

Instructions for Use Installation and Servicing

To be left with the user

THIS DOCUMENT HAS BEEN PROVIDED BY

 PLEASE VISIT WWW.HEATINGSPPARES247.COM FOR FURTHER
 INFORMATION AND GENUINE PARTS & SPARES AT LOW PRICES

HEARTBEAT 4 BBU Fire Front

FOR USE WITH BBU 45/4 & BBU 54/4

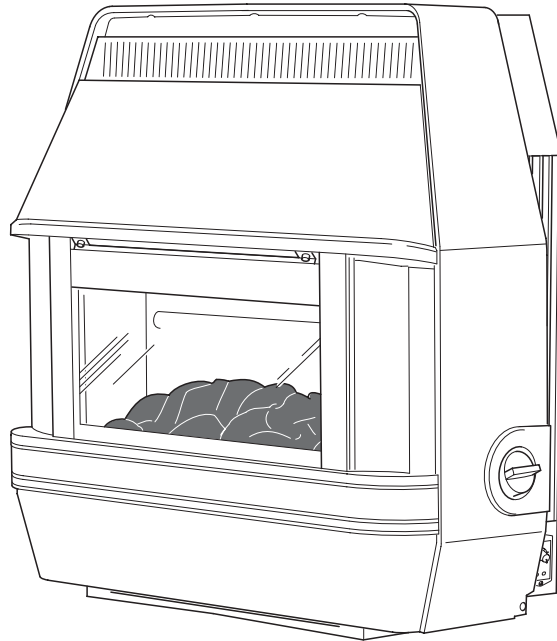
G.C. No. 37-047-16



The mark of quality for domestic heating

This is a Cat I_{2H} Appliance

Reference in these instructions to British Standards and Statutory Regulations/Requirements apply only to the United Kingdom. For Ireland the rules in force must be used.



The instructions consist of three parts, User, Installation and Servicing Instructions, which includes the Guarantee Registration Card. The instructions are an integral part of the appliance and must, to comply with the current issue of the Gas Safety (Installation and Use) Regulations, be handed to the user on completion of the installation.

Guarantee Registration

Thank you for installing a new Glow-worm appliance in your home.

Glow-worm appliances' are manufactured to the very highest standard so we are pleased to offer our customers' a Comprehensive First Year Guarantee.

In the centre pages are to be found your Guarantee Registration Card, which we recommend you complete and return as soon as possible.

If this card is missing you can obtain a copy or record your registration by telephoning the Heatcall Customer Service number 01773 828100.

Our Guarantee gives you peace of mind plus valuable protection against breakdown by covering the cost of:

- All replacement parts**
- All labour charges**
- All call-out charges**

REGISTER YOUR GLOW-WORM APPLIANCE
 FOR 1ST YEAR GUARANTEE PROTECTION

CALL 0208 247 9857

HEATCALL Customer Services:
 Tel: (01773) 828100
One Contact Local Service Fax: (01773) 828070

Hepworth Heating Ltd.,
 Nottingham Road, Belper, Derbyshire. DE56 1JT
General/Sales enquiries:
 Tel: (01773) 824141 Fax: (01773) 820569

Important Information

Certification

This fire is certificated to the current issue of BS6332 part 2, invoking the current issue of BS5258 part 8 for safety and performance. It is, therefore, important that no alteration is made to the fire, without permission, in writing, from Hepworth Heating Ltd.

Any alteration that is not approved by Hepworth Heating Ltd., could invalidate the certification, the warranty and could infringe the statutory requirements.

CE Mark

The CE mark on this appliance shows compliance with:

1. Directive 90/396/EEC on the approximation of the laws of the Member States relating to appliances burning gaseous fuels.
2. Directive 73/23/EEC on the harmonization of the Laws of the Member States relating to electrical equipment designed for use within certain voltage limits.
3. Directive 89/336/EEC on the approximation of the Laws of the Member States relating to electromagnetic compatibility - Boiler and Fire.

INFORMATION FOR THE INSTALLER AND SERVICE ENGINEER.

Under Section 6 of the Health and Safety at Work Act 1974, we are required to provide information on substances hazardous to health.

The Adhesives and sealants used in this appliance are cured and give no known hazard in this state.

FUELBED

This product uses fuel effect Pieces containing Refractory Ceramic Fibre (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 heavy duty polythene bags, 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.

INSULATION PADS, CERAMIC FIBRE, GLASS YARN & SEALANT

These can cause irritation to skin, eyes and the respiratory tract.

If you have a history of skin complaint you may be susceptible to irritation. High dust levels are usual only if the material is broken.

Normal handling should not cause discomfort, but follow normal good hygiene and wash your hands before eating, drinking or going to the lavatory.

If you do suffer irritation to the eyes or severe irritation to the skin seek medical attention.

SERVICING

REMEMBER, When replacing a part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Hepworth Heating Ltd.

CONTENTS	DESCRIPTION	SECTION	PAGE No.
INSTRUCTIONS FOR USE	Safety		3
	Introduction		3
	Maintenance/Serviceing		3
	Operating your Boiler & Fire		4
	Lighting the Boiler & Fire		4
	Cleaning/Replacement Parts		6
INSTALLATION INSTRUCTIONS	General Data	1	7
	Types of Installation	2	8
	Types of Flue Installation	3	9
	Fire Front Preperation	4	9
	Installation	5	11
	Controls & Pressure Checks	6	13
	Final Review	7	15
SERVICING INSTRUCTIONS	Serviceing and Replacement of Parts	8	16
	Fault Finding	9	18
	Spare Parts	10	20

Instructions for Use

IF YOU SMELL GAS

**DON'T SMOKE.
EXTINGUISH ALL NAKED FLAMES.
DON'T TURN ELECTRICAL SWITCHES
ON OR OFF.
TURN OFF THE GAS SUPPLY AT THE METER.
OPEN DOORS AND WINDOWS TO GET
RID OF THE GAS.
IMMEDIATELY CALL THE GAS EMERGENCY
SERVICE.**

*Advice/help should be obtained from your installation/
servicing company or the local gas undertaking.*

Notes and General Information

These instructions should be read and carefully followed for the safe and economical use of your appliance.

These gas fire fronts are to be used with specially designed Glow-worm 45/4 & 54/4 Back Boiler Units only.

The fire front and back boiler must be installed as a complete unit.

The boiler and fire can be operated together or independently.

Important Notice

This appliance is for use on natural gas (G20) as distributed in the United Kingdom and Ireland and must not be used on any other gas.

A slight smell may occur for a short time after initial lighting, this is quite normal and with use it will quickly disappear.

Combustible furniture or materials must not be placed closer than 1m (39in) in front of the fire front.

Soft wall coverings (e.g. embossed vinyl, etc.) which have a raised pattern, are easily affected by heat. They may, therefore, scorch or become discoloured when close to a heating appliance. Please bear this in mind whenever you are considering redecorating

The convection air openings at the top of the fire front and air inlet grilles at the sides and base must never be restricted.

Never use the fire with a damaged fuelbed.

The Gas Safety (Installation and Use) Regulations

In your interests and that of safety it is the Law that ALL gas appliances are installed by a competent person in accordance with the current issue of the above regulations.

Maintenance

To ensure the continued efficient and safe operation of the appliance it is recommended that it is checked and serviced as necessary at regular intervals. The frequency of servicing will depend upon the particular installation and usage, but in general once a year should be enough.

If this appliance is installed in a rented property there is a duty of care imposed on the owner of the property by the current issue of the Gas Safety (Installation and Use) Regulations, Section 35.

It is the law that servicing must be carried out by a competent person.

Please be advised that the 'Benchmark' logbook (supplied with the Back Boiler Unit) should be completed by the installation engineer on completion of commissioning and servicing.

All CORGI Registered Installers carry a CORGI ID card, and have a registration number. Both should be recorded in your boiler Logbook. You can check your installer is CORGI registered by calling CORGI direct on :- 01256 372300.

Servicing

In the United Kingdom servicing can be carried out either by a Heatcall Service engineer or a CORGI registered installer.

If you require your appliance to be serviced, please contact Heatcall on (01773) 828100 and quote the following details;

Model name and Serial numbers.

Fire front-positioned bottom right inside of the case.

Back Boiler-positioned on the base of the boiler next to the control box

If you wish to replace the fuelbed and do not know where they can be obtained please contact Hepworth Heating on (01773) 824141 or your nearest stockist.

In the United Kingdom, for general advice about gas and your gas fire contact Hepworth Heating Ltd.

Electrical Supply

WARNING. The appliance must be earthed.

Connection of the appliance and any system controls to the mains (230V-50Hz) must be through a 3A fused double pole isolating switch, having a minimum double pole contact separation of 3mm, serving only the boiler and system controls.

The colours of three core flexible cable are, Brown - live, Blue - neutral, Green and Yellow - earth.

Frost

If the boiler is to be out of use for any long time during severe weather conditions we recommend that the whole of the system, including the boiler be drained off to avoid the risk of freezing up.

If fitted, switch off the immersion heater in the domestic hot water cylinder.

If you are in any doubt your installation or servicing company or the local gas undertaking should be contacted.

Clearance

A shelf or surround of a maximum depth of 150mm may be fitted, provided that clearances above and at the sides of the fire front are as shown in diagram 1. For a shelf made from wood or other combustible materials deeper than 150mm add 12.5mm for every 25mm of shelf depth over 150mm.

On no account must a carpet or other combustible material be laid directly under the fire, unless the minimum clearances shown in diagram 1, is achieved.

The dimension is taken from the bottom of the fire case to the top of the carpet pile or other floor covering.

Hearth

A fire proof hearth under the fire front must have the minimum dimensions as shown in diagram 2.

Instructions for Use

OPERATING YOUR BOILER AND FIRE

Safety Device

BOILER - This appliance is fitted with a flue blockage safety device which will shut down the appliance in the event of abnormal flue conditions. This device is NOT a substitute for an independently mounted Carbon Monoxide detector.

FIRE FRONT- The fire is fitted with a safety device which will shut it down if there is a lack of oxygen it also incorporates a probe which senses that the heat from the pilot flame is correct. If the probe is cool, the device will prevent any gas flow unless the control knob is held down at the ignition position.

If, for any reason, the flames go out when the fire is hot or if the fire is turned off when hot, always wait at least three minutes before attempting to relight.

If the boiler and/or fire shuts down frequently for no apparent reason the first things to be checked are the chimney and air inlets into the room.

Any problems found must be put right, by a competent person, before the appliance is used again.

Lighting the boiler

The boiler controls are situated at the bottom of the R/H louvre of the fire front.

Refer to diagram 3 to identify the boiler controls.

See that all other controls are calling for heat.

The clock, room thermostat and programmer, if fitted, will probably be some distance from the unit.

To see how these items work and need to be set, read the manufacturers instructions supplied with them.

Turn the control thermistor knob "A" so that the pointer is between maximum and minimum, "O" on the boiler user control, see diagram 3.

Switch on electrical supply to the back boiler.

There will be a purge for approximately 30 seconds.

NOTE: If the electrical supply is switched rapidly off and on without gas present the control will purge for 100 sec. Neither of the indicators will be lit. The appliance will then operate correctly.

The boiler will automatically light.

This is indicated by a green light on the boiler user control coming on, see diagram 3.

Note: Should the red light on the boiler user control come on, it indicates that the pilot light is not operating correctly, or the flue blockage safety device has been activated.

When the fault has been corrected, turn the control thermistor knob "A" fully anti-clockwise so that the pointer is against the "Reset" position on the boiler user control, see diagram 3.

NO ATTEMPT SHOULD BE MADE TO RELIGHT THE BOILER UNTIL ANY FAULT HAS BEEN CORRECTED. EXPERT ADVICE SHOULD BE SOUGHT.

