

IDEAL

CAVALCADE; 340 & 350

Combined Central Heating Boiler and Gas Fire

Installation and Servicing

CAUTION:

To avoid the possibility of injury during the installation, servicing or cleaning of this appliance, care should be taken when handling the edges of sheet steel components.

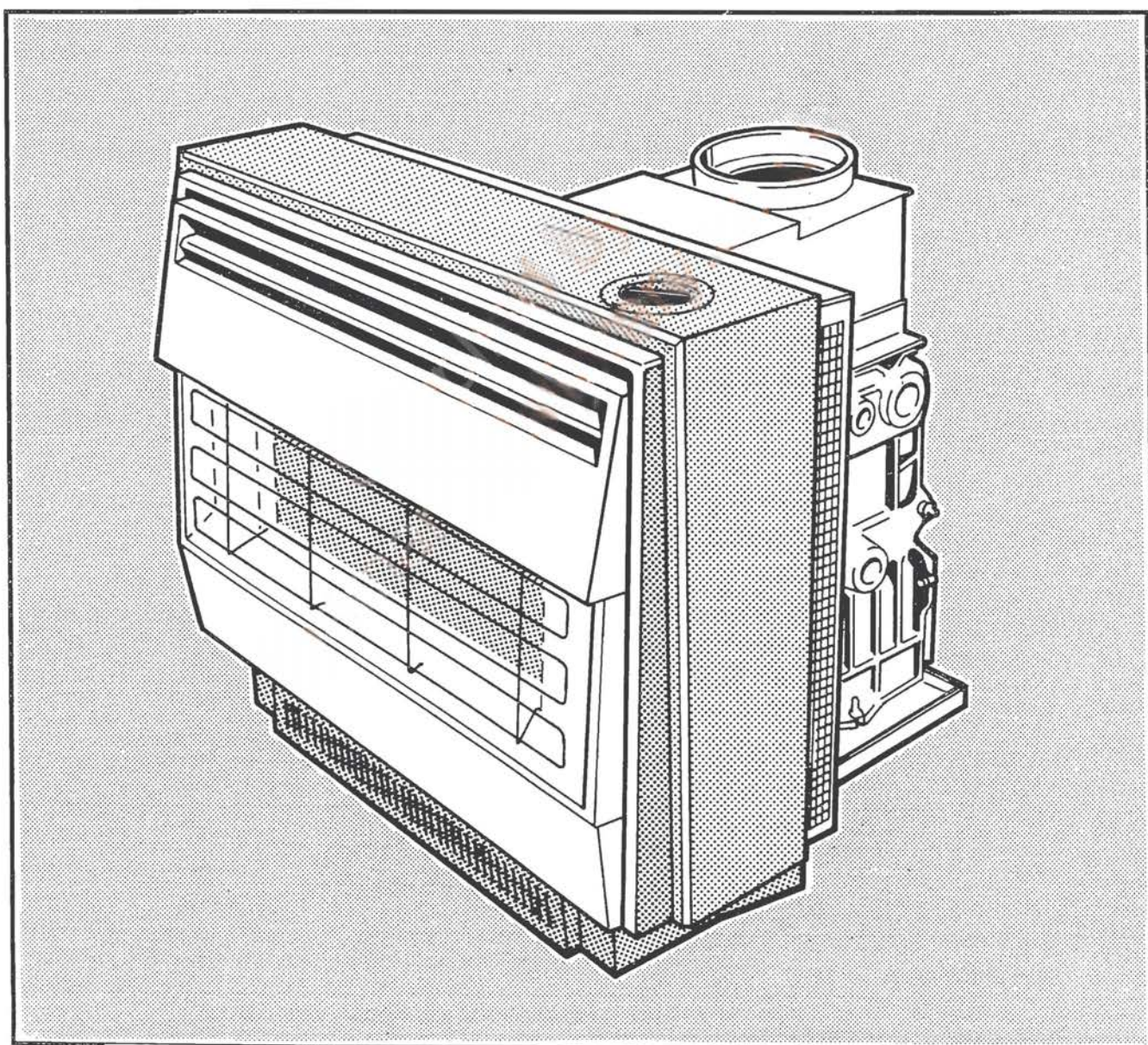
Appliance

Ideal CAVALCADE	340
Ideal CAVALCADE	350

G.C. Number

44 392 30
44 392 31

IMPORTANT: The appliances are for use with **NATURAL GAS ONLY**.



**STELRAD
GROUP**

Table 1- GENERAL DATA

Boiler Size		CAVALCADE 340	CAVALCADE 350
Main Burner		Aeromatic AC 19/12 3226	
Gas Control Valve		1/2 in. BSP Honeywell Compact V.4600 C 1029, 240V	
Burner Injector		Aeromatic 93-7 125	Aeromatic 93-7 135
Pilot Injector		HONEYWELL- 45003 508 001; 0.38/ 0.36A	
Gas Supply Connection	(in.BSP)	Rc 1/2 (1/2)	
Flow Connections (four)	(in.BSP)	Rc 1 (1)	
Return Connections (two)	(in.BSP)	Rc 3/4 (3/4)	
Flue Outlet Size	mm (in.)	125 (5)	
Maximum Static Water Head	m (ft.)	27.5 (90)	
Electrical Supply		220/ 240V 50Hz ~	
External Fuse Rating		3 A	
Water Content	litre (gal)	3.65 (0.8)	
Dry Weight	kg (lb)	52.0 (115)	
Hydraulic Resistance 11°C (20°F) temp. difference	mbar (in.w.g.)	30.5 (12.2)	

Table 2- PERFORMANCE DATA BOILER

Boiler Size			CAVALCADE 340	CAVALCADE 350
Boiler Input	MINIMUM	kW (Btu/h)	10.4 (35 600)	14.3 (49 000)
	Gas Consumption	l/s (ft³/h)	0.27 (34.3)	0.37 (47.2)
	MID	kW (Btu/h)	13.3 (45 300)	17.1 (58 500)
	Gas Consumption	l/s (ft³/h)	0.34 (43.6)	0.44 (56.4)
	MAXIMUM	kW (Btu/h)	15.5 (53 000)	19.4 (66 200)
	Gas Consumption	l/s (ft³/h)	0.40 (51.0)	0.50 (63.8)
Boiler Output to Water	MINIMUM	kW (Btu/h)	7.3 (25 000)	10.3 (35 000)
	MID	kW (Btu/h)	9.7 (33 000)	12.6 (43 000)
	MAXIMUM	kW (Btu/h)	11.7 (40 000)	14.7 (50 000)
Burner Setting Pressure (Hot)	MINIMUM	mbar (in.w.g.)	6.2 (2.5)	8.2 (3.3)
	MID	mbar (in.w.g.)	10.1 (4.0)	11.8 (4.7)
	MAXIMUM	mbar (in.w.g.)	13.8 (5.5)	15.4 (6.2)

Table 2a – PERFORMANCE DATA: FIRE

Firegem Visa 2 and Firegem Visa 2 Deluxe		
Fire input	MAXIMUM kW (Btu/hr)	5.86 (20 000)
Fire output	MAXIMUM kW (Btu/hr)	3.52 (12 000)

Notes:

- Gas consumption is calculated using a calorific value of 38.7 MJ/m³ (1038 Btu/ft³)
- The appliance is pre-set at the factory to the highest nominal rating.

INTRODUCTION

The IDEAL CAVALCADE 340 and CAVALCADE 350 are combined central heating boiler and gas fire units.

They are for fitting in a fireplace or standard builders opening at the base of a chimney and should NOT be installed in a bedroom, bed-setting room or any other room or space containing a bath or shower.

The units are for use on NATURAL GAS ONLY and MUST NOT be used with any other gas.

The IDEAL CAVALCADE 340 boiler is range rated from 7.3 kW (25 000 Btu/h) to 11.7 kW (40 000 Btu/h) output, and the CAVALCADE 350 boiler from 10.3 kW (35 000 Btu/h) to 14.7 kW (50 000 Btu/h) output.

The range of fires suitable for use with the IDEAL CAVALCADE 340 and 350 Boilers are:-

The ROBINSON WILLEY FIREGEM VISA 2

The ROBINSON WILLEY FIREGEM VISA 2 DELUXE.

The FIREGEM VISA 2 has a metal casing surround and the FIREGEM VISA 2 DELUXE has a wooden casing surround.

The heat input on all the models is 5.86 kW (20 000 Btu/h) and are for use with NATURAL GAS ONLY.

The boiler data plate is positioned on the front of the down-draught deflector plate and the fire data plate is on the inside bottom left of the base plate- behind the removable front panel.

FIRE DATA

The weights and dimensions of the fires are as follows:-

FIREGEM VISA 2

	Weight	Height	Width	Depth *
kg	21.8			
lb	48.0			
mm		570	660	243
in		22 1/2	26	9 9/16

Note; * including depth of frame

FIREGEM VISA 2 DELUXE

	Weight	Height	Width	Depth *
kg	23.0			
lb	50.5			
mm		586	695	243
in		23 1/8	26	9 9/16

Note; * including depth of frame

The central heating boiler is supplied as a package, containing the boiler unit (mounted on a pallet), with a hardware pack attached to the draught diverter, a cardboard template, and the installation components required for fitting the above designated fires to the boiler unit.

The fires are supplied as standard ROBINSON WILLEY gas fires. They are fitted to the boiler unit using the installation components in the boiler pack.

IMPORTANT: This appliance is range certified by the British Standards Institute for safety and performance. It is therefore important that no external control devices e.g. flue dampers, economisers, etc, be directly connected to this appliance unless covered by these 'Installation and Servicing' instructions or otherwise recommended by Caradon Heating Ltd., in writing.

If in doubt please enquire.

Any direct connection of a control device not approved by Caradon Htg. Ltd., could invalidate the B.S.I. certification and the normal appliance warranty and could also infringe the Gas Safety (Installation and Use) Regulations

Gas Safety (Installation and Use) Regulations:1984

It is the law that all gas appliances are installed by competent persons, (e.g. CORGI, identified by ) in accordance with the above regulations. Failure to install appliances correctly could lead to prosecution.

It is in your own interest, and that of safety, to ensure that the law is complied with.

The installation of the boiler MUST also be in accordance with I.E.E. Regulations, the by-laws of the Local Water Undertaking and relevant recommendations of the following British Standards:-

Codes of Practice:

- CP.331:3** Low pressure installation pipes.
- BS.5376:2** Boilers of rated input not exceeding 60 kW.
- BS.5449:1** Forced circulation hot water systems (smallbore & microbore domestic central heating systems).
- BS.5871** Installation of gas fires, convector and fire/back boilers (2nd Family gases).
- BS.5546** Installation of gas hot water supplied for domestic purposes (2nd Family gases).
- BS.5440:1** Flues (for gas appliances of rated input not exceeding 60 kW).
- BS.5440:2** Air Supply (for gas appliances of rated input not exceeding 60 kW).

Manufacturers notes must NOT be taken, in any way, as over-riding statutory obligations.

LOCATION OF BOILER

- The appliance is designed for installation in a standard builders recess, or opening, which should be to the dimensions shown in Frame 1 of the Installation section.
- The floor of the recess MUST be flat and level, and made of insulating, non-combustible material.
- A flat, vertical area MUST be available around the fireplace opening for mounting the various fires- refer Frame 1 of the Installation Section.
If the fire is to be fitted above a non-combustible hearth, then the floor of the boiler recess MUST be at the same level as the hearth.
- If however, the floor beneath the fire is to be covered with carpeting, or other type of floor covering, then a MINIMUM under fire clearance MUST be maintained. In order to comply with this requirement, the floor of the boiler recess MUST be raised to give the necessary clearance above the normal floor level.
- In the majority of cases it will be necessary to remove the tiled surround to wall mount the fire.

FLUE

- For guidance on flues refer to BS.5440:Pt. 1.
- This appliance is NOT suitable for precast flues.
- Where a standard brick chimney is used, it MUST be swept clean and inspected, and MUST be lined with a 125 mm (5 in) diameter, acid resistant, flue liner, preferably a type approved by British Gas.
- All obstructions, e.g. register plates, restrictors, dampers etc, MUST be removed.
- The liner MUST be fitted and sealed to the boiler flue outlet socket and a flue terminal of a type approved by British Gas, MUST be fitted, waterproofed and sealed to the liner.
- The annular space between the liner and the chimney MUST be sealed at the TOP and BOTTOM.
- If a new chimney is used, which is constructed of, or lined with, a non-porous acid resistant material, a flue liner will NOT be necessary. However a short length of flue liner should be connected from the boiler flue outlet to the flue in the chimney, using an adapter where necessary.
- In installations where there is no chimney breast or opening in which the boiler can be fitted, and a false chimney breast has been built around the boiler, or where false extensions have been built at the side, or sides, of a chimney breast, to envelope pipes, cables etc., appropriate sealing of the boiler compartment MUST be carried out to prevent combustion products spilling into the false spaces. The sealing will usually mean a horizontal sealing plate fitted just above the level of the boiler draught diverter to prevent products from entering the false space above, & the sealing of any gaps left by pipes, cables etc., passing through the walls of the compartment.

GAS SUPPLY

A gas meter is connected to the service pipe by the Local Gas Region, or a Local Gas Region Contractor. An existing meter should be checked, preferably by the Gas Region, to ensure that the meter is adequate to deal with the rate of gas supply required.

Installation pipes should be fitted in accordance with CP.331, Pt.3.

Pipework from the meter to the appliance MUST be of adequate size. DO NOT use pipes of a smaller size than the appliance inlet gas connection.

The complete installation MUST be tested for soundness as described in the above Code.

Any part of the gas supply pipe, running within the chimney recess, should be suitably sleeved or protected (e.g. coated, or wrapped with P.V.C. tape).

A three-way gas cock is fitted on the inlet to the appliance, to isolate the appliance for servicing.

A gas pressure of 20 mbar (8 in. w.g.) must be available at the appliance inlet.

AIR SUPPLY

A purpose provided ventilation opening, communicating with the outside air, is required.

The minimum effective area of the permanent air vent(s) required is as follows:-

Cavalcade 340; 67 cm² (10 in²)

Cavalcade 350; 86 cm² (13 in²)

The vent(s) MUST open either directly into the room in which the appliance is installed, or into an adjoining room or space, that is provided with the same size opening communicating with the outside air.

