

IDEAL

MEXICO SUPER 2; CF 70, CF 80, CF 100, CF 125 & CF 140

Open Flue Gas Boilers.

Installation & Servicing.

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

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

Ideal Mexico Super 2

CF 70

CF 80

CF 100

CF 125

CF 140

G.C. Number

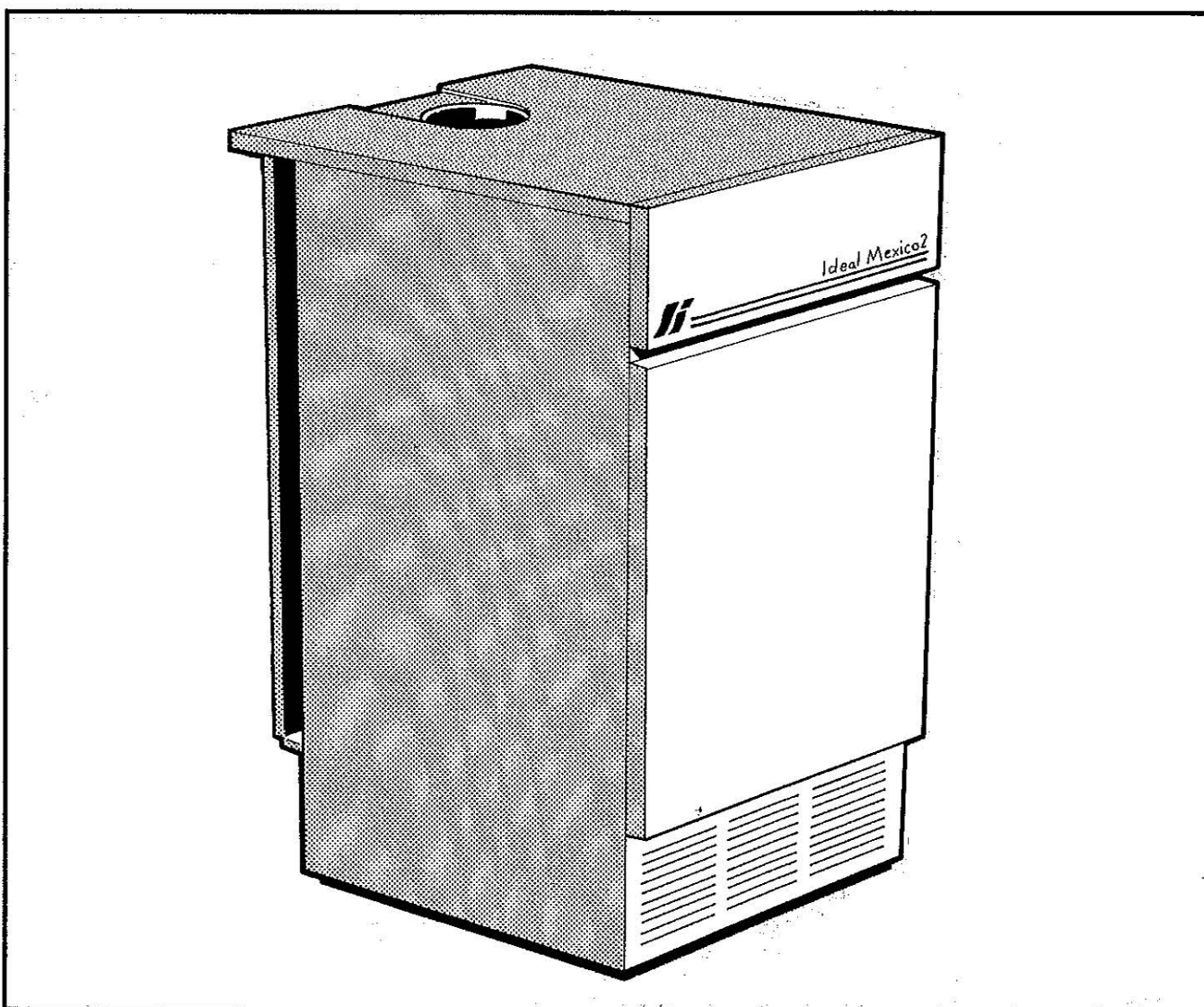
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NOTE TO THE INSTALLER: LEAVE THESE INSTRUCTIONS ADJACENT TO THE GAS METER

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GENERAL

PERFORMANCE DATA

Table 1- GENERAL DATA

Boiler Size	CF 70	CF 80	CF 100	CF 125	CF 140
Main Burner	AEROMATIC AC 19/ 123 246		FURIGAS 118 500 058 (R.H.) 118 500 059 (L.H.)	FURIGAS 118 500 062 (R.H.) 118 500 060 (L.H.)	FURIGAS 118 500 061 (R.H.) 118 500 056 (L.H.)
Gas Control Valve	1/2 in. BSP. HONEYWELL VR 4700 E 1007, 240V		1/2 in. BSP. HONEYWELL COMPACT V 4600 A 1023, 240V		
Burner Injector	AEROMATIC 935 440	AEROMATIC 935 460	BRAY 103 1500	AEROMATIC 935 390	BRAY 10 2300
Pilot Injector	HONEYWELL 38/36 A		HONEYWELL 56/42 A		
Gas Supply Connection (in. BSP)	Rc 1/2 (1/2)		Rc 3/4 (3/4)		
Flue connection mm (in.)	100 (4)	125 (5)	125 (5)	150 (6)	150 (6)
Number of Boiler Sections	3	3	4	5	6
FLOW & RETURN Connections	Flow- 4 x Rc 1 (1 in. BSP) Return- 4 x Rc 1 (1 in. BSP)				
MAXIMUM Static Water Head m (ft.)	30.5 (100)				
MINIMUM Static Water Head m (ft.)	1.0 (3.3)				
Electrical Supply	240 V ~ 50 Hz				
External Fuse Rating	3 A				
Water Content Litre (gal.)	7.4 (1.6)	7.4 (1.6)	9.8 (2.1)	12.2 (2.7)	14.6 (3.2)
Dry Weight kg (lb.)	99 (218)	99 (218)	120 (264.5)	140 (308.6)	154 (340)
Boiler Size	Height mm (in.)	850 (33.5)			
	Width mm (in.)	440 (17.4)			
	Depth mm (in.)	533 (21.0)		600 (23.6)	750 (29.5)

