

Wonderfire

**AIRFLAME
LOG CONVECTOR**

(GC No. 32-815-58)

**INSTALLATION & SERVICING
INSTRUCTIONS**

Please leave these Instructions with the user.

This appliance must be installed in accordance with the rules in force.

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Important Notes

This fire is intended for decorative purposes. The installation must be in accordance with National Regulations and must be carried out by a qualified installer.

This fire must be installed and used in accordance with these instructions.

Prior to installation, ensure that the local distribution conditions (identification of the type of gas and pressure) and the adjustment of the appliance are compatible.

The builders opening or fireplace opening must be constructed of non-combustible material.

A non-combustible hearth must be fitted in front of the fire in accordance with National Regulations

Any flue damper plate or flue restrictor must be removed or fixed permanently in the fully open position, or shall only be fitted in accordance with National Regulations.

If the chimney has been previously used to burn solid fuel, the chimney should be swept before the appliance is installed.

Before the fire is installed a flue test in accordance with National Regulations should be carried out.

The gas connection must be in accordance with National Regulations.

The pilot light and flame sensing device fitted to this fire is also an atmosphere sensing device. If for any reason any part of the pilot assembly is to be replaced ALL the assembly including the pilot burner, thermocouple, electrode and injector must be exchanged complete for an original manufacturers pilot assembly only. This atmosphere sensing device is not adjustable and must not be put out of action.

This product uses fuel effect pieces, firebox walls and gaskets containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to these materials may cause temporary irritation to eyes, skin and respiratory tract. Consequently, it makes sense to take care when handling these articles to ensure that the release of dust is kept to a minimum. To ensure that the release of fibres from these RCF articles is kept to a minimum, during installation and servicing we recommend that you use a HEPA filtered vacuum to remove any dust and soot accumulated in and around the fire before and after working on the fire. When replacing these articles we recommend that the replaced items are not broken up, but are sealed within a heavy duty polythene bag, clearly labelled as RCF waste. This is not classified as "hazardous waste" and may be disposed of at a tipping site licensed for the disposal of industrial waste. Protective clothing is not required when handling these articles, but we recommend you follow the normal hygiene rules of not smoking, eating or drinking in the work area and always wash your hands before eating or drinking.

This appliance does not contain any component manufactured from asbestos or asbestos related products.

Technical Data

Pilot burner assembly marking	NG 9040 LPG 9226
Gas Connection	8 mm O.D. tube
Minimum flue diameter	7" (178mm)
Minimum flue height	3 Metres
Minimum ventilation	100cm ²
Approximate weight:	48kg

GAS TYPE	CATEGORY	INLET PRESSURE	MAIN BURNER INJECTOR SIZE (ONE PER APPLIANCE)	HEAT INPUT Kw (Gross)	SETTING PRESSURE Mbar
NG	12H	20	82-902	10.0	13.4
PROP	13P	37	92/340	10.4	34.0

Tolerance on setting pressures :

NG ±1 mbar

LPG ± 3 mbar

Appliance Dimensions

Height	Width	Depth
570mm	610mm	330mm

Fireplace Opening Dimensions

	Height	Width	Depth
Min	553mm	555mm	335mm
Max	567mm	600mm	-

Clearance to Combustibles

To combustible side panels – 100mm

To combustible shelves – 200mm

Fitting the convector box

- Place the adhesive foam seal to the rear of the appliance frame ensuring full contact with the fireplace opening. See figure 1.
- Drill two holes in the rear wall of the fireplace for the eyebolt plugs using a no.12 masonry drill. The nominal height of the holes should be around 200mm from the base of the opening. The holes should be equidistant each side of the centre line of the fireplace to ensure that the appliance finishes centrally in the opening when tension is applied to the cables. See figure 2.

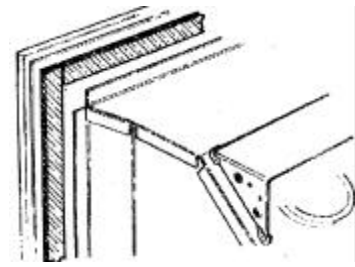


Figure 1 Foam seal position

- Insert a fibre plug into each hole. Use the rawlplugs supplied with this appliance - **Never use plastic plugs instead of the fibre plugs supplied.** Screw the eyebolts into the plugs. Make sure that the bolts are secure.
- Place the convection box unit close to the fireplace but allow sufficient access into the fireplace opening so that the cables can be threaded through the eyebolts and returned through the back of the convection box.

