising:

- (i) 2 Fixing Cables
- (ii) 2 Cable Adaptors
- (iii) 2 Grub Screws
- (iv) 4 Eye Screws
- (v) 1 Spigot Restrictor
- (vi) 4 Screws and Wall Plugs (fire fixing)

3.2 PREPARATION OF FIRE

3.2.1 SPIGOT RESTRICTOR

The spigot restrictor is supplied loose with the fire and should be fitted only in the case of installation to a brick chimney, 178mm diameter stone/lined flue of at least 3 metres effective height, with good draught.

DO NOT fit the spigot restrictor if installation is to a **PRE-CAST FLUE** or a **METAL FLUEBOX / 5 INCH FLUE**. Fit the spigot restrictor if applicable using 2 screws (Fig. 4).

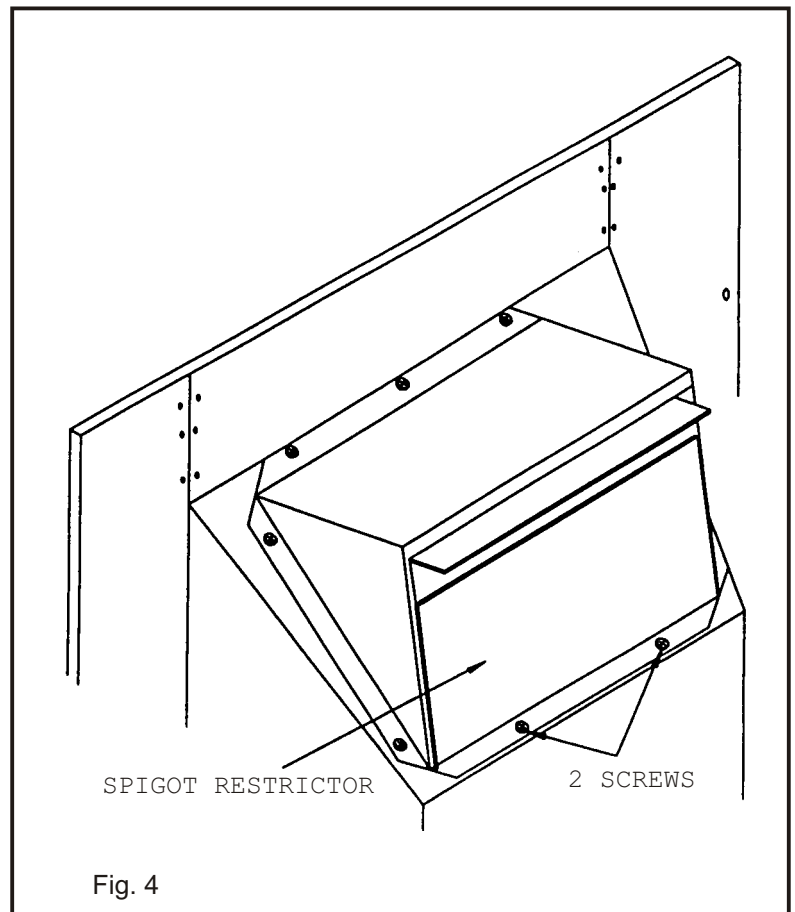


Fig. 4

3.3 METHOD OF INSTALLATION

There are two methods for securing the fire to the wall which are:

- (a) Fixing by tension cable.
- (b) Screwing the fire directly to the wall.

It is recommended, where drilling holes in the front face of the fireplace surround is unacceptable or otherwise risky e.g. a marble surround, that fixing by tension cable is employed.

IMPORTANT NOTES

- (a) If the surface of the fireplace is uneven it is necessary to prepare the surface so that a positive seal can be achieved between the fire and the wall.
- (b) If the fire is to be connected using a concealed gas connection then it is necessary to prepare the pipework prior to fitting the fire to the wall. Refer to Section 3.4.1. (Concealed Connection).