Table 2- PERFORMANCE DATA

Boiler Size	CF 70	CF 80	CF 100	CF 125	CF 140
Boiler input	MINIMUM kW (Btu/h)	23.9 (81 500)	28.2 (96 200)	32.6 (111 200)	39.8 (136 000)
	Gas consumption, l/s (ft³/h)	0.62 (78.5)	0.73 (92.7)	0.84 (107.1)	1.03 (131.0)
	MID kW (Btu/h)	25.7 (87 800)	29.9 (102 000)	36.0 (123 000)	44.2 (150 700)
	Gas consumption, l/s (ft³/h)	0.67 (84.6)	0.77 (98.3)	0.93 (118.5)	1.14 (145.2)
	MAXIMUM kW (Btu/h)	27.5 (94 000)	31.5 (107 500)	39.3 (134 200)	48.8 (166 700)
	Gas consumption, l/s (ft³/h)	0.71 (90.6)	0.81 (103.5)	1.02 (129.3)	1.26 (160.6)
Boiler output to water	MINIMUM kW (Btu/h)	17.6 (60 000)	20.5 (70 000)	23.4 (80 000)	29.3 (100 000)
	MID kW (Btu/h)	19.0 (65 000)	22.0 (75 000)	26.4 (90 000)	32.8 (112 000)
	MAXIMUM kW (Btu/h)	20.5 (70 000)	23.4 (80 000)	29.3 (100 000)	36.6 (125 000)
Burner setting pressure (hot)	MINIMUM mbar (in.w.g.)	8.6 (3.4)	10.1 (4.0)	9.3 (3.7)	9.6 (3.9)
	MID mbar (in.w.g.)	9.9 (3.9)	11.2 (4.5)	11.6 (4.7)	11.7 (4.7)
	MAXIMUM mbar (in.w.g.)	11.3 (4.5)	12.4 (5.0)	13.8 (5.5)	13.8 (5.5)

Notes: 1. Gas consumption is calculated using a calorific value of 38.7 MJ/m³ (1038 Btu/ft.³).

2. The appliance is pre-set at the factory to the highest nominal rating.

INTRODUCTION

The **Ideal Mexico Super 2** CF 70, CF 80, CF 100, CF 125 & 140 are floor standing, natural draught, open flue gas boilers. They are range rated to provide central heating outputs of 17.6kW (60 000 Btu/h) to 41.0kW (140 000 Btu/h).

The boiler has a cast iron heat exchanger, with an insulating blanket of aluminium foil backed fibreglass- held in place by clips, and is supplied fully assembled, complete with a white enamelled mild steel casing. Programmer and Pump Kits, which fit within the casing, are available as optional extras and separate fitting instructions are included with the kits (**Note.** The CF 140 does not have a pump kit).

A door at the top of the casing front panel hinges down, revealing the boiler thermostat control (& programmer if fitted).

The boilers are suitable for connection to OPEN VENTED SYSTEMS ONLY.

The systems may be pumped or gravity circulating indirect DHW only, pumped central heating only, or pumped central heating combined with either a pumped or gravity circulating indirect DHW circuit.

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 the current I.E.E. Wiring Regulations, The Building Regulations (1985), Building Standards (Scotland), the Bye Laws of the Local Water Undertaking and any relevant requirements of the Local Authority. Detailed recommendations are contained in the following British Standard Codes of Practice.

Codes of Practice:

BS. 6891:1988	Low pressure installation pipes.
BS. 6798	Installation of gas fired hot water boilers of rated input not exceeding 60 kW.
BS. 5449:1	Forced circulation hot water systems (small bore and microbore domestic central heating systems).
BS. 5546	Installation of gas hot water supplies 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).

IMPORTANT. This appliance range is 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.) are directly connected to this appliance unless covered by these 'Installation and Servicing Instructions' or otherwise recommended by Stelrad Group Ltd., in writing. If in doubt please enquire.

Any direct connection of a control device not recommended by Stelrad Group Ltd., could invalidate the BSI certification and the normal appliance warranty. It could also infringe the Gas Safety Regulations and the above Regulations or other statutory requirements. Manufacturers notes must NOT be taken, in any way, as over-riding statutory obligations.

LOCATION OF BOILER

The floor MUST be flat and level, and of a suitable load bearing capacity. The boiler may be fitted on a combustible floor, and insulation, other than that required by the Local Authority and Building Regulations, is NOT necessary.

THE BOILER IS NOT SUITABLE FOR EXTERNAL INSTALLATION.

The boiler MUST NOT be installed in a bedroom or in a room containing a bath or a shower or in a garage.

A compartment used to enclose the boiler MUST be designed and constructed especially for this purpose. An existing cupboard or compartment may be used, provided it is modified for the purpose. Details of essential features of cupboard/ compartment design, including airing cupboard installations are given in BS. 6798.

In siting the boiler, the following limitations MUST be observed:

1. The position selected for the installation MUST allow adequate space for servicing in front of the boiler and for air circulation around the boiler.
The back of the boiler may be fitted up to the wall.
2. This position MUST also permit the provision of a satisfactory flue and an adequate air supply.
Installation in airing cupboards is NOT recommended.

GAS SUPPLY

The Local Gas Region should be consulted, at the installation planning stage, in order to establish the availability of an adequate supply of gas.

A gas meter can only be connected by the Local Gas Region, or by a local Gas Region Contractor.

Installation pipes should be fitted in accordance with BS. 6891:1988. Do not use pipes of a smaller size than the boiler inlet gas connection.

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

FLUEING

The flue must be installed in accordance with the recommendations of BS. 5440:1.

The following notes are intended for general guidance.

