

British Gas 

Scottish Gas 

INSTALLER GUIDE

Churchill Radiant

(GC No. 32-032-33)

CE *OUTSET RADIANT/CONVECTOR
GAS FIRE*

(Manufacturer ref. 3403)

**THIS APPLIANCE IS FOR USE WITH NATURAL GAS (G20)
THIS APPLIANCE IS FOR USE IN THE UNITED KINGDOM (GB) AND
THE REPUBLIC OF IRELAND (IE) ONLY.**

INSTALLER: Please leave this guide with the owner

Manufactured exclusively for British Gas & Scottish Gas by Valor Heating
For Service Phone 0845 960 5040

Because our policy is one of constant development and improvement, details may vary slightly from those given in this publication.

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SAFETY

Installer

Before continuing any further with the installation of this appliance please read the following guide to manual handling

- The lifting weight of this appliance is 15.74 kg. One person should be sufficient to lift the fire. If for any reason this weight is considered too heavy then obtain assistance.
- When lifting always keep your back straight. Bend your legs and not your back.
- Avoid twisting at the waist. It is better to reposition your feet.
- Avoid upper body/top heavy bending. Do not lean forward or sideways whilst handling the fire.
- Always grip with the palm of the hand. Do not use the tips of fingers for support.
- Always keep the fire as close to the body as possible. This will minimise the cantilever action.
- Use gloves to provide additional grip.
- Always use assistance if required.

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1 APPLIANCE DATA

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

The appliance data label is on the inner face of the back panel at the lower left-hand side. It is visible when the outer case is removed.

Gas	Natural (G20)	
Inlet Pressure	20mbar	
Gross Heat Input	Max.	5.6kW (19,100Btu/h)
	Min.	1.25kW (4,300Btu/h)
Burner Test Pressure (Cold)	17.95 \pm 0.75mbar (7.2 \pm 0.3in w.g.)	
Gas Connection	8mm pipe	
Burner Injector	Upper (Centre Radiant)	Bray Cat. 16 Size 120
	Lower (Outer Radiants)	Bray Cat. 28 Size 250B
Pilot & Atmosphere Sensing Device	OP9093	
Ignition	Twin-spark Piezo-electric integral with gas tap	
Aeration	Non-adjustable	

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2 GENERAL INSTALLATION REQUIREMENTS

2.1 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 5871 Part 1	
BS 1289 Part 1	BS 5440 Part 1	BS 6461 Part 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:
 - The current edition of IS 813
 - All relevant national and local rules in force.

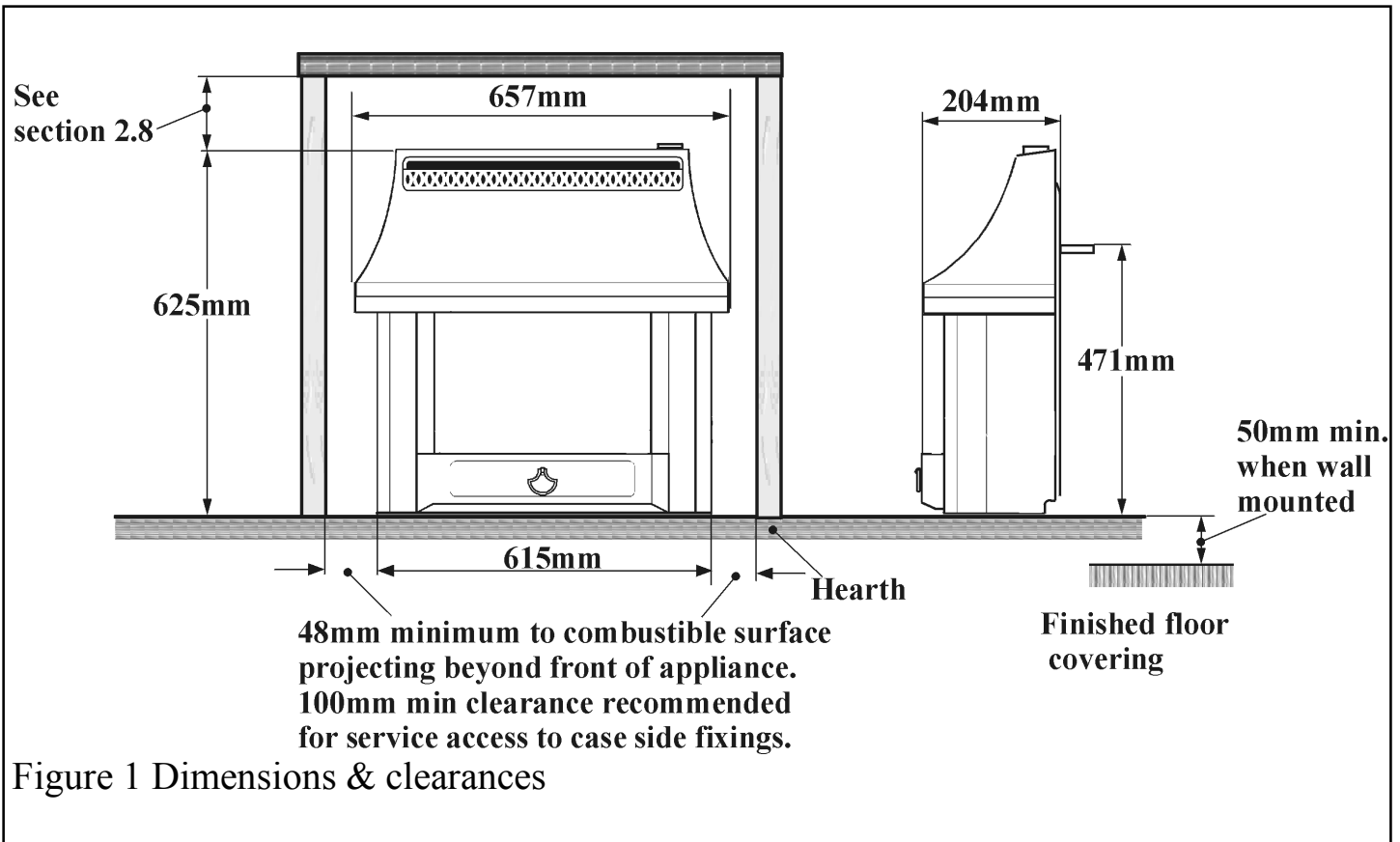
2.2 If the appliance is intended to be installed to a chimney that was previously used for solid fuel, the flue must be swept clean prior to installation. All flues should be inspected for soundness and freedom from blockages.

2.3 Any chimney dampers or restrictors should be removed. If removal is not possible they must be fixed in the open position.

2.4 In the United Kingdom (GB) special ventilation bricks or vents are not normally required in the room for this appliance.