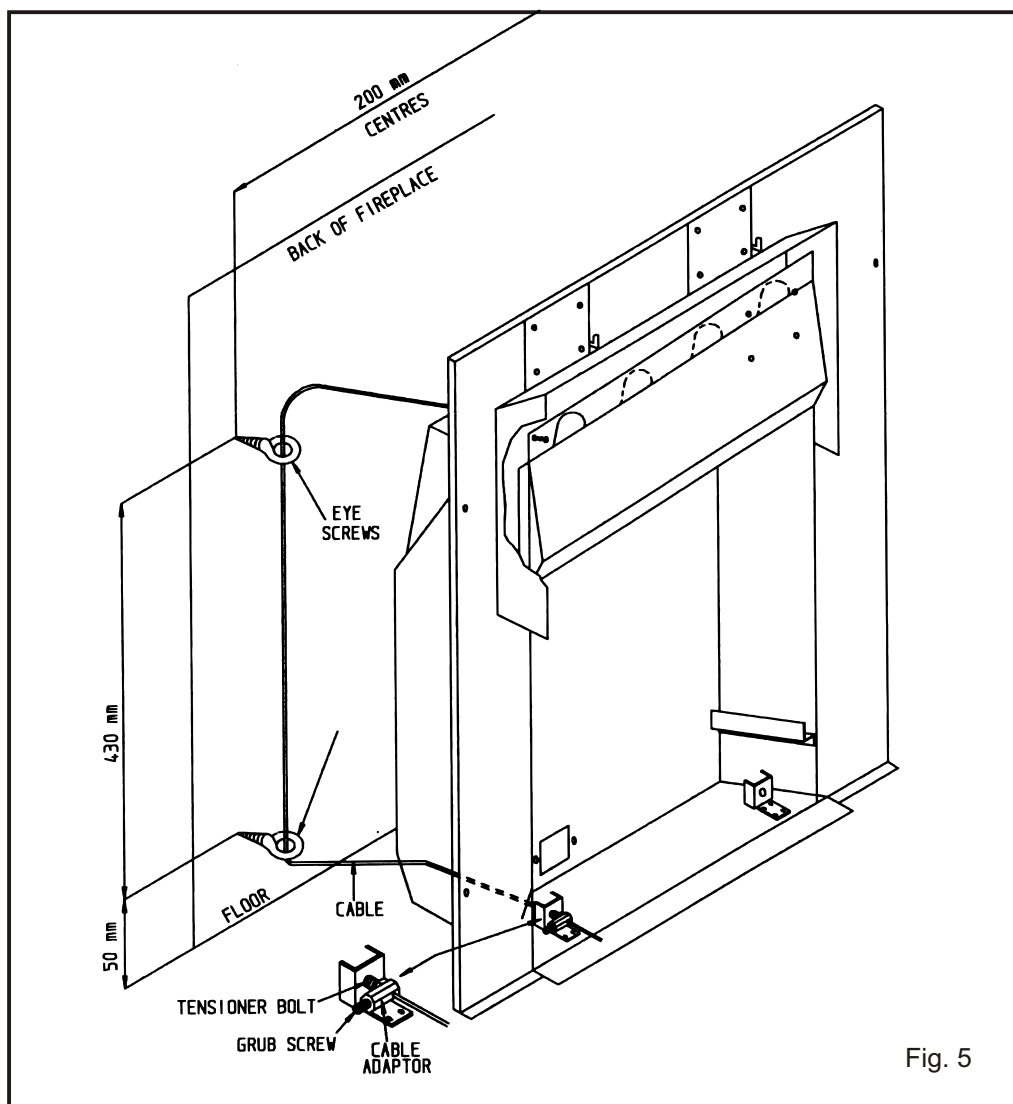
3.3.1 FIXING BY TENSION CABLE

FIT MOUNTING EYE SCREWS

Mark the position for eye screws in the back of the opening according to the dimensions in Fig. 5. Drill the four 6mm holes and plug the holes with the wall plugs. Fix the eye screws to the holes.

FIXING THE CABLE

First remove the burner tray (see Section 6.1). Insert the free end of each cable through the respective hole in the firebox and then through the eye screws (refer to Fig. 5). Thread the free ends of the cable through the holes in the tensioning bolts located in the base of the fire from the rear. Insert the fire into the opening so that the seal on the back of the fire is compressed against the face of the fireplace/surround. Any visible gaps indicate a deviation from flatness of the surround face which **MUST** be corrected. Pull the cable taut each side of the fire and insert the cable adaptors over the ends of the cable (Fig. 5). While keeping the cable taut slide the adaptor against the tensioning bolt and tighten the grub screw to lock the cable. Using a spanner unscrew each tensioning bolt by about 20mm to tension the cable. Prevent the cable adaptors from rotating while unscrewing the tensioning bolts. Refit the burner tray.



3.3.2 FIXING DIRECTLY TO SURROUND FACE

Mark the four positions of the fixing holes on the front face of the fireplace surround using the fire as a template. Drill 6mm holes and plug the holes with the wall plugs supplied. Insert the fire into the opening in the fireplace until the seal on the back of the fire is compressed against the surround face at every point. Note that any visible gaps between the surround face and the seal indicate a deviation from flatness on the surround face and **MUST** be rectified. Screw the fire to the wall.