1. The cross-sectional area of the flue, serving the boiler, MUST NOT be less than the area of the flue outlet of the boiler.
If flue pipe is to be used it MUST NOT be less than the diameter of the flue outlet connection on the boiler.
2. Flue pipes and fittings should be constructed from one of the following materials:
 - (a) Aluminium or Stainless Steel
 - (b) Cast Iron- coated on the inside with acid-resistant vitreous enamel.
 - (c) Other approved material.
3. If twin walled flue pipe is used, it should be of a type acceptable to British Gas.
4. If a chimney is to be used, it should preferably be one that is composed of, or lined with, a non-porous acid resistant material.

Note. Chimneys lined with salt glazed, earthenware pipes are acceptable if the pipes comply with BS. 65 and BS. 5440:1. A flue pipe constructed from one of the materials listed in 2 (a), 2 (b) or 2 (c), above, should form the initial connection to the lined chimneys. Where a chimney is to be used that is not composed of or lined with a non-porous, acid resistant material it should be lined with a stainless steel, flexible flue liner which complies with BS. 715 (1986). The internal diameter of the liner MUST NOT be less than 100 mm (4 in.) and the number of joints kept to a minimum.

5. Before connecting the boiler to, or inserting a liner into a flue that has been previously used - then the flue MUST be thoroughly swept clean of any soot or loose material. If a register plate, restrictor plate or damper, etc. is fitted in the flue then it MUST be removed before connecting the boiler to, or inserting a liner into the flue.
6. The flue should terminate in accordance with the relevant recommendations given in BS 5440:1.

GENERAL

- The flue **MUST** be fitted with a terminal (or ridge tile up to 5in. flue diameter). The terminal shall be of a type which has been tested and found satisfactory by British Gas. This terminal must **NOT** be installed within 600mm (24 in.) of an openable window, air vent or any other ventilation opening.
- The chimney/ flue lining **MUST** be sealed at both the top and the bottom.

IMPORTANT. It is absolutely **ESSENTIAL** to ensure, in practice, that the flue discharge is in a draught free zone and products of combustion discharging from the terminal cannot re-enter the building, or any other adjacent building through ventilators, windows, doors, other sources of natural air infiltration or forced ventilation/ air conditioning systems.

Continuous spillage of the products of combustion must **NEVER** be allowed to issue from the draught diverter relief outlets.

*If this should occur, the appliance **MUST** be turned OFF IMMEDIATELY and the Local Region of British Gas plc. called to investigate.*

AIR SUPPLY

Detailed recommendations for air supply are given in BS 5440:2.

The following notes are intended for general guidance:

- The room, or internal space in which the boiler is installed **MUST** have, or be provided with, a permanent air vent. This vent **MUST** be either direct to outside air, or to an adjacent room, or internal space, which **MUST** itself have, or be provided with, a permanent air vent at least the same size direct to outside air.

The minimum effective area of the permanent air vent(s) are specified below, and are related to maximum rated heat input of the boiler.

Table 3

Boiler Size	CF 70	CF 80	CF 100	CF 125	CF 140
Effective area cm ² (in. ²)	93 (15)	111 (18)	146 (23)	189 (30)	211 (32)

The air vent(s) 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 Region of British Gas plc. should be requested to advise before proceeding.

- If the boiler is to be installed in a cupboard or compartment, permanent air vents are required (for combustion, flue dilution and cooling purposes) in the cupboard or compartment, at both high and low levels, to ensure safe and efficient combustion and ventilation. The air vents may either communicate with a room/ internal space, appropriately ventilated, or be direct to outside air.

The minimum effective areas of the permanent air vents, required in the cupboard/compartment, are specified below and are related to the maximum rated heat input of the boiler.

Table 4- CF 70

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm ² (in ²)	248 (39)	124 (20)
LOW LEVEL cm ² (in ²)	496 (78)	248 (39)

FLUEING- WATER CIRCULATION

Table 5- CF 80

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm ² (in ²)	284 (44)	142 (22)
LOW LEVEL cm ² (in ²)	568 (88)	284 (44)

Table 6- CF 100

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm ² (in ²)	354 (55)	177 (28)
LOW LEVEL cm ² (in ²)	708 (110)	354 (55)

Table 7- CF 125

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm ² (in ²)	440 (69)	220 (35)
LOW LEVEL cm ² (in ²)	880 (138)	440 (69)

Table 8- CF 140

Position of air vent	Air from room/ internal space	Air direct from outside
HIGH LEVEL cm ² (in ²)	485 (74)	243 (37)
LOW LEVEL cm ² (in ²)	970 (148)	485 (74)

Notes.

- Both air vents **MUST** communicate with the same room or internal space, or **MUST** be on the same wall to outside air.
- In siting the air vents care must be taken to avoid freezing of pipework.
- Where cupboard/ compartment air vent(s) are open to a room or internal space, the room or internal space **MUST** itself be provided with a permanent air vent as previously specified.
- The cupboard/ compartment air vents **MUST NOT** communicate with a bedroom, bed sitting room, or a room containing a bath or shower.

EFFECT OF AN EXTRACTOR FAN

If there is any type of extract fan fitted in the premises there is a possibility that, if adequate air inlet area from outside is not provided, spillage of the boiler flue products could occur when the fan is in operation. Where such installations occur a spillage test, as detailed in BS. 5440:1, **MUST** be carried out and any necessary action taken.

VENTILATION IN SERIES

In installations requiring two ventilators to be fitted in series, e.g. across a cavity wall, **EACH** should be sized in accordance with the above data. Where there are more than two ventilators in series, **EACH** should have an area of 50% in excess of the value quoted above.

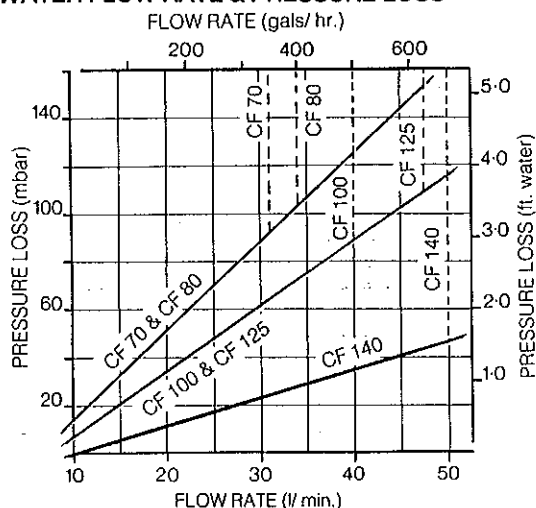
WATER CIRCULATION SYSTEM

The boiler is suitable for connection to pumped, open vent central heating systems, pumped central heating combined with pumped or gravity indirect domestic hot water supply systems, and gravity, or pumped, indirect domestic hot water supply systems.