The air grilles MUST NOT have provision for closing or adjustment, and should be sited to avoid risk of accidental damage or blockage.

If other methods of ventilation are envisaged, the Local Gas Region should be consulted before proceeding.

Note: The use of an extractor fan, in the room in which the appliance is installed, or in an adjoining room, may cause the spillage of combustion products from the diverter relief outlets.

Where such installations occur, a spillage test, with the FAN RUNNING, as detailed in BS.5440:1, MUST be carried out.

If any spillage is detected, corrective action MUST be taken. If in any doubt, consult the Local Gas Region.

WATER CIRCULATION SYSTEM

The appliance is suitable for the following indirect, open vented systems:-

1. Combined gravity domestic hot water and pumped central heating.
2. Combined pumped domestic hot water and pumped central heating.
3. Pumped central heating only.
4. Gravity hot water only, up to a maximum domestic hot

water cylinder storage capacity of 180 litres (40 gallons).

The appliance MUST NOT be used for direct hot water supply, for sealed systems, or gravity heating systems.

The boiler MUST be vented. If venting cannot be done via a flow connection, a separate vent MUST be fitted by the installer.

Draining taps MUST be located in accessible positions which permit the draining of the whole system, including the boiler and hot water storage vessel.

Draining taps should be at least 1/2 in. nominal size and be in accordance with BS.2879.

The use of a cylinder thermostat is recommended.

This will prevent excessive domestic hot water temperatures and thus reduce gas consumption.

A distributor tube is pre-fitted within the Heat Exchanger Assembly and cannot be removed.

THE THERMOSTAT POCKET SUPPLIED IN THE HARDWARE PACK MUST BE FITTED AT THE SAME SIDE OF THE BOILER AS THE PUMPED FLOW CONNECTION.

Gravity hot water piping and fittings MUST be at least 28 mm (1 in) in diameter.

Return connection are 3/4 BSPT

Flow connection are 1 BSPT

BOILER CONNECTIONS

1. Combined gravity domestic hot water & pumped central heating

- (a) Flow connections to both services may be made to the same side or opposite sides of the boiler.
- (b) Return connections from both services MUST be connected to a common return using the injector tee provided. The common return may be connected to either side of the boiler.

2. Fully pumped systems

- (a) A common flow connection may be made to either side of the boiler.
- (b) A common return connection may be made to either side of the boiler.

NOTE: THE INJECTOR TEE IS NOT REQUIRED FOR FULLY PUMPED SYSTEMS.

3. Systems providing one service only i.e. domestic hot water or central heating

In either case, flow and return connections to the boiler may be at the same side or opposite sides.

ELECTRICAL SUPPLY

External wiring MUST be in accordance with the I.E.E. Regulations and any Local Regulations which apply.

The boiler is supplied for 220/240 volts, 50 Hz, A.C., Single Phase.

Fuse rating is 3 amp.

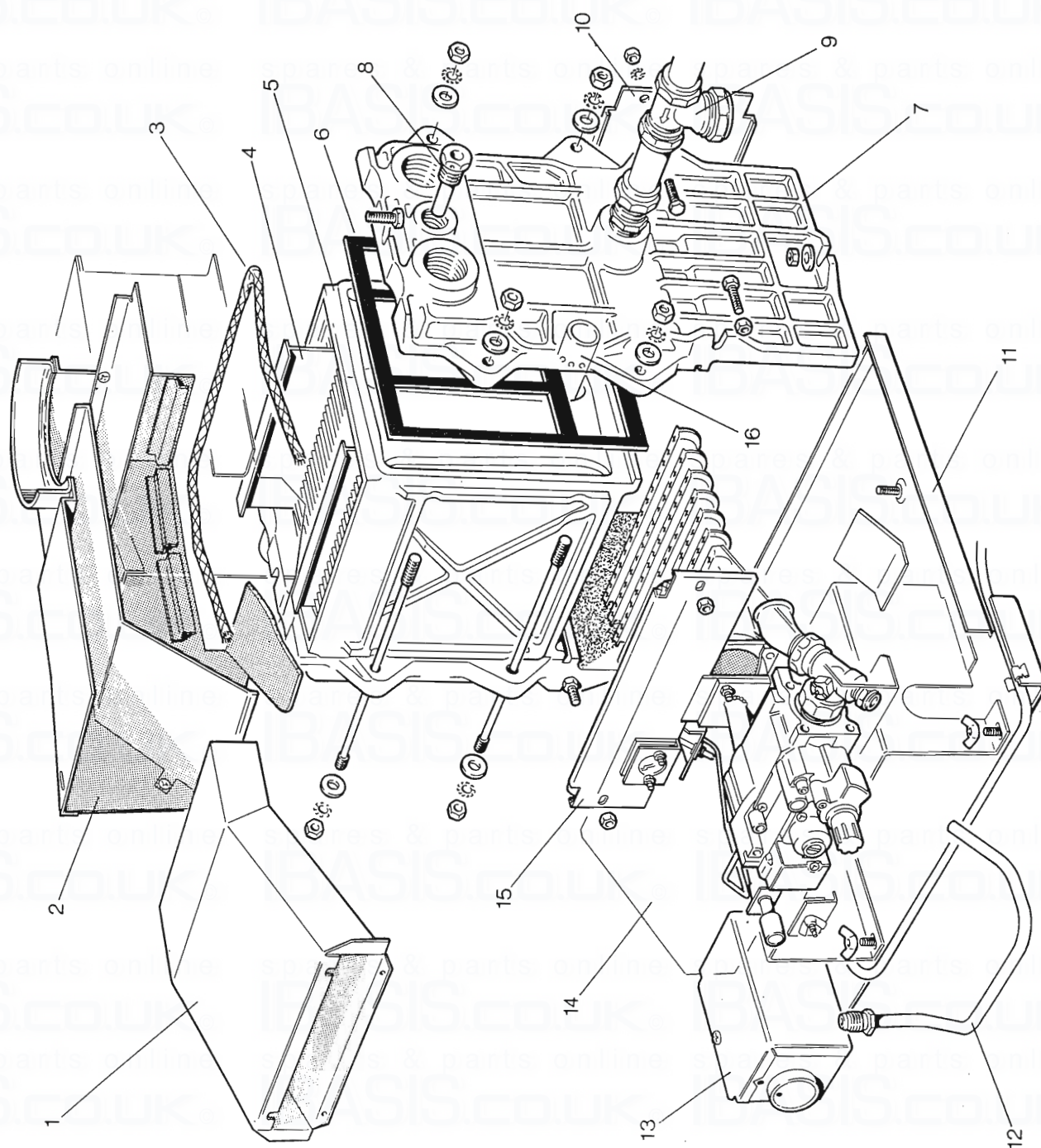
For wiring instructions -

Refer Frames 9 & 10 in the Installation Section.

BOILER ASSEMBLY - Exploded View

LEGEND

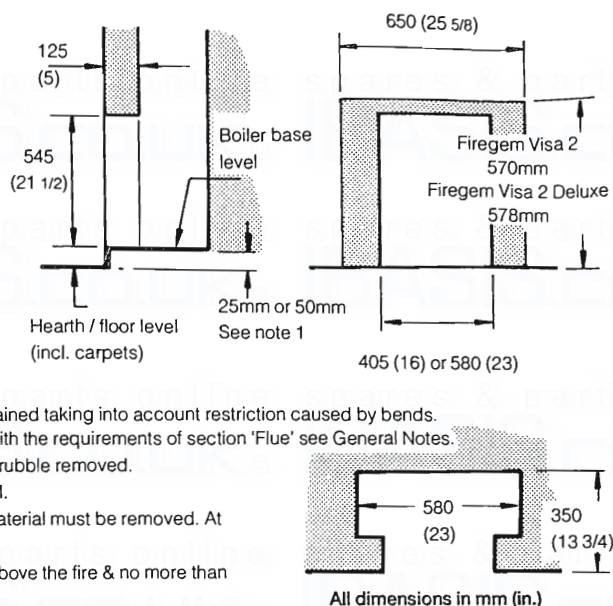
1. Fire flue duct
2. Draught diverter
3. Sealing rope; Fibre-glass
4. Flue baffle; 2- off
5. Heat exchanger
6. End plate gasket; 2- off
7. Heat exchanger end plate; 2- off
8. Thermostat pocket
9. Injector tee
10. Back plate
11. Boiler base plate
12. Gas fire inlet pipe
13. Control box
14. Down draught deflector
15. Burner & Controls assembly
16. Distributer tube



1 INSTALLATION REQUIREMENTS

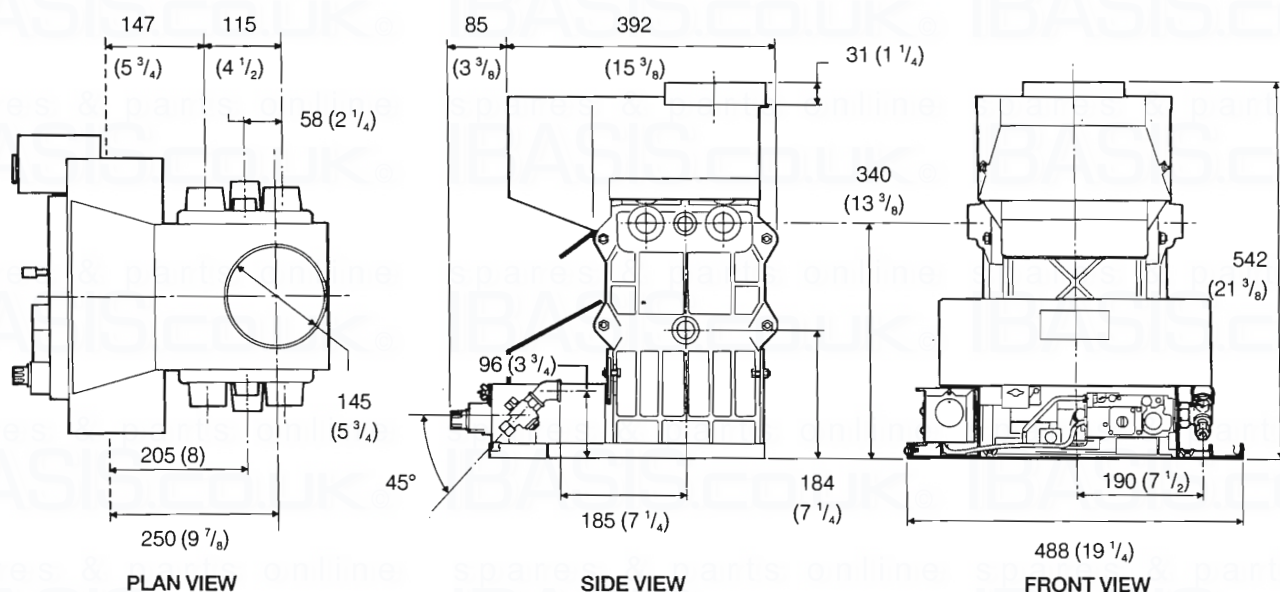
- Where the fire is to be installed above a combustible material, the bottom of the fire MUST be at least 150 mm (6 in.) from this material.
Where the fire is to be installed above a hearth of incombustible material, the bottom of the fire MUST be at least 130 mm (5 in.) from the hearth.
To obtain these clearances the distance beneath the boiler base plate and floor level (including carpets) must be 25 mm for incombustible material or 50 mm for combustible material. If necessary raise the floor of the boiler recess to achieve this.
- The MINIMUM height of the fire place opening must be 545mm (21 1/2 in) when measured from the boiler base level to the recess opening.. The MAXIMUM height of the fireplace opening must be 570mm (22 1/2 in) when measured from the boiler base level of the recess.
- Surrounds up to 50mm (2 in) in thickness may be used with the boiler template in line with the front of the surround.
- Side piers may be fitted with a flat surround, & with MINIMUM dimensions from the centre line of the opening.
FIREGEM VISA 2 : 432 (17 in) FIREGEM VISA 2 DELUXE : 447 (17 5/8)
- A MINIMUM vertical flue height of 3m from the recess floor level MUST be maintained taking into account restriction caused by bends.
- A 125 mm (5 in) diameter flue liner MUST be used or the chimney must comply with the requirements of section 'Flue' see General Notes.
- A previously used chimney must be swept, inspected – all restrictions, debris & rubble removed.
- The annular space between chimney & liner MUST be sealed at TOP & BOTTOM.
- The fire is not suitable for fitting on a combustibled wall. The combustible wall material must be removed. At the same time minimum fire place opening dimensions must be maintained.
- A combustible shelf may be fitted above the fire. It must be at least 230mm (9) above the fire & no more than 150 mm (6) in depth.

DETAIL OF FIRE PLACE OPENING



2 BOILER DIMENSIONS

All dimensions in mm (in.)



3 UNPACKING

Complete Boiler & Base

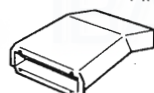
The boiler is supplied fully assembled and mounted on a wooden base- together with all the components necessary for fitting the fire. A cardboard template is supplied in the boiler pack, and a hardware bag inserted in the fire spigot.

Top Panel

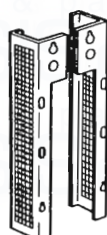


Fire Support Channel

Fire Flue Duct



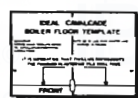
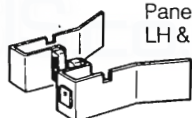
Side Grilles; 2-off, LH & RH



Concealment Grille



Concealment Panel- side; LH & RH



Floor Template



Gas Fire Pipe

Note:- Under no circumstances lift the boiler by the gas manifold.