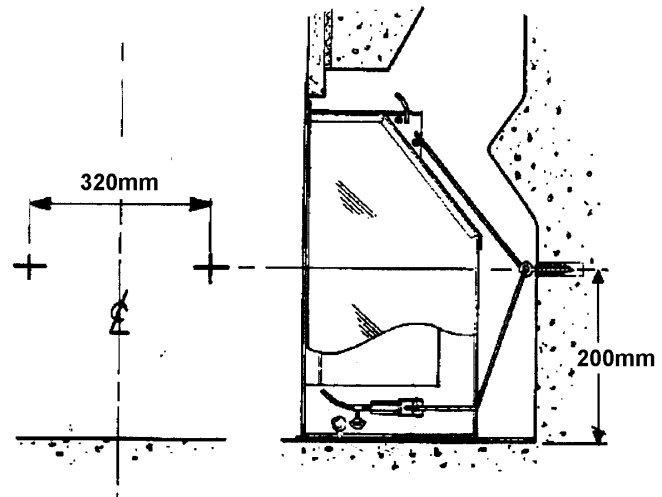


Figure 2 Eyebolt hole positions

- If a concealed connection is being used, insert the gas supply pipe through a suitable gas inlet point.
- The convection box has two holes on each end of the debris deflector. Insert one end of each cable (one cable each side) from the back through the lower of the two holes and return the end through the upper of the holes as shown in figure 3. Give the cables a pull so that they grip against the debris deflector flanges.
- Thread the cables through the eyebolts in the rear wall. Return the cables through the holes near the bottom of the convection box back panel and through the "V" shaped brackets near the bottom front sides of the convection box. See figure 4.
- Place the convection box fully back into the fireplace opening so that it is sealed against the fireplace front surround.
- Fit a cable retainer over the bottom end of each cable.
- Pull each cable taut. Push the cable retainers hard up against the "V" brackets. Tighten the screws in the retainers so that they

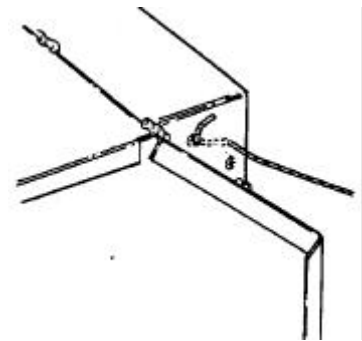


Figure 3 Upper cable route

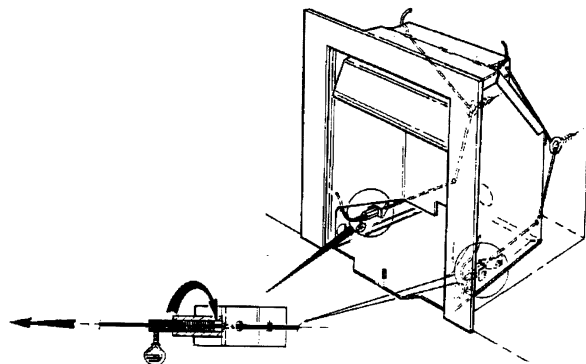


Figure 4 Cable routing and tightening of cable retainers

clamp the cables in position. Apply tension to the cables by hand. See figure 4.

- Inspect the fit of the convection box to the fireplace sealing is satisfactory, fully tighten the cable retainers.
- If the convection box is not correctly aligned, release screws and turning the hexagonal adjusters fully and automatically realign itself. Pull each cable taut against the "V" brackets. Again, tighten the screws in the retainers and the hexagonal adjusters clockwise as far as possible.
- Push the free length of the cables inside the convection box so that they are available to allow easy removal and refitting of the appliance during subsequent service calls.
- Fit the burner into the convector box, and retain using the fixing screw and nut provided.