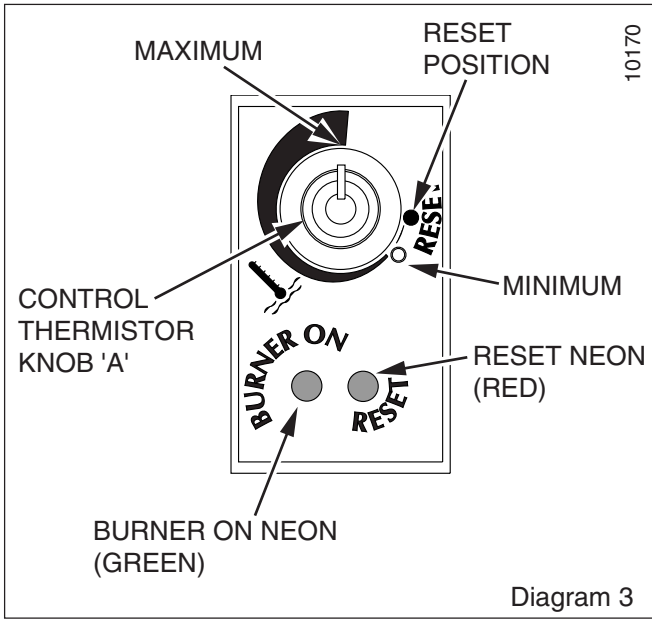
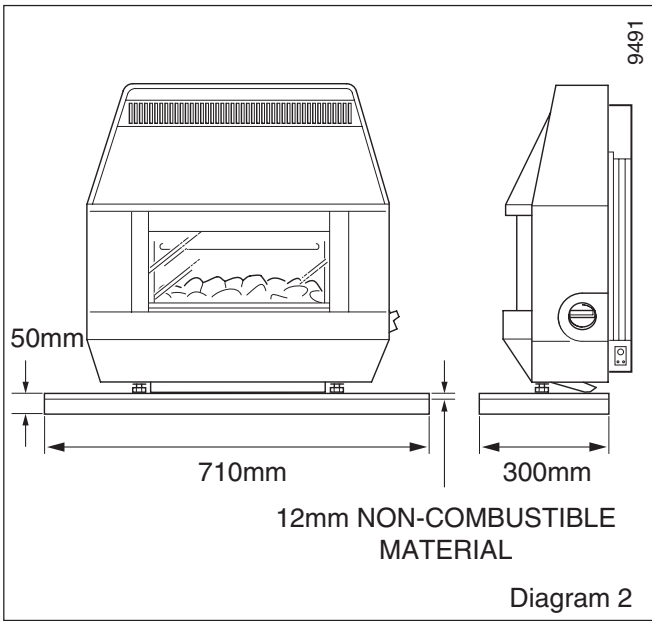
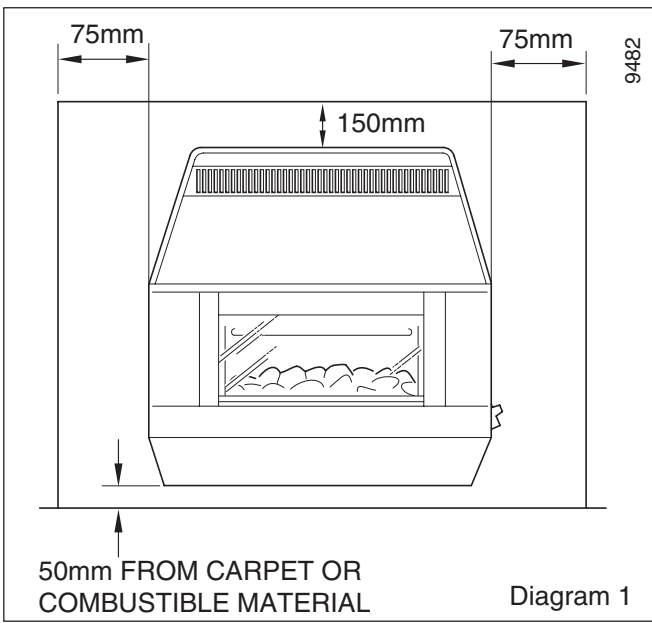
Adjust the control thermistor knob to the required setting between the minimum, "O" and maximum position.

Maximum is approximately 82°C.

The temperature of the hot water cylinder should be periodically raised to 60°C.

Check that all external controls are also set to your requirements.

If the burner goes out for no apparent reason it is **IMPORTANT** that the advice given under "Safety Device" is followed.



Instructions for Use

To turn the boiler off

For short periods, turn the control thermistor knob "A" fully anti-clockwise so that the pointer is against the "Reset" position on the boiler user control, see diagram 3.

To relight the main burner turn control thermistor knob "A" clockwise to the desired setting between the minimum, "O" and maximum position.

For longer periods, turn the control thermistor knob "A" to "Reset" position. Switch off the electrical supply to the boiler.

To relight follow the full lighting instructions given above.

Lighting the fire

Please note:

When operating your fire for the first time, some vapours may be given off which may cause a slight odour and could possibly set off any smoke alarms in the immediate vicinity. These vapours are quite normal with new appliances. They are totally harmless and will disappear after a few hours.

To light the fire

The control is shown in diagram 4.

Depress the control knob and turn partially to the 1/IGN position until you feel some resistance.

Keep the knob depressed at this position for a few seconds to allow gas to flow to the burner.

While keeping the knob depressed, turn to the 1/IGN position. While turning, a spark should light the pilot.

Keep the knob depressed at the 1/IGN position for a further 10 seconds then release it. The centre section of the coal will be alight at this position.

Depress the control knob slightly and turn it to your desired burner setting.

The control knob should be depressed slightly before turning whenever you are changing the burner setting.

The burner settings are ;

- 1/IGN.....Centre section on low. Outer sections off.
- 2.....Centre section fully on. Outer sections off.
- 3.....Centre section fully on. Outer sections on low.
- 4.....Centre section fully on. Outer sections fully on.

We recommend that the fire is set at position 4 for the first 10 minutes after lighting to warm up the chimney and so obtain full efficiency quickly.

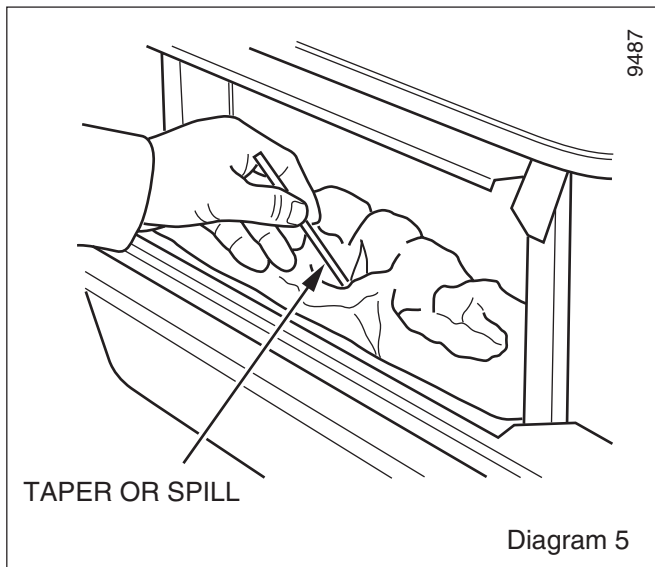
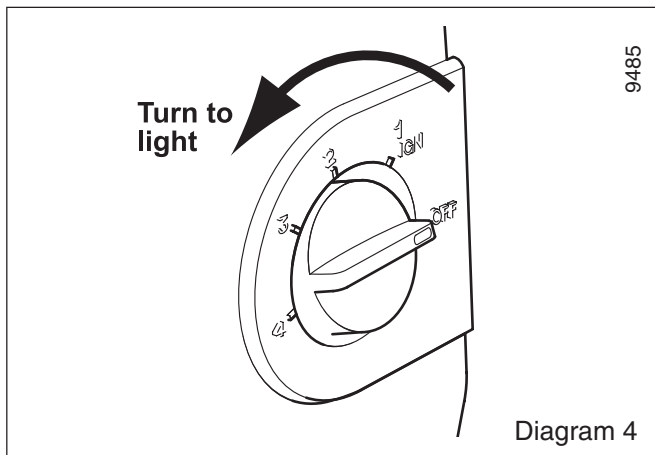
If operating the appliance for long periods it is beneficial occasionally to change the settings. This will also help to remove any carbon deposits that may form during operation.

Note: If the fire goes out while setting the control, repeat the full lighting procedure. If the fire repeatedly goes out, have the fire serviced.

To turn the fire off

Partially depress the control knob and turn clockwise to OFF. Release the knob.

Wait at least 3 minutes after turning the fire off before relighting.



Lighting with a taper

In the unlikely event of failure of the ignition spark, the pilot can be lit with a long taper or spill after the glass panel surround and glass panel assembly has been removed. Removal of these parts is described in the "Glass Panel" section.

Insert the taper or spill into the centre opening in the ceramic coal while the control is kept depressed at the 1/IGN position see diagram 5.

When the pilot has lit follow the rest of the instructions in the section headed "To light the fire". Always replace the window unit after lighting.

Metal Parts

Clean the metal parts with a slightly damp cloth and then dry.

Do not use abrasive cleaners as these will scratch the fire surface.

Instructions for Use

Cleaning

Turn the fire off and allow it to cool before attempting any cleaning.

Normally the fire will only need dusting. The bright metal trims may be cleaned with a damp cloth and dried with a soft duster.

Obstinate marks can be removed from the guard and trims using soapy water. Never use abrasive cleaners.

Glass Panel

Remove any stains on the glass panel with a non-abrasive cleaner such as a ceramic hob cleaner. Do not use abrasive cleaners.

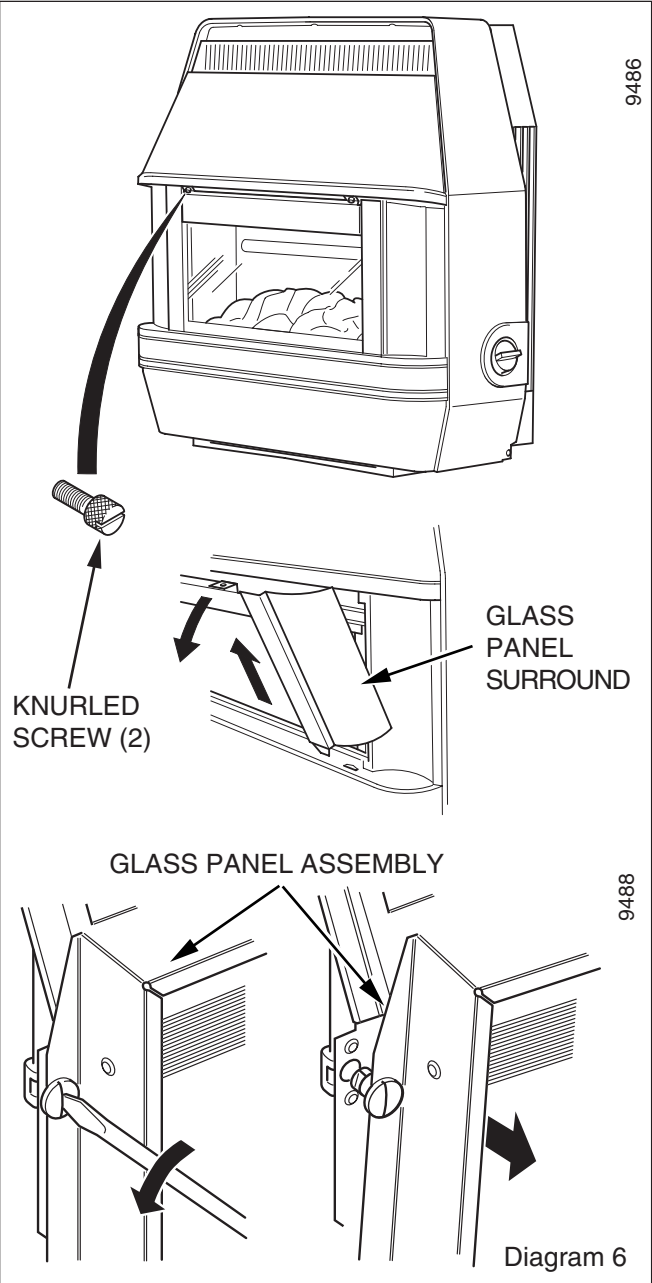
The fire has been designed so that you can remove the glass panel without having to call in a service engineer. This allows you to clean the inside of the glass.

To remove the glass panel assembly:

Unscrew and remove the two knurled screws which are under the outer case canopy, see diagram 6.

Pull the top of the glass panel surround forward, see diagram 6.

Lift the surround up to clear the slots in the case apron.



Put the surround in a safe place.