GENERAL

Note. The boiler is NOT suitable for gravity heating systems. The hydraulic resistances of the boilers, at MAXIMUM OUTPUT with 11°C (20°F) temperature differential, are shown in below.

WATER FLOW RATE & PRESSURE LOSS



Dotted lines indicate flow rates equivalent to a temperature rise of 11°C (20°F)

The central heating system should be in accordance with the relevant recommendations given in BS. 6798 and, in addition, for small bore and microbore systems- BS. 5549:1

The domestic hot water system, if applicable, should be in accordance with the relevant recommendations of BS. 5546.

Copper tubing, to BS. 2871:1, is recommended for water

WATER CIRCULATION- ELECTRICAL SUPPLY

carrying pipework.

The hot water storage cylinder MUST be of the indirect type and should preferably be manufactured of copper. Single feed indirect cylinders are not preferred. The hot water cylinder and ancillary pipework, not forming part of the useful heating surface, should be lagged to prevent heat loss and any possible freezing- particularly where pipes run through roof spaces and ventilated under floor spaces, in accordance with the Water Bye-laws.

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.

ELECTRICAL SUPPLY

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

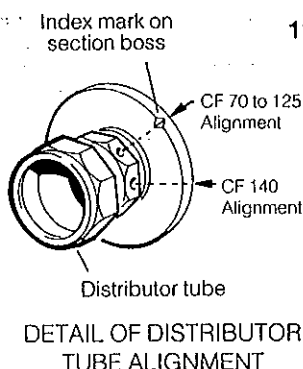
The boiler is supplied for 240 V ~ 50 Hz, Single Phase. Fuse rating is 3A.

The method of connection to the mains electricity supply MUST facilitate complete electrical isolation of the boiler, preferably by the use of a fused three-pin & shuttered socket outlet, both complying with the requirements of BS. 1363.

Alternatively, a fused double-pole switch having a 3 mm (1/8 in.) contact separation in both poles and serving only the boiler, may be used. The point of connection to the mains should be readily accessible and adjacent to the boiler.

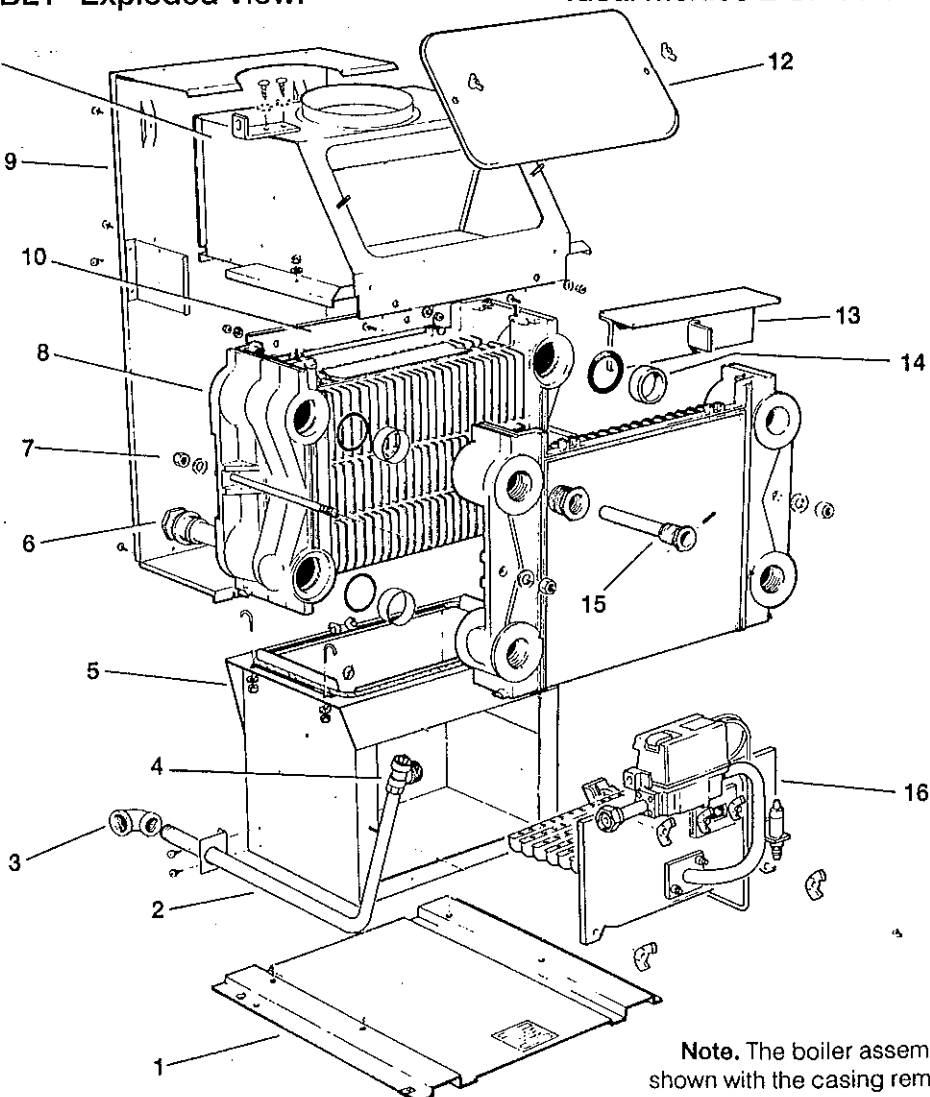
1 BOILER ASSEMBLY- Exploded View.