3.4 GAS CONNECTION

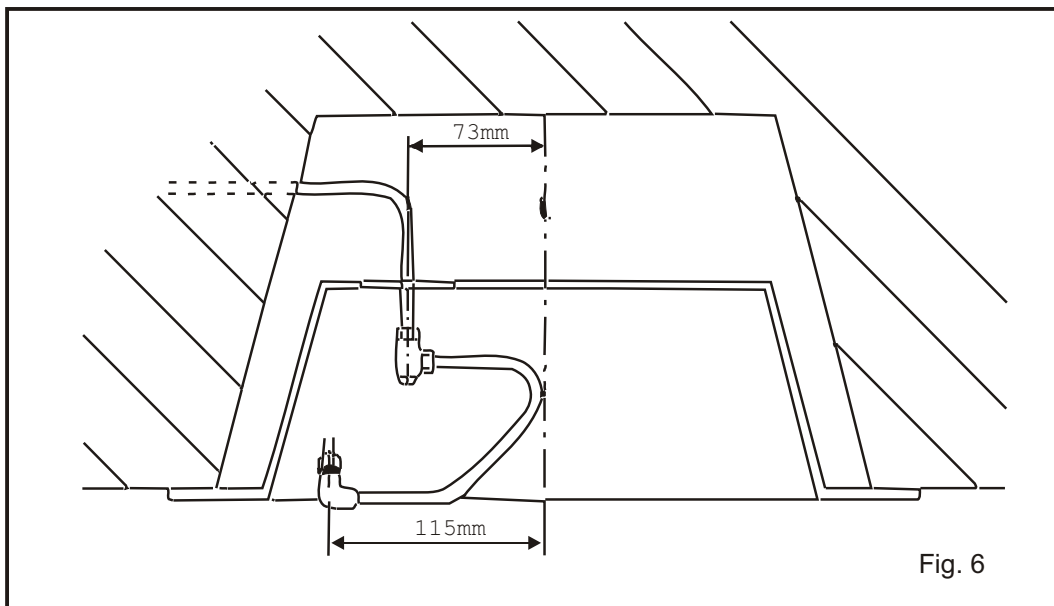
NOTE: The appliance must be connected to gas with rigid or semi-rigid tubing. A means of isolating the gas supply must be fitted upstream of the appliance inlet to facilitate connection and subsequent servicing. The supply pipe to the fire should be installed so that it is easy to remove the fire from the opening during servicing. Ensure that a service cock (which may be in the form of a union restrictor elbow) is provided for isolation of the fire for servicing at a later date.

If a concealed connection from within the fireplace is required then, before the appliance is fitted into the fireplace, it will be necessary to extend the supply line so that it will project through the sealed opening situated at the back of the firebox to the appliance inlet elbow.

3.4.1. CONCEALED CONNECTION

The dimensions below indicate the required position of the supply pipe to enable it to pass through the aperture in the fire back. Refer to Fig. 6.

- (a) Remove the burner tray from the fire to improve access (see Section 6.1).
- (b) Make connection from concealed point to finish in the position indicated in Fig. 6. Ensure there is a union connection at this point. The inlet elbow provided with the fire should be fitted to the supply.
- (c) The pipe run from the supply line up to the rear opening in the firebox must be kept clear of the area which will be taken by the box when it is installed.



3.4.2 FRONT CONNECTION

After fixing the fire to the surround (Section 3.3) it is possible to connect the gas supply from either the right or left hand side. The union elbow on the fire which has an R_p1/4 internal thread should be connected to the supply pipe.

3.5 TEST FOR GAS SOUNDNESS

The gas installation, including metre, should be inspected and tested for gas soundness and purged.

Refer to B.S. 6891 : 1988 when performing gas soundness testing.

4.1 INSTALL FUEL EFFECT COMPONENTS

The fuel effect components comprise:

- (a) Rear Coal
- (b) Two Side Cheeks
- (c) Coal Bed
- (d) Nine Loose Coals

The Coal Bed and the loose coals are illustrated in Fig. 7A. The fire is supplied with the rear coal and side cheeks already fitted as illustrated in Fig. 7B.

Unpack the pack containing the coal bed and the loose coals and check that these are undamaged.

DO NOT INSTALL THE FIRE WITH BROKEN OR MISSING COALS. USE ONLY THE COALS SUPPLIED WITH THE FIRE.

1. The underside of the coal bed has grooves matching the raised ports of the burner top. Fit the coal bed by placing it onto the burner. Take care to avoid damage as you insert it past the pilot burner (Refer to Fig. 7C). Ensure that it is correctly located in the burner tray by sliding it sideways and front to back.
2. Notice that there are five depressions at the front of the coal bed and four depressions at the rear (as shown in Fig. 7A). Place five loose coals in the front recesses with their decorative faces forward. Similarly place the remaining four loose coals on top of the recesses formed by the front loose coals and touching the rear coal (Fig. 7D). Ensure that the loose coals are stable and not likely to fall off.