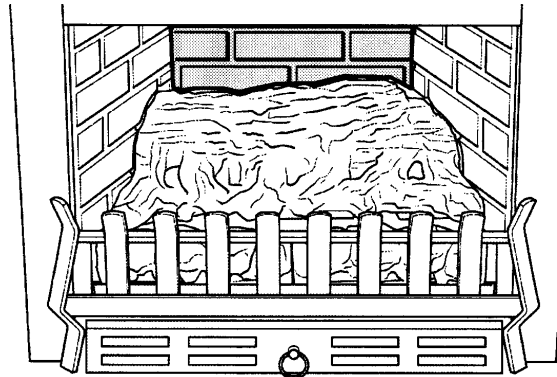


Figure 9 Fitting rear wall

Commissioning the Burner

Fitting the Ceramic Sidewalls

Before the burner can be placed into the convection box, the sidewalls must be installed.

- Remove the sidewalls from the protective packaging.
- Insert the bottom edges into the support brackets. See figure 5.
- Carefully move the sidewall into position ensuring that the front edge fits neatly behind the front frame of the appliance.
- Secure the top of the sidewall using a small fixing bracket (provided in the loose parts pack) as shown in figure 5.
- Repeat for opposite side.
- Place the burner assembly centrally in the convector box, and re-connect front fastener to the convector box. Connect the gas supply of the gas control valve.

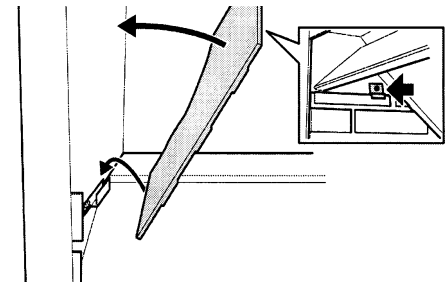


Figure 5 Fitting the sidewalls

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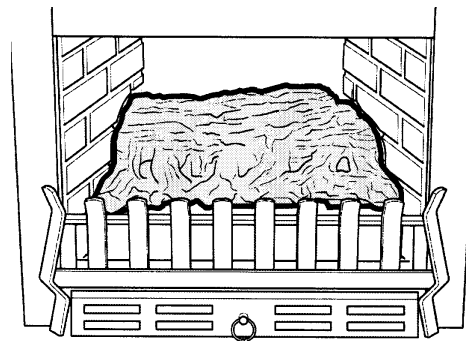


Figure 8 Fitting fuel matrix

Remove the rear wall from its protective packaging and place into position in the back of the convector box, ensuring that it sits firmly into the two locating brackets. See figure 9.

Matrix

which should be handled vertically in the burner and gently pushed into place.

Place the burner assembly centrally in the convector box as shown in figure 6. Ensure the fixing hooks are fully inserted.

Push the burner assembly against the back of the convector box. See figure 7. Fitting firefront

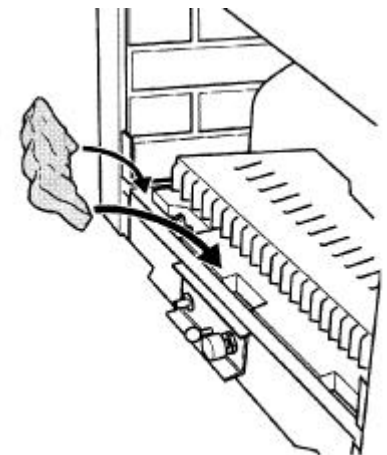


Figure 6 Fitting the front coal grate

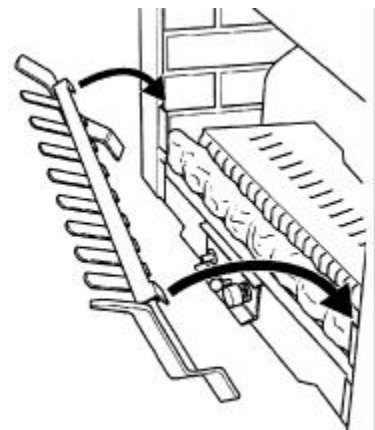


Figure 7 Fitting firefront

Positioning the Logs

In order to get the most realistic flame effect possible and the correct performance from this fire, it is important that the logs are set up in exact accordance with these instructions.