In the Republic of Ireland (IE), permanent ventilation must comply with the regulations currently in force.

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2.5 Note that soft wall coverings (e.g. embossed vinyl, etc.) are easily affected by heat. They may scorch or become discoloured when close to a heating appliance. Please bear this in mind when installing.

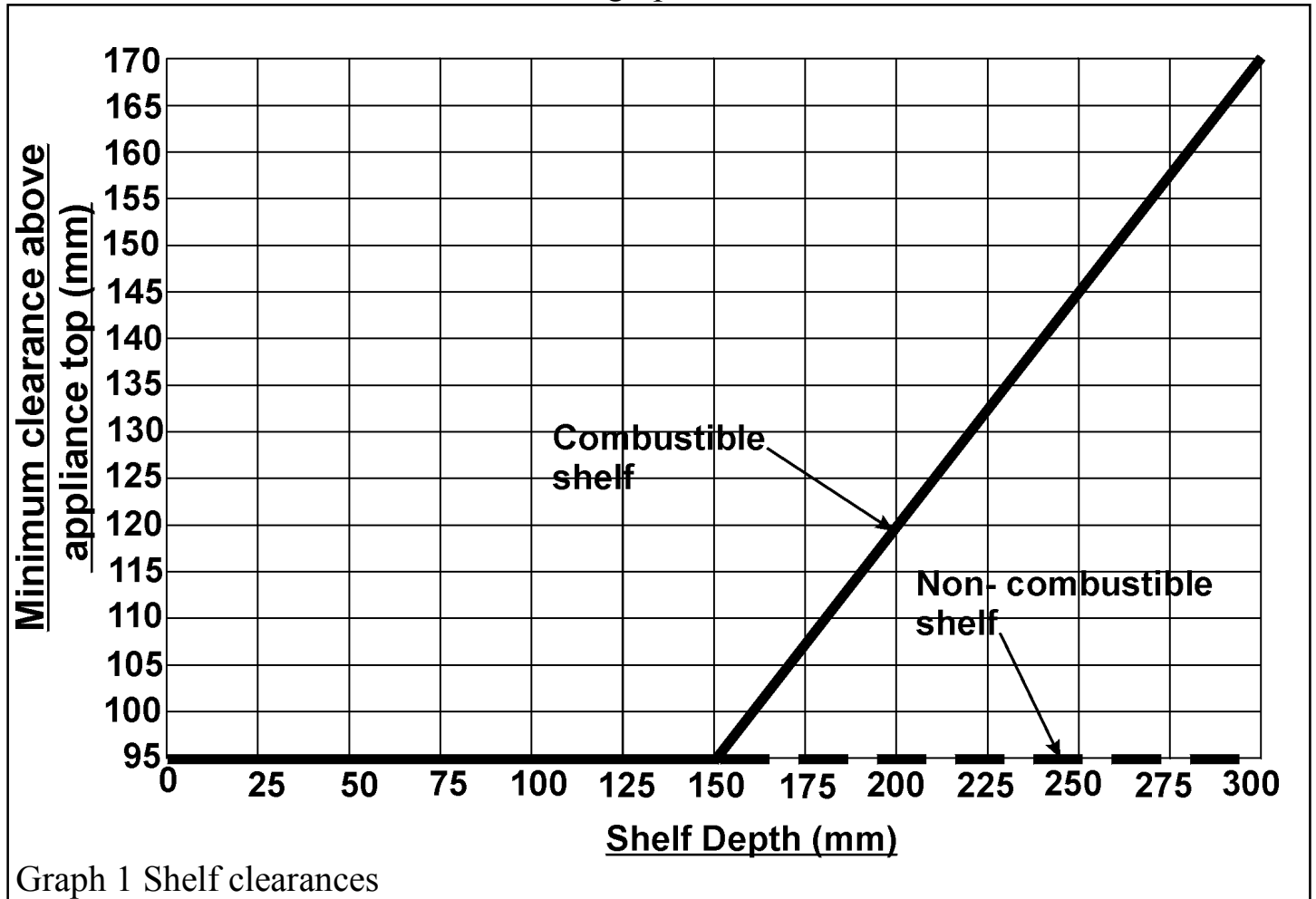
2.6 The minimum side clearances to combustible surfaces and recommended side access clearances are given in figure 1.

2.7 The appliance must not be installed in any room, which contains a bath, or shower or where steam is regularly present.

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2.8 Allow a minimum clearance of **95mm** from the top surface of the appliance case to the underside of any shelf whether it is made from **combustible or non-combustible** materials. This clearance is necessary to allow the case to be lifted off for servicing and also allows the owner sufficient access to operate the control knob.

For a shelf made from **wood or other combustible materials deeper than 150mm**, the minimum clearance must be as shown in graph 1.



2.9 In the United Kingdom, as supplied, this appliance can be installed in the following situations:-

Note: A spigot extension is available (Part number 0595191). When fitted this shall extend through the closure plate for at least 15mm and have a minimum clearance of 50mm from the end to any surface.

2.9.1 Conventional Fireplace

The fireplace opening must be within the following dimensions:

Width	Max.	440mm
	Min.	305mm
Height	Max.	610mm*
	Min.	525mm

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* Though the total height of the closure plate will accommodate a maximum opening height of 650mm, heights above 610mm will leave the closure plate and sealing tape visible above the appliance.

The appliance must be mounted on a non-combustible hearth (N.B. conglomerate marble hearths are considered as non-combustible). The hearth must be at least 880mm wide x 300mm deep. The hearth material must be at least 12mm thick. The periphery of the hearth (or fender) should be at least 50mm above floor level to discourage the placing of carpets or rugs over it.

The appliance can be fitted to a purpose made proprietary class "O" 150°C surround.

2.9.2 Wall Mounted

The wall opening must be within the following dimensions:

Width	Max.	440mm
	Min.	305mm
Height	Max.	610mm*
	Min.	350mm

* Though the total height of the closure plate will accommodate a maximum opening height of 650mm, heights above 610mm will leave the closure plate and sealing tape visible above the appliance.

The bottom of the appliance must be at least 50mm above the finished floor covering. See figure 1. This requires the top of the opening to be at least 575mm above the finished floor covering. Any opening visible below the appliance may be closed in but the depth of the catchment space within the wall opening must be as shown in figure 2.

2.9.3 Precast Flues

The appliance can be installed to a fireplace that has a properly constructed precast concrete or clay flue block system conforming to BS1289 or BS EN 1806. The appliance is suitable for installations conforming to older versions of BS1289 as well as the current standards. The flue blocks must have a minimum width not less than 63mm and a cross-sectional area not less than 13,000mm². Older editions of BS1289 required a cross-sectional area of 13,000mm². The current revision of the standard requires 16,500mm². This appliance is suitable in both cases.