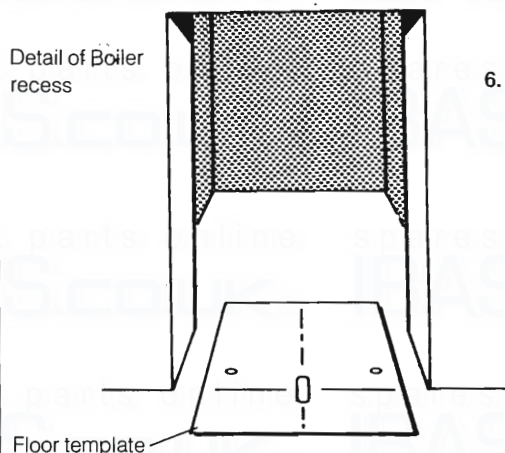
HARDWARE PACK CONTENTS

M5 Nuts :	2 off
M5 Washers (small) :	2 off
M5 Washers (large)	2 off
M5 Wingnuts :	2 off
M4 Washers :	2 off
M4 Spring washers :	2 off
1 in. BSPt Plugs :	3 off
3/4 in. BSPt Plug :	1 off
1/4 in. BSPt Plug :	1 off
3/4 in. x 22 mm Adapter :	1 off
Injector tee :	1 off
22 mm Tube :	1 off
Thermostat pocket :	1 off
Split pin :	1 off
No. 6 x 3/4 in. Self tappers :	2 off
No. 10 x 1 1/2 in. Screws :	4 off
Wall plugs	4 off
Aluminium buckle clips :	3 off
Arrow label :	1 off

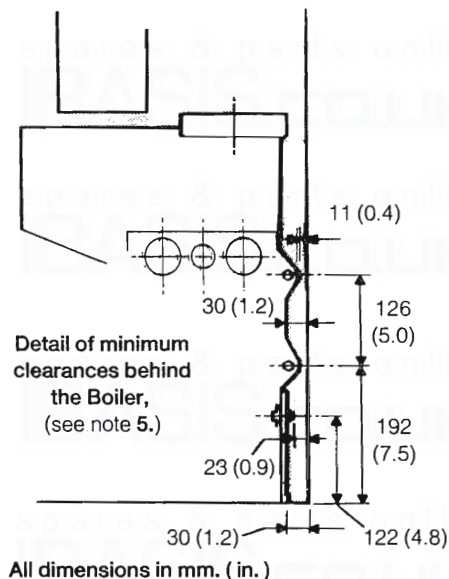
4 HEARTH MOUNTING

1. Mark a centre line in recess.
2. Apply template as shown.
3. Mark off the positions of the two fixing holes.
4. Drill and plug marked holes, using a 6.5 mm ($\frac{1}{4}$ in.) drill.
5. The gas supply must be to the right hand side, if necessary bring the pipe BEHIND the boiler to make the gas connection.
6. When installing the appliance in minimum width opening, make allowances for the final gas connection to be made at the 3 way cock or in a wider part of the recess.

Detail of Boiler recess

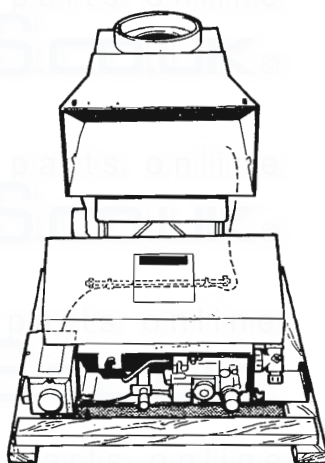


The finished face line on the template MUST be in line with the finished wall face.



5 BOILER PREPARATION

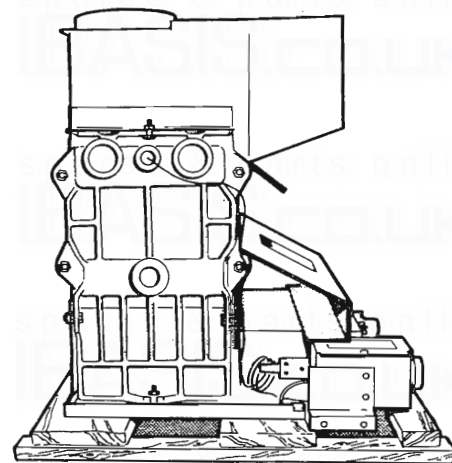
View of Boiler showing a right hand thermostat capillary route (dotted)



1. Remove wooden pallet (3 pozi screws).
2. Undo the 2 wing nuts at the front of the base tray.
3. Remove the deflector assembly by lifting up and outwards.
4. Choose the boiler tappings suitable for the system. Refer 'Water Circulation System'.
5. Plug off return tapping not required using an approved sealing compound.
6. Fit the thermostat pocket into the top centre $\frac{1}{2}$ in. tapping at the same side of the boiler as the pumped flow connection.
7. Fit the thermostat phial into the pocket. Secure with split pin provided and route capillary as shown with the buckle clips provided.
8. Plug off any unused tappings, using an approved sealing compound

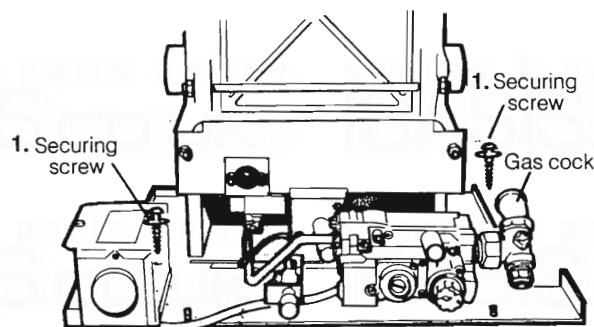
Wooden pallet

View of Boiler showing a left hand thermostat capillary route



6 SERVICE CONNECTIONS

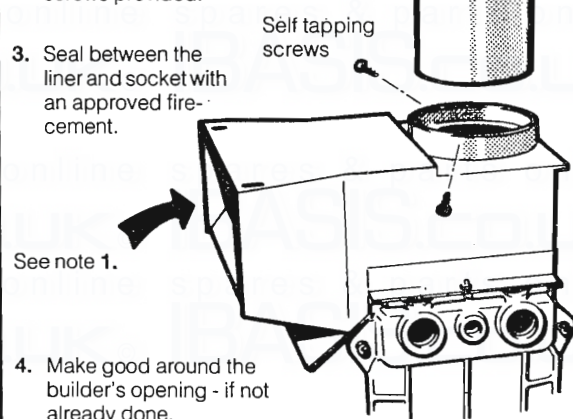
1. Assemble the $1\frac{1}{2}$ x 10 screws and large M5 washers (provided in the Hardware Pack), and secure the boiler in the fire opening.



2. Fit the gas supply pipe to the elbow on the 3 way gas cock.
3. Make up the water connections. THE INJECTOR TEE MUST BE FITTED IF A COMBINED GRAVITY AND PUMPED RETURN IS USED.
4. Gas and water pipes within the recess should be sleeved or protected, e.g. coated or wrapped with PVC tape.

7 FLUE CONNECTION

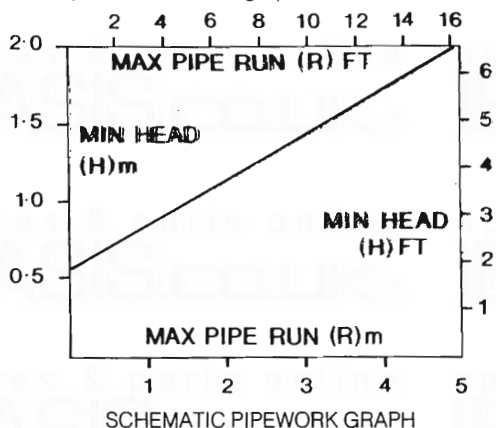
1. Ensure that the boiler flue baffles are correctly slotted down each flue-way, refer Frame 5 (Servicing).
2. Secure the flue liner to the socket with the self tapping screws provided.



8 SYSTEM REQUIREMENTS

The Schematic Pipework Graph has been calculated on the assumption that not more than seven elbows are used in the gravity loop- including entry to the boiler.

For every elbow in excess of seven then 0.8 m. (2.5 ft.) must be added to the measurement, R, in order to obtain the maximum head requirement from the graph.

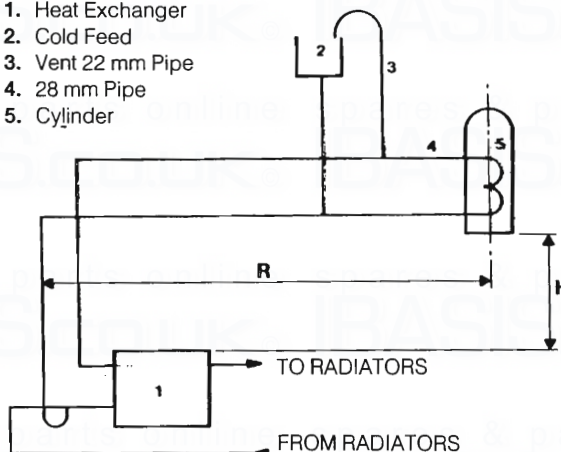


SCHEMATIC PIPEWORK GRAPH

COMBINED GRAVITY HOT WATER & PUMPED CENTRAL HEATING SHOWN

LEGEND:

1. Heat Exchanger
2. Cold Feed
3. Vent 22 mm Pipe
4. 28 mm Pipe
5. Cylinder



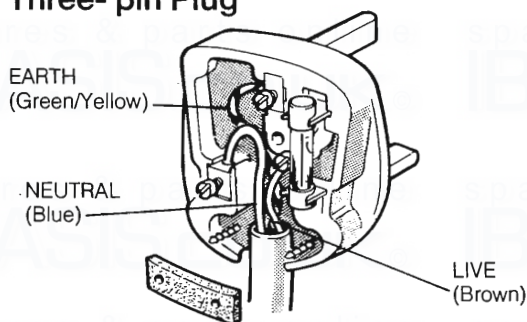
9 ELECTRICAL CONNECTIONS

WARNING: The appliance MUST be efficiently earthed. A mains supply of 220/ 240 volt, ~ 50 Hz., Single Phase, is required.

All external controls and external wiring MUST be suitable for mains voltage.

Wiring should be in three-core, PVC insulated cable, NOT LESS than 0.75 mm² (24 c 0.2 mm.) to B.S. 6500 Table 16.

Three- pin Plug



Fuse at 3 R

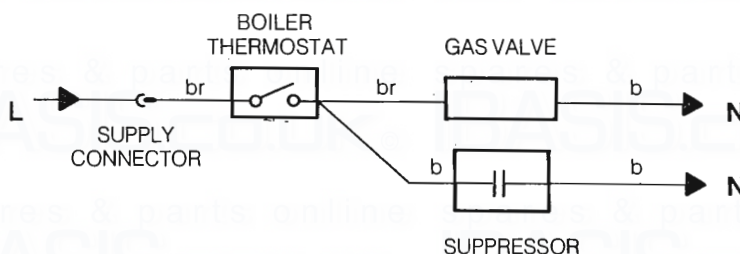
Wiring external to the boiler MUST be in accordance with the current I.E.E. Wiring Regulations and Local Regulations which apply.

The method of connection to the electricity supply must facilitate complete isolation and should preferably be made via a fused three- pin plug and an unswitched, shuttered socket outlet-both complying with the requirements of B.S. 1363. Alternatively, connection may be made via a fused double-pole isolator having a contact separation of at least 3 mm. in all poles and supplying the Boiler and System Controls only.

Flow Wiring Diagram

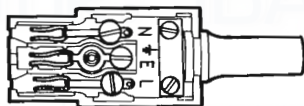
LEGEND:

- br - brown
b - blue



10 FITTING THE POWER SUPPLY CORD

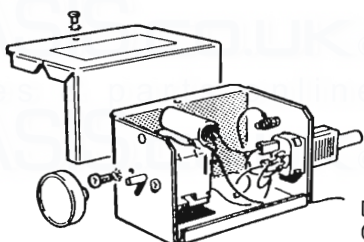
1. Connect in the mains lead to the plug provided- as shown.



2. If the mains lead comes from the right then route the cable away from hot surfaces - as shown by a dotted line in Frame 5 and using the buckle clips provided.

NOTE:

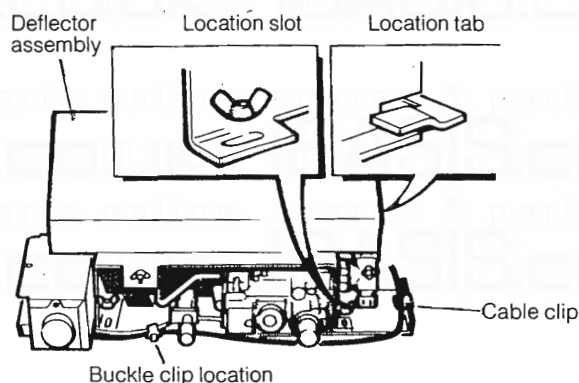
Flow and Pictorial diagrams are shown in Frames 9 and 14.



Detail of Boiler Control Box

11 REPLACING THE DEFLECTOR

1. Slot the downdraught deflector assembly over the gas valve and locate the slots onto the studs in the base tray.
2. Slide the assembly forward then push fully back to locate under the base tray tabs.
3. Secure with the wing nuts previously removed.



12 WATER & GAS SOUNDNESS

At this stage the **WATER CIRCULATION SYSTEM** should be checked.

The whole of the system should be thoroughly flushed out with cold water **WITHOUT** the pump in position.

Ensure that all valves are open.

With the pump fitted, the system should be filled and airlocks cleared.

Check for water soundness.

GAS SOUNDNESS up to the 3 way gas cock should be checked.

Refer at this stage to Frame 28 'Initial Lighting' of the boiler.

With the system **HOT** examine all water connections for soundness.

Then turn **OFF** the gas, electricity and water supplies to the appliance, and drain down whilst the system is still hot.

In order to complete the flushing process, refill and vent the system, and again check for water soundness.

13 EXTERNAL WIRING

EXTERNAL CONTROLS; External wiring **MUST** be in accordance with the current I.E.E Wiring Regulations.

The wiring diagrams illustrated in Frames 16 - 20 cover the systems most likely to be used with this appliance.

Difficulty in wiring up should **NOT** arise, providing the following directions are observed:

1. Controls that switch the system **ON** and **OFF**, e.g. a time switch, **MUST** be wired in series in the live mains lead to the boiler.
2. Controls that over-ride an **ON/OFF** control, e.g. a frost thermostat, **MUST** be wired into the mains lead in parallel with the control (s) to be over-riden - refer Frame 15.
3. Controls that switch the circulating pump only **ON** and **OFF**, e.g. a room thermostat, **MUST** be wired in series with the pump, in the live pump lead.
4. If a proprietary system is used, follow the instructions supplied by the Manufacturer.