- Use only the logs supplied with the fire.
- Do not add any extra logs or coals.
- Unpack all of the logs from the protective packaging.
- Identify the logs. See figure 10

- Take the 'A' log and position as shown in figure 11, ensuring that it is pulled fully forward, on top of the cross member of the front iron.

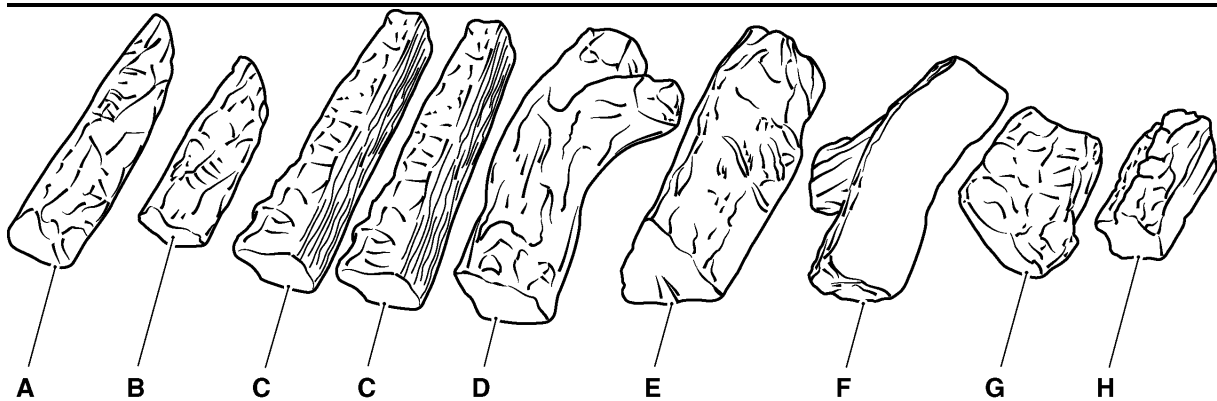


Figure 10 Log identification

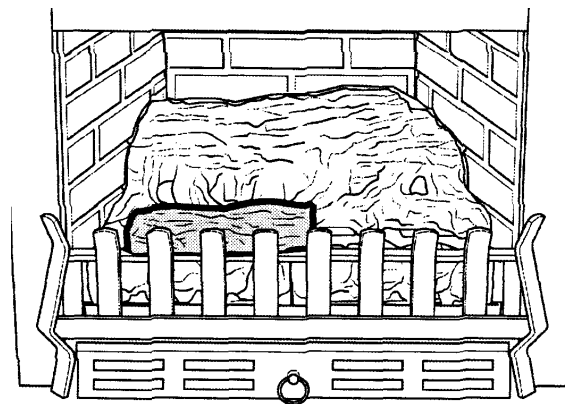


Figure 11 "A" log position

- Now take the smaller 'B' log and position in the same manner as shown in figure 12.
- *Note 'A' log and 'B' log should fit snugly in between the outer protrusions of the log matrix.*
- Take a 'C' log and position as shown in figure 13. Ensure the bark effect of the log is facing towards the sidewall, and the thinner end of the log is at the back corner of the firebox.
- Take the other 'C' log and position as shown in figure 14, this time ensuring that the bark effect of the log is facing away from the sidewall, but (as previous) the thinner end of the log is at the back corner of the firebox.
- Take the 'D' log and position on top of the fuel matrix as shown in figure 15. Ensure that the log sits flat on the fuel matrix. When positioned correctly, the log should be in contact with both the rear wall and the front 'B' log.
- Take the 'E' log and position as shown in figure 16. When positioned correctly, the opposite corners of the 'E' log should be in contact with both the left