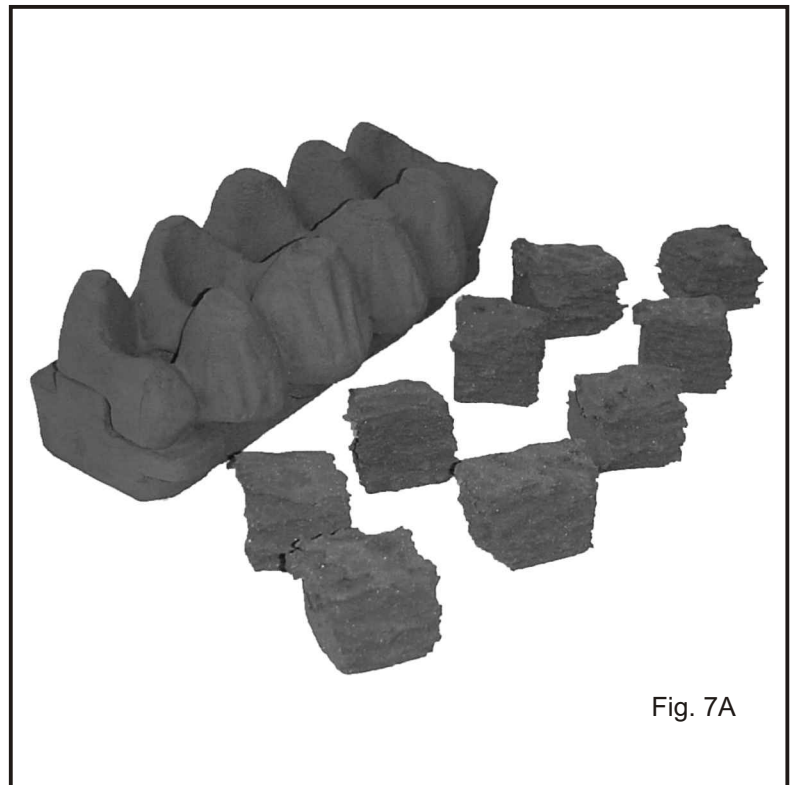


Fig. 7A

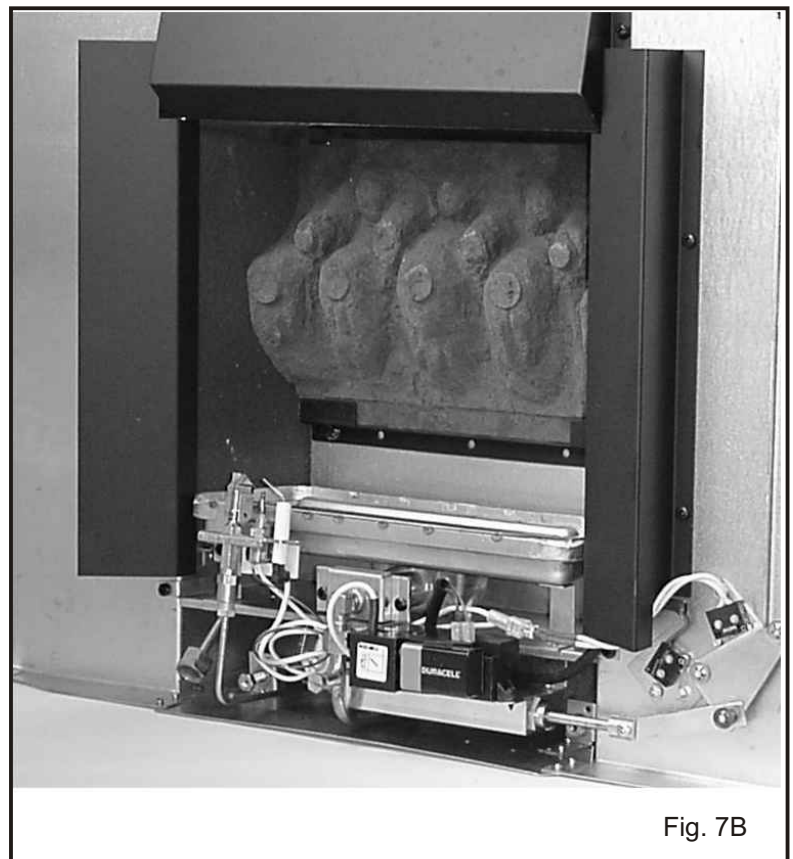


Fig. 7B

4.2 CHECK GAS PRESSURE

Remove the pressure test point screw located on the injector feed pipe just left of centre on the fire. Connect a pressure gauge, slide the control knob down to the PILOT/IGNITION position. Keep the knob depressed after the pilot has lit to activate the FSD and then slide the knob to the HIGH position. Check that the gas pressure is as specified in Section 1.0 Technical Data. Turn off the fire and disconnect the pressure gauge. Replace the test point screw, relight the fire and test for gas soundness around the sealing screw using a suitable leak detection fluid.

4.3 FIT OUTER CASE

Align the bottom cut-outs in the outer case with the retaining lugs on the firebox sides. Raise the outer case vertically and then lower to engage the top onto the lugs above the air guide, at the same time ensure that the bottom cut-outs remain on the retaining lugs.