The chimney should be one or two storeys high but not less than 3m vertical height and be correctly terminated. No mortar fangs between the blocks should be extruded into the flueway. If raking blocks are used, they must be fitted in accordance with the manufacturer's instructions. Mortar must not be allowed to drop down and accumulate in the raked positions.

The fireplace opening must be within the following dimensions:

Width	Max.	440mm
	Min.	305mm
Height	Max.	610mm ¹
	Min.	610mm ²

¹ Though the total height of the closure plate will accommodate a maximum opening height of 650mm, heights above 610mm will leave the closure plate and sealing tape visible above the appliance.

² Any opening visible below the appliance may be closed in.

2.9.4 Metal Flue Box

The appliance can be installed to a metal flue box conforming to BS715 Section 6 (For gas fires to BS5258: Part 5) having a minimum internal depth of 165mm.

The opening must be within the following dimensions:

Width	Max.	440mm
	Min.	380mm
Height	Max.	610mm*
	Min.	525mm

* Though the total height of the closure plate will accommodate a maximum opening height of 650mm, heights above 610mm will leave the closure plate and sealing tape visible above the appliance.

2.10 If the fireplace opening is greater than the acceptable dimensions given in this guide, do not use the back of a fire surround or marble to reduce the opening. This may cause cracking of the surround back or marble.

2.11 The following flues are suitable:

- 225mm x 225mm conventional brick flue.

If a flue liner is used, it must be a minimum of 125mm diameter. The liner must be sealed to the surrounding area above the fireplace opening and to the top of the chimney. An approved terminal must be fitted.

- A properly constructed precast flue conforming to B.S 1289 or BS EN 1806.
- A flue pipe with a minimum diameter of 127mm. See B.S 6461 Part 1 for suitable materials. Metal flue pipes must comply with B.S 715. See section 2.9.4 of this guide for flue box opening sizes.

2.11.1 The flue must conform to BS 5440: Part 1 in design and installation.

The flue, measured from the bottom of the fireplace opening to the bottom of the terminal, shall be not less than 3m in actual vertical height. When calculated in accordance with BS 5440: Part 1 Annex A, the minimum **equivalent** height of the flue shall be 2.0m of 125mm dia. flue pipe.

2.11.2 The flue must be clear of any obstruction and its base must be clear of debris.

2.11.3 The flue must be completely sealed so that combustion products do not come into contact with combustible materials outside the chimney.

2.11.4 The flue must serve only one fireplace.

2.11.5 Proprietary terminals must comply with BS 715 or BS 1289. Any terminal or termination must be positioned in accordance with BS 5440 Part 1 to ensure that the

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products of combustion can be safely dispersed into the outside atmosphere. Where the appliance is connected to an unlined brick chimney it is generally unnecessary for the chimney pot to be replaced or for a terminal to be fitted unless the flue has a diameter smaller than 170mm.

2.12 If the fireplace opening is an underfloor draught type, it must be sealed to stop any draughts.

2.13 The flue spigot and any spigot extension must be capable of passing through the closure plate by at least 25mm with a minimum clearance of 50mm between its open end and the nearest obstruction. There must also be a minimum clearance of 165mm between the back of the closure plate and the back of the catchment space.

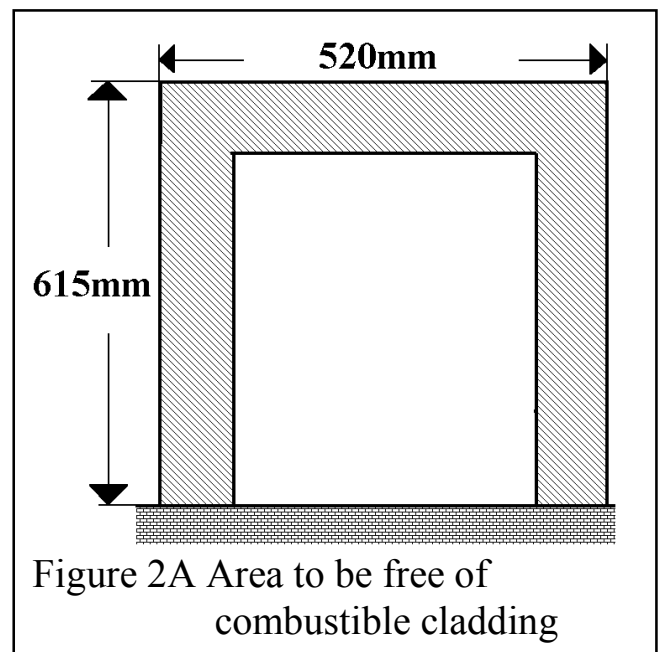
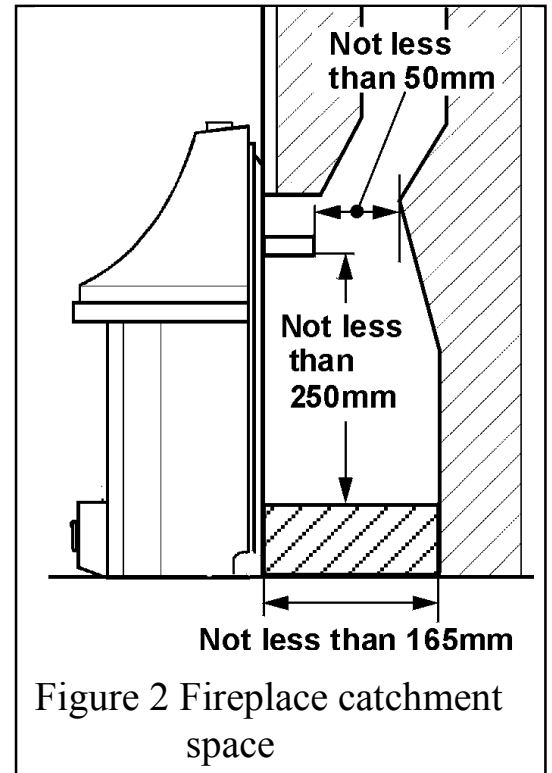
The catchment space below the flue spigot must extend at least 250mm downwards measured from the bottom of the flue spigot. See figure 2.

2.14 The front of the fireplace should be flat over an area sufficient to ensure a good seal with the closure plate. The flat surface should extend for a height equal to that of the closure plate plus 20mm and for a width equal to that of the closure plate plus 40mm.

2.15 If the fire is to be fitted against a wall with combustible cladding, the cladding must be removed from the area shown in figure 2A.

2.16 An extractor fan may only be used in the same room as this appliance, or in any area from which ventilation for the appliance is taken, if it does not affect the safe performance of the appliance. Note the spillage test requirements detailed further on in this manual. If the fan is likely to affect the appliance, the appliance must not be installed unless the fan is permanently disconnected.