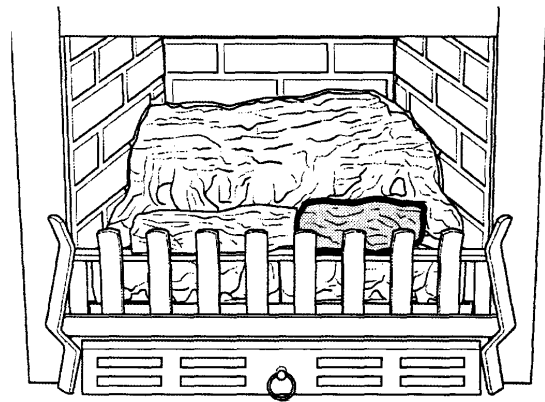


Figure 12 "B" log position

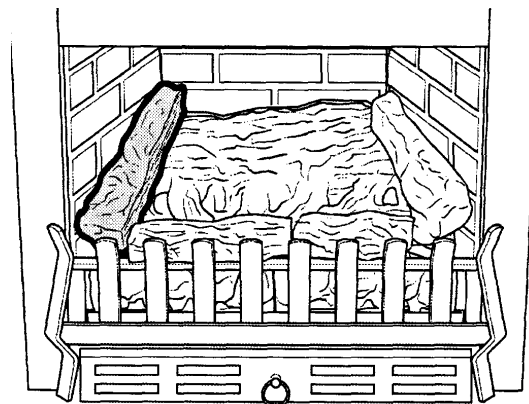


Figure 13 First "C" log position

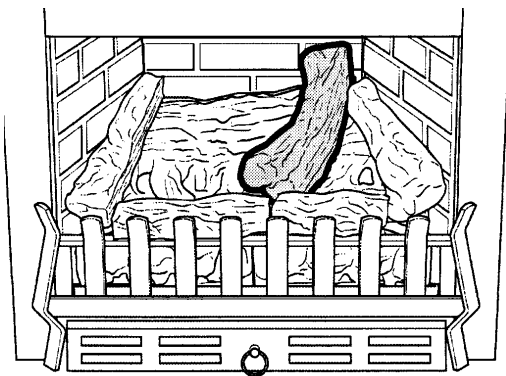


Figure 15 "D" log position

hand 'C' log and the 'D' log.

- Take the 'F' log and position on top of the 'E' log as

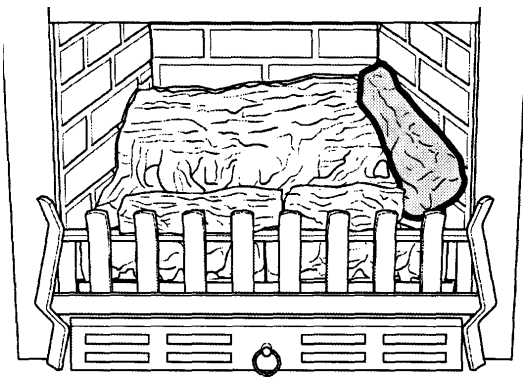


Figure 14 Second "C" log position

shown in figure 17. When positioned correctly, the 'F' log should be in contact with both the rear wall, the left hand 'C' log, and resting on top of the 'E' log.

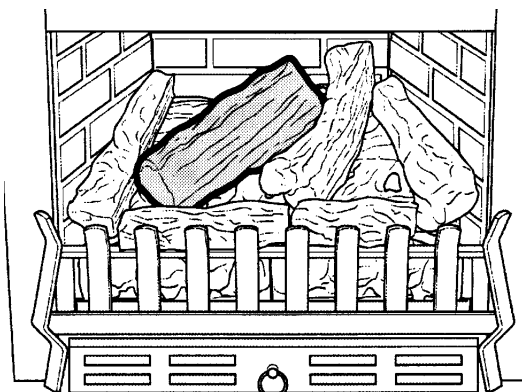


Figure 16 "E" log position

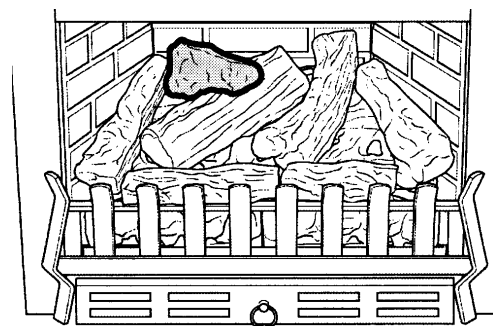


Figure 17 "F" loa position

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- Now take the 'G' log and insert the thinner end between the 'D' log and the right hand 'C' log. The front of the 'G' log should be level with the front 'B' log. See figure 18.
- Finally, take the 'H' log (the smallest) and position at the back of the box, such that it rests between the 'D' log and the right hand 'C' log, and is also in contact with the back wall as shown in figure 19.