Remove the glass panel assembly by turning the screws each side of the frame $\frac{1}{4}$ turn anticlockwise. A tool is provided with your fire for turning the screws. Lift the assembly clear, see diagram 6.

After cleaning, replace and secure the glass panel assembly to the firebox by turning the two screws $\frac{1}{4}$ turn clockwise with the tool provided. Replace the surround. Make sure that the outside edges of the surround sides are inside the outer case.

Ceramic Coal

This product uses a fuel effect piece containing Refractory Ceramic Fibres (RCF), which are man-made vitreous silicate fibres. Excessive exposure to this material may cause temporary irritation to eyes, skin and respiratory tract. Consequently, it makes sense to take care when handling this article to ensure that the release of dust is kept to a minimum.

Although light coatings of soot are usually burnt off during normal use, the coal may benefit from occasional cleaning.

Should any soot accumulation become excessive, the fuel effect piece should be removed from the fire for cleaning. Cleaning should be carried out in a well ventilated area or in the open air by gently brushing with the pieces held away from your face so that you avoid inhaling the dust. We do not recommend the use of a normal domestic vacuum cleaner which may blow dust back into the air.

The coal can be lifted out of the fire box when the glass panel surround and glass have been removed as described above.

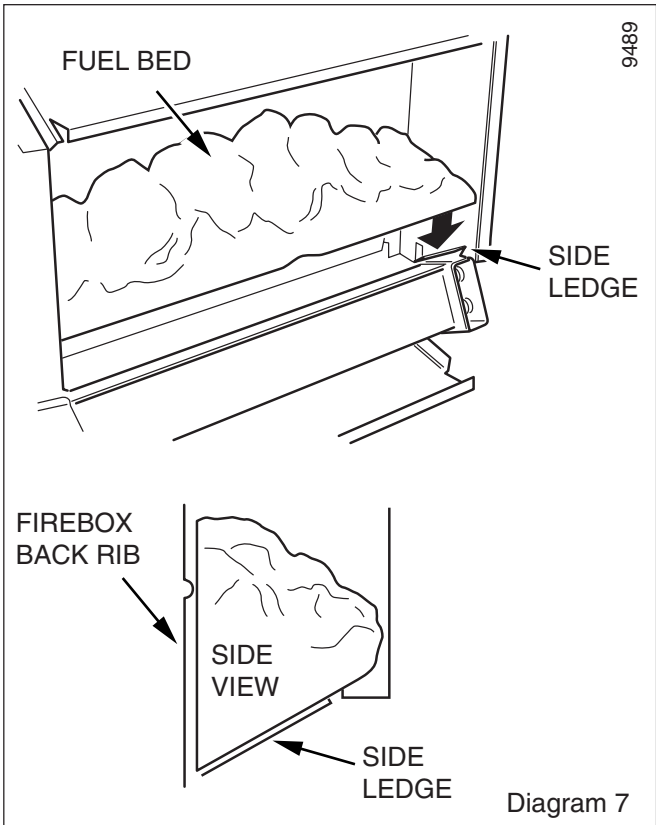
When replacing the coal, make sure that it rests on the ledges at the sides of the firebox and that its back face is touching the horizontal rib at the back of the firebox, see diagram 7.

Replace the glass panel assembly and surround after cleaning.

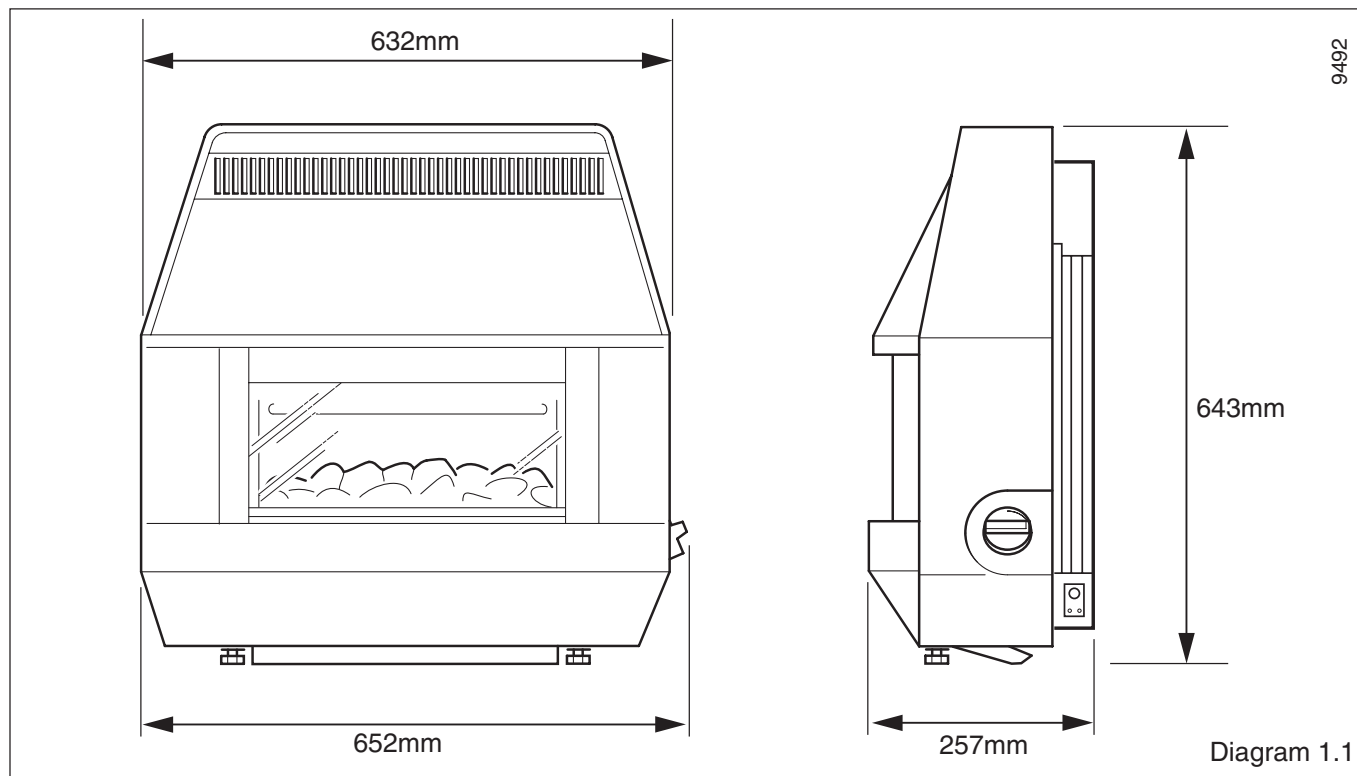
Replacement Parts

If replacement parts are required apply to your local supplier.

Please quote the name of the appliance and Part No. required.



1 General



General Notes and Information

The Glow-worm Heartbeat 4 BBU gas fire front is to be used with specially designed Glow-worm 45/4 & 54/4 Back Boiler Units only.

This fire front and back boiler are NOT suitable for fitting to a precast flue.

The fire front is delivered packed in one cardboard carton, which contains all the parts necessary for the installation of the fire front.

If the back boiler and fire front are to be installed at the same time please read both sets of instructions before starting.

Wherever possible, all materials, appliances and components to be used shall comply with the requirements of applicable British Standards.

Where no British Standards exist, materials and equipment should be fit for their purpose and of suitable quality and workmanship.

1.1 Important Notice

This fire front is for use only on G20 gas.

This fire front is fitted with a flue blockage safety device which will shut down the fire if there is an unacceptable spillage of products at the draught diverter. If the fire front shuts down frequently for no apparent reason the first things to be checked are the chimney and the air inlets into the room. An additional cause could be that the filter, in the gas tap has become blocked. Any problems found must be put right by a competent person, before the fire front is used again.

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

Sheet Metal Parts

WARNING. When installing or servicing this fire front care should be taken when handling metal parts (components) to avoid any possibility of personal injury.

1.2 Data

Gas connection -	from the service cock
Total weight -	18.9kg
Injector	- upper - Bray Cat. 99 size 115
	- lower - Bray Cat. 99 size 230A
Burner test pressure setting	- cold - 17.4 ± 0.75mbar 6.9±0.3in wg
Heat input (NETT)	
Control setting 4	4.54kW - 15,500Btu/h
Control setting 3	3.11kW - 10,630Btu/h
Control setting 2	1.61kW - 5,500Btu/h
Control setting 1	1.41kW - 4,800Btu/h
Pilot & atmosphere sensing device -	SIT Ref.OP9419
Ignition -	Piezo-electric integral with gas tap
Aeration -	Non-adjustable
Data label -	LH Side lower corner on the inner face of back panel

1 General

1.3 Statutory Requirements

The installation must be in accordance with these instructions.

For the user's protection, in the United Kingdom it is the law that all gas appliances are installed by competent persons in accordance with the current edition of the Gas Safety (Installation and Use) Regulations. Failure to install the appliance correctly could lead to prosecution. The Council for the Registration of Gas Installers (CORGI) requires its members to work to recognised standards.

In the United Kingdom the installation must also be in accordance with:

All the relevant parts of local regulations.

All relevant codes of practice.

The relevant parts of the current editions of the following British Standards:-

BS 715, BS EN 1806 , BS 5440 Part 2

BS 6891, BS 1251, BS 4543 Part 2

BS 5871Part 1, BS 1289 Part 1, BS 5440 Part 1, BS 6461Part 1

In England and Wales, the current edition of the Building Regulations issued by the Department of the Environment and the Welsh Office.

In Scotland, the current edition of the Building Standards (Scotland) Regulations issued by the Scottish Executive.

In Northern Ireland, the current edition of the Building regulations (Northern Ireland) issued by the Department of the Environment for Northern Ireland.

In the republic of Ireland the installation must also conform to the relevant parts of:

- a) The current edition of IS 813
- b) All relevant national and local rules in force.

1.4 Fire Front Location

This fire front can only be fitted to a specially designed Glow-worm 45/4 & 54/4 Back Boiler Units, which itself has been installed in accordance with the Glow-worm Installation and Servicing Instructions.

The back boiler must have been correctly positioned in the builder's opening as the fire front is located by connection to the back boiler.

The back boiler draught diverter and combustion chamber extension acts as a support for the fire front.

The fire front flue spigot projects into the back boiler draught diverter assembly.

The gas supply is taken from the back boiler service cock.

1.5 Clearances

Restrictions should not be placed around the assembled fire front, see diagram 1 Instructions for Use. A shelf up to 150mm deep may be fitted above.

Combustible furniture or materials must not be placed closer than 1 metre in front of the fire front.

2 Types of Installation

2.1 With Hearth

A fireproof hearth under the fire front must have the minimum dimensions as shown in diagram 2 Instructions for Use.

2.2 With Surround

The fire front casing should cover the opening.

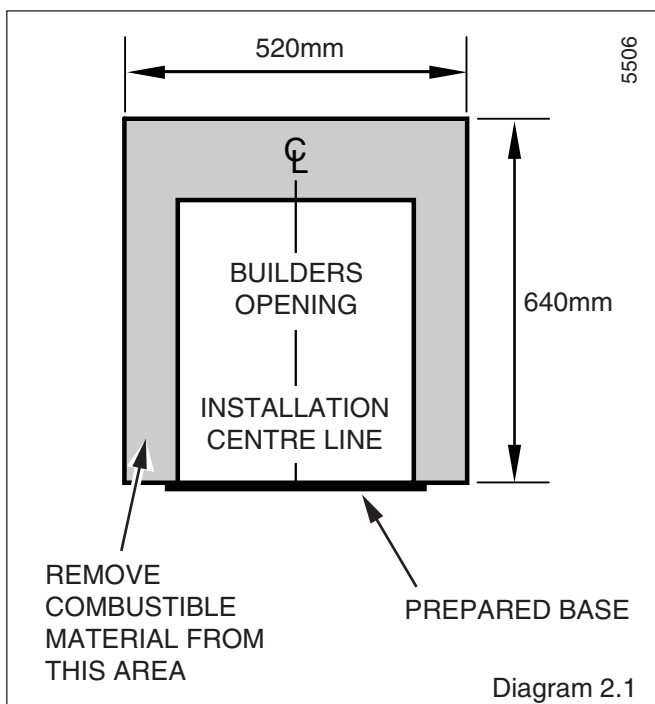
Any combustible material on the fire front fixing face area of the surround must be removed, see diagram 2.1. This area, to the depth removed, should then be rendered with a sand/cement mixture.