2.17 The space between the fireplace front face and the back of the outer case must not be filled in.



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3 PRE-INSTALLATION PREPARATION

3.1 Unpacking

This appliance is supplied completely assembled except for:-

- 3 radiants which are in a cardboard pack inside the firebox.
- The closure plate
- Literature pack
- An olive & olive nut for gas line connection

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

3.2 Fireplace Flue Pull

Close all doors and windows in the room in which the appliance is to be installed. After confirming with a match that smoke is drawn into the flue, light a 13 gram smoke pellet and check that there is a definite flow through the flue. Verify outside that the smoke exits from one terminal only and that the termination is suitable. Observe where possible, upstairs rooms and loft spaces for signs of escaping smoke indicating a defective flue. If there is not a definite flow warm the flue for a few minutes and repeat the smoke pellet test. If there is still no definite flow the flue may need remedial work – **Do not fit the appliance until there is a definite flow through the flue.**

3.3 Appliance Preparation

3.3.1. Stand the fire upright.

3.3.2 Remove the two transit screws from near the top of the back panel extensions. See figure 2B.

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

3.3.4. Remove the two case retaining screws located at the sides of the case near the bottom.

3.3.5. Lift the case up and forward to clear the rear top location. Store in a safe place.

3.3.6. Remove the radiant pack.

3.3.7. Remove any protective film from all the bright trims.

3.3.8. 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

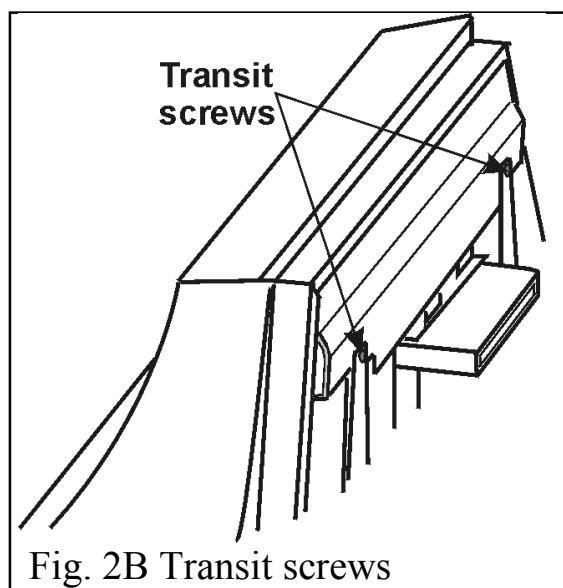


Fig. 2B Transit screws

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knob to the spindle. Depress the knob and while keeping it depressed, turn to the 1/IGN position. A spark should track from the electrode pin to the thermocouple tip. If there is no spark or incorrect tracking, check the spark gap between the electrode wire and thermocouple tip. See figure 3.

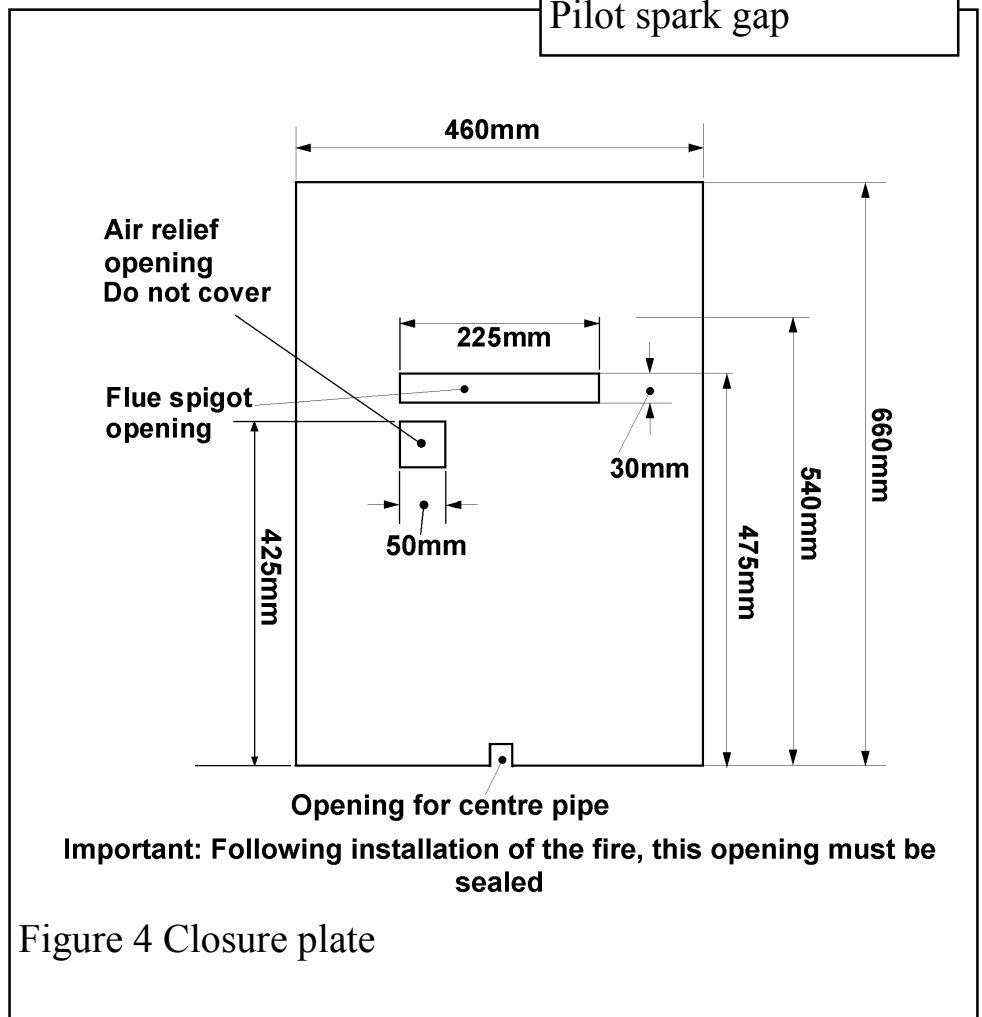
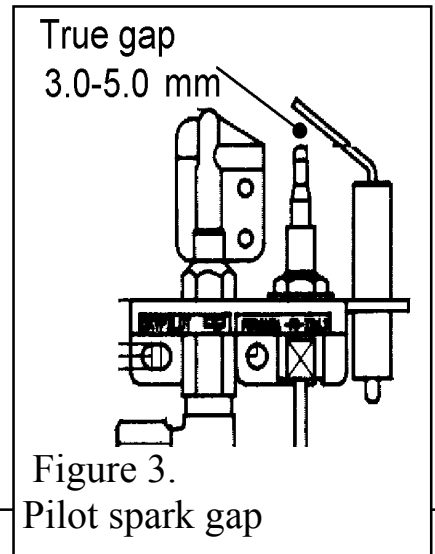
If the spark gap is correct, check the ignition wiring.