Ideal Mexico 2 CF 80 Shown



LEGEND

1. Boiler baseplate
2. Gas inlet pipe
3. Gas inlet elbow
4. Gas service cock
5. Combustion chamber
6. Distributor tube
7. Tie rod
8. Heat exchanger
9. Draught diverter back panel assembly
10. Rear infill
11. Collector hood
12. Cleanout cover
13. Flue baffle
14. Section alignment rings and 'O' rings
15. Thermostat pocket
16. Burner & controls assembly



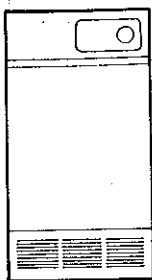
Note. The boiler assembly is shown with the casing removed

2 UNPACKING

Unpack the boiler & check the contents. The boiler is supplied fully assembled in one pack 'A'.

PACK 'A' CONTENTS

Complete boiler



HARDWARE PACK CONTENTS

- 1 in. BSP Plugs, 5 off
- 1 in x 1/2 in. BSP reducing bush
- 1/2 in. BSP elbow (CF 70)
- 1/2 x 3/4 in. BSP elbow (CF 80 - 125)
- 3/4 x 3/4 in. BSP elbow (CF 140)
- Distributor tube, 1 off



Thermostat pocket, 1 off



Thermostat retaining clip, 1 off

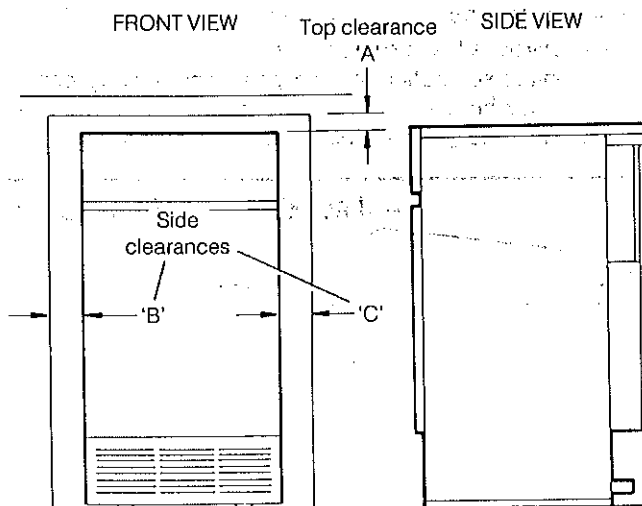


Thermostat retaining pin, 1 off



Output setting label, 1 off

DIAGRAM TO SHOW BOILER CLEARANCES



Note. CF 70 - CF 125 ONLY. A clip-on concealment panel is available as an optional extra, (see separate fitting instructions). If such a panel is fitted, the clearance on that side MUST NOT be less than 110mm, and not less than the minimum specified above, on the other side (CF 70, CF 80 & CF 100) or not less than the minimum aggregate (CF 125).

3 FLOOR MOUNTING & CLEARANCES

FLOOR MOUNTING

- The floor must be flat, level & of a suitable load bearing capacity.
- The back of the boiler may be fitted up to the wall.

BOILER CLEARANCES

The minimum overall dimensions of the space in which the boiler is to operate, and to facilitate servicing are as follows:

Boiler Size	Width	Depth	Height
CF 70/ CF 80	mm (in.)	550 (21 5/8)	535 (21)
CF 100	mm (in.)	575 (22 5/8)	535 (21)
CF 125	mm (in.)	650 (25 5/8)	600 (23 5/8)
CF 140	mm (in.)	740 (29 1/8)	750 (29 1/2)

Additional space will be required for installation, depending upon site conditions.

IMPORTANT

- In order to facilitate gas connection a clearance of at least 100 mm (4 in.) must be available to either the left hand or right hand side DURING installation- refer to Frame 6.
- A MINIMUM clearance of 25 mm (1 in.) MUST also be maintained between the flue pipe and any adjacent combustible material.

In addition, a MINIMUM clearance of 533 mm (21 in.) MUST be available at the front of the boiler for servicing.

Boiler Clearances	Top 'A'	One side 'B' or 'C'	Aggregate 'B' plus 'C'
CF 70	mm (in.)	20 (3/4)	10 (3/8)
CF 80	mm (in.)	20 (3/4)	55 (2 1/4)
CF 100	mm (in.)	20 (3/4)	35 (1 3/8)
CF 125	mm (in.)	20 (3/4)	50 (2)
CF 140	mm (in.)	20 (3/4)	150 (6)

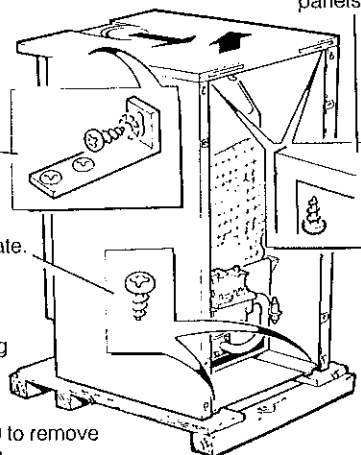
4 BOILER CASING REMOVAL

To install the boiler, the casing MUST be removed.

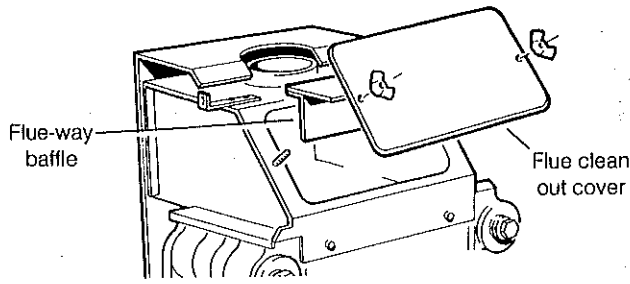
- Lift off the lower front panel.
- Remove the two securing screws & lift off the grille assembly.
- Remove the gas valve cover (CF 70 & CF 80) or electrical cover (CF 100, CF 125 & CF 140) by removing the retaining screw & disconnect electrical leads, refer to Frame 2 'Servicing'.
- Release the gas valve lead from the retaining clip.
- Remove the two screws securing the control panel and

disengage the panel by lowering and pulling it forward.