2.3 Without Surround or Hearth

The minimum clearances for shelves or projections on the fire front fixing wall face are as shown in diagram 1, (Instructions for Use).

The information in the last two paragraphs of "With Surround" should now be followed.

Under no account must carpet or other combustible material be laid directly under the fire front, unless the minimum clearances shown in diagram 1. (Instructions for Use) is achieved.



3 Types of Flue and Installation

3.1 Flue

The back boiler flue collector assembly accepts the fire front flue spigot.

Note. Provision must be made during the installation of the back boiler for the total ventilation requirement for the combined appliance. See relevant section in the Back Boiler Installation Instructions.

4 Fire Front Preparation

4.1 Unpacking

The carton contains the following:-

1. Fire assembly.
1. Ceramic fuel effect (In packaging inside firebox).
1. Fittings pack.
1. Gas feed pipe and fittings.
1. Literature pack.
1. Tool for window removal.

Remove all the items carefully to prevent damage. Some items may be contained in the packaging fittings. Examine the packaging carefully before discarding. Check that all the items are present and undamaged.

4.2 Appliance Preparation

Stand the fire upright.

Remove the two transit screws securing the chassis to the fire front located at the top rear of chassis and discard, see diagram 4.1.

Detach the window surround see diagram 6 "Instructions for Use".

- a) Remove the two knurled screws immediately below the outer case canopy.
- b) Lift the surround clear of the slots in the outer case apron. Remove the control knob by pulling clear of the gas tap spindle.

Remove the control bezel by unscrewing two screws see diagram 4.2.

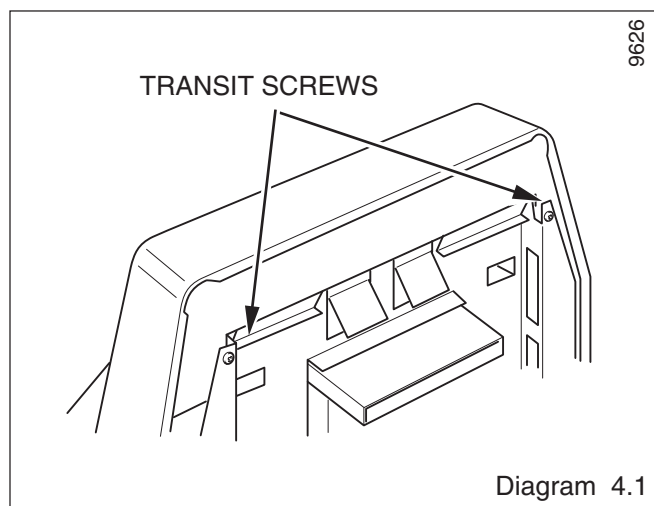
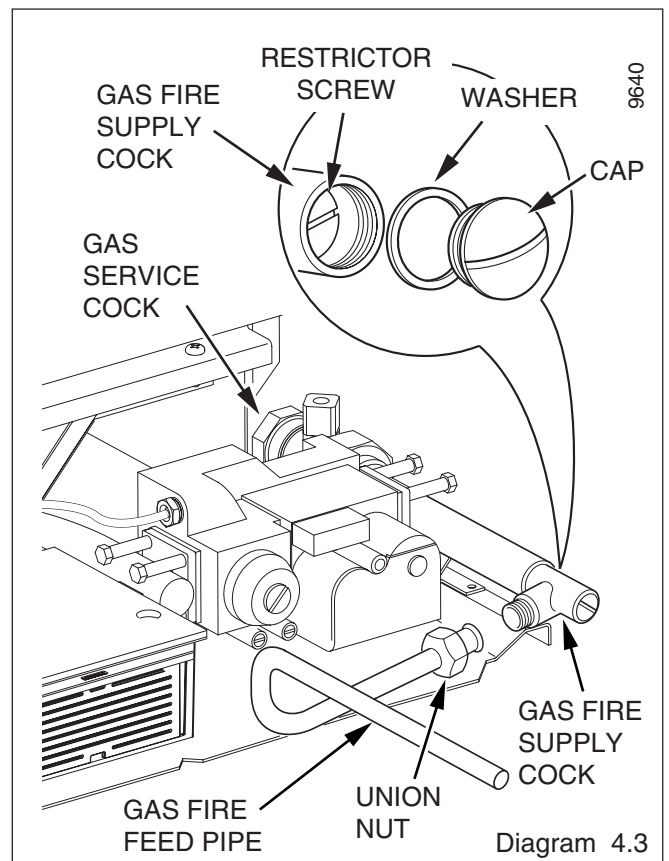
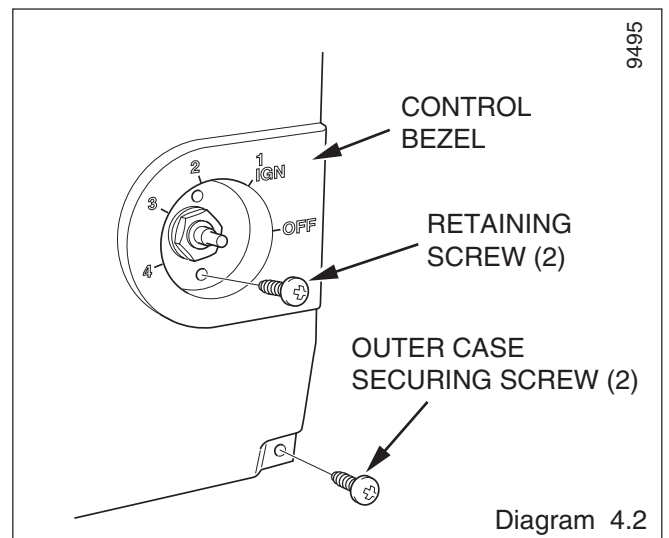
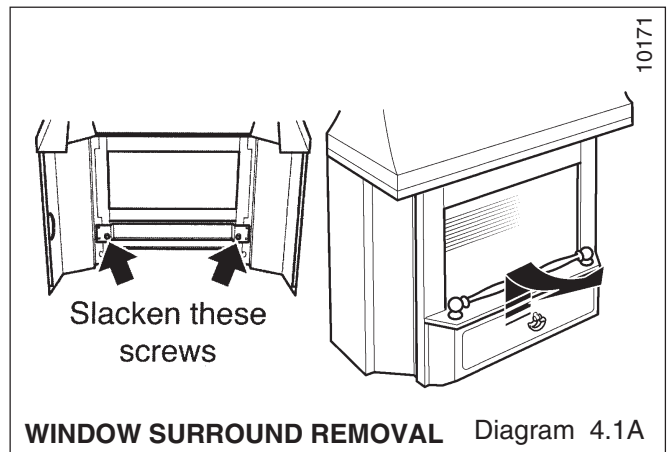
Detach the outer case by removing the screws at the case sides see diagram 4.2.

Pull the bottom of the case forwards while springing the bottom corners outwards to clear the fixing brackets. Lift the case upwards and forwards to clear. Place carefully to one side.

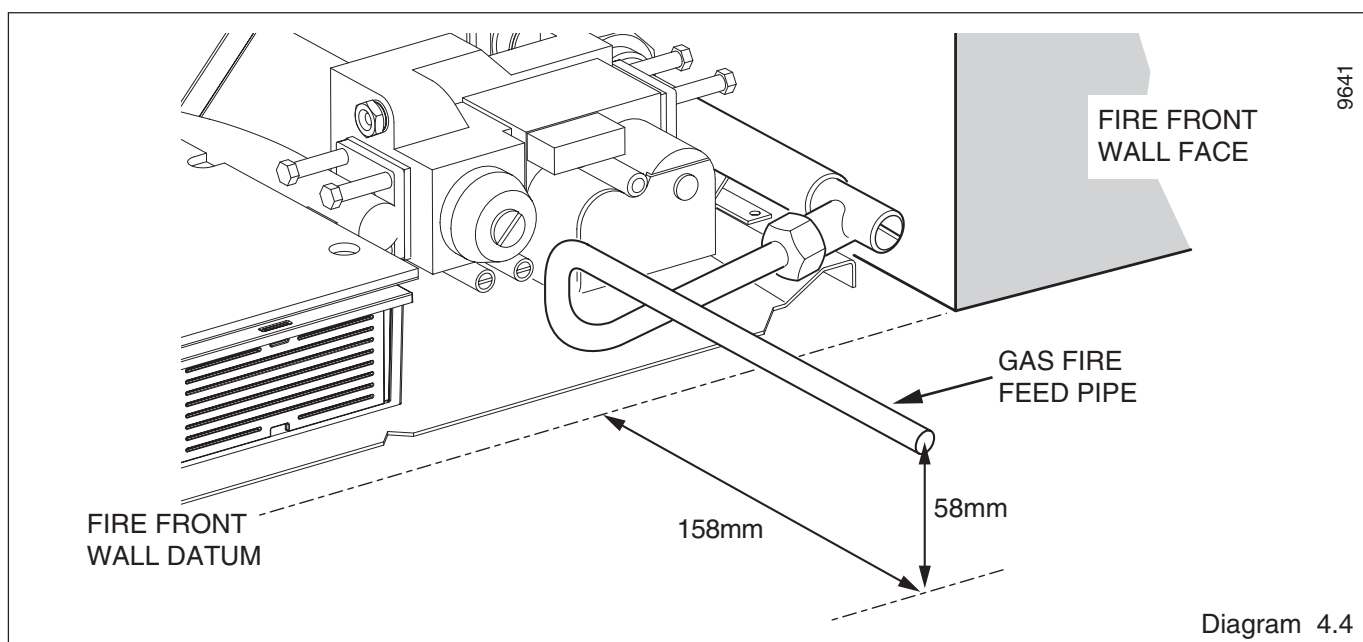
IMPORTANT : The front fascia of the case is secured by two screws as shown in diagram 4.1a. These screws have been tightened to avoid damage to the case during transit. These screws must be slackeden to enable the customer to remove this section of the case.

Remove the glass panel assembly by turning the screws each side of the frame 1/4 turn anticlockwise and lifting the unit clear see diagram 6 Instructions for Use.

Remove the coal pack from the firebox and keep it safe.



4 Fire Front Preparation



4.3 Gas Supply to Fire Front

Check that the gas service cock is in the Off position.

NOTE: The gas fire feed pipe will need cutting at the plain end at a point depending upon the position of the BBU to the fire front wall face.

From the fittings pack, fit the union nut to the flanged end of the gas fire feed pipe.

Connect the gas fire feed pipe assembly to the gas fire supply cock, see diagram 4.3.

The gas fire feed pipe must project from the fire front wall face, 158 mm, see diagram 4.4. Measure and cut to suit.

From the fittings pack, fit the gas fire isolating valve to the cut end of the gas fire feed pipe, ensuring it is positioned correctly, using an olive and nut, see diagram 4.5.

When fitted check that the gas fire feed pipe, where it projects from the fire front wall face, is level and the centre of the feed pipe is 58 mm above the back boiler base plate.

Tighten connections.

Make sure that the gas fire isolating valve is in the Off position by removing cap and turning restrictor screw clockwise, see diagram 4.5.

Turn the gas service cock to the On position.

Turn the gas fire supply cock to the On position by removing cap and turning restrictor screw anti-clockwise, see diagram 4.3.