3.3.9. If the fire is fitted to a recessed fireplace, an extension flue spigot up to a maximum total length of 125mm may be used. The extension must be a tight fit over the flue spigot and be secured by two self tapping screws. Note the minimum clearance required as shown in figure 2.

3.4 Fit The Closure Plate

See figure 4.

The closure plate has an opening at the bottom for a central gas feed pipe. The gap between the pipe and this opening should be sealed with tape after connection. If a central feed pipe is not required the opening should be completely sealed with tape.



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3.4.1 Hearth mounting

See figure 5.

The closure plate must be fitted and sealed to the hearth and fireplace opening using a suitable heat resistant material. If necessary cut the closure plate but make sure that it overlaps the fireplace opening sufficiently to allow satisfactory sealing. Make sure that the rectangular air relief opening is fully within the fireplace opening.

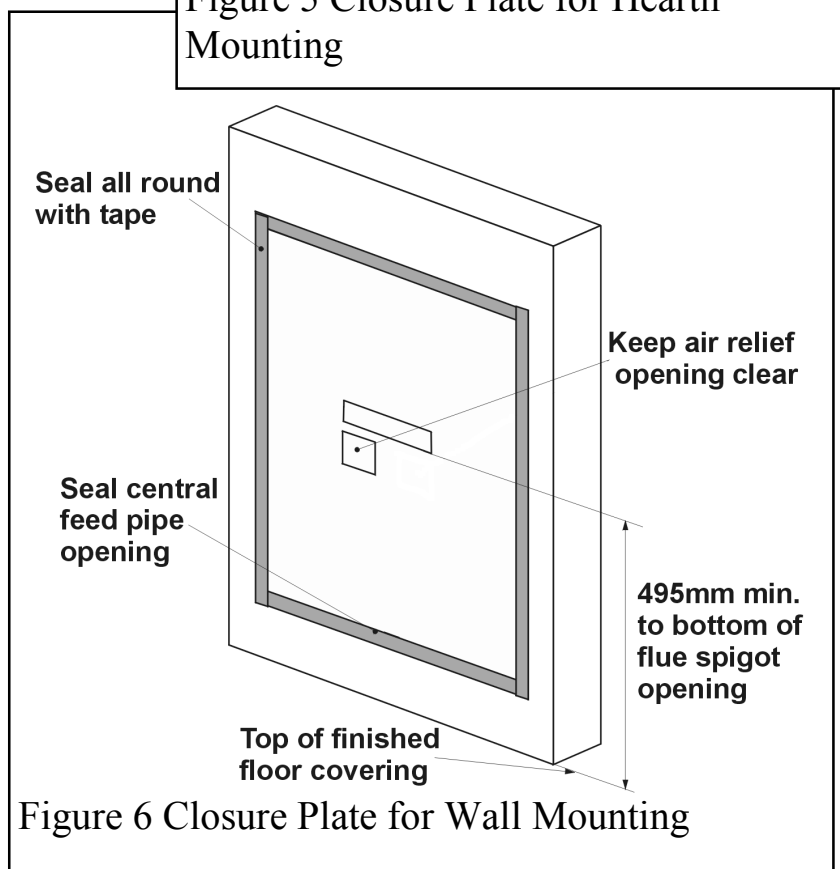
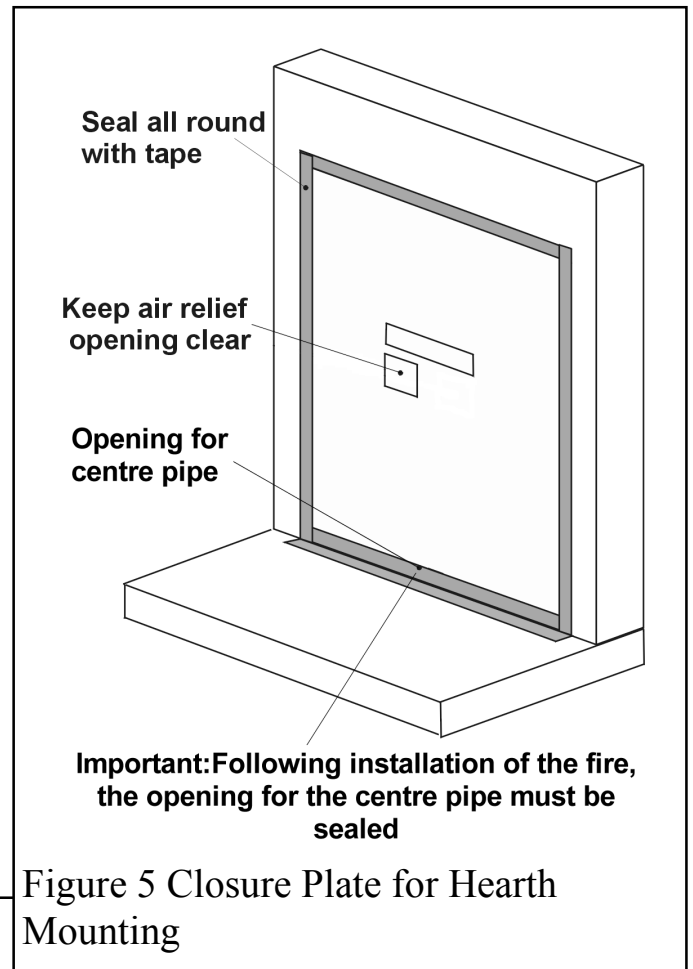
3.4.2 Wall mounting

See figure 6.

The closure plate must be fitted and sealed to the hearth and fireplace opening using a suitable heat resistant material. If necessary cut the closure plate but make sure that it overlaps the fireplace opening sufficiently to allow satisfactory sealing. Make sure that the rectangular air relief opening is fully within the fireplace opening.

The bottom of the appliance must be at least 50mm above any carpet or other floor covering. To achieve this, the bottom of the flue spigot opening must be at least 495mm above the finished floor covering.

3.4.3 Check the flue pull with closure plate fitted by applying a lighted match or smoke match to the flue spigot opening in the closure plate and observe the smoke. If there is a definite flow continue with the installation. If not check the fitting of the closure plate. The fireplace flue pull check described in section 3.2 should have confirmed that the fireplace itself is satisfactory.



4 APPLIANCE INSTALLATION

4.1 Installing To A Hearth

4.1.1 Place the fire centrally on the hearth making sure that the spigot lines up with the spigot hole in the closure plate. Gently slide the appliance into place. The spigot must enter the closure plate to a depth of at least 25mm.