- Remove the 2 screws securing the top panel to the side panels.
- Draw the top panel forward & lift it off the boiler.
- Remove the 2 screws securing the L.H. side panel to the flue collector & baseplate.
- Pull the panel forward, lifting it clear of the locating peg & remove it from the boiler.
- Repeat steps 8 & 9 to remove the R.H. side panel.
- The boiler is held to the packaging base by 4 M6 hex head screws. Remove the front screws, slacken the rear screws & remove the boiler from the packaging base.

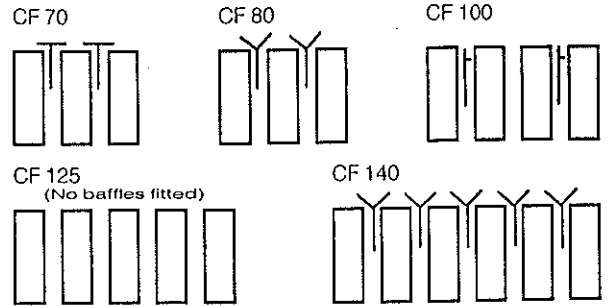


5 CHECKING THE FLUE-WAY BAFFLES



1. Remove the flue clean out cover & ensure that the baffles are fully inserted in the flue-ways.

SIDE VIEW OF BOILER SECTIONS
SHOWING THE BAFFLE ARRANGEMENTS



6 PREPARING THE BOILER

Notes: Before placing the boiler in the selected position, any gas and water connections at the rear of the boiler should be prepared due to the possible lack of access.

If an optional Pump Kit is to be used then it must be fitted at this stage. Refer to separate fitting instructions included with the kit.

1. Screw the distributor tube (supplied with a 1 in. BSP x 28mm copper adaptor) into the selected heating return tapping using an appropriate jointing material.

IT IS IMPERATIVE THAT THE INDEX MARK ON THE DISTRIBUTOR BUSH IS IN ALIGNMENT WITH THE MARK ON THE SECTION BOSS, AS SHOWN IN FRAME 1.

DO NOT disturb it when connecting subsequent pipework.

Fully pumped systems using more than one pump serving separate zones, must have a common return connection to the distributor tube.

2. Select the desired pumped flow tapping.
3. Screw the supplied boiler thermostat pocket into the appropriate front section tapping, using an approved jointing material. Refer to Tables 9 & 10.
4. Connect appropriate fittings to the rear tapings & plug any unused tapings.

Note: If using iron elbows fit a short straight connector into the boiler tapping first- to clear the casing when fitted.

Table 9- Fully Pumped Systems

CONNECTIONS AS VIEWED FROM FRONT		THERMOSTAT POSITION
BACK SECTION		FRONT SECTION
Flow	Return	Top
L.H.	L.H.	L.H.
L.H.	R.H.	L.H.
R.H.	R.H.	R.H.
R.H.	L.H.	R.H.
CF 140 ONLY		
L.H.	L.H.	L.H.
R.H.	R.H.	R.H.

Table 10- Gravity Domestic Hot Water & Pumped Central Heating

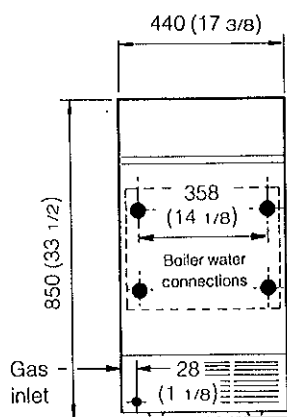
CONNECTIONS AS VIEWED FROM FRONT				THERMOSTAT POSITION
BACK SECTION				FRONT SECTION
C.H.		D.H.W.		Top
Flow	Return	Flow	Return	
L.H.	L.H.	R.H.	R.H.	L.H.
L.H.	R.H.	R.H.	L.H.	L.H.
R.H.	R.H.	L.H.	L.H.	R.H.
R.H.	L.H.	L.H.	R.H.	R.H.
CF 140 ONLY				
L.H.	L.H.	R.H.	R.H.	L.H.
R.H.	R.H.	L.H.	L.H.	R.H.

5. Place the boiler in position

Note. The pump may be fitted on the FLOW or the RETURN

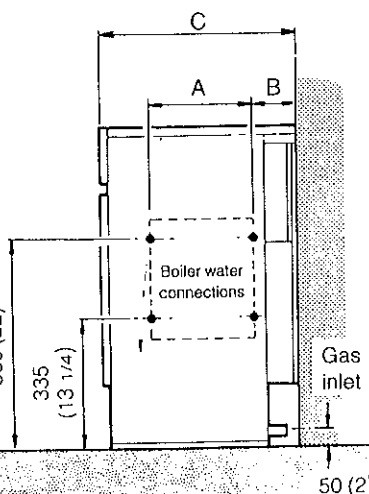
7 GAS CONNECTION

1. A MINIMUM working gas pressure of 20 mbar (8 in.w.g.) MUST be available at the boiler inlet.
2. Extend a gas supply to the boiler (for size refer to Table 1 on page 2) & connect to the gas pipe situated at the back L.H. side of the boiler. **Note:** Connection may be made from either the left or the right by using the elbow supplied.
3. Test the gas installation for soundness & purge in accordance with BS. 6891; 1988. Refer to Frame 21 (b).



FRONT VIEW

8 WATER CONNECTION



SIDE VIEW

Boiler size	Dim. 'A'	Dim. 'B'	Dim. 'C'
CF 70- 80	218 (8 5/8)	122 (4 3/4)	533 (21)
CF 100	291 (11 1/2)	122 (4 3/4)	533 (21)
CF 125	363 (14 1/4)	122 (4 3/4)	600 (23 5/8)
CF 140	436 (17 1/8)	202 (8)	750 (29 1/2)

1. Connect the system flow & return pipework to the boiler as appropriate. Refer to Frames 9 & 10 for guidance on system design.

Note: All water connections are Rc 1 (1 in. BSP) but pumped pipework MUST be increased to 35 mm (1 1/4 in. BSP)- CF 125 ONLY, or 42 mm (1 1/2 BSP)-CF 140 ONLY immediately after leaving the boiler. Gravity pipe-work & connections MUST be at least 28 mm (1 in. BSP)-CF 70 to CF 125, or 3 mm (1 1/4)- CF 140.