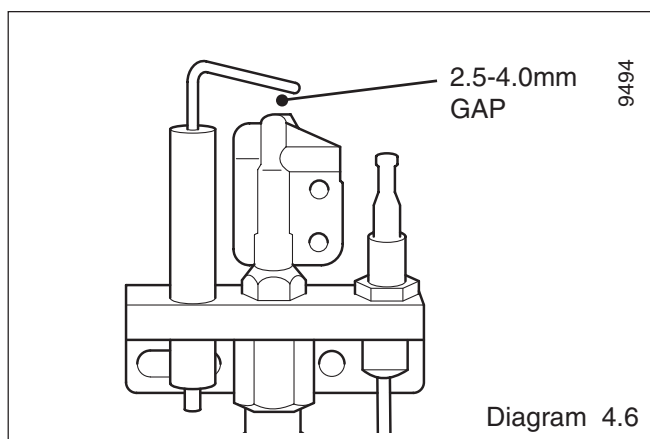
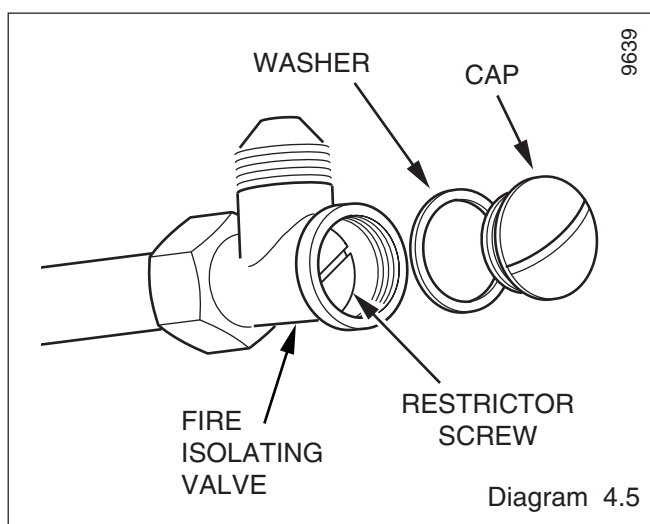
Pressure check the installation pipework for gas soundness. In the United Kingdom check in accordance with the current edition of BS6891. In the Republic of Ireland check in accordance with the rules in force.

4.4 Check ignition spark

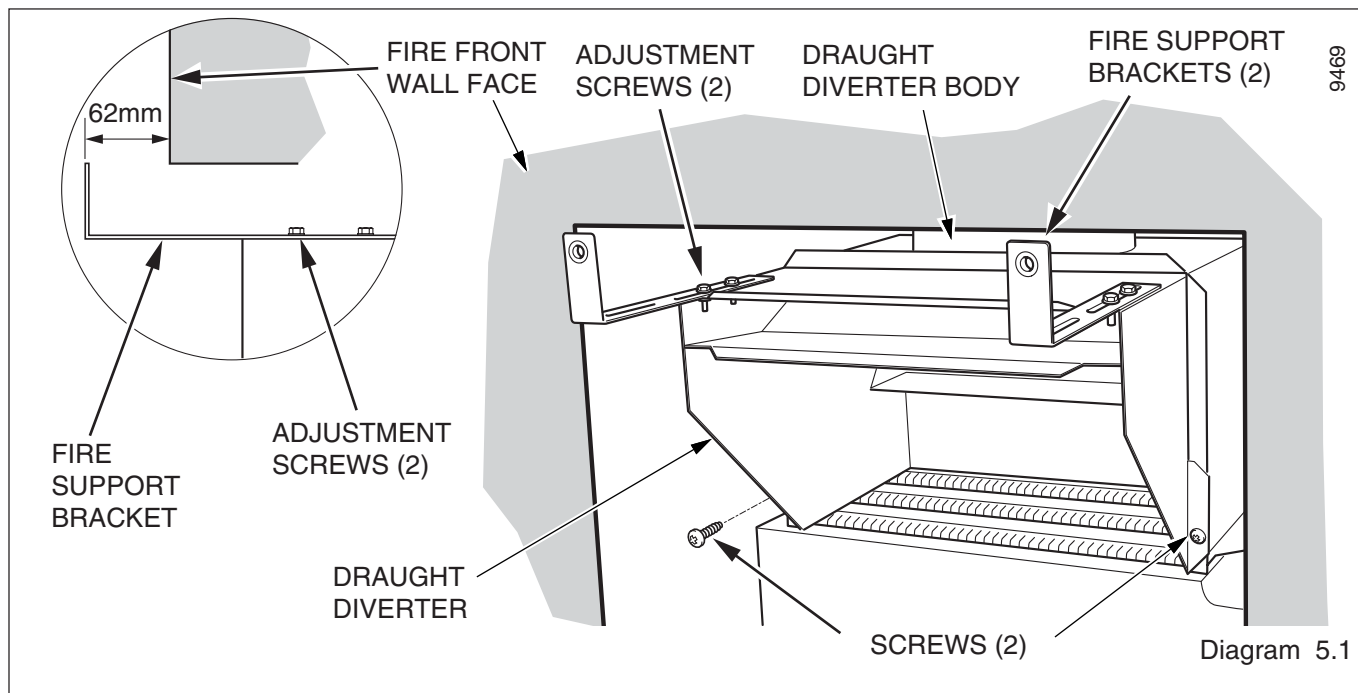
Before attempting to install, it is worth checking that the piezo electric spark ignition system operates satisfactorily.

To initiate the spark, temporarily refit the control knob to the tap spindle. Depress the control knob and while keeping it depressed, turn anticlockwise through approximately 60° to the 1/IGN position. A spark should track from the electrode pin to pilot burner. If there is no spark or incorrect tracking, check that the spark gap is between the limits shown in diagram 4.5. If the spark gap is correct, check the ignition wiring.

Remove the control knob after checking.



5 Installation



5.1 Fire Front Fixing

Slide the draught diverter, supplied with the boiler, into the draught diverter body on the BBU and secure with two 5mm dog point screws, see diagram 5.1.

Fit the two upper fire support brackets on to the draught diverter with two dog points screws each and adjust so that the end of each bracket extends about 62 mm from wall face, see diagram 5.1.

Check that the measurement between the centres of the fire securing holes on the brackets is 238mm and adjust accordingly, ensuring that the brackets are as near to 90° as possible from the wall face, tighten the dog point screws.

Note. The Boiler User Control is supplied coiled and taped onto the controls, remove tape an uncoil, carefully place to the right hand side of the boiler.

Take the combustion chamber extension, supplied with the back boiler, and fit the lower fire support brackets with two dog point screws on each but do not tighten.

Fit the combustion chamber extension on the two BBU combustion chamber front screws and secure, see diagram 5.2.

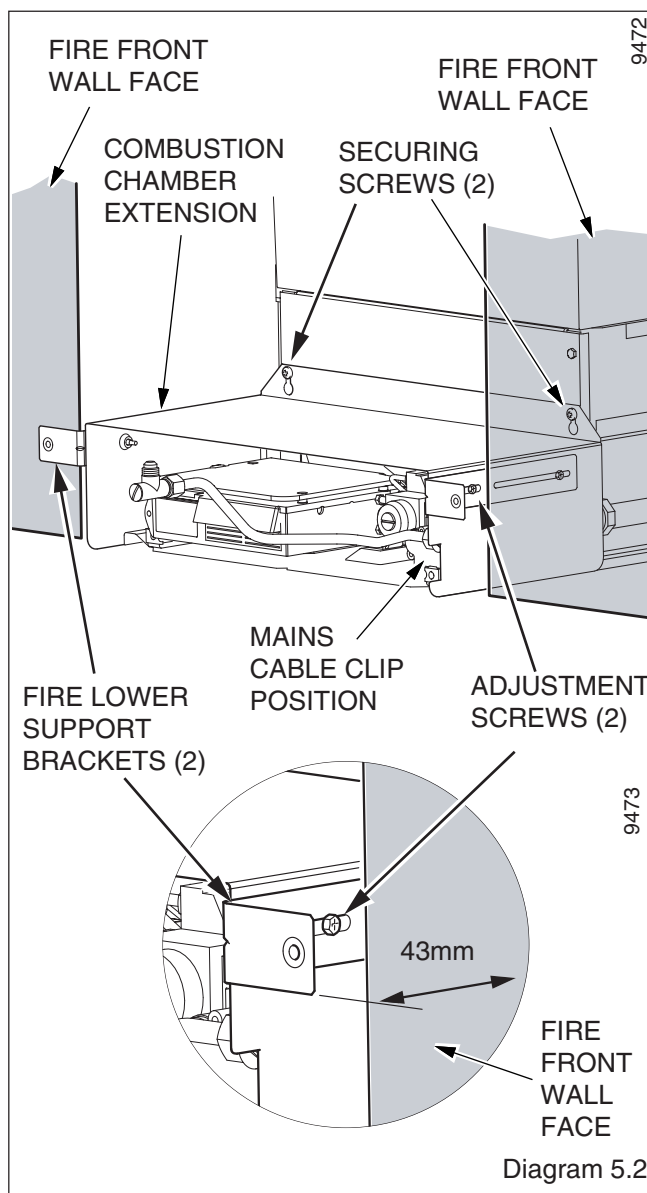
Note: If the mains electrical supply cable is routed from the right, secure it with a cable clip, from fittings pack, to the combustion chamber extension, see diagram 5.2.

Adjust the two lower support brackets so that the end of each bracket extends about 43 mm from the fire wall front face, see diagram 5.2.

Lift the fire chassis and position the spigot centrally into the back boiler unit draught diverter assembly, gently slide the chassis into place.

Note: It may be necessary to temporarily remove the floor protection plate, see diagram 5.4 to ease installation and fitting of gas fire feed pipe to fire.

Secure fire chassis to the fire support brackets using the M5x20mm dog point screws, see diagram 5.3.



5 Installation

5.2 Gas Supply Connection

Connect and tighten the union nut at the fire front isolating valve, see diagram 5.4.

Refit floor protection plate if removed.

Turn gas On at the fire isolating valve by removing the cap and turning restrictor screw anti-clockwise..

Pressure check the installation pipework for gas soundness. In the United Kingdom check in accordance with the current edition of BS6891. In the Republic of Ireland check in accordance with the rules in force.

5.3 Boiler User Control

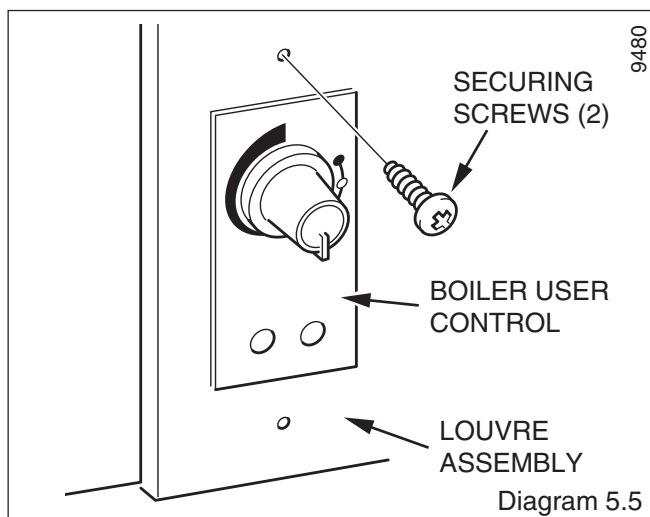
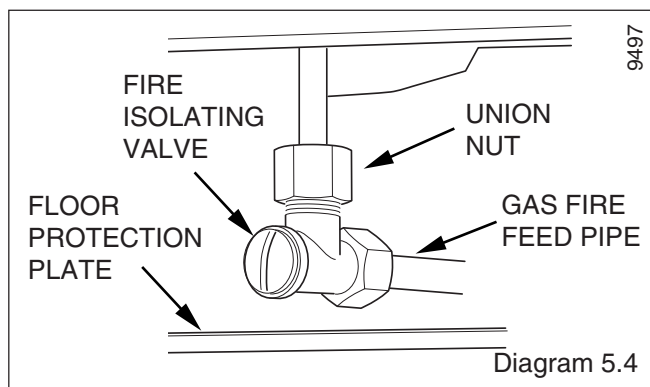
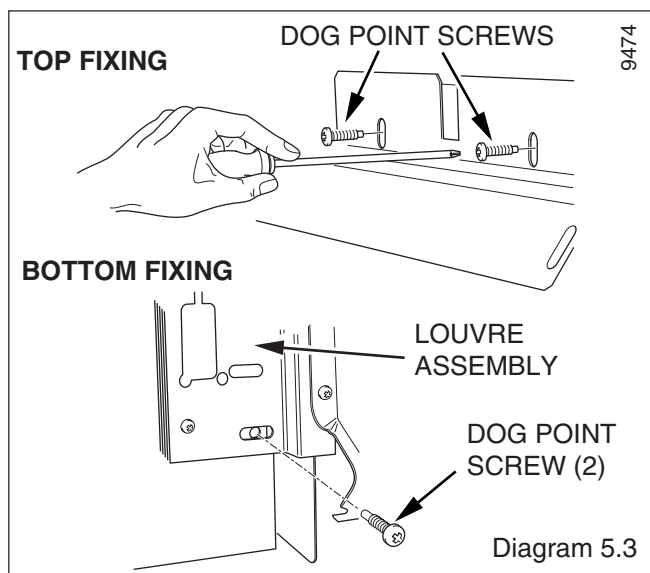
Place the boiler user control in position from the inside to the aperture on the bottom of the R/H louvre of the fire chassis, making sure that it is the correct way up, see diagram 5.5.