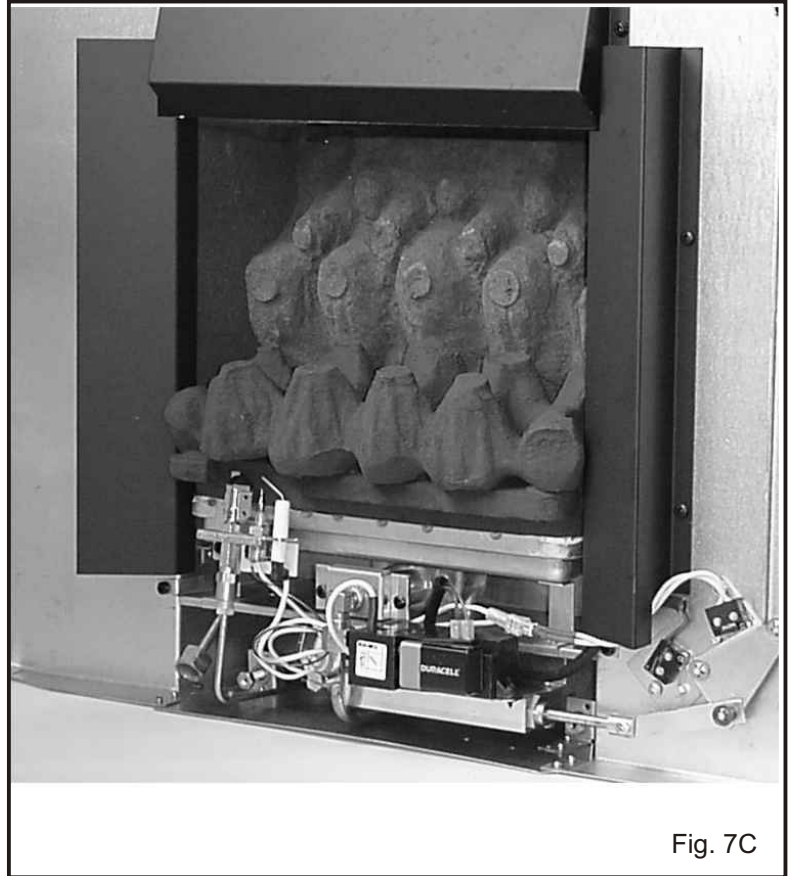


Fig. 7C

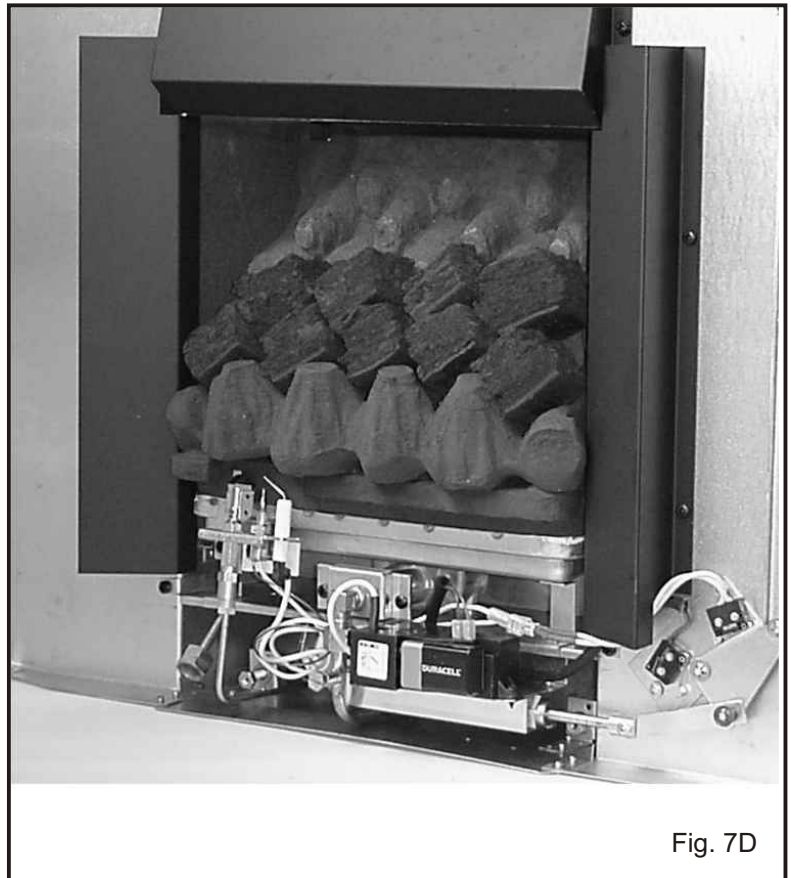


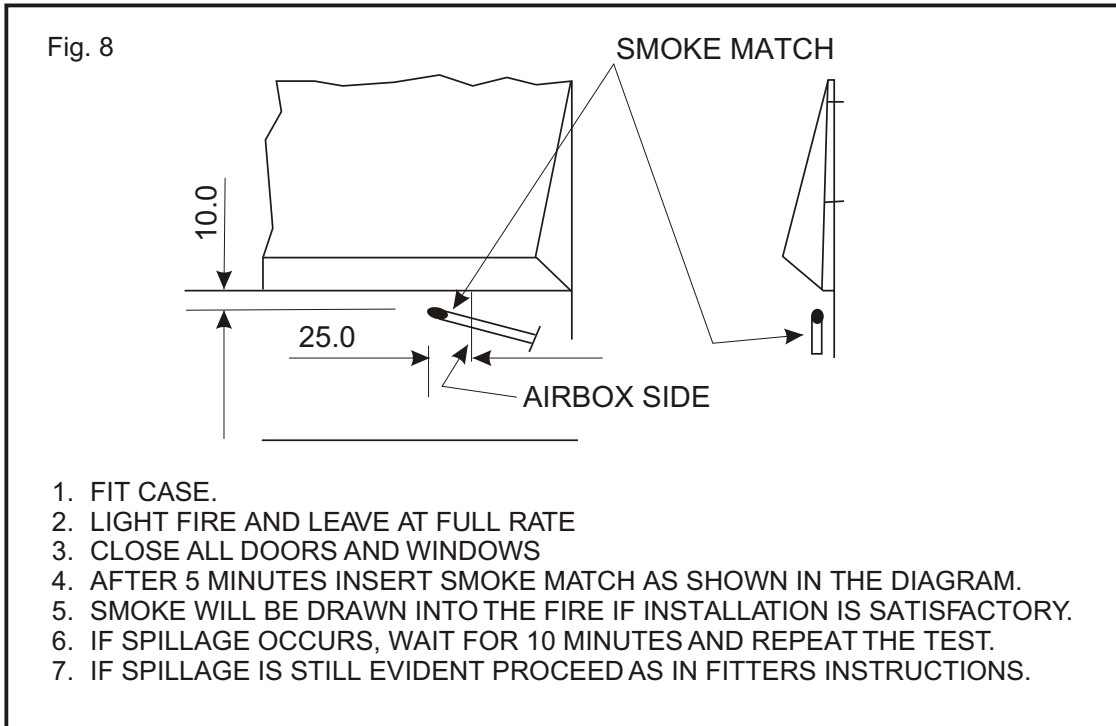
Fig. 7D

4.4 TEST FOR SPILLAGE

A test for spillage must be made before the installed fire is left with the user. This is carried out in the following manner. Light the fire and leave at HIGH rate. Close all the doors and windows in the room and after the fire has been alight for five minutes insert a lighted smoke match in line with the bottom edge of the canopy and 10mm below it (See Fig. 8). Hold the match with a pair of pliers or in a metal tube. If all of the smoke is drawn into the fire the installation is satisfactory. If in doubt, repeat the test after a further ten minutes.

If there is a fan or a fan operated appliance in a connecting room then the spillage test must be repeated with the fan running