2. Ensure that all valves are open, fill and vent the system and check for water soundness.

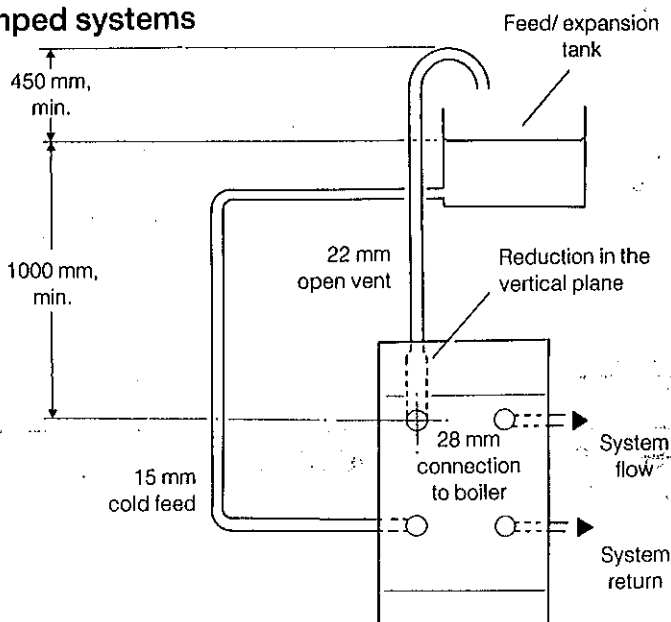
Notes:

- (a) Isolating valves must be fitted as close to the pump as possible.
- (b) The boiler is not suitable for use with a direct hot water cylinder or a sealed system.

9 MINIMUM REQUIREMENTS. Fully pumped systems

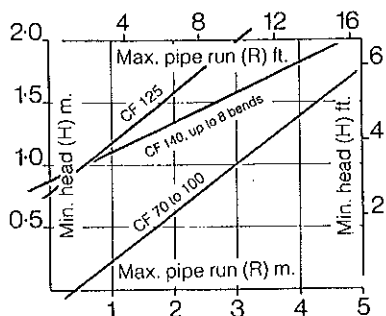
The following conditions & assumptions apply;

1. Open vent and cold feed connections are made to the boiler flow & return tapings according to the options shown in Frame 6.
2. The boiler is assumed to be the highest point of the circulating system.
3. The circulating pump is positioned on the FLOW, & the vertical distance, between the pump & feed/ expansion tank, complies with the Pump Manufacturer's minimum requirements, to avoid cavitation. Should these conditions not apply, either lower the pump position, or raise the feed/ expansion tank above the minimum requirements of Stelrad Group.
4. The water velocity through the boiler flow/ return pipes is assumed to be below 1 m/s (3 ft./s), whilst the pump flow rate is set to provide a temperature difference of 11°C (20°F) across the boiler flow/ return, at design input.
5. This information is intended as a GUIDE ONLY and cannot take into account instantaneous changes in head caused by the operation of motorised valves, pumps etc. Due allowance MUST be made if surging is liable to occur. If in any doubt, contact Stelrad Group.



10 GRAVITY HOT WATER & PUMPED CENTRAL HEATING

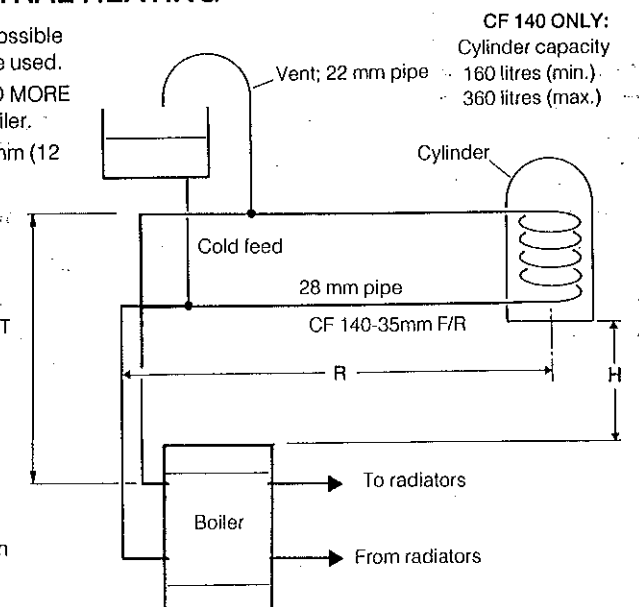
1. Separate flow & return connections are used for each service. All possible configurations are given in Frame 6 & ONLY those shown should be used.
2. The schematic pipework graph is based on the assumption that NO MORE than 8 elbows are used in the gravity loop, including entry to the boiler.
3. For each extra elbow in excess of 8, 'R' MUST be reduced by 300 mm (12 in.) or 'H' increased by 100 mm (4 in.).
4. Whatever value is selected for 'R', (the horizontal distance between the centre line of the cylinder & the boiler tapings used- measured along the pipe run) the value of 'H' (the vertical distance between the top of the boiler & the base of the cylinder) MUST be at least that indicated by the graph.



Notes.

- (a) Flow & return pipes should rise vertically on leaving the boiler.
- (b) Horizontal pipes should be ABOVE ceiling level & as short as possible.

CF 140 ONLY:
1.0m MINIMUM HEIGHT
from boiler tapings



- (c) A MINIMUM inclination of 25 mm per 3 m run (1 in. per 10 ft.) is required to avoid air locks.
- If the above conditions cannot be met pumped primaries should be used.

11 FLUE CONNECTION

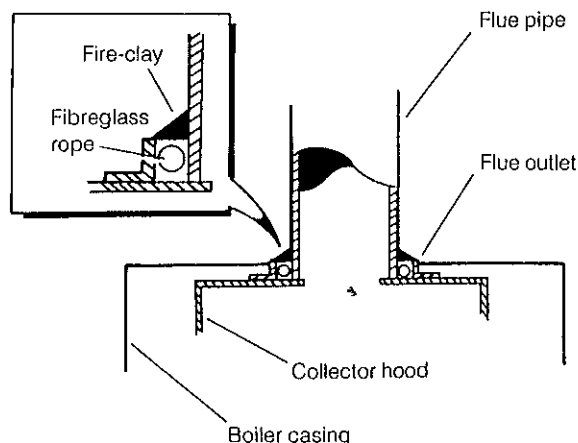
Connect the flue pipe to the flue outlet.