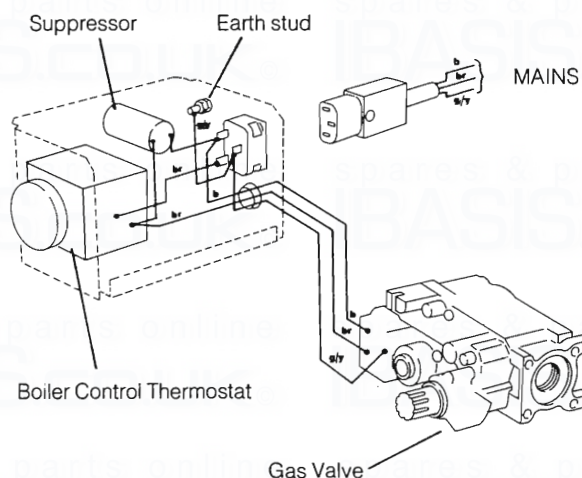
NOTE:

1. Connection between the frost thermostat and time controls should be made without disturbing other wiring.
2. The frost thermostat should be sited in a cool place in the house, but where it can sense heat from the system.
3. In cold weather, the boiler should be turned **OFF** at the time over-ride switch **ONLY**.
All other switches, including the mains supply and the boiler thermostat, **MUST** be left in the running position.

14 PICTORIAL WIRING

LEGEND

b blue g/y green/yellow
br brown

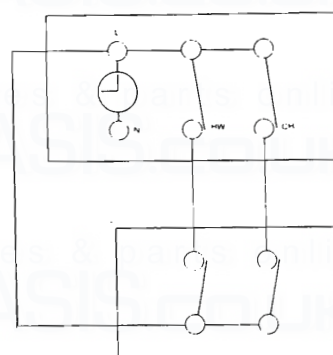


15 FROST PROTECTION

Notes:

1. The frost thermostat should be wired to the programmer as shown, without disturbing the appliance internal wiring.
2. The frost thermostat should be sited in a cool place in the house, but where it can sense heat from the system.
3. The occupier should be advised that, during frosty weather, the system should be turned **OFF** at the programmer slide switches **ONLY** - all other controls should be left in the normal running position.

TYPICAL PROGRAMMER



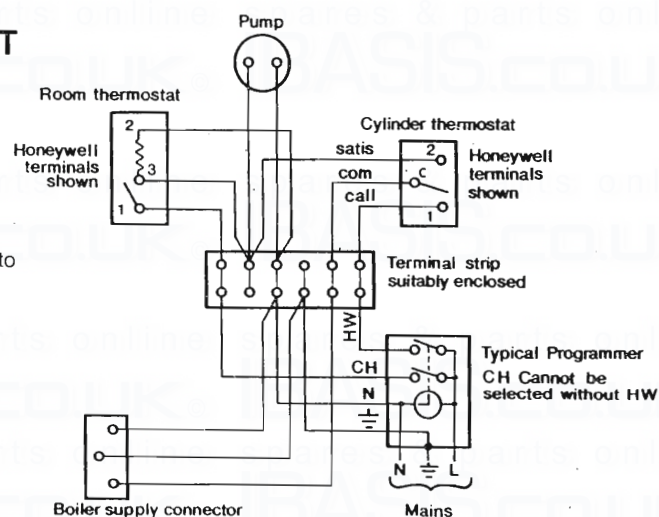
DOUBLE POLE FROST THERMOSTAT

16 GRAVITY HOT WATER WITH CYLINDER & ROOM THERMOSTAT

(Formerly Honeywell 'A' plan)

NOTES:

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring.
2. If the cylinder thermostat is not required, then delete all wiring to it, but link the programmer HW terminal direct to boiler L.
3. Numbering of thermostats is specific to the particular Manufacturer mentioned.



17 GRAVITY HOT WATER WITH MOTORISED VALVES

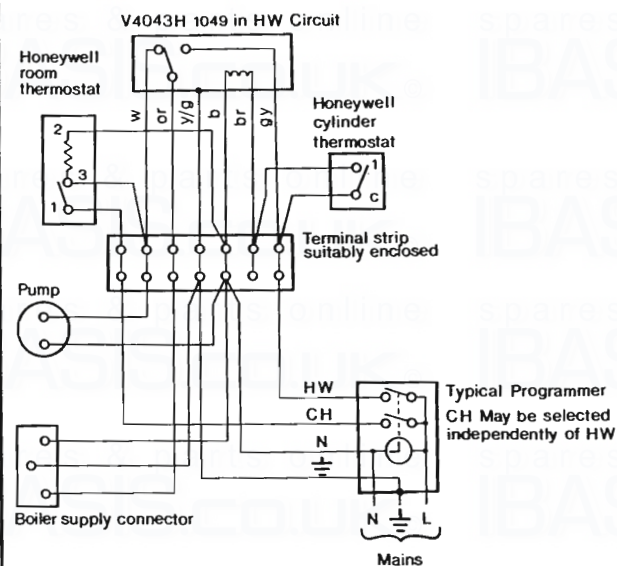
Honeywell 'C' plan shown; gravity HW, pumped CH

NOTES:

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring
2. Numbering of terminals on thermostats apply only to the Manufacturer mentioned.
3. This is a fully controlled system - set the boiler thermostat to maximum.

LEGEND

w - white y/g - yellow/green br - brown
or - orange b - blue gy - grey



18 MID POSITION VALVE

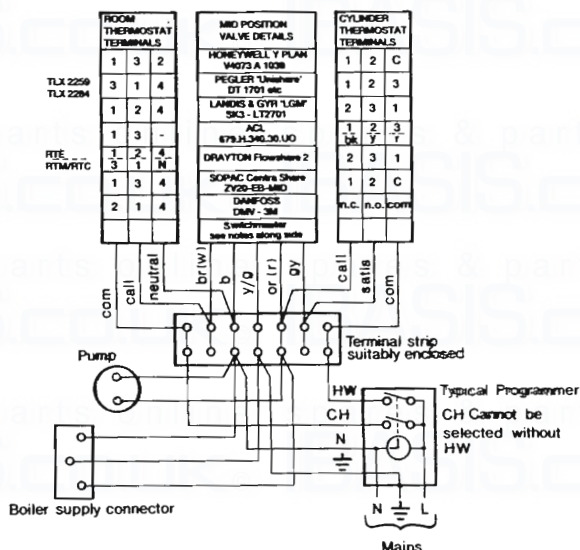
Pumped only

NOTES:

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring
2. Numbering of terminals on thermostats apply only to the Manufacturer mentioned.
3. This is a fully controlled system - set the boiler thermostat to maximum.
4. Switchmaster 'Midi' is similar in operation, but the wiring differs slightly; see Manufacturer's literature.

LEGEND

b - blue gy - grey r - red
bk - black y/g - yellow/green y - yellow
br - brown or - orange w - white
g - green



19 TWO SPRING CLOSED VALVES

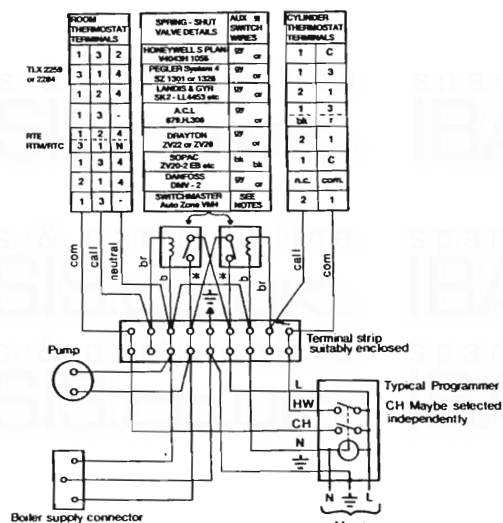
Pumped only

NOTES:

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring
2. Numbering of terminals on thermostats apply only to the Manufacturer mentioned.
3. This is a fully controlled system - set the boiler thermostat to maximum.
4. Switchmaster VM4 valve - colours are grey and orange. Connect GREY (not ORANGE) to the incoming live, otherwise valve will not close properly.

LEGEND

b - blue gy - grey bk - black
br - brown or - orange w - white
y/g - yellow/green r - red



20 ONE VALVE IN HEATING CIRCUIT

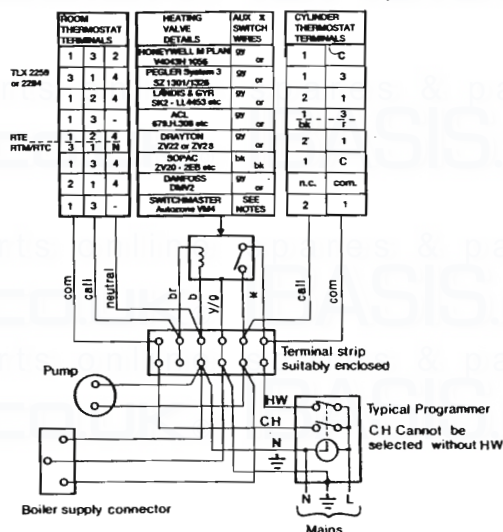
Pumped only

NOTES:

1. Some earth wires are omitted for clarity. Ensure proper earth continuity when wiring
2. Numbering of terminals on thermostats apply only to the Manufacturer mentioned.
3. This is a fully controlled system - set the boiler thermostat to maximum.
4. Switchmaster VM4 valve - colours are grey and orange. Connect GREY (not ORANGE) to the incoming live, otherwise valve will not close properly.

LEGEND

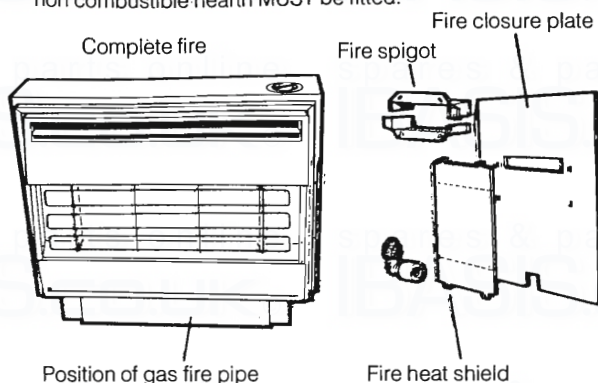
b - blue gy - grey bk - black
br - brown r - red w - white
y/g - yellow/green



21 UNPACKING THE FIRE

NOTE:

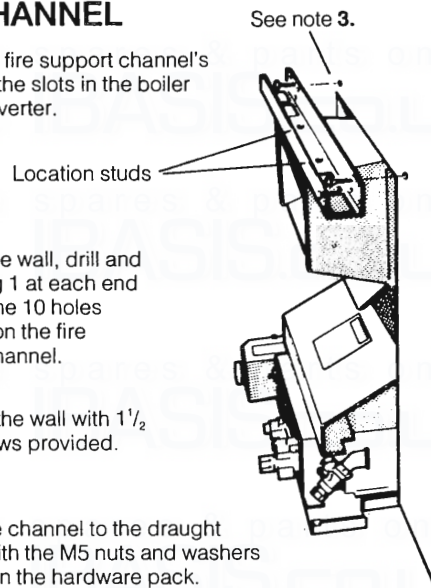
- Before fitting the fire the boiler must have been installed such that there is a minimum of 150 mm (6 in) beneath the fire if it is to be fitted above a carpet or combustible floor. If less, then a non combustible hearth **MUST** be fitted.



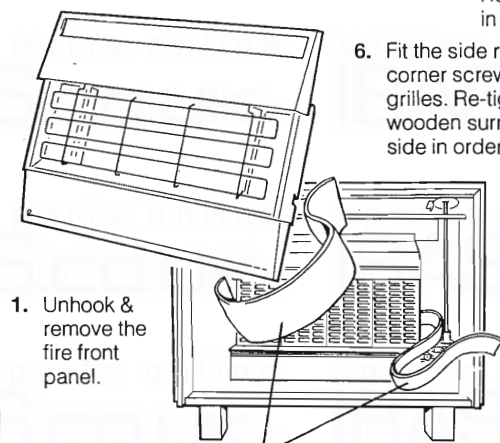
- Discard the fire closure plate, the fire heat shield and the fire spigot.

22 FITTING THE FIRE SUPPORT CHANNEL

- Locate the fire support channel's studs into the slots in the boiler draught diverter. See note 3.
- Mark off the wall, drill and plug-using 1 at each end of any of the 10 holes provided on the fire support channel.
- Fasten to the wall with 1 1/2 x 10 screws provided.
- Fasten the channel to the draught diverter with the M5 nuts and washers provided in the hardware pack.



23 FIRE PREPARATION



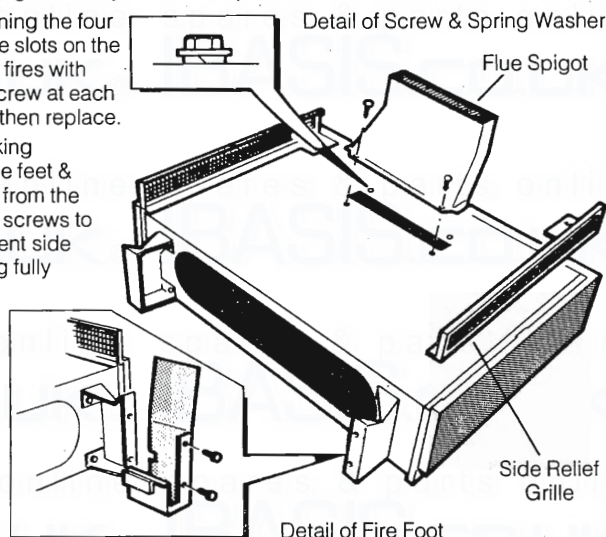
- Remove the cardboard packing retaining the radiants. Remove the radiants.
- Remove the paper packing in the radiant support plate.
- Carefully lay the fire on its front face.

- Remove the top two screws from around the fire flue opening, fit the spring & then the plain washers to these screws; replace & ensure they are screwed fully home. Remove the bottom two screws & fit flue spigot over the top screws ensuring the slots in the top edge of the spigot are fully located. Replace the bottom screws.

- Fit the side relief grilles by slackening the four corner screws & using the keyhole slots on the grilles. Re-tighten the screws. On fires with wooden surrounds remove one screw at each side in order to locate the grilles- then replace.