and all inter-connecting doors between the fan and the fire left open. If the fan and the fire are in the same room, close all windows and doors connected to the room. Switch on the fan and repeat the spillage test.

If spillage is detected, inspect the sealing of the fire to the surround / hearth. If this is satisfactory proceed as follows:
If a spigot restrictor was fitted, disconnect the fire and remove the spigot restrictor. Re-install the fire and repeat the above spillage test. If there is still evidence of spillage then there may be a fault with the chimney or insufficient air in the room. If the cause of the spillage cannot be corrected **DISCONNECT THE FIRE AND SEEK EXPERT ADVICE.**



4.5 CHECK IGNITION

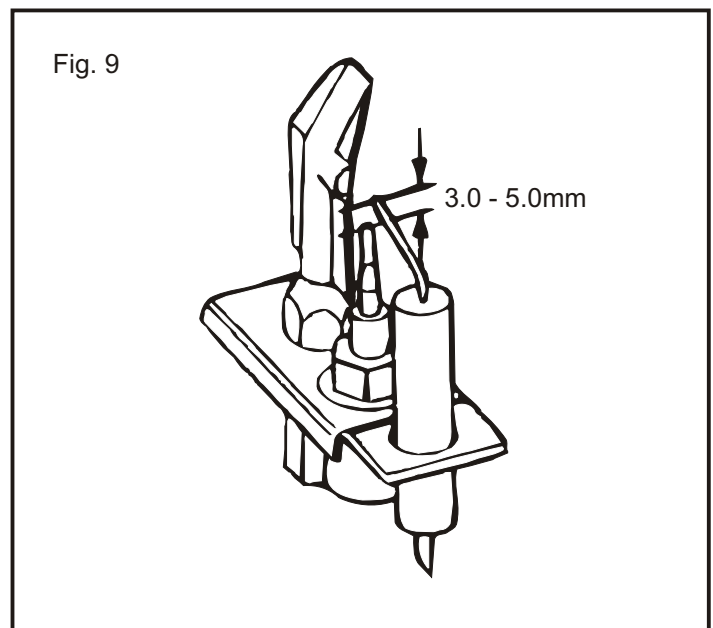
Check that ignition of the pilot and the cross lighting to the main burner is satisfactory.