1. Flue pipe spigot and socket connections should be sealed with fibreglass rope, or similar, and suitable fireclay cement.

Notes.

- (a) The boiler flue connection outlet size is suitable for flue pipe conforming to BS 567. If sheet steel flue pipe is fitted a suitable adaptor must be used.
- (b) To facilitate installation and subsequent disconnections, it is recommended that a slip or split socket be included in the flue installation adjacent to the boiler flue outlet connection.
- (c) A minimum of 600 mm (2 ft.) of vertical flue directly above the boiler should be provided.

Detail of flue connection
sealing arrangement



12 ELECTRICAL CONNECTIONS

WARNING: This appliance **MUST** be efficiently earthed.

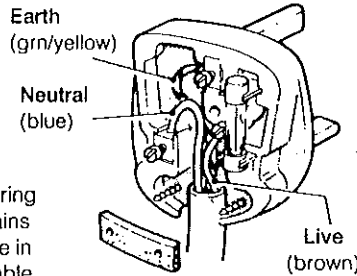
A mains supply of 240 V ~ 50 Hz is required.

All external controls & wiring **MUST** be suitable for mains voltage. Wiring should be in 3-core PVC insulated cable NOT LESS than 24/0.2 mm (0.75 mm) to BS. 6500 Table 16

Wiring external to the boiler **MUST** be in accordance with current I.E.E. Wiring Regulations & Local Regulations.

The supply connection may be made via a removable plug to a shuttered socket/ outlet, preferably adjacent to the boiler, & should such a plug be used for connection to the mains, it **MUST** be of the 3-pin type- wired as shown, fused at 3A & comply with the requirements of BS.1363.

Alternatively, a fused double-pole switch, having a 3 mm contact separation in both poles, serving only the boiler & system controls may be used.



13 INTERNAL WIRING

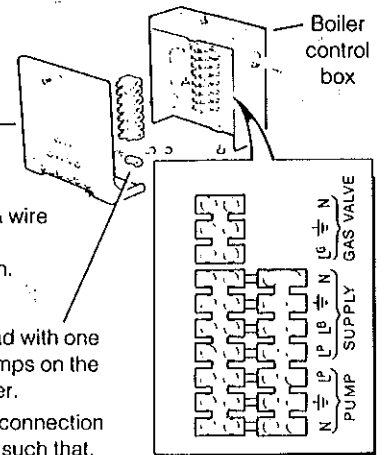
Flow & pictorial wiring diagrams are shown in Frames 14- 15. A schematic wiring diagram is included on the Lighting Instruction label.

1. Remove the securing screw & lift off the control box cover.

2. Route the electrical leads into the box & wire into the plug-in connector as shown.

Notes.

- (a) Secure each lead with one of the cable clamps on the control box cover.
- (b) The mains lead connection **MUST** be made such that, should the lead slip from it's anchorage, the current carrying conductors become taut before the earthing conductor.

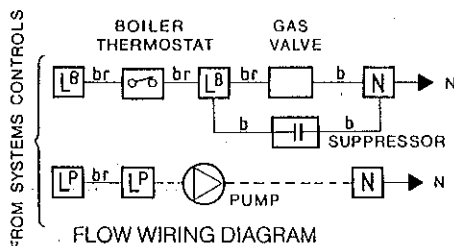


DETAIL OF TERMINAL STRIP

14 EXTERNAL CONTROLS

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

The wiring diagrams shown in Frames 16 to 18 cover the systems likely to be used with this appliance. For wiring external controls to the Ideal Mexico Super 2 boiler, reference should be made to the system wiring diagram supplied by the relevant Manufacturer, in conjunction with the Flow wiring diagram & Frame 13. Difficulty in wiring should not arise, provided the following directions are observed.



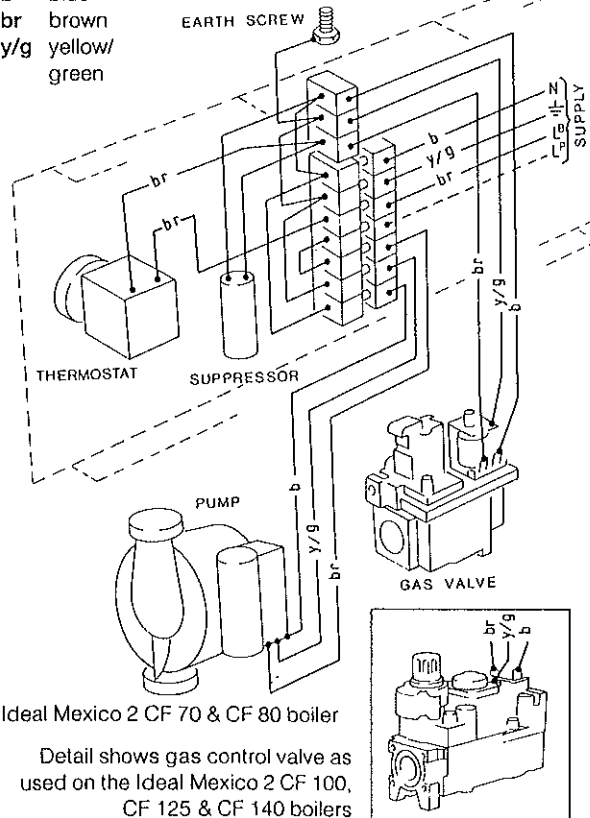
1. Controls that switch the system ON & OFF, e.g. a time switch **MUST** be wired in series, in the live mains lead to the boiler.
2. Controls that over-ride an ON/OFF control, e.g. a frost thermostat, **MUST** be wired into the mains lead in parallel with the control(s) to be over-ridden. Refer to Frame 19.
3. If a propriety system is used, follow the instructions supplied by the Manufacturer.

Note: If there are no external controls, the circulating pump **MUST** be wired into the control box.

15 PICTORIAL WIRING DIAGRAM

LEGEND

b blue
br brown
y/g yellow/
green