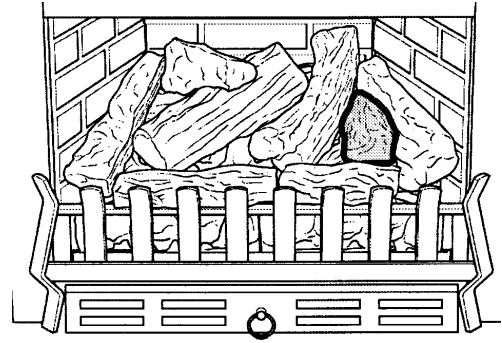


Figure 18 "G" log position

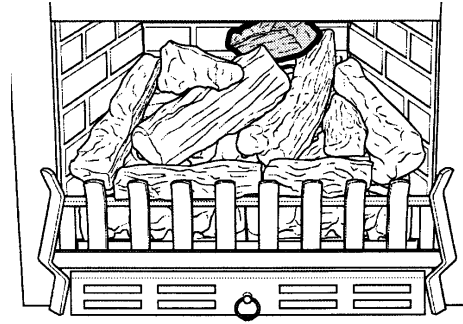


Figure 19 "H" log position

Operating Checks

Gas Supply Checks

Purge the gas supply and ensure that all joints are sound. Check that the setting pressure is as shown in the table on page 3.

Lighting Checks

This fire is controlled by a four position gas tap mounted in the front of the appliance. In addition to the OFF setting there is a pilot position and two heat control settings.

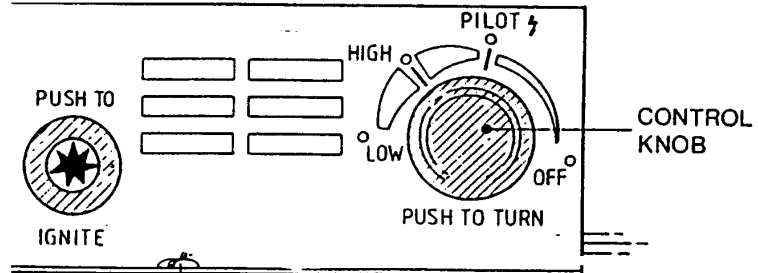


Figure 20 Controls

To Light the Pilot

- Ensure that the control knob is turned to the OFF position.
Depress the control knob and turn anticlockwise until the PILOT setting is reached.
- Keeping the control knob depressed, press the piezo ignition unit to light the pilot. Observe if it is alight by looking through the slots to the left hand end of the front coals.
- If the pilot does not light immediately, press the piezo button several more times until ignition is achieved.
- If after ten seconds, ignition has not occurred, turn the control knob back to the OFF position and repeat the ignition procedure after 30 seconds.
- When the pilot is alight, keep the control knob depressed for ten seconds to allow the flame supervision device to establish.
- When the control knob is released, the pilot should remain alight. If the pilot fails to remain alight, repeat the ignition procedure, this time keeping the control knob depressed for a longer period of time.

Lighting the Main Burner

- Once the pilot light is established the main burner can be lit by turning the control knob anticlockwise to the HIGH position.

Controlling the heat setting.

- In order to change from one setting to another depress the control knob slightly and turn the knob to the required position. Alternatively, if a setting between LOW and HIGH is required, then the control knob may be turned to this position.
- Note: We recommend you use the appliance at a low setting for the first few hours of use to reduce thermal cracking of the burner surface. Surface cracking of the burner is normal and is no cause for concern. Whilst binding materials are being burnt out of the burner there may be a slight odour.

To Turn the Fire back to Pilot Setting

- Depress control knob and turn clockwise until pilot setting is reached.

To Turn the Fire OFF

- Ensure control knob is in pilot position, depress control knob and turn clockwise to the OFF position.

For fires fitted with Aeration control

For appliances fitted with variable aeration control, the lighting and adjustment procedures are as normal. To operate the aeration control system, the following procedure should be followed:

- Allow the appliance to warm up, (for at least fifteen minutes) in the fully aerated position, with the control lever pushed in to the locked position – see figure 21.