4.1.2 Level the fire by loosening the lock nuts and turning the levelling screws in the feet up or down as required while they bear on the hearth. When the fire is level and square to the wall, retighten the lock nuts.

4.2 Wall Mounting

The fixing hole positions in relation to the flue spigot opening are shown in figure 7. Mark these positions on the wall. The positions can alternatively be marked by placing the fire in position and marking the wall through the holes in the back panel. Drill and plug the holes using no. 10 wall plugs. Place the fire in position and secure with four no. 10 x 2in. woodscrews.

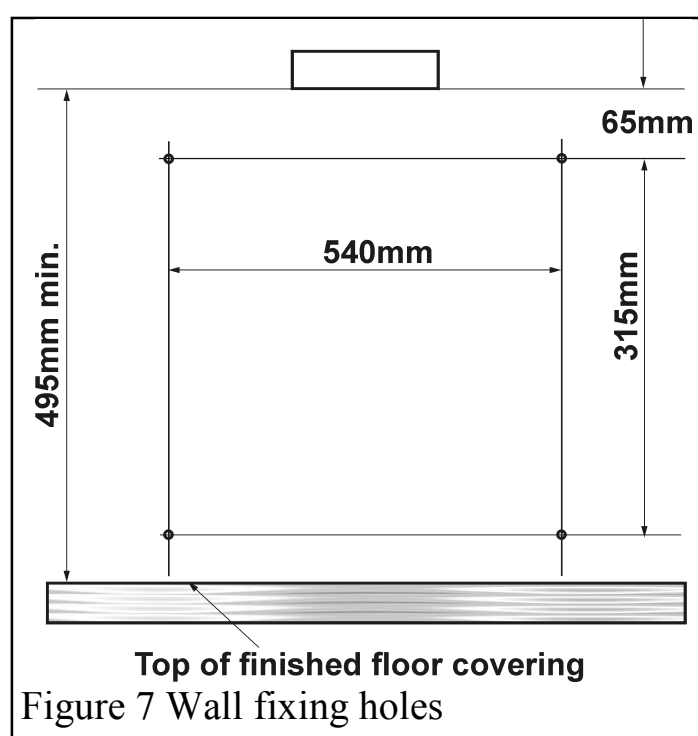
4.3 Gas Supply Connection

8mm rigid tubing must be used to connect the gas supply to the appliance. An olive and nut are provided for connection to the "T" connector on the appliance. The connector can be rotated to allow connection from either side or the rear. The connector includes a valve for isolating the gas supply. The closure plate has a cut-out for rear connection. Seal the gap between the cut-out and the supply pipe.

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 Radiants Installation

Important: Fit the radiants ensuring that their rear face rests against the horizontal ribs in the rear panel. There will be a small gap between their bottom front edge and the retaining channel at the front of the radiant box.



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4.5 Flue Restrictor Adjustment

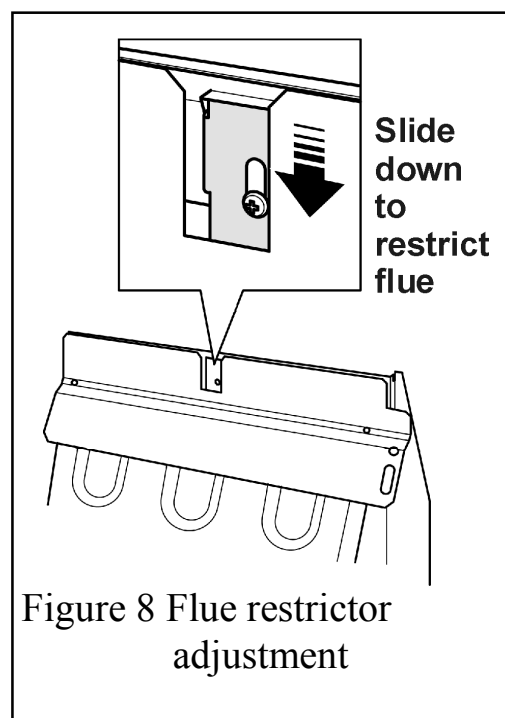
See figure 8.

The appliance has an integral adjustable flue draught restrictor. This is supplied set in the fully open (unrestricted) position and in most cases no adjustment should be necessary. It can be reset to a fully restricted position if the flue draught is excessive. **The restrictor must remain in its fully open position if the flue has an equivalent height of 4m or less (as calculated in accordance with BS5440: Part 1 Appendix A) or where a pre-cast flue is used.**

To close the restrictor:

1. Loosen the screw situated behind the cut-out in the black upper heat shield. Do not fully remove the screw.
2. Push the restrictor firmly down as far as it will go. The top of the slot in the restrictor bracket should touch the screw.
3. Fully tighten the screw.

There may be certain exceptional circumstances where closing the restrictor causes the fire to fail the spillage test (See section 7). In such cases the restrictor will have to be reopened.



5 CONTROL & PRESSURE CHECKS

5.1 Check Control Settings

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

5.1.2 To check the control positions temporarily place the outer case loosely over the engine. Fit the control knob over the gas tap spindle.

5.1.3 Depress the control knob and turn anticlockwise partially towards the 1/IGN position until some resistance is felt. Keep depressed at this position for a few seconds 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. If it does not, keeping the knob depressed, continue to turn the knob anticlockwise. A **second spark** should be generated at the pilot while turning. This spark should ignite the pilot.

5.1.4 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

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orifice is clear and that the thermocouple connections are sound. Replace the pilot unit if necessary (see servicing section of this manual).

5.1.5 Check all the control settings. These are: -

Knob Position	Radiants Condition
2	Centre radiant on low. Outer radiants off.
3	Centre radiant fully on. Outer radiants off.
4	Centre radiant fully on. Outer radiants on low.
5	All radiants fully on.

5.2 Flame Supervision & Spillage Monitoring System

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;

5.2.1 Light the appliance. Set at position 5 and leave for one minute.

5.2.2 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.

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 authorised parts.

5.3 Check Reference 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.

5.3.1 Detach the control knob from the spindle. Remove the outer case.

5.3.2 Check the burner pressure by fitting a pressure gauge at the test point. The test point is on the gas tap. Refit the control knob to the spindle and check the pressure with the appliance alight and set at maximum output (Control position 5).

5.3.3 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.

5.3.4 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.

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6 OUTER CASE FITTING

- Remove the control knob from the spindle.
- Refit the outer case. The outer case top rear strip should locate in front of, but touching, the side extensions of the engine back panel. See figure 9.
- Secure the case at the bottom sides with the two screws previously removed.
- Fit the control knob fully over the gas tap spindle.