Secure from the outside to the louvre with the screws, from the fittings pack, see diagram 5.5.

5.4 Fit the Coal and Glass Panel Assembly

Place the coal bed in position. Make sure that the coal rests on the ledges at the sides of the firebox and that its back face is touching the horizontal rib at the back of the firebox, see diagram 7 Instructions for Use.

Replace the glass panel assembly and secure the to the firebox by turning the two screws 1/4 turn clockwise.



6 Control & Pressure Checks

6.1 Check Control Settings

If closed, open the isolating valve at the inlet elbow.

To help in checking the control positions while the outer case is detached, place the control bezel over the gas tap spindle and against the tap bracket. Temporarily secure to the tap bracket with one of the screws.

Fit the control knob over the gas tap spindle.

Depress the control knob and turn anticlockwise partially towards the 1/IGN position until some resistance is felt. Keep depressed at this position to purge air from the system then, while keeping it depressed, turn fully to the 1/IGN position. A spark should be generated at the pilot while turning. The spark should ignite the pilot.

When pilot ignition has been achieved, keep the control knob depressed for approximately ten seconds to allow the thermocouple probe to warm up and then release it. If the pilot does not remain alight, ensure that the air has been purged, that the pilot orifice is clear and that the thermocouple connections are sound. Replace the pilot unit if necessary (see servicing section of this manual).

Check all the control settings. These are:-

Knob Position	Burner appearance
1/IGN	Centre section on low. Outer sections off.
2	Centre section fully on. Outer sections off.
3	Centre section fully on. Outer sections on low.
4	Centre and outer sections fully on.

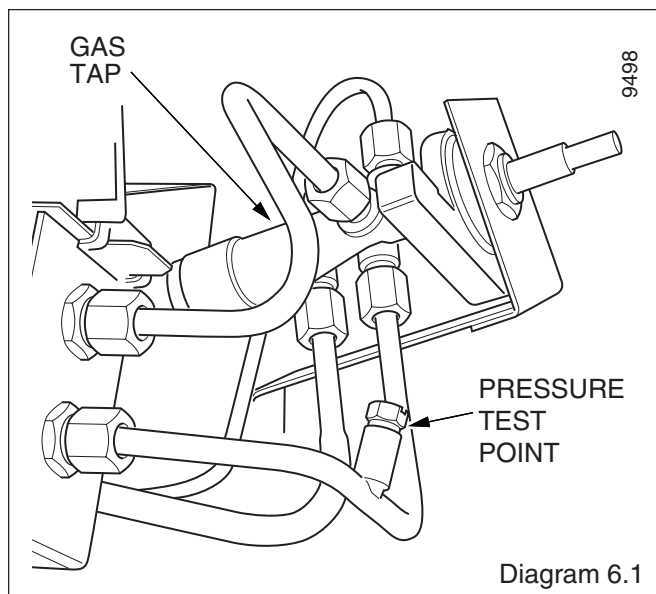
6.2 Flame Supervision Device

The pilot unit incorporates a system which will automatically shut off the gas supply if the pilot flame goes out or if there is insufficient oxygen due to spillage or lack of ventilation.

Check that the system operates properly as follows;

Light the appliance. Set at position 4 and leave for one minute.

Turn back to "OFF" to extinguish the pilot. Note the time when the pilot goes out. Listen for a snap sound at the gas tap. Note the time when the sound is heard. This sound is caused by an electromagnetic valve shutting off the gas supply through the tap. The valve is located in the body of the tap. The valve should operate within 60 seconds of the pilot going out. If the valve does not operate within this time limit do not allow the appliance to be used until the fault has been corrected.



6.3 Flue Blockage Safety Device

This monitoring system must not be adjusted, bypassed or put out of operation.

This monitoring system, or any of its parts, must only be exchanged using Glow-worm authorised parts.

6.4 Check Burner Pressure

The appliance is pre-set to give the correct heat input at the inlet pressure shown in section 1 of this manual. No adjustment is necessary. Check the burner pressure by fitting a pressure gauge at the test point, see diagram 6.1. Check the pressure with the appliance alight and set at maximum output (Control position 4).

After checking, turn off the appliance. Remove the pressure gauge and replace the test point sealing screw. Relight the appliance. Turn to the maximum output position and test around the sealing screw for gas soundness with a suitable leak detection fluid.

If all the above checks are satisfactory, continue with the installation. If not, check the control and ignition circuitry and components as described in the servicing section of this manual.

6.5 Fit The Outer Case

Refit the outer case. Make sure the ridges on the back of the outer case is located behind the back panel wings on the chassis back panel, see diagram 6.2.

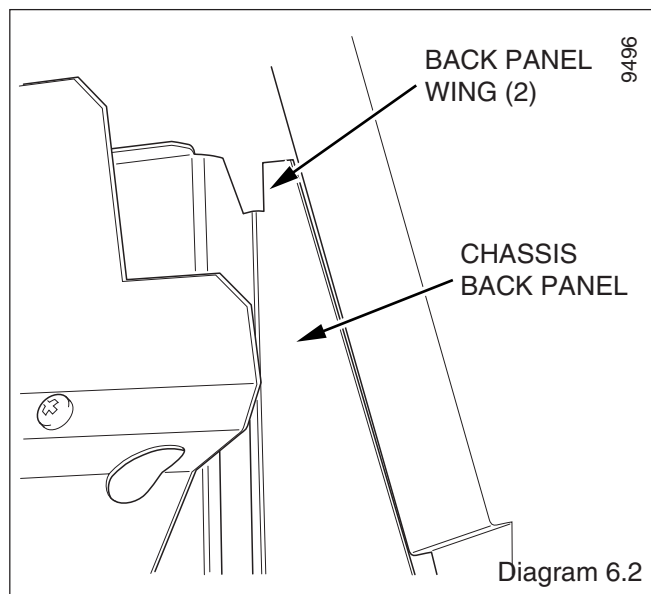
Secure the case at the bottom sides with the two screws previously removed.

Place the control bezel back in position and secure it to the gas tap bracket with two screws.

Fit the control knob over the gas tap spindle.

Make sure that the coal is not dislodged when refitting the case.

Refit the glass panel surround using the two knurled screws previously removed (The reverse method to that described in the Instructions for Use section). Make sure that the outer edges of the surround sides are inside the outer case.



6 Control & Pressure Checks

6.3 Test For Spillage

Note:

1. Take care. The appliance gets hot during testing.
2. To carry out the test you will need a 500mm emplume tube and a torch.

TEST: WHERE NO FAN IS PRESENT

Close all outside doors and doors and windows in the room in which the appliance is installed.

Light the fire front only. After 5 minutes apply spillage test. Position the smoke match tip under the fire front flue duct on the draught diverter lip by inserting the emplume tube 370mm from the outside edge of the louvres, see diagram 6.3. During test smoke should be drawn into the draught diverter and between the fire front flue duct and the draught diverter lip. If spillage occurs leave fire front alight for up to a further 10 minutes and repeat tests.

Next, light the boiler only and after 10 minutes apply spillage test by positioning smoke match tip as described above, and shown in diagram 6.3. If spillage occurs, leave the boiler alight for up to a further 5 minutes and repeat test.

Now light the boiler and fire front. After 10 minutes apply spillage tests by positioning smoke match tip as described above, and shown in diagram 6.3. During tests smoke should be drawn into the boiler draught diverter. If spillage occurs, leave the boiler and fire front alight for up to a further 5 minutes and repeat tests.

Note: If spillage does occur smoke will be visible exiting the top of the fire casing.

TEST. WHERE A FAN IS PRESENT

(A fan means an extractor fan, or a fan for other open flued appliances, or a circulating fan for a warm air unit, whether or not gas fired). With the fan switched off carry out the appropriate spillage test with all doors and windows closed, as above.

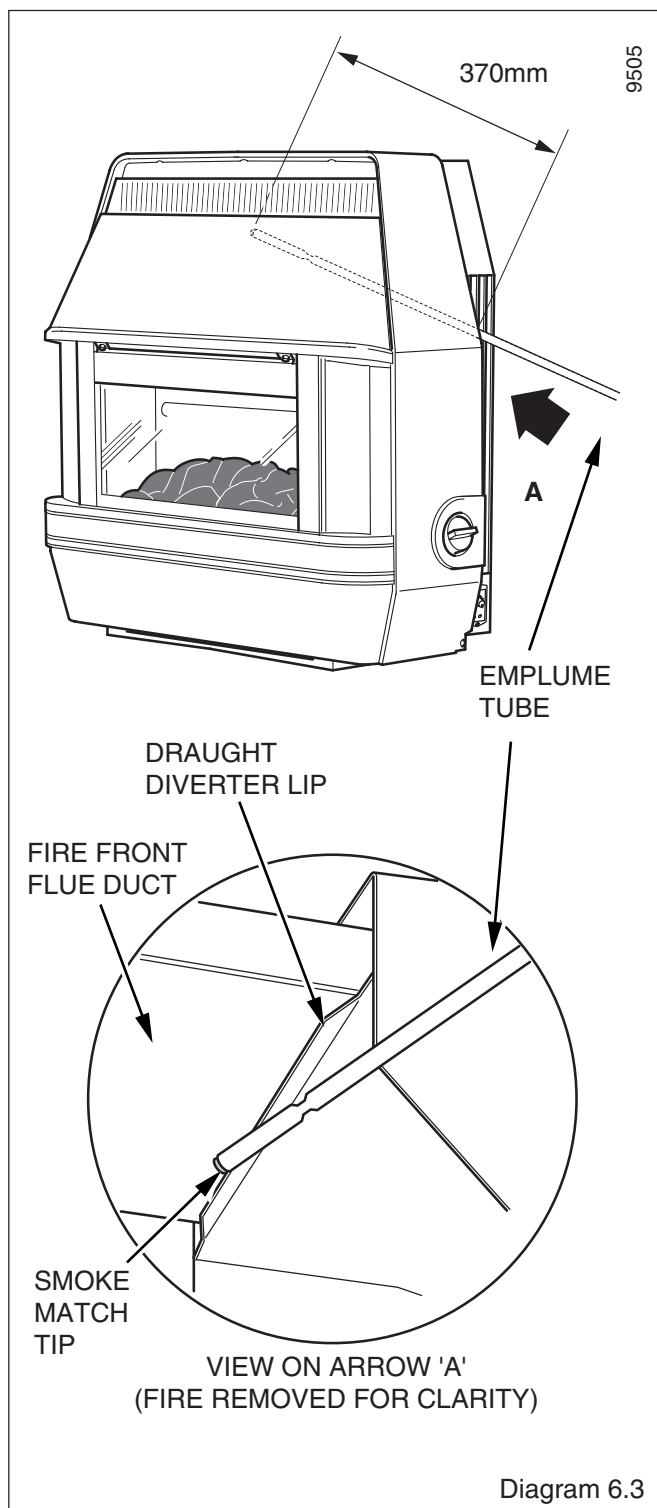
If the above tests are satisfactory continue as follows,

Open all doors connecting the room containing the appliance and the room in which the fan is fitted. Close all other doors and windows in the premises.

If the fan is in the same room as the appliance close all doors and windows in that room. Switch on fan and repeat spillage test as above.

In ALL cases, if spillage continues after the specified test periods steps MUST be taken to put right the fault(s).

Possible causes include, flue obstructions, down draught or restricted fresh air supply into the room.



7 Final Review

Please ensure the "Benchmark" logbook (supplied with the Back Boiler Unit) is completed and left with the user.

Check the operation of the fire at all control positions.

Visually inspect the appliance. Clean off any marks incurred during installation.

Advise the customer how to operate the fire.

Explain to the customer that the appliance has a flame failure and spillage monitoring system. Point out the explanation of this system shown in the "Instructions for Use".

Advise that if the fire goes out for any reason, wait at least three minutes before relighting.

Stress that if the monitoring system repeatedly shuts off the fire or boiler, the appliance should be switched off and a specialist should be consulted.