NB. The spark gap between the electrode and thermocouple tip should be between 3.0 and 5.0mm (See Fig. 9).

4.6 CHECK OPERATION OF FSD

Leave the fire running on HIGH rate for 5 minutes and then turn off the gas at the service cock. After 3 minutes turn the service cock on again. If the gas has stopped flowing the FSD has operated satisfactorily.

NOTE: You may hear the FSD valve close within the 3 minute period but always check that the gas has stopped flowing.



5.0 INSTRUCT USER

Refer to Users Instructions

Make sure the user understands the following:

- (a) How to light and operate the fire.
- (b) The fire can be lit with a match or taper in the event of failure of the battery ignition.
- (c) Demonstrate the removal and replacement of the coals. Advise on the need to clean these regularly.
- (d) Advise that for safe and efficient operation, the fire should be serviced annually by British Gas or a CORGI registered service agent.
- (e) Explain to the user the functioning of the combined flame supervision and atmosphere monitoring device as detailed in Section 6.4. Stress that if this device repeatedly shuts off the fire, the fault must be rectified immediately by a competent person.
- (f) When the fire is first lit a slight smell and light smoke may be noticed but this will clear away with a few hours of use on HIGH.
- (g) Advise the user to carefully clean the base of the fire with a vacuum cleaner regularly.

Hand over the Users Instructions

6.0 SERVICING INSTRUCTIONS

IMPORTANT NOTES

1. Turn off the gas supply to the fire before starting any servicing.
2. Always test for gas soundness after servicing or exchanging any component.
3. Remove the fire from the surround and inspect the catchment space for build up of debris on every service visit.
4. Check the fire for clearance of products on every service visit.
5. Remove any lint from the top of the main burner and from around the aeration hole of the pilot and main burner.

6.1 REMOVE BURNER TRAY

1. Remove the outer case by lifting it upwards and away from the fire.
2. Remove the loose coals and coal bed.
3. Disconnect the gas supply at the inlet to the fire.
4. Remove the screw from the slider valve connection to the linkage.
5. Separate the yellow wires on the thermocouple break micro switch from the white wires attached to the pilot assembly.
6. Disconnect the red and blue wires from the ignition unit.
7. Remove the two screws securing the burner tray to the firebox and slide out the burner tray.

6.2 BURNER INJECTOR

1. Remove the burner tray (Section 6.1 above).
2. Undo the union nuts on the burner gas inlet and at the gas valve end and remove the gas pipe.
3. Undo the two screws securing the injector bracket to the burner manifold.
4. Undo the nut securing the injector to its holder, and remove the injector and washer.
5. Replace with the new injector.
6. Re-assemble in the reverse manner.

6.3 GAS VALVE / FSD ASSEMBLY

1. Remove burner tray (Section 6.1 above)..
2. Turn the tray upside down.
3. Undo the gas connections to the gas valve.
4. Release the thermocouple nut and ease out the probe.
5. Undo the two screws securing the burner to its tray and ease out the gas valve and gas inlet pipe.
6. Remove the two screws securing the gas valve to its bracket and remove the gas valve.
7. Replace with the new gas valve/fsd assembly.
8. Re-assemble in the reverse manner.

6.4 PILOT ASSEMBLY

The pilot is an atmosphere sensing device and must be replaced as a complete unit. Repair must not be undertaken.

NOTE: If the fire keeps going out or exhibits signs of nuisance shut off, check the operation of the pilot as follows:-

- (a) Inspect the pilot flame, if suspect check the gas supply. Clear blockage if necessary. If flame is still suspect replace pilot assembly.
- (b) Check the thermocouple. If faulty replace the pilot assembly.
- (c) Check the magnet unit in the gas valve. If faulty replace the valve.
- (d) Check the thermocouple break micro switch and connections.
- (d) Check the ventilation in the room. Vitiation may be due to lack of sufficient air supply.
- (e) Check for satisfactory clearance of combustion products. Vitiation may be due to spillage of combustion products into the room.

1. Remove burner tray (Section 6.1 above).
2. Release the pilot supply pipe at the pilot end and ease out the pipe.
3. Undo the thermocouple nut at the gas valve end and ease out the thermocouple.
4. Disconnect the thermocouple wires from the yellow micro switch wires.
4. Pull off the spark lead at the pilot end.
5. Remove the two screws securing the pilot assembly (and insulation pad) to its bracket.
6. Fit the new pilot assembly.
7. Re-assemble in the reverse manner.