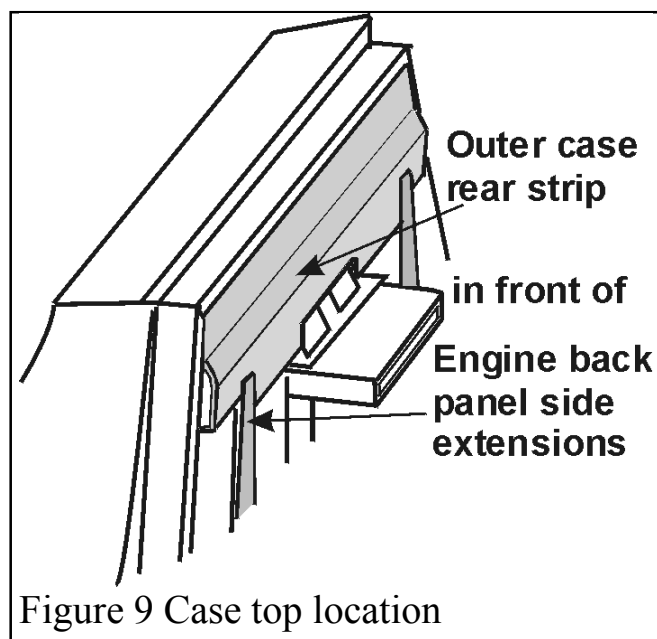


Figure 9 Case top location

7 SPILLAGE CHECK

A spillage test must be made before the installed appliance is left with the customer.

1. Close all doors and windows in the room containing the fire.
2. Light the appliance and set the control knob to the maximum position (Position 5).
3. Leave the appliance on for five minutes.
4. Place a smoke match tube (with lighted match) horizontally underneath the radiant box but touching the top lip of the box. The tube should be between the two vertical inner ribs of the centre radiant. The tip of the match should project between 2mm and 5mm beyond the lowest edge of the **radiant box lip** (The radiant box lip is behind the black outer case panel). See figure 10.

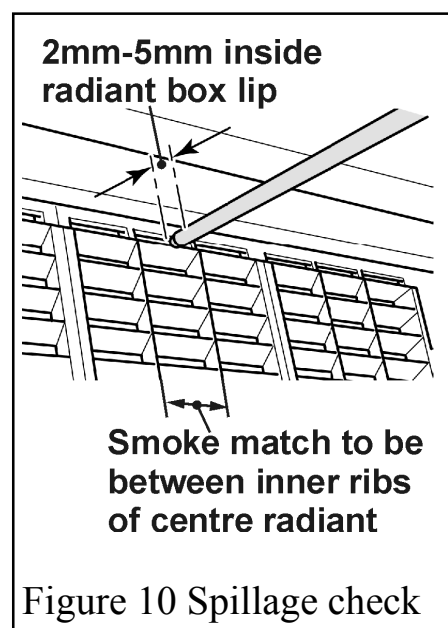


Figure 10 Spillage check

5. The installation is satisfactory if the smoke is drawn into the appliance. If the smoke is not drawn into the appliance, leave the appliance alight at the maximum setting for a further ten minutes and then repeat the test. If the smoke is still not drawn into the appliance, inspect the sealing of the closure plate. If the sealing is satisfactory but the appliance is installed with the flue restrictor in the closed position (see section 4.5), reopen the restrictor, reseal the appliance and retest. **If smoke is still not drawn into the appliance Disconnect the appliance and seek expert advice**
6. If the above test is satisfactory, open all internal connecting doors, hatches, etc. in the

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room. Keep all doors and windows that open to the outside of the building closed. Recheck for spillage as above. If an extractor fan is installed in the same room as the appliance or a connecting room, check that spillage does not occur with the fan operating and all doors and other openings between the fan and the appliance open. If the test is satisfactory continue with the installation. **If the test is not satisfactory disconnect the appliance and advise the customer of the cause of failure.**

8 FINAL REVIEW

- Make sure that the dress guard is securely in position.
 - Recheck the operation of the fire at all control positions. **Explain to the customer that the appliance is fitted with a two-spark ignition system. (See section 5.1.3)**
 - 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 owner's guide. 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, the appliance should be switched off and a specialist should be consulted.
 - Advise that the dressguard can be removed to replace the radiants.
 - 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 Owner's guide before operating the fire and always follow the advice in the section headed "Cleaning your fire".
 - Advise the user that the appliance can be lit with a match if necessary by inserting it through the central opening at the bottom of the radiant box.
 - 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.
- Mention that the radiants may become brown with use, that this is quite normal and has no adverse effect.
 - Hand this guide to the customer.

9 SERVICING & PARTS REPLACEMENT

- Always turn off the gas supply before commencing any servicing (The appliance inlet "T" connector incorporates an isolating valve).
- It is recommended that, at least once a year, the appliance is disconnected and the catchment space behind the closure plate checked and cleared of any debris. **The closure plate must be resealed to the wall after checking.**
- Check that soot or debris is not impairing the electrode spark or pilot burner.
- Check that soot or debris is not blocking any of the holes in the main burner.
- **Always test for gas soundness and spillage after servicing the appliance.**

9.1 To Replace Radiant(s)

9.1.1. Remove the dress guard by pressing down the two hooks at the top. Tilt the guard forward and lift out.

9.1.2. Remove the old radiant(s) Fit the new radiant(s) **ensuring that their rear face rests against the horizontal ribs in the rear panel.** There will be a small gap between their bottom front edge and the retaining channel at the front of the radiant box.

9.1.3 Replace in the reverse order.

9.2 To Remove the Outer Case

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

9.2.2. Remove the two case retaining screws located at the sides of the case near the bottom.

9.2.3. Lift the case up and forward to clear the rear top location.

9.2.4. Replace in the reverse order. Make sure that the outer case top rear strip locates in front of, but touching, the side extensions of the engine back panel. See figure 9 in the installation section.

Make sure that the radiants are not dislodged when refitting the case.

9.3 To Replace the Pilot Unit

9.3.1. Remove the outer case as section 9.2 above.

9.3.2. Disconnect the thermocouple connection at the bottom of the gas tap.

9.3.3. Disconnect the pilot pipe from the gas tap. It is the upper connection at the right side of the tap.

9.3.4. Remove the first screw securing the dust cage to the pilot unit & burner bracket. Carefully remove the dust cage and place aside. Remove the second screw securing the pilot unit to the burner bracket.

9.3.5. Disconnect the electrode lead from below the pilot electrode.

9.3.6. Carefully remove the pilot unit together with the pilot pipe then disconnect the pipe

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from the pilot unit.

9.3.7. 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. Once removed, ensure that the dust cage is cleaned before refitting. Make sure that it locates squarely onto the pilot unit without any gaps between the cage edges and the pilot unit.