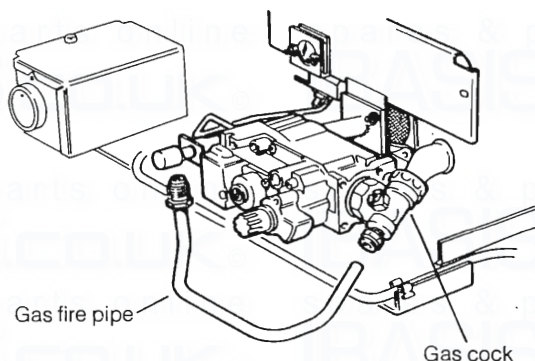
- Remove the jacking screws on the fire feet & remove the nuts from the screws. Use the screws to fit the concealment side panels, screwing fully home.

- Remove the elbow provided on the gas fire pipe & discard.



24 FITTING THE GAS FIRE PIPE

- Fit the gas fire pipe to the 3-way cock using the nut and olive screwed on to the cock.



Ensure that:

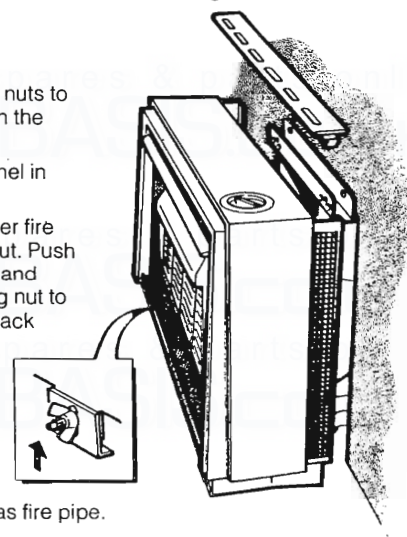
- The pipe is pushed fully into the 3-way cock.
- The pipe is fed under and behind the gas valve lead.

25 FITTING THE FIRE

- Offer the fire up to the boiler, locating the flue duct into the boiler and the studs on the side relief grilles into the slots on the channel.

- Fit the M5 wing nuts to retain the fire on the channel.
- Clip the top panel in place.
- Loosen the lower fire support wing nut. Push up the bracket and tighten the wing nut to retain the fire back panel.

Detail of Lower Fire Support



26 COMMISSIONING & TESTING THE BOILER

(a) Electrical Installation

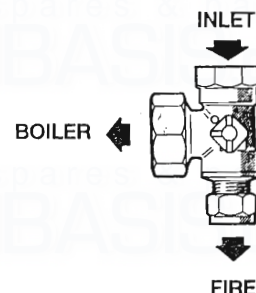
Checks to ensure electrical safety should be carried out by a competent person.

In the event of an electrical fault after the installation of the appliance, preliminary electrical system checks shall be carried out, i.e. earth continuity, polarity and resistance to earth - as described in the British Gas Multimeter book.

(b) Gas Installation

The whole of the gas installation, including the meter, should be inspected and tested for gas soundness, and should be purged in accordance with the recommendations of CP.331, Pt.3. Purging air from the gas installation may be expedited by turning the three-way gas cock so that gas will pass to the boiler and fire - see diagram, check for gas soundness, and purge through the fire.

WARNING: Whilst effecting the required gas soundness test, and purging air from the gas installation, open all windows and doors, extinguish naked lights and **DO NOT SMOKE.**



27 INITIAL LIGHTING OF THE BOILER

The inlet gas cock must have been OFF for at least three minutes before initiating the lighting sequence.

Check that all drain cocks are closed, and that stop valves in the flow and return lines are open.

Undo the screw in the burner pressure test nipple (A) and connect a gas pressure gauge via a flexible tube.

Check that the inlet gas cock is turned ON to the boiler only - see Frame 26 and that the boiler thermostat control knob is at OFF.

Turn the gas control knob (B) CLOCKWISE until resistance is felt and then release it.

Wait for three minutes.

Check that the gas and electricity supplies, and all external controls, are ON.

Push in the gas control knob, press, and release, the piezo unit button (C) repeatedly, until the pilot is seen to light through the sight glass (F).

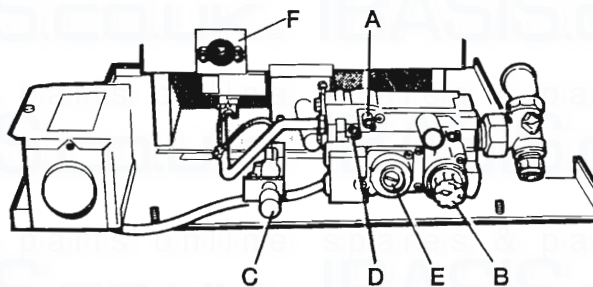
Hold the gas control knob depressed for 15 seconds after the pilot burner has ignited.

Should the pilot light go out at this, or any other stage, turn the gas control knob CLOCKWISE and release it.

Wait for three minutes and then repeat the procedure detailed above, but wait longer than 15 seconds before releasing the gas control knob.

Note: The pilot flame is factory set and no adjustment should be necessary. If it appears small, see Frame 7 'Servicing'.

Turn the boiler thermostat knob to position 6 - the boiler will then light.



Operate the boiler for ten minutes to stabilise the burner temperature.

Test for gas soundness around boiler gas components, using leak detection fluid.

Check the burner setting pressure against the values quoted in Table 2. Use the arrow label provided in the Hardware Pack on the data plate if the boiler is set to minimum or middle rate.

Remove the protective cap and turn the adjusting screw (E) CLOCKWISE to INCREASE the burner setting pressure and ANTI-CLOCKWISE to DECREASE it.

A screwdriver with a 10 mm bit should ALWAYS be used for adjustment to avoid damaging the plastic head on the screw.

Replace the protective cap and turn the thermostat knob to the OFF position. Remove the gas pressure gauge and tube, and retighten the sealing screw in the pressure test nipple.

Turn thermostat knob to position 6.

Test for gas soundness around test nipple.

28 GENERAL CHECKS- Boiler only

After initial lighting of the boiler.

Make the following checks for correct operation:

1. Check that there is no spillage of products of combustion from the boiler draught diverter, by carrying out a spillage test as shown Frame 29.
2. Check the operation of the flame failure device in the gas control.
Turn the gas control knob clockwise until resistance is felt, and then release it.
The flame failure device MUST cut off the gas to the burner within 60 seconds (a click will be heard).
3. Relight and turn the boiler thermostat OFF and ON, and check that the main burner is extinguished and relit in response.
4. The correct operation of external system controls should be proved.
Turn each, in turn, to OFF and ON and check that the main burner or circulating pump, as the case may be, responds.
5. Finally set the controls to the User's requirements.

The temperatures quoted below are approximate and may vary between installations:

Knob Setting	Flow Temperature	
	°C	°F
1	54	130
2	60	140
3	66	150
4	71	160
5	77	170
6	82	180

29 COMMISSIONING, TESTING & INITIAL LIGHTING OF THE FIRE

1. Replace the radiants, TOP first, ensuring that they locate down & behind the upturned edge of the radiant support plate.
2. Test for Correct Burner Pressure
Remove the pressure test point sealing screw and attach a pressure gauge to the test point.
This test point is located on the gas tap, on the right hand side of the appliance.
Turn ON the gas at the 3-way gas cock - see Frame 26
Light the fire by depressing the knob and turning FULLY ANTICLOCKWISE. This lights the fire at full burning rate & on all four radiants.
When the fire is first lit, check that the pressure setting (when cold) is $18.0 \text{ mbar} \pm 1.0$ (7.2 in. w.g.) ± 0.4 . If it is not then note the pressure at the meter to determine if there is a restriction in the supply from the meter, or whether other appliances, served by the same meter, are starving the gas fire.
Check that the flames are uniform and not distorted.
Turn OFF the fire, remove the pressure gauge and replace the pressure test point sealing screw.
Turn on and check for gas soundness.
The correct heat input when HOT, is 5.86 kW (20 000 Btu / h).
The injectors are identified: Cat 16/ 220.
Check the operation of the fire at all tap settings.
3. Check ignition.
Check that the spark ignition functions correctly.
Note: The spark electrode tip should be positioned between 3 mm and 4mm ABOVE the cross lighting ports on the burner top - refer Frame 21 of the Servicing Instructions.

CLEARANCE OF COMBUSTION PRODUCTS

A spillage test must be carried out.

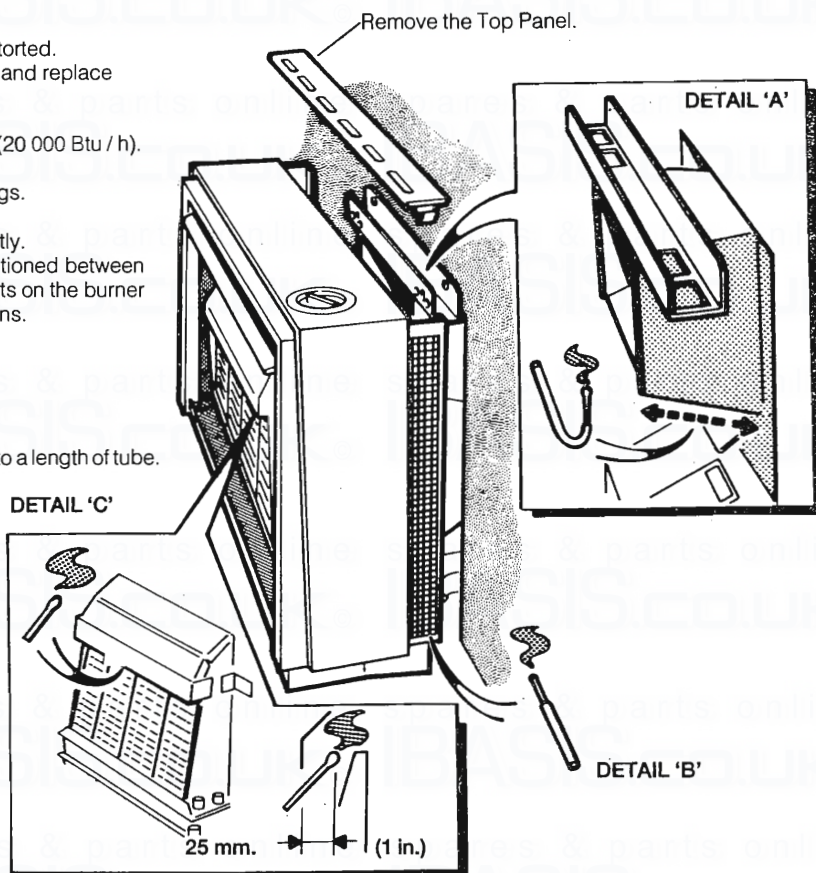
This may be done using a smoke match attached to a length of tube.

When the appliance is built in to minimum side clearances a suitably bent piece of tube with the smoke match attached may be inserted & viewed from the top through the cut outs in the support channel:-
See Detail 'A'

When the appliance is not built in to minimum side clearances a straight piece of tube with the smoke match attached to the end may be inserted & viewed through the side grilles:- **See Detail 'B'**

Run smoke match along bottom edge of boiler draught diverter. After 10 minutes running, smoke from the match MUST be drawn up the flue:- **See Detail 'C'**

4. Fit the concealment grille.
Locate the concealment grille between the two end panels beneath the fire, the grille being retained by magnetic catches.
General Check:
After the fire and boiler have been lit, use the smoke match test for checking clearance of the gas fire products. The match must be inserted at 45° & 25 mm (1 in) under the canopy edge.
After 10 mins running, smoke from the match MUST be drawn up the flue. Smoke issuing at a high velocity should be ignored.
Turn on the back boiler with the fire and re-check clearance
5. Replace the front panel. Remove the two tags from the dress-guard and retain for the User's attention.



30 HANDING OVER

Make sure the user knows that on the fire:-

1. The front panel is readily removable.
2. The tap MUST be PRESSED DOWN before turning ANTI-CLOCKWISE.
3. The tap should be turned ON SLOWLY- the spark igniter acts automatically during operation of the tap.
4. The ignition will NOT operate at the HALF setting and the TAP must be turned to the ON position EVERY TIME to light it.
5. The fire can be lit with a match if necessary.
Apply the lighted match to the BASE of ONE of the CENTRE radiants and then turn the gas tap FULLY ON to 'IGN'.

After completion of installation and commissioning of the system, the Installer should hand over to the Householder by the following actions:

1. Hand the User's Instructions Publication to the Householder and explain his/her responsibilities under the Gas Safety Regulations.
2. Explain, and demonstrate, the lighting and shutting down procedures.
3. The operation of the boiler and the use, and adjustment, of ALL system controls, should be fully explained to the Householder, to ensure the greatest possible fuel economy consistent with household requirements of both heating and hot water consumption.
Advise the User of the precautions necessary to prevent damage to the system, and to the building, in the event of the system remaining inoperative during frost conditions.
4. Explain the function, and the use, of the boiler thermostat, and any external controls that may be fitted to the system.
5. Stress the importance of regular servicing by the Local Gas Region, or by a qualified Heating Engineer.

1 GENERAL NOTES

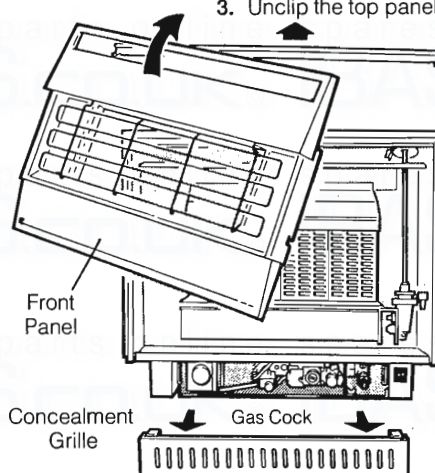
A comprehensive service should be carried out at least once a year.

WARNING: Switch off, and disconnect, the electricity supply and turn off the inlet gas cock, before servicing the appliance.

In order to service the boiler, the fire will first have to be removed.

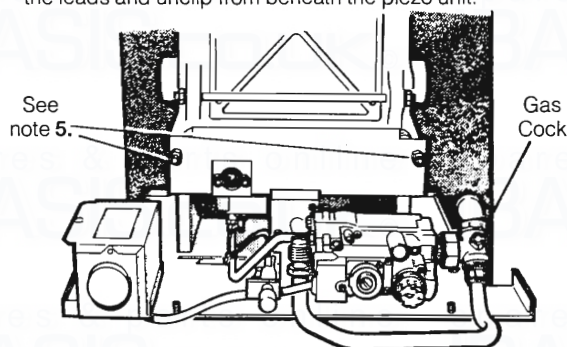
2 FIRE REMOVAL

1. Remove the front panel from the fire.
2. Pull the concealment grille off the magnetic catches.
3. Unclip the top panel.
4. Turn off the mains supply at the 3-way gas cock - see frame 6.
5. Disconnect the gas fire pipe - beneath the fire.
6. Slacken the wing-nut on the bottom retention bracket (Frame 25 Installation)
7. Undo two wing nuts retaining the fire (Frame 25 Installation).
8. Remove fire forwards until the flue duct is clear of the boiler.