6.5 FUEL EFFECT COMPONENTS

The loose coals and the coal bed simply lift out. To replace the rear coal and/or side cheeks proceed as follows:

SIDE CHEEKS

1. Remove the outer case.
2. Remove the left or right retaining panel by undoing the two screws securing it to the fire body.
3. Slide out the side cheeks and replace with new ones. Re-assemble in reverse order.

REAR COAL

1. Remove burner tray (Section 6.1)
2. Remove the screws securing the lower coal support and slide out the rear coal.
3. Replace with a new one, and re-assemble in reverse order.

6.6 MAIN BURNER

1. Remove burner tray (Section 6.1)
2. Undo the two screws securing the pilot assembly to the burner.
3. Undo the two screws securing the injector to the burner manifold.
4. Turn the tray upside down.
5. Undo the two screws securing the burner to the tray and remove the burner.
6. Fit the new burner and re-assemble in the reverse manner.

6.7 CONTROL KNOB

1. Remove the outer case.
2. Remove the two screws securing the knob to the slider linkage.
3. Replace with a new knob and re-assemble in the reverse manner.

6.8 IGNITION UNIT

1. Remove the outer case.
2. Disconnect the red and blue wires and the ignition lead from the ignition unit.
3. Undo the two screws securing the ignition unit to its mounting bracket.
4. Replace with a new one and re-assemble in the reverse manner.

6.9 IGNITION BATTERY REPLACEMENT

1. Remove the outer case.
2. The battery can now be located at the bottom of the fire, fitted into the ignition unit.
3. Remove the old battery from the ignition unit by pulling it out towards the right.
4. Replace with the new battery of the same type (see Section 1.0 Technical Data).
Note: The terminals of the battery are of different shapes to prevent incorrect connection. If it does not fit, try it the other way round.
5. Re-fit the outer case.

6.10 IGNITION MICRO SWITCH

1. Remove the outer case.
2. Disconnect the red and blue wires from the ignition unit.
3. Remove the two screws securing the micro switch to the fire.
4. Replace with a new one and re-assemble in the reverse manner.

6.11 THERMOCOUPLE BREAK MICRO SWITCH

1. Remove the outer case.
2. Disconnect the thermocouple wires from the yellow micro switch wires.
3. Remove the two screws securing the micro switch to the fire.
4. Replace with a new one and re-assemble in the reverse manner.

7.0 HINTS ON FAULT FINDING

The following are possible fault conditions. Check the items mentioned and repair or replace parts as necessary. The list is not exhaustive but a fair outline of possible faults.

1. **No Spark**

- (a) Check spark by manually operating the micro switch.
- (b) The battery may be exhausted. Check and replace if necessary.
- (c) Check the spark gap and electrode alignment. The electrode, thermocouple probe and horizontal arm of the pilot burner should be in a straight line.
- (d) Inspect the spark lead, ensure firm contact at the ends and that there is no shorting out of spark at either end.

2. **Spark but the pilot does not light.**

- (a) Verify availability of gas at the pilot burner, if possible, light with a match.
- (b) If gas is available, proceed as in 1 above.
- (c) If gas is not available, check the pilot burner and supply pipe for blockage.
- (d) **IMPORTANT:** Remove the battery from the ignition unit to disable the spark ignition. Ensure gas is available at the pilot port of gas tap, if not replace the tap.

3. **Pilot lights but goes out on heat setting.**

Pilot starvation due to partial blockage. Clean the pilot gas supply line. See also 2(c) and 2(d) above.

4. **Nuisance shut off.**

- (a) Inspect the pilot flame.
- (b) Check the thermocouple. If faulty replace the pilot assembly.
- (c) Check the thermocouple break micro switch and connections.
- (d) Check the magnet unit in the gas tap. If faulty replace the tap.
- (e) Check the ventilation into the room. Vitiation may be due to the lack of sufficient air supply.
- (f) Check for satisfactory clearance of combustion products. Vitiation may be due to spillage of combustion products into the room.

5. **Main burner popping.**

Remove the loose coals and coalbed. Light the fire and inspect the burner for cracks and leakage. Replace the burner if necessary.

6. **Poor flame picture.**

- (a) Remove the burner assembly. Check the alignment of the burner ports with the holes in the coalbed. Ensure the ports are clear.
- (b) Re-assemble correctly and check the flame picture.
- (c) Check the gas rate.


7. **Sooting.**

Proceed as in 6 above.

8. **Spillage.**

- (a) Check the seal of the fire to the wall/surround.
- (b) Inspect the chimney.
- (c) Remove the spigot restrictor if fitted.
- (d) Check the coal arrangement.

8.0 SHORT LIST PARTS

 PART NUMBER	DESCRIPTION
822309	Gas Valve / FSD Assembly
990274	Control Knob
822308	Pilot Assembly (Natural Gas)
993911	Spark Lead
822238	Ignition Unit
992232	Rear Coal
992234	Coal Bed
992169	Loose Coals (9 off)
992178	Left Side Cheek
992179	Right Side Cheek