9.4 To Remove the Piezo Generator

9.4.1. Remove the outer case as section 9.2 above.

9.4.2. Disconnect the electrode lead from below the pilot electrode.

9.4.3. Disconnect the control spindle & adapter from the gas tap by removing the split pin. Lift the adapter clear of the gas tap spindle.

9.4.4. Remove the circlip holding the piezo generator to the tap.

9.4.5. Replace in the reverse order. Make sure that the control knob with spindle is correctly turned to agree with the gas tap position before refitting the split pin.

9.5 To Remove The Complete Burner Module, Pipes and Pilot

9.5.1. Remove the outer case as section 9.2 above.

9.5.2 Support the inlet isolating elbow to avoid straining the pipework and disconnect the appliance from the elbow.

9.5.3. Disconnect the control spindle & adapter from the gas tap by removing the split pin. Lift the adapter clear of the gas tap spindle.

9.5.4. Detach the left end of the burner module from the radiant box by removing one screw. See figure 11.

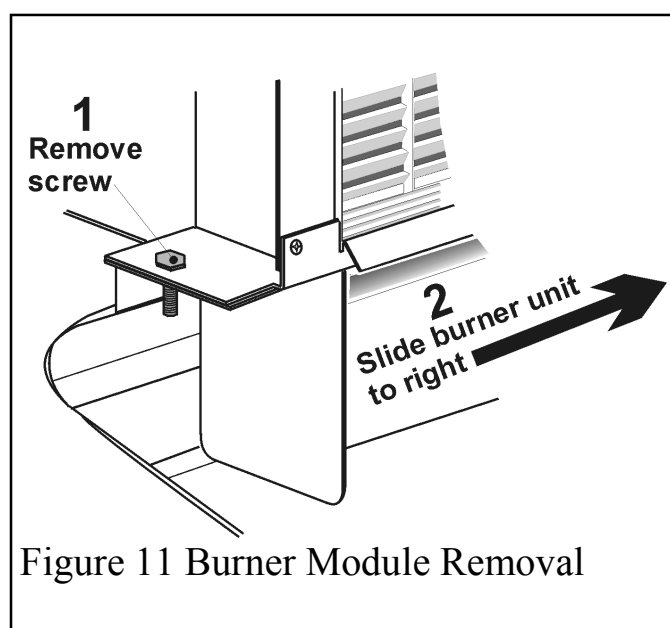
9.5.5. Carefully slide the burner module to the right to free it from the right side of the radiant box. See figure 11.

9.5.6. Remove the pipes, gas tap or injectors as required.

9.5.7. Replace in the reverse order.

Take care when replacing the injectors. The injectors have ceramic tips at each end. It is important not to allow jointing compound to get on either end of the injectors.

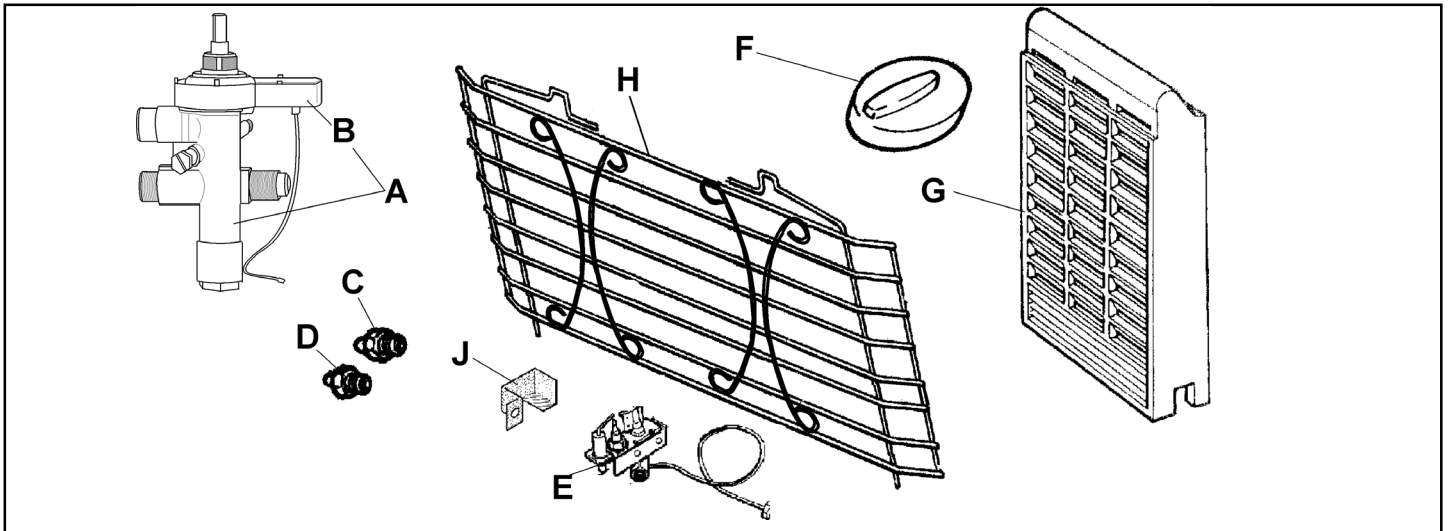
Make sure that the control knob with spindle is correctly turned to agree with the gas tap position before refitting the split pin.



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9.6 To Grease the Gas Tap

- 9.6.1. Remove the burner module as section 9.5.
- 9.6.2. Remove the circlip holding the piezo generator to the tap.
- 9.6.3. Remove the two screws from the head of the tap.
- 9.6.4. Remove the spindle and spring from the tap.
- 9.6.5. Note the position of the slot in the plug. Mark this position on the tap body.
- 9.6.6. Rotate the plug and pull it out of the tap.
- 9.6.7. Clean and grease the plug lightly with suitable grease. Do not apply excessive grease. Particularly, make sure that the gas ports are not restricted by grease.
- 9.6.8. Push the plug back into the tap body. Line up the slot in the plug with the mark previously made on the tap body.
- 9.6.9. Reassemble in the reverse order making sure that the components are correctly engaged. Check the operation of the tap and piezo. Make sure that the control knob with spindle is correctly turned to agree with the gas tap position before refitting the split pin.



10 REPLACEMENT PARTS – SHORT LIST

KEY	DESCRIPTION	No. OFF	PART No.
A	Gas Tap & Spark Generator	1	3000674VAL
B	Spark Generator	1	700K665
C	Upper injector Bray Cat. 16 Size 120	1	3002120
D	Lower injector Bray Cat. 28 Size 250B	1	320A327
E	Pilot Unit	1	3000964
F	Control Knob	1	3000785
G	Radiant	3	030A018
H	Dress Guard	1	3000974AQ
J	Dust cage	1	320B282