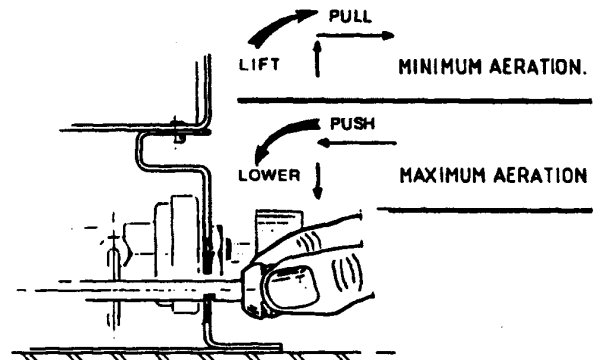


Figure 21 Aeration control

- Switch to the minimum aerated position by slightly lifting the control lever. A spring mechanism will close the aeration shutter.
- To return to the fully aerated position push the control lever in and slightly downwards until it rests in its locked position.
- Please note : It is advisable to run the fire in its fully aerated mode (control knob pushed in) at the beginning of each operation and if running at the minimum rate setting, or to burn off any carbon deposits which may have built up after prolonged use of the minimum aerated setting.

Clearance Test

Warm up the appliance on MAX for 5 minutes. Insert a smoke match as shown in figure 22, 30mm from either end of the fireplace opening. Smoke should draw positively into the chimney.

If in doubt repeat the procedure after ten minutes.

If the smoke is still not positively drawn into the appliance, isolate the gas supply and seek expert advice.

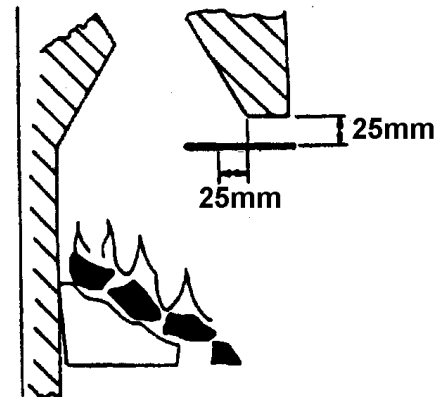


Figure 22 Clearance test

Servicing and Maintenance

Annual maintenance

The logs should be removed and any sooting carefully brushed from the surface with a soft brush.

The coal matrix should be removed and any debris shaken off. The burner should be removed from the fireplace and any debris carefully removed using a soft brush. Inspect the burner for any damage and repair or replace if necessary.

Please note: surface cracking of the burner is quite normal.

Check the venturi and injector for linting and clean if necessary. Clean any debris or carbon from around the pilot unit and check the correct operation of the gas control. Reinstall the burner into the fireplace, reconnect the gas supply and check the soundness of all gas connections. Refit the coals in accordance with the section of this manual entitled, "Commissioning the burner".

Follow the lighting procedure and check for spillage. If spillage is found the cause should be identified and remedied.

Check that any purpose made room ventilation is free from obstruction.

NEVER ATTEMPT TO INSPECT OR REMOVE THE FIRE UNLESS IT HAS BEEN ALLOWED TO COOL FOR AT LEAST 20 MINUTES

The following procedures should be carried out with these tools at hand.

Slot head screwdriver	14mm spanner
7mm spanner	15mm spanner
10mm spanner	16mm spanner
11mm spanner	3/4 AF spanner
12mm spanner	

Before servicing the component parts carry out the following procedure:

1. Turn off the appliance and wait least 15 minutes to allow the fire to cool.
2. Isolate the gas supply.
3. Remove the coals, matrix and front coal.
4. Disconnect the inlet supply/appliance union.
5. Unscrew the appliance fixing screw.
6. Remove the appliance.

To remove the injector:

Carefully invert the burner assembly ensuring that the ceramic surfaces are not damaged. Disconnect the injector/supply pipe union, place the burner assembly upright.

LPG (G31) MODELS ONLY: Remove the injector retaining nut and then remove the injector.

NG (G20) MODELS: Remove the injector.