Advise the user that the window may require cleaning periodically outside and inside as described in the users instructions. Explain how to remove and replace the window unit for cleaning the inside of the glass etc. Point out that a tool is supplied for releasing the window screws. Leave the tool in the instruction pack.

Advise that the fire may give off a slight odour while new. This is quite normal and it will disappear after a short period of use.

Advise that any cleaning must only be carried out when the fire is off and cold.

Advise the customer that they should read the Instructions for Use before operating the fire and always follow the advice in the section headed "Cleaning your fire".

Advise the customer that the appliance will operate to its

maximum potential if the flue is primed during the first 20 - 30 minutes of use. To do this, simply turn the control to its highest setting. This will also burn off any carbon deposits that may have formed during previous use.

If using the appliance for long periods it is beneficial to change between settings. This will also help to remove any carbon deposits that may form during use.

Recommend that the appliance should be serviced and the chimney inspected by a competent person (In the UK a CORGI registered person) at least annually.

If the appliance is in premises in the United Kingdom occupied by a tenant, point out that by law a landlord must have any gas appliance, flue and pipework which is situated in a tenant's premises checked for safety at least every 12 months.

Reminder - leave these instructions and the "Benchmark" logbook with the user.

8 Servicing and Replacement of Parts

Servicing Notes

MAKE SURE THE FIRE FRONT IS COLD.

Servicing must be carried out by a competent person. After completing a service, always test for gas soundness and carry out functional check of controls.

Unless stated otherwise all parts are replaced in reverse order to removal.

Before starting make sure that the gas supply is turned off at the Fire isolating valve, see diagram 5.4.

NOTE: It is recommended that the back boiler be serviced before refitting the fire front case, refer to Back Boiler Installation Instructions.

CAUTION: Disconnect the boiler user control before removing the fire front chassis when servicing the back boiler unit, refer to Section 5.

After removing or disconnecting any pipework always make sure that it is refitted correctly and does not interfere with the fitting of the fire.

8.1 Servicing

Detach the glass panel surround, see diagram 6 in section, Instructions for Use.

Remove the two knurled screws which are under the outer case canopy.

Pull the top of the glass panel surround forward.

Lift the glass panel surround up to clear the slots in the case apron and store carefully.

Remove the control knob by pulling clear of the gas tap spindle.

Remove the control bezel by unscrewing two screws, see diagram 4.2.

Detach the outer case by removing the screws at the sides, see diagram 4.2.

Pull the bottom of the case forwards while springing the bottom corners outwards to clear the fixing brackets. Lift the case upwards and forwards to clear. Place carefully to one side.

Remove the glass panel assembly by turning the screws each side of the frame $\frac{1}{4}$ turn anticlockwise and lifting the unit clear, see diagram 6 in section, Instructions for Use.

Remove the fuel bed and clean, Refer to "Ceramic Coal" in Instructions for Use.

Clean all around the fire front chassis with a soft brush or vacuum cleaner.

Make sure that the electrode spark gap is as shown in diagram 4.6.

Clean injectors as necessary, but, Do not clean injectors with a wire or sharp instrument.

Clean the burner with a soft brush or vacuum cleaner.

Replace in the reverse order. Make sure that the coal is not dislodged when refitting.

NOTE: It is recommended that the back boiler unit be serviced before refitting the fire front case, refer to the Back Boiler Installation Instructions.

Replacement of Parts Notes

REMEMBER: When replacing a part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by Hepworth Heating Ltd.

8.2 Fuel Bed

Remove the glass panel assembly as described in section 8.1.

Remove the fuel bed.

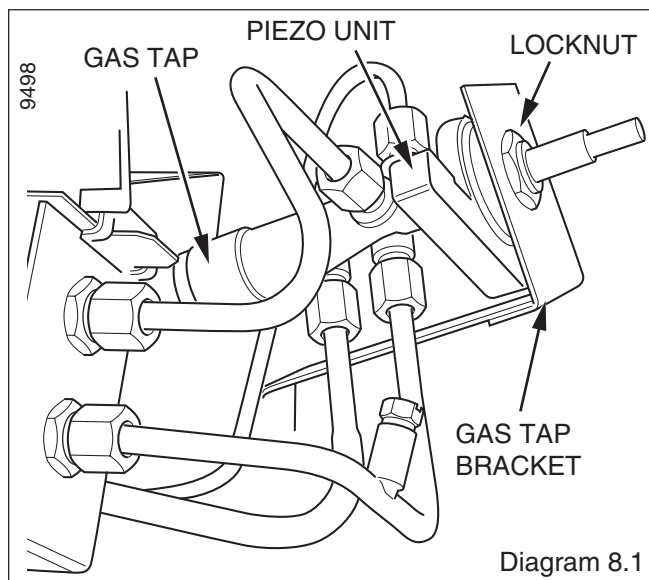


Diagram 8.1

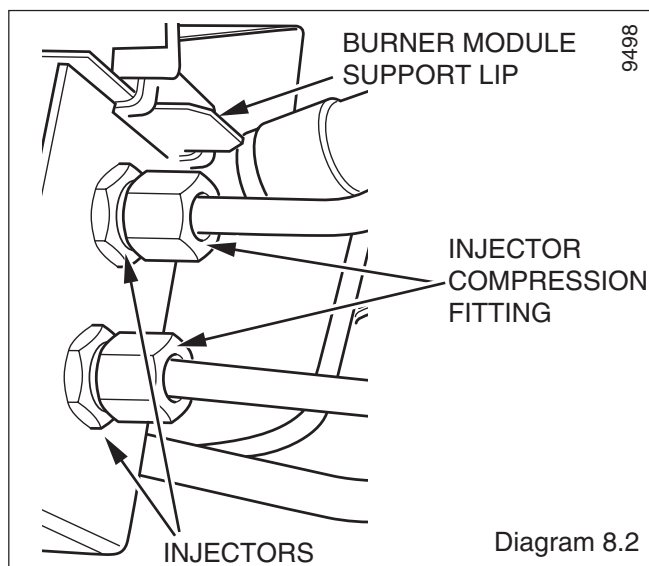


Diagram 8.2

When replacing, make sure that the coal rests on the ledges at the sides of the firebox and that its back face is touching the horizontal rib at the back of the firebox, see diagram 7 in the Instructions for Use section.

Replace and secure the glass panel assembly to the firebox by turning the two screws $\frac{1}{4}$ turn clockwise with the tool provided. Replace the surround. Make sure that the outside edges of the surround sides are inside the outer case.

8.3 To Remove The Gas Tap

Remove the outer case as section 8.1 above.

Detach the electrode lead from the pilot unit by pulling the lead down and away from the electrode situated at the centre rear of the burner.

Disconnect the two pipes linking the upper and lower injectors at the tap end and loosen their connections at the injector ends. Swing the pipes clear of the tap, see diagram 8.1.

Disconnect the inlet pipe and pilot pipe from the gas tap and remove the locknut holding the gas tap to the tap bracket, see diagram 8.1.

Carefully lift the tap clear to allow access to the thermocouple connection. Disconnect the thermocouple from the tap.

Replace in the reverse order.

8 Servicing and Replacement of Parts

8.4 To Remove The Piezo Generator

Remove the gas tap as section 8.3.
 Make sure that the tap is in the off position.
 Remove the circlip holding the piezo unit to the tap. Remove the piezo unit, see diagram 8.1.
 Replace in the reverse order.

8.5 To Grease The Control Tap

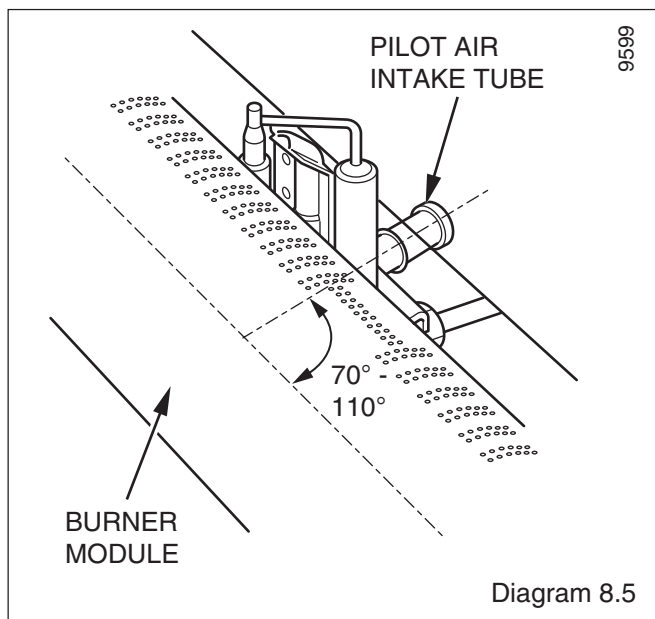
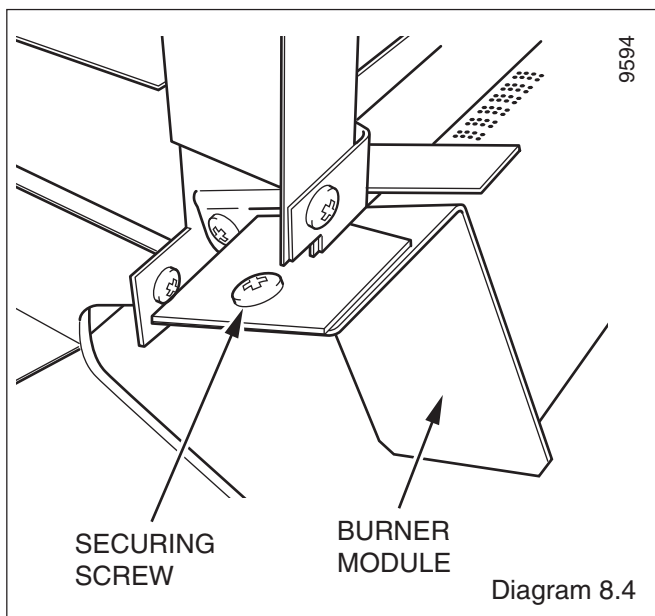
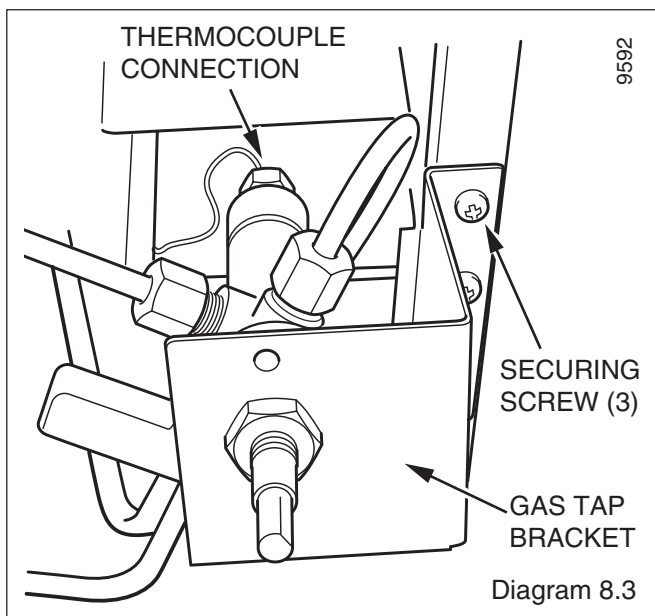
Detach the tap and remove the piezo generator as section 8.4 making sure that the tap is in the off position.
 Remove the two screws from the head of the tap. Remove the niting head and spindle complete with collar and spring.
 Note the position of the slot in the plug - mark its position on the tap body.
 Remove the plug rotating slightly while pulling.
 Clean and grease the plug lightly with a suitable grease. Do not apply excessive grease. Particularly, make sure that the gas ports in the tap are not restricted by grease.
 Push the plug into the tap body and position the slot in line with the mark previously made on the tap body.
 Reassemble the niting head and spindle complete with collar and spring making sure that the components are correctly engaged. Check the operation of the tap.
 Refit the piezo generator.

8.6 To Remove An Injector

Remove the outer case as section 8.1.
 Refer to diagram 8.2.
 Release the pipe compression fitting to the upper or lower injector as required. Lock the injector with a second spanner to ensure that it does not move.
 Loosen the pipe compression fitting at the tap end and move the pipe clear.
 Remove the injector from the burner.
 Replace in the reverse order.