3 BURNER ASSEMBLY REMOVAL

1. Remove the downdraught deflector assembly - as previously described (in Frame 5 Installation).
2. Remove the electrical cover from the gas valve, disconnect the leads and unclip from beneath the piezo unit.

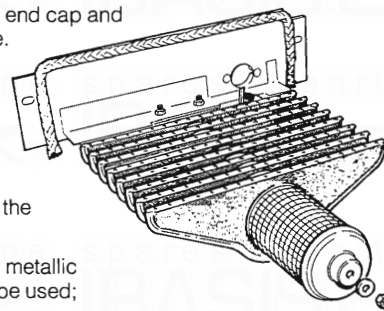


Gas Valve Electrical Cover

3. Disconnect the gas supply union at the 3-way gas cock.
4. Disconnect and remove the gas fire pipe at the nut and olive connection on the 3-way gas cock.
5. Remove the two nuts and withdraw burner assembly.

4 CLEANING BURNER ASSEMBLY

1. Remove the burner end cap and withdraw the gauze. Clean the gauze to remove any deposits of lint, fluff etc., and brush off any deposits that may have fallen on the burner blades.



Note: Brushes with metallic bristles must NOT be used;

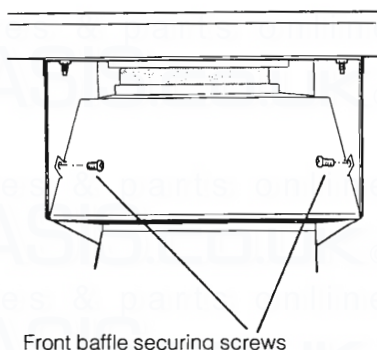
Inspect the pilot burner, thermocouple and ignition electrode; ensure that they are clear and in good condition.

In particular check that:

2. The pilot burner is firmly secured.
3. The ignition electrode and lead are clean, undamaged and secure. Check that the ignition spark gap is 3-4 mm.
4. The thermocouple tip is not burnt or cracked.
5. The thermocouple terminal, at gas valve, is clean & secure.
6. The sight glass is clean and undamaged.
7. Replace the gauze and re-secure the burner and cap.
8. Remove the main burner injector and check for blockage or damage. Clean or renew as necessary.

5 CLEANING THE FLUEWAYS

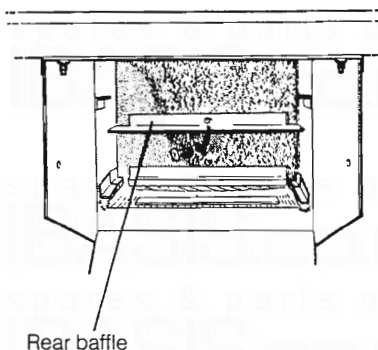
1. Remove the two screws holding the front baffle and withdraw the baffle.



Front baffle securing screws

View into Collector Hood

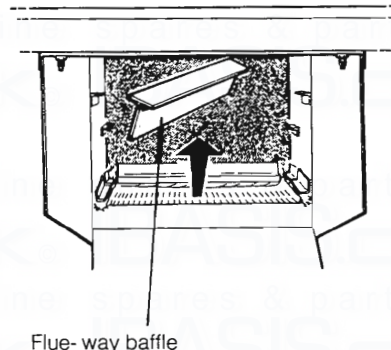
2. Remove the single screw holding the rear baffle and withdraw that baffle.



Rear baffle

View into Collector Hood

3. Remove the two flue-way baffles.



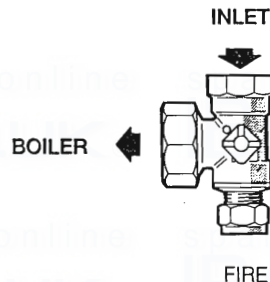
Flue-way baffle

4. Remove all loose deposits from the flue-way fins:- brushing from above and below.

6 RE-ASSEMBLY

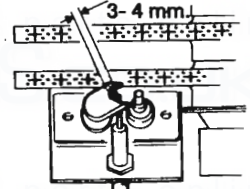
Re-assemble the boiler in the following way, in reverse order to that shown in Frames 3, 4 and 5.

1. Refit the two flue way baffles.
2. Refit the front and rear baffle in the diverter.
3. Refit the burner assembly.
4. Reconnect the gas and electrical supplies to the gas valve.
5. Turn on the 3 way gas cock to the BOILER ONLY - see below



7 PILOT BURNER SETTING

1. Light the boiler and check that the pilot flame envelopes the tip of the thermocouple, & is approximately 25 mm (1 in) long. The pilot adjuster screw is factory set to maximum and no further adjustment should be necessary. However, if the pilot flame appears small, check the adjustment of the pilot pressure adjuster screw. Refer to 'Initial Lighting' Frame 27, 'Installation'
 - (a) Turn the gas control knob (B) fully CLOCKWISE to the OFF (●) position.
 - (b) Turn the pilot pressure adjuster screw (D) CLOCKWISE until fully CLOSED.
 - (c) Turn the pilot pressure adjuster screw ANTI-CLOCKWISE four full turns to give max. setting.
 - (d) Relight the pilot in accordance with Frame 27.
2. After each occasion of servicing, reference should be made to Table 2 which quotes details of the rated input with the related burner setting pressure and the heat input. Any re-adjustment should be made by using the pressure adjustment screw (E). Refer to Frame 27, 'Installation'



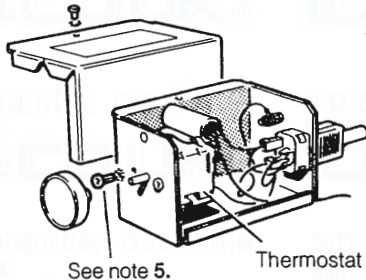
REPLACEMENT OF PARTS:- Boiler

The fire must be removed in all cases (Frame 2) & the electricity & gas supplies must be isolated

8 BOILER THERMOSTAT REPLACEMENT

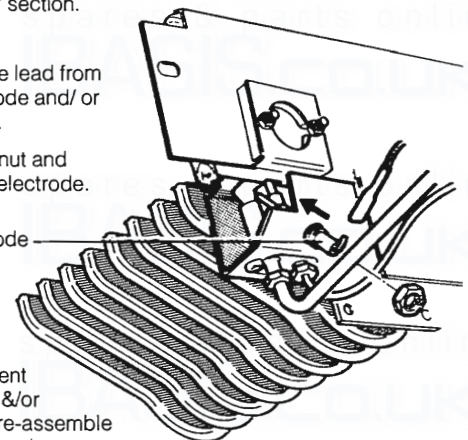
Remove the Down-draught deflector as described in Frame 5 of the 'Installation' section

1. Remove the split pin from the thermostat pocket and withdraw the phial.
2. Unclip the capillary from the Heat Exchanger
3. Pull off the thermostat knob.
4. Remove the control box lid.
5. Undo the two screws retaining the thermostat body.
6. Pull off the two electrical connections and remove the thermostat.
7. Fit the new thermostat and re-assemble in reverse order.



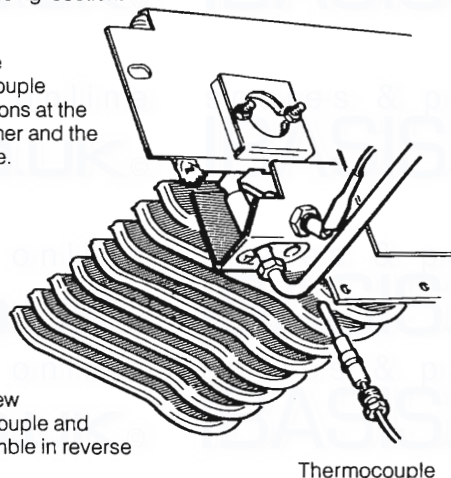
9 IGNITION ELECTRODE & LEAD REPLACEMENT

1. Remove the burner assembly - as detailed in Frame 3 of the 'Servicing' section.
2. Unplug the lead from the electrode and/or piezo unit.
3. Undo the nut and withdraw electrode.
4. Fit the replacement electrode &/or lead and re-assemble in reverse order.
5. Check that the spark gap is as given in Frame 7 of the 'Servicing' section



10 THERMOCOUPLE REPLACEMENT

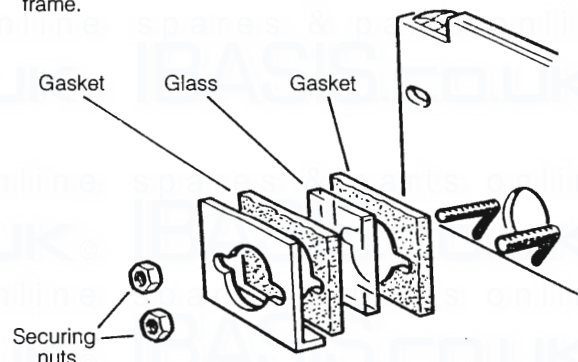
1. Remove the burner assembly - as described in Frame 3 of the 'Servicing' section.
2. Undo the thermocouple connections at the pilot burner and the gas valve.



3. Fit the new thermocouple and re-assemble in reverse order.

11 SIGHTGLASS REPLACEMENT

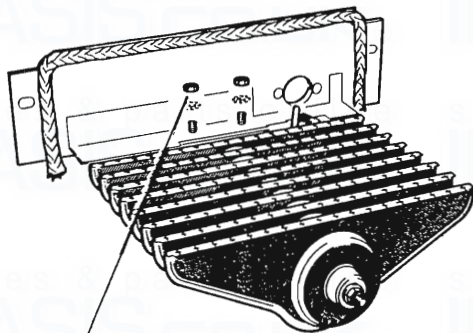
1. Undo the two nuts and washers holding the sight-glass assembly.
2. When fitting the replacement assembly, MAKE CERTAIN the parts are in correct order, i.e. gasket, glass, gasket and frame.



3. Retighten the two nuts to ensure an airtight seal, but DO NOT OVERTIGHTEN.

12 PILOT BURNER REPLACEMENT

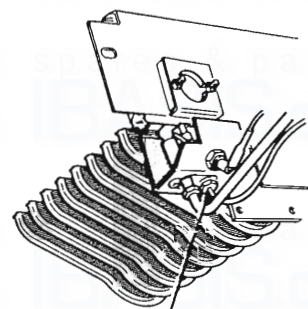
1. Remove the burner assembly as detailed in Frame 3 of the Routine Servicing section.



See note 2.

2. Remove the two nuts - securing the front plate to the burner. Remove the plate and retain the two washers.
3. On the pilot shield & bracket;-
 - (a) Undo the pilot pipe connection.
 - (b) Pull off the igniter lead from the electrode.
 - (c) Undo the electrode nut and remove the electrode.
 - (d) Undo the thermocouple connection.
 - (e) Undo the two screws and washers holding the pilot burner to the bracket and remove the pilot burner. Take care not to damage the pilot injector which is loose in the burner.
4. Fit the new pilot burner and re-assemble in reverse order. However, ensure that the pilot injector is in position and partially screw in the pilot tube, before fixing the pilot burner to its bracket.

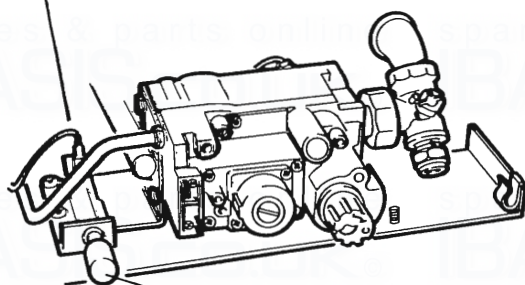
Pilot Shield & Bracket



Thermocouple Connection

13 PIEZO UNIT REPLACEMENT

1. Unplug the lead from the piezo unit body.

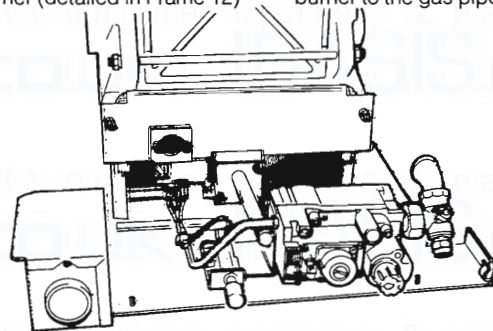


Piezo Unit

2. Remove the two screws securing the unit to the bracket on the gas manifold pipe.
3. Fit the new unit and re-connect the igniter lead.

14 MAIN BURNER REPLACEMENT

1. Remove the burner assembly as detailed in Frame 3 of the 'Servicing' section.
2. Remove the front plate & pilot burner (detailed in Frame 12)
3. Undo the two nuts & washers holding the main burner to the gas pipe.

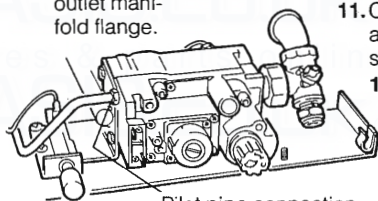


4. Re-assemble in reverse order, being careful not to damage the main burner injector.

IMPORTANT: Use an approved jointing compound when replacing the main burner injector gas valve. Check ignition spark gap. Check operation of the flame failure device.

15 GAS VALVE REPLACEMENT

1. Undo valve union on the 3 way cock.
2. Remove electrical cover from the valve and disconnect the leads.
3. Disconnect & remove the gas fire pipe at the 3 way gas cock.
4. Slacken the 2 nuts securing burner assembly to the boiler (Frame 12 'Servicing').
5. Undo pilot pipe connection at gas valve.
6. Undo the thermocouple connection at the gas valve.
7. Undo the four screws securing valve to gas outlet manifold.
8. Remove the union spigot from the gas valve.
9. Fit the new gas valve - ensuring that:
 - (a) A new 'O' ring is fitted between the valve and the outlet manifold flange.
 - (b) The gas valve is the correct way round - an arrow engraved on the valve indicates the direction of flow.
10. Re-assemble in reverse order.
11. Check complete assembly for gas soundness.
12. Check operation.