To remove the Piezo unit:

Invert the burner assembly and remove the HT lead. Remove the piezo retaining nut, and remove the piezo. Replace in reverse order.

To remove the Thermocouple/pilot unit:

The thermocouple is an integral part of the pilot unit assembly, and as such, must be replaced as a complete unit. To remove the pilot assembly, disconnect the electrode lead from the piezo unit, disconnect the thermocouple from the gas tap, and remove the two screws retaining the pilot unit to the support bracket. Withdraw the unit. Replace in reverse order.

To remove the gas tap/FSD:

Invert the burner assembly, disconnect the supply union, pilot supply union and thermocouple connecting nut, remove control knob, remove the retaining nut. Replace in reverse order.

Fault Finding Chart

Problem	Remedy
Pilot light will not light when ignition button is pressed.	<ol style="list-style-type: none"> 1. Check that the lighting instructions are being followed. 2. Check that the spark is jumping between the electrode and the pilot head. If not, check for debris around the electrode, condition of the wiring and any possible short circuit. 3. Check that the gas is passing through the pilot injector. If not, check pipe, injector and tap for possible blockage and rectify. 4. Purge the system.
Pilot light ignites, but will not establish after holding the tap knob in for ten seconds.	<ol style="list-style-type: none"> 1. Ensure that the pilot flame is impinging on the thermocouple probe. 2. Check that the thermocouple butts are tight on both the tap and the pilot unit assembly. 3. If steps 1) and 2) do not cure the problem it is likely that the thermocouple is faulty. Remove and replace.
Fire operates well, but 'pops'.	<ol style="list-style-type: none"> 1. Popping is usually caused by the logs being placed too closely together. Ensure that the log arrangement instructions given in this manual have been followed precisely. 2. If the injector has been removed or disturbed during the installation, ensure that the compression joint has been assembled correctly and is gas tight.
Excessive sooting.	<p>A small amount of sooting can occur on any fire of this type, especially those operating on LPG.</p> <ol style="list-style-type: none"> 1. Excessive sooting can be caused by incorrect arrangement of the logs. Ensure that the log arrangement instructions given in this manual have been followed precisely. 2. The position of the injector is set in the factory, but if this has been disturbed during installation, then it should be reset. The correct position is when the injector points directly down the centre of the venturi. A blue flame with yellow tips should be produced in this position. 3. Check the flue pull. A 'lazy' chimney will not exhaust all of the soot particles from the burner. 4. Prolonged use of the minimum aeration setting on models with adjustable aeration. Return to the full aeration setting after cleaning.
Fire glows, but little or no flame is produced.	<p>This type of fire is designed to be efficient, and produce radiant heat in favour of expensive flames. The flames that are produced are 100-150mm long. If the flames are</p>

	<p>significantly shorter than this after the fire has been allowed to burn on MAX for 30 minutes, check the following.</p> <ol style="list-style-type: none"> 1. Ensure that the injector is clear from obstruction. 2. Ensure that the correct injector is fitted (see gas data). 3. Measure the gas pressures with the fire operating at MAX setting. The reading at the pressure test point should be as laid down in the gas data section of this manual. If the pressure is low, check the gas run for kinks, fiction producing fittings etc. Do not install more than 1.2 metres of 8mm gas line with natural gas fires. 4. Check that any restrictor elbow is fully open.
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Short Spares List

Never fit a non-standard part as this may constitute a hazard. Use only the correct manufacturer's spares. Use the correct number of fibrebed components, and install them precisely in accordance with this manual.

Description	Maker's part number
Gas control	9730049
Gas control knob	9730058
ASD pilot assembly (natural)	9740029
ASD pilot assembly (LPG)	9740030
Log set	9790038
Front coals	9780005
Brick effect wall - LH	9790037
Brick effect wall - RH	9790035
Brick effect wall –rear	9790036
Fuel matrix	9770019
Main injector – Natural gas (G20)	9730090
Main injector – Propane (G31)	9730035

Wonderfire

All Wonderfire appliances are CE Approved and designed to meet the appropriate British Standards.



All Wonderfire appliances are manufactured to the highest standards of quality and excellence under the BS EN ISO 9001 quality system accepted by the British Standards Institute.

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