8.7 To Remove The Complete Burner Module, Pipes and Pilot

Remove the outer case as section 8.1.
 Remove the coal as section 8.2.
 Support the inlet isolating elbow to avoid straining the pipework and disconnect the appliance from the elbow.
 Detach the gas tap bracket from the right side of the appliance by removing three screws, see diagram 8.3.
 Detach the left side of the burner from the firebox by removing one screw, see diagram 8.4.
 Carefully slide the burner module to free the support lip from the right side of the firebox, see diagram 8.2.
 Remove the pipes, or pilot unit if required.
 Replace in the reverse order.
 Note:
 1.The pilot unit is an atmosphere sensing device. It must be replaced as a whole assembly. Its individual components are not separately replaceable.
 2.Check that there is no blockage of the air intake tube at the back of the pilot unit.
 To allow optimum air intake, the air intake tube should be within the limits of angular relationship to the burner rail shown in diagram 8.5. Rotate the tube if necessary.



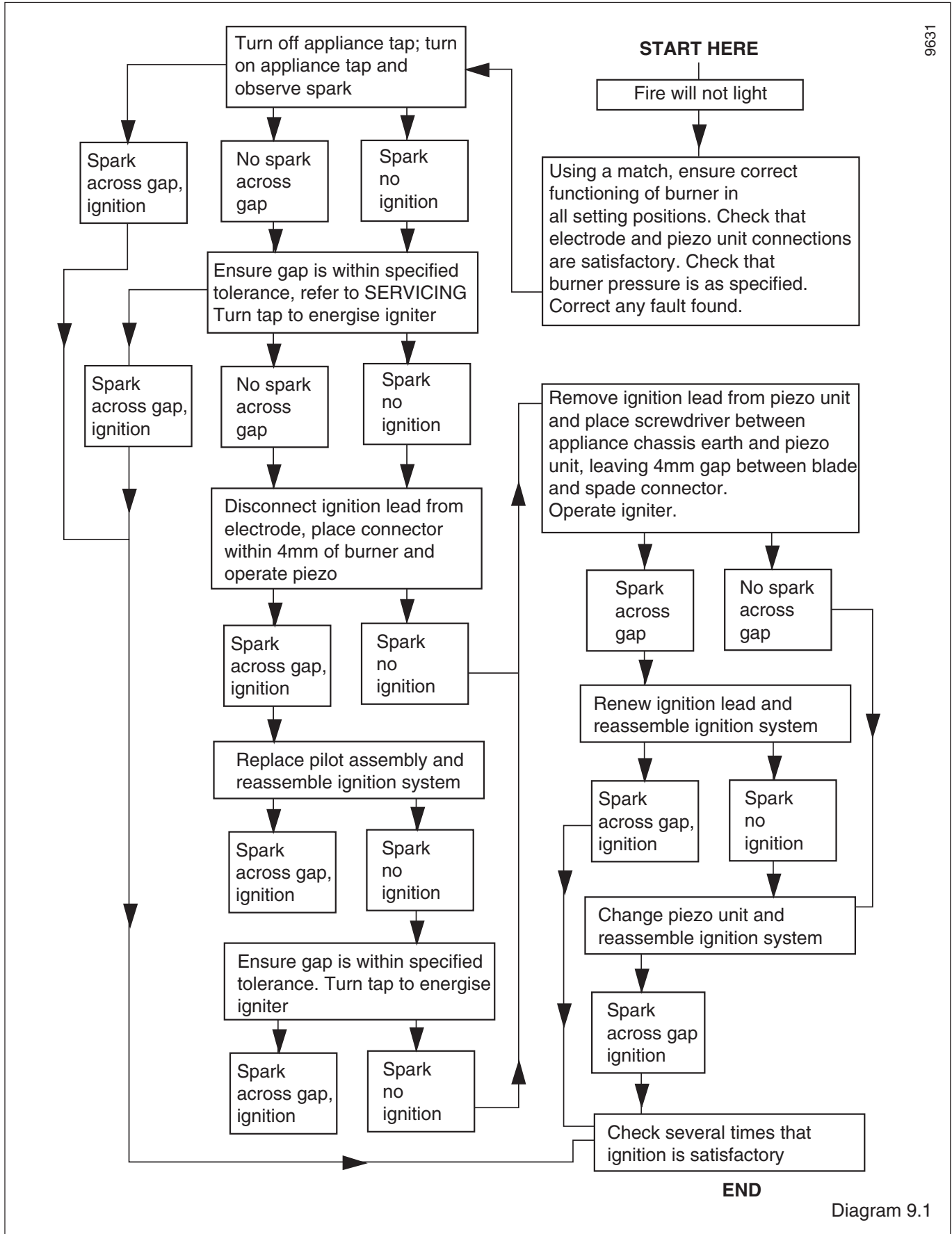
9 Fault Finding

9.1 Fire Font Ignition

Remove casing as section 8.1.
Refer to Fire Front Ignition Fault Finding, diagram 9.1.

9.2 Flue Blockage Safety Device

If the device operates it indicates there could be a problem with the chimney. First make sure air vents are free of obstructions, by carrying out spillage checks as section 6.3.



9631

Diagram 9.1

9 Fault Finding

5243

Disconnect appliance thermocouple from the gas tap. Check that all connections are clean and in good condition. Fit test meter interrupter into the magnet unit. Fit appliance thermocouple into the test meter interrupter.

Hold down control tap in ignition position. Ignite burner, allowing thermocouple to attain operating temperature. Measure the OPEN CIRCUIT voltage.

Is voltage greater than 15mV?
 NO → Faulty thermocouple. Replace flue blockage safety device.
 YES →

Note the open circuit reading then measure the CLOSED CIRCUIT voltage. Note this voltage. Referring to the diagnosis graph, mark the open circuit voltage on the VERTICAL axis, and the closed circuit voltage on the HORIZONTAL axis. Note the point where these two values intersect on the graph.

In which area of the graph is the intersect
 A → Faulty thermocouple. Replace flue blockage safety device.
 B → THERMOCOUPLE CIRCUIT IS SATISFACTORY
 C → Faulty magnet unit in gas tap. Replace gas tap

Diagram 9.2

9.3 Thermocouple

To test a thermocouple, a meter with a range of 0 to 30mV is required together with a thermocouple interrupter test unit. Refer to Fault Finding diagram 9.2 and Diagnosis Graph diagram 9.3.

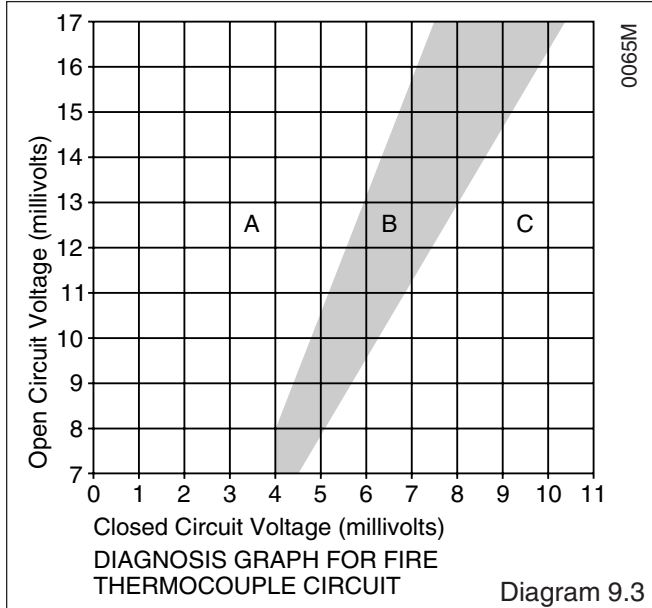


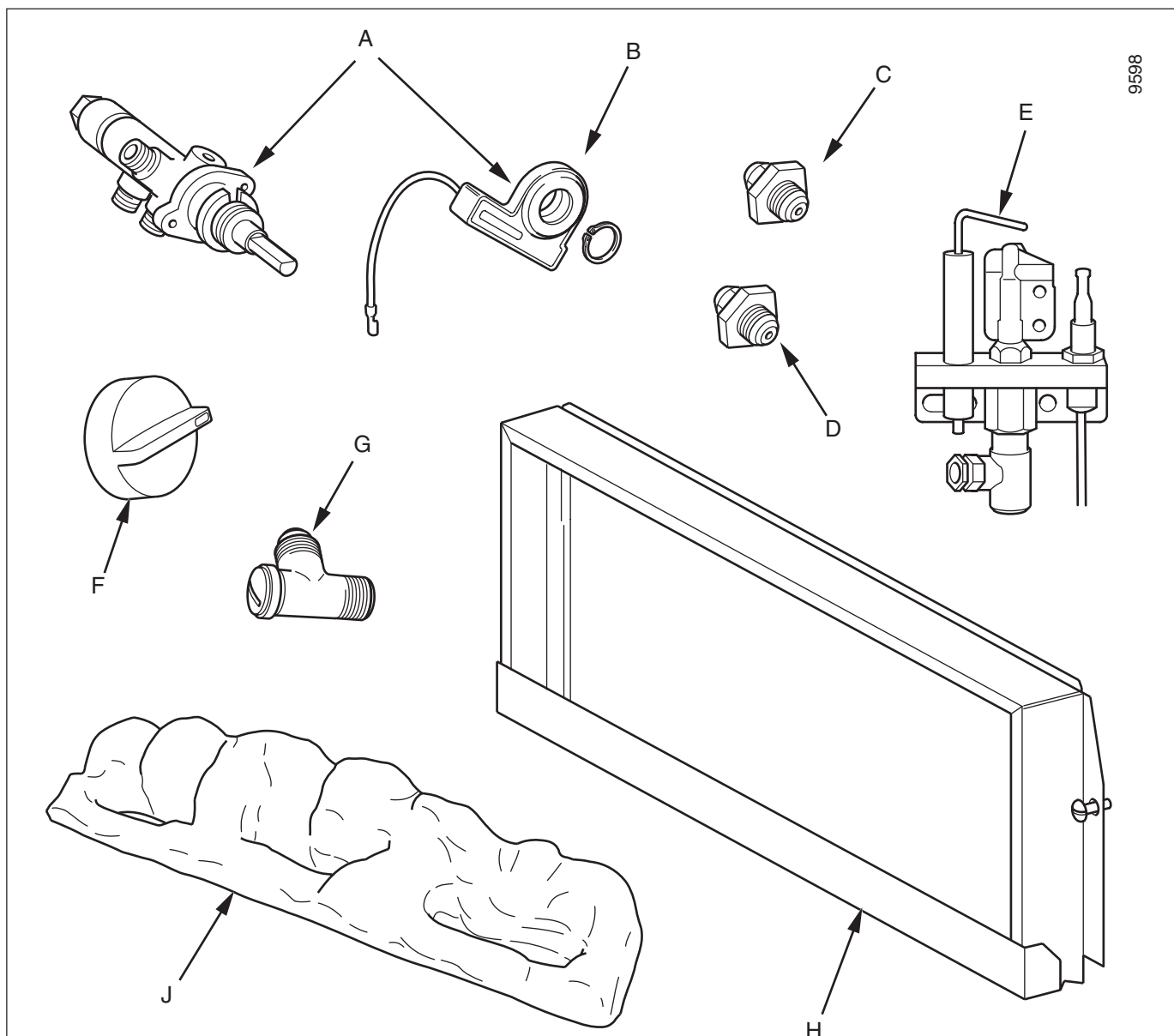
Diagram 9.3

10 Spare Parts

When spare parts are required apply to your local supplier.

Please quote the name of the appliance, also the serial number which can be found on the data label on the appliance.

If ordering from the local gas undertaking the appropriate appliance GC number should also be quoted together with the GC number of the part.



9598

Diagram 8.6

KEY	DESCRIPTION	No. OFF	PART No	GC PART No
A	Gas Tap & Spark Generator	1	462510	*****
B	Spark Generator	1	462511	*****
C	Upper injector Bray Cat.99 Size 115	1	462512	*****
D	Lower injector Bray Cat.99 Size 230A	1	462513	*****
E	Pilot Unit	1	462514	*****
F	Control Knob	1	462515	*****
G	Inlet & isolating 'T' connector	1	462516	*****
H	Glass Panel Assembly	1	462517	*****
J	Coal	1	462518	*****

Because of our constant endeavour for improvement details may vary slightly from those in the instructions.