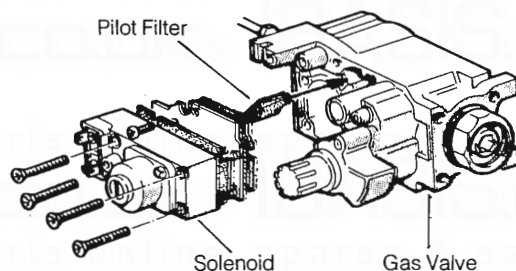


Pilot pipe connection

IMPORTANT: Use an approved jointing compound when replacing main burner or gas valve.

16 PILOT FILTER REPLACEMENT

1. Remove the electrical cover from the valve and disconnect the leads.
2. Remove the four pozidrive screws holding the solenoid onto the main body of the valve and remove the solenoid.
3. Remove the pozidrive screw next to the burner pressure test point and remove cover plate.



Solenoid

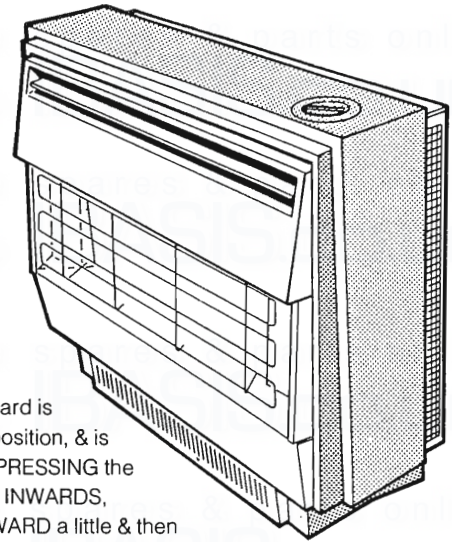
Gas Valve

4. Replace or clean filter as necessary.
5. Re-assemble in reverse order.

17 GENERAL NOTES

1. Access to all connections, radiants, injectors etc., is gained by removing the front panel and the concealment grille, as detailed in Frame 2 of the 'Boiler Servicing' section.
2. To avoid damage to the radiants during servicing, it is recommended that these be removed and placed aside in a safe place.
3. Ensure that the gas supply is turned off at the inlet gas cock.

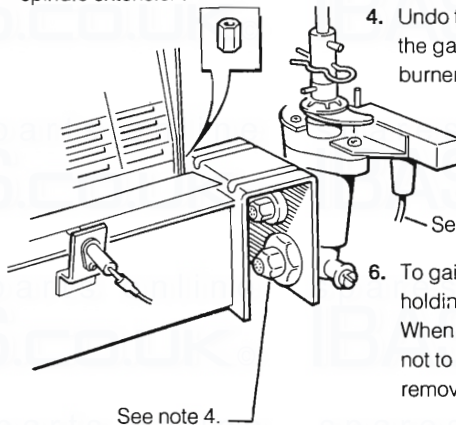
18 REMOVING THE DRESS GUARD



The dress guard is sprung into position, & is removed by PRESSING the bottom limbs INWARDS, pulling FORWARD a little & then pulling DOWNWARDS, AWAY from the fire to completely free the guard.

19 SERVICING THE GAS TAP

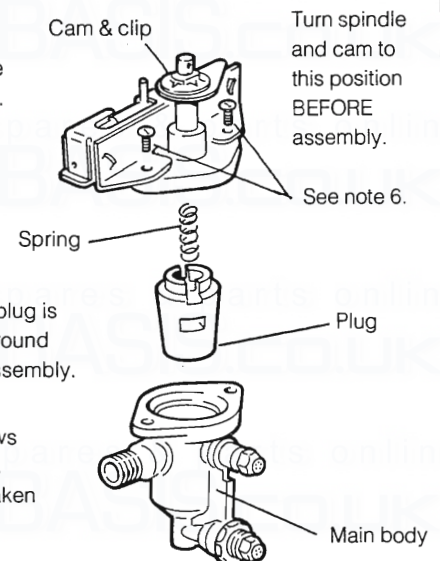
1. Pull off the tap knob and remove the washer from the spindle extension.
2. Disconnect the spark lead at the spark generator.
3. Undo the nut at the inlet to the gas tap.
4. Undo the nut fixing the gas tap to the burner.
5. Remove the gas tap from the fire together with the spindle extension.
6. To gain access to the plug, remove the two screws holding the striking plate / piezo unit to the body. When removing the striking plate care must be taken not to lose the tap spring. The plug can now be removed.



See note 4.

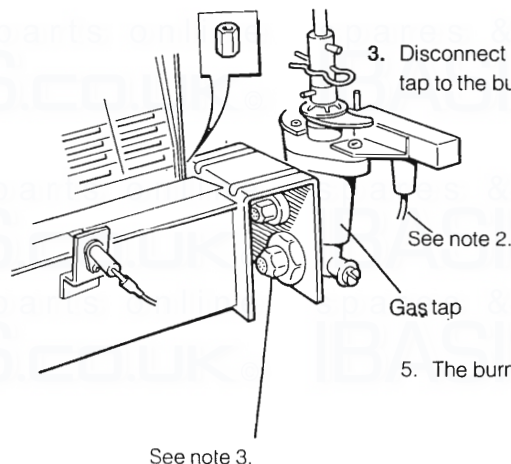
7. Regrease with a suitable grease.

8. Re-assemble in reverse order

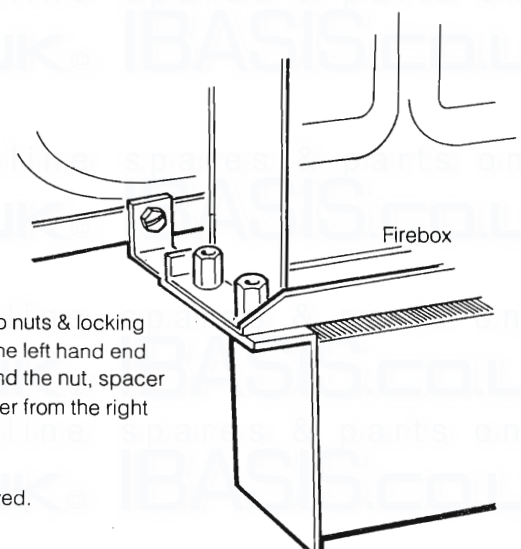


20 REMOVING THE BURNER

1. Ensure that the fire tap knob is turned to OFF
2. Disconnect the ignition lead at either the generator or the electrode.
3. Disconnect the nut fixing the gas tap to the burner.
4. Remove the two nuts & locking washers from the left hand end of the burner and the nut, spacer and plain washer from the right hand end.
5. The burner can now be removed.
6. Re-assemble in reverse order, ensuring the spacer is fitted to the right hand burner stud when re-assembling.



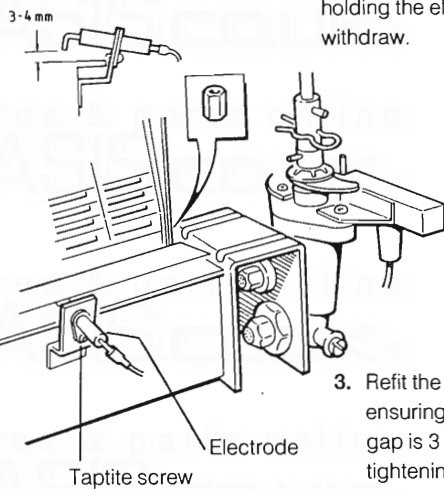
See note 3.



Firebox

21 SPARK ELECTRODE REPLACEMENT

1. Disconnect ignition lead at spark electrode.
2. Remove the taptite screw holding the electrode and withdraw.



3. Refit the new electrode - ensuring that the spark gap is 3-4 mm, before tightening the taptite screw.

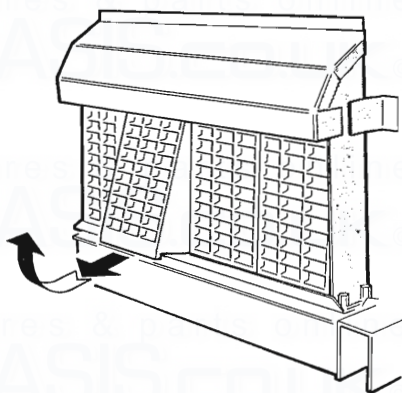
22 PIEZO GENERATOR REPLACEMENT

Refer to the diagrams of frame 19.

1. Remove the gas tap assembly as previously described.
 2. Dis-assemble the striking plate/piezo generator assembly from the gas tap (also described in frame 19)
- Note:** Care must be taken in order not to lose the spring.
3. Remove the spring clip, cam and spacer.
 4. Fit the new generator assembly by re-assembling in reverse order. Ensure that the cam and spring clip are in their correct relative positions.
 5. Refit the complete gas tap assembly to the fire.

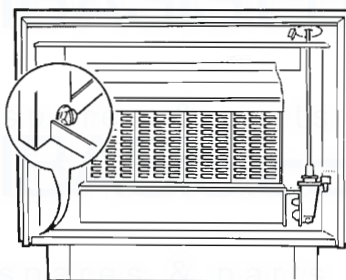
23 OUTER CASING REPLACEMENT

1. Remove the fire - as described in Frame 2, of the boiler servicing section.



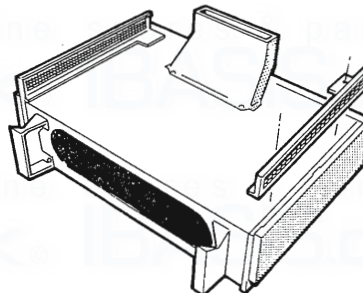
2. Remove the radiants and also the gas tap knob.

3. Unfasten the two self-tapping screws securing the base of the fire to the outer casing.



4. Remove the ten self-tapping screws on the back of the fire and place the side relief grilles to one side.

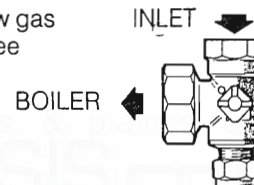
5. Remove the wood or metal casing, complete, by pulling forwards and upwards.
6. Fit the new outer casing - threading the top spindle through the hole in the outer case.
7. Replace all twelve self-tappers. Ensure that the side relief grilles are re-fitted.
8. Check the operation of the gas tap.



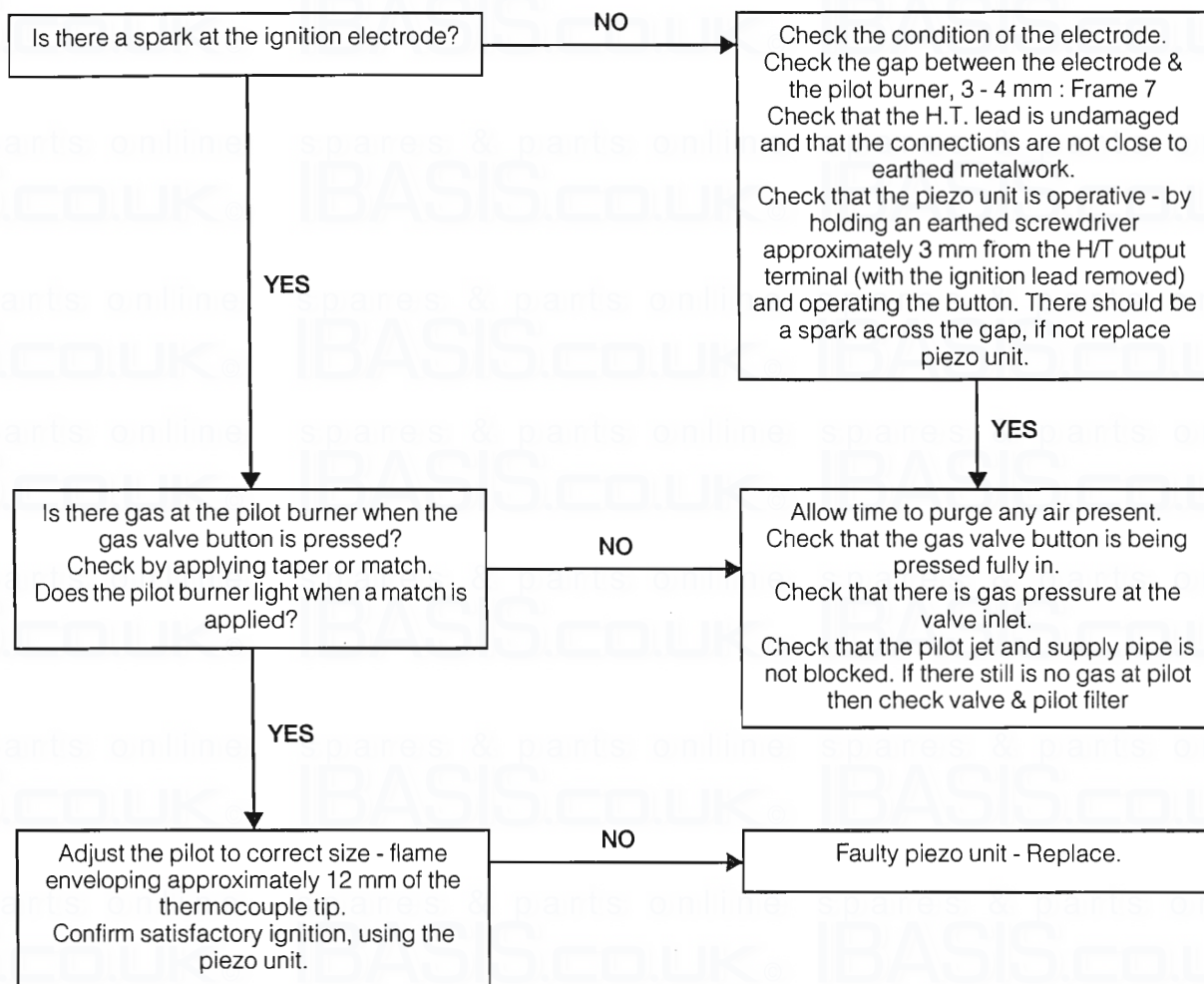
9. Re-assemble in reverse order.

Before attempting any electrical fault finding, always carry out the preliminary electrical system checks, as detailed on pages 6 - 9 of the Instructions for British Gas Multimeter. Detailed instructions on the replacement of faulty components will be found in the 'Servicing' section of this booklet. The fire will have to be removed to enable the following fault finding work to be carried out.

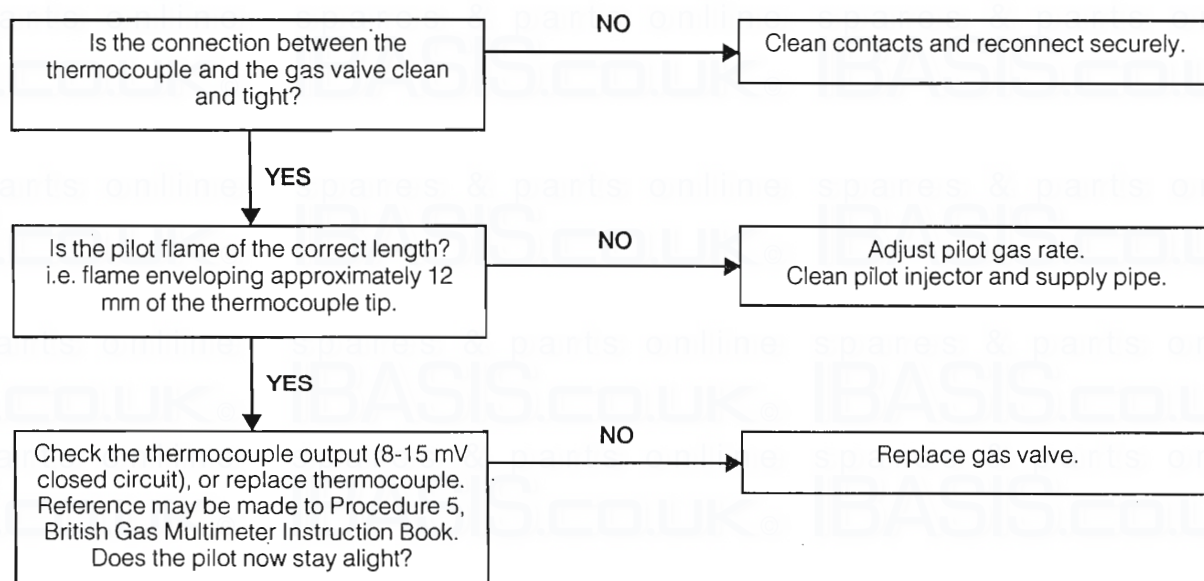
Turn the inlet gas cock to allow gas to pass to the boiler ONLY - see diagram.



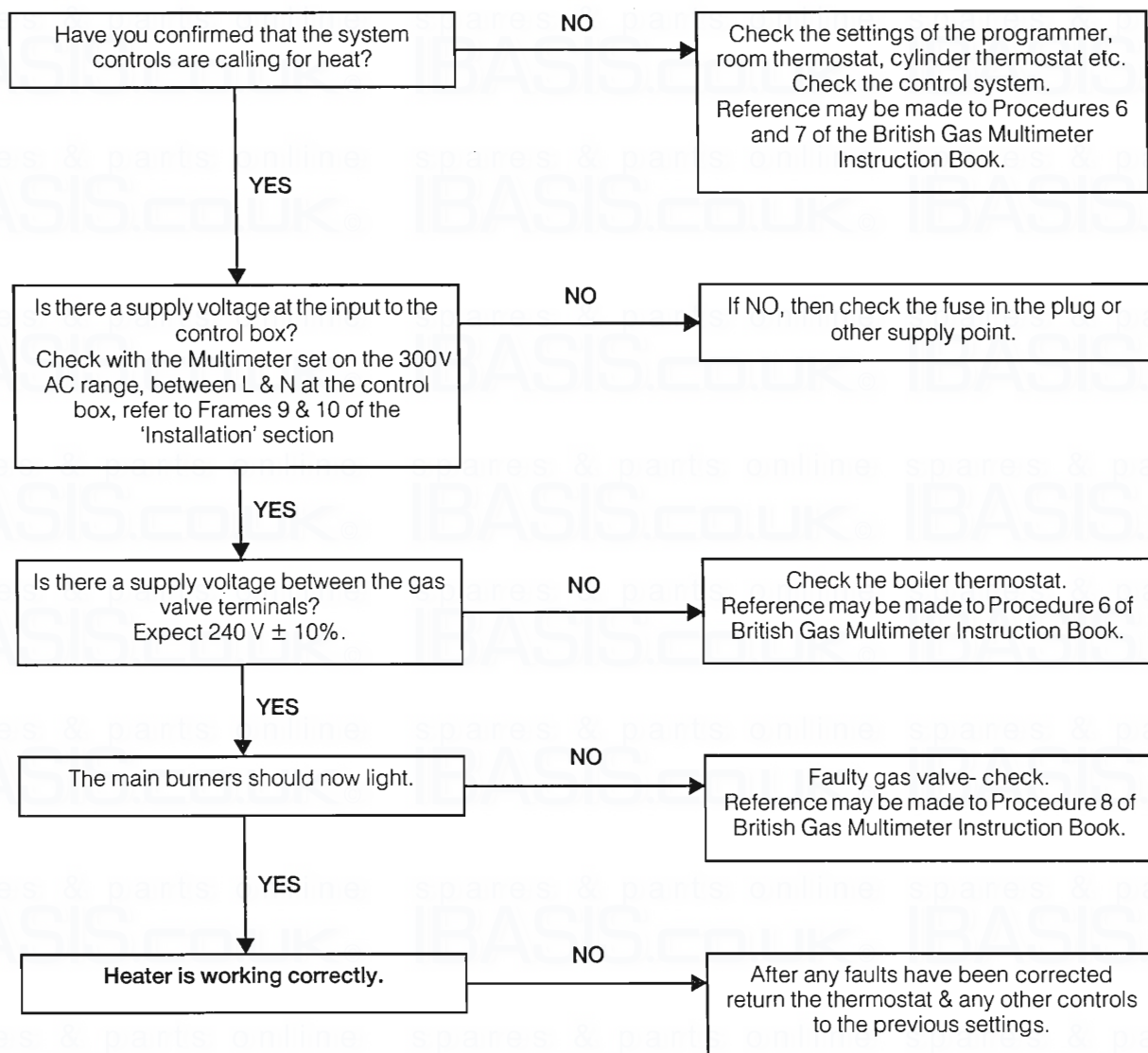
1 PILOT WILL NOT LIGHT



2 PILOT WILL NOT STAY LIT WHEN THE GAS VALVE BUTTON IS RELEASED



3 PILOT LIT, BUT NO MAINS GAS



SPARES

SHORT LIST OF PARTS

The following list comprises parts commonly required as replacements due to damage, expendability, or such that their failure, or absence, is likely to affect safety or performance.

This List is extracted from the British Gas List of Parts, which contains all available spare parts.

Details of the British Gas Lists are held by Gas Regions, STELRAD Distributors and by Merchants.

IDEAL CAVALCADE 340 & 350 GAS BOILERS

When ordering spares, please quote:

1. Boiler Model
2. Appliance G.C. Number
3. Description
4. Maker's Part Number
5. Quantity

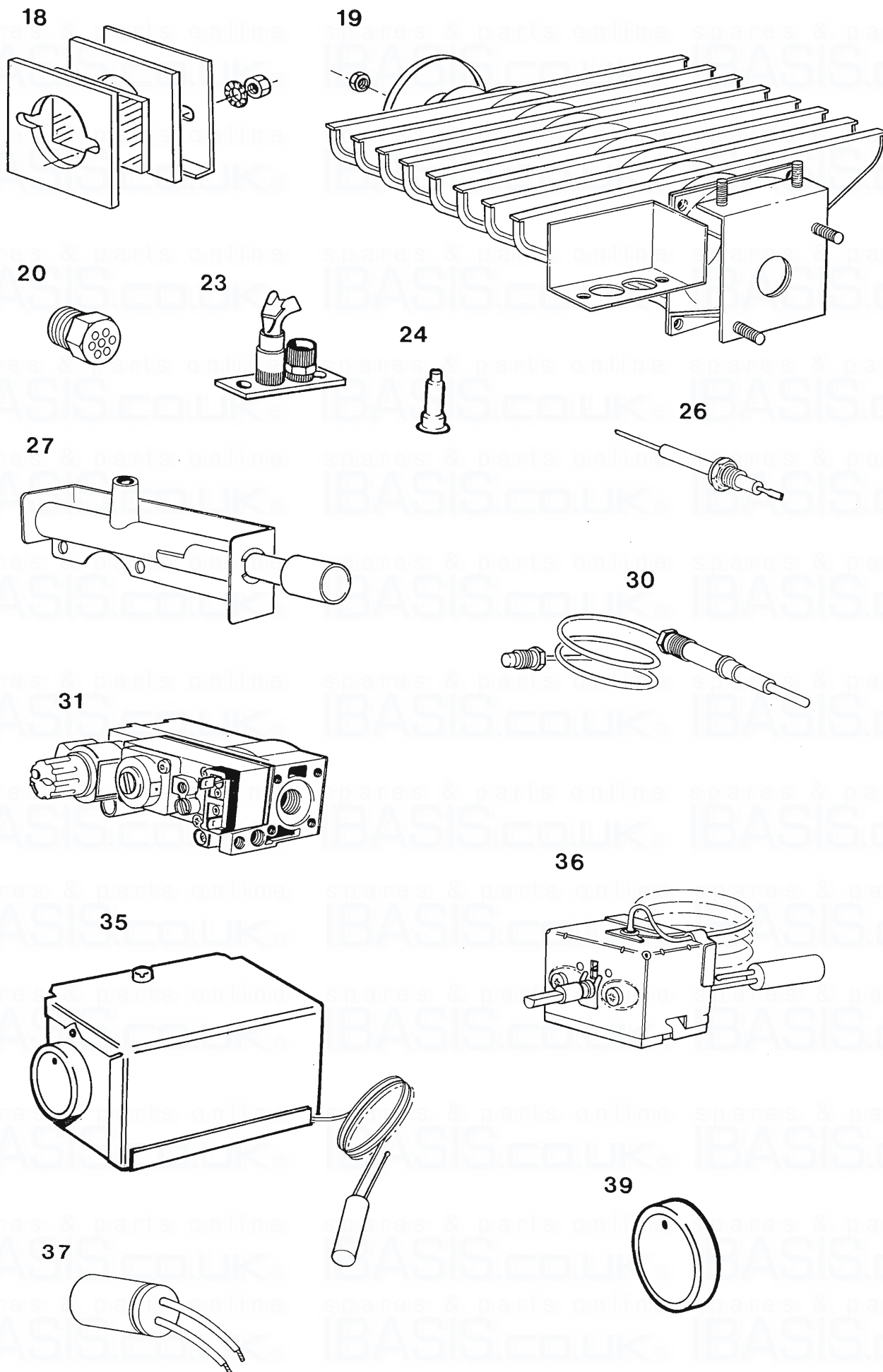
BOILER PARTS

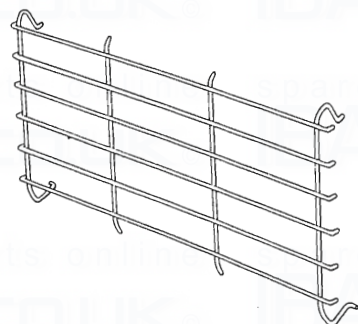
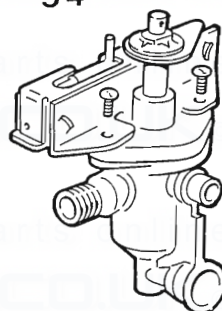
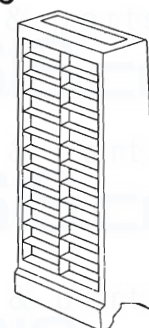
Key No.	G.C. Part No.	Description	No. off	Maker's Part No.
18	191 679	Sight glass assembly, comprising sight glass and frame, two sight glass gaskets, two M4 Hex nuts and two M4 shakeproof washers	1	119948574
19		Boiler burner bar - AEROMATIC, Ae 19/123237	1	119 968 571
20	384 963	Burner injector - AEROMATIC, 93-7-125 340;- Cavalcade 340	1	519 938 573
	348 853	Burner injector - AEROMATIC, 3-7-135 350;- Cavalcade 350	1	519 928 572
23		Pilot burner. HONEYWELL Q359A - 1116 with HONEYWELL 45003 - 508.001 Injector	1	119 968 620
24	382 536	Pilot injector - HONEYWELL 45003 - 508.001	1	589 040 083
26		Ignition electrode	1	588 962 002
27	393 894	Spark generator - VERNITRON 60038/01	1	586 810 087
30	390 131	Thermocouple - HONEYWELL Q309A - 2721;-18 in. lg	1	586 811 720
31	393 180	1/2in. BSP. HONEYWELL Softlite gas control V4600C - 1029;- 240v	1	586 281 900
35		Boiler control box including key no's. 36, 37, 38 & 39.	1	119 968 551
36		Thermostat - RANCO CL6 PO 148000	1	589 960 051
37	384 689	Suppressor - ITT;- TS - 121A can type;- 40 mm leads	1	589 040 030
39	382 327	Thermostat knob - RANCO 83151 31	1	589 020 051

FIRE PARTS

Key No.	G.C. Part No.	Description	No. off	Maker's Part No.
53	144 875	Dress guard	1	
54	...	Gas tap assembly with KIGAS Piezo igniter	1	
56	144 723	Gas tap knob	1	
60	...	Fire burner injector, Bray Cat 16 / 220	2	
63	138 901	Fire lead assembly	1	512 921 281
64	384 205	Electrode	1	
66	154 371	Radiant (each)	4	

1 SMALL PARTS:- Ideal Cavalcade 340 & 350 Boiler Unit Only



2 SMALL PARTS:- Firegem Visa 2 & Firegem Visa 2 Deluxe Fires**53****54****56****60****63****64****66**



**THIS SYMBOL IS YOUR
ASSURANCE OF QUALITY**

These appliances are designed for use with Natural Gas only. They have been tested and conform with the provisions of BS. 6332 & BS. 5258.

Products bearing this Kitemark are made to a safety and performance standard under a stringent scheme of supervision and control monitored by the British Standards Institute.

CARADON HEATING pursues a policy of continuing improvement in the design and performance of its products. The right is therefore reserved to vary specification without notice.

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A subsidiary of M.B. Caradon p.l.c.

Printed in England.

April 1993

116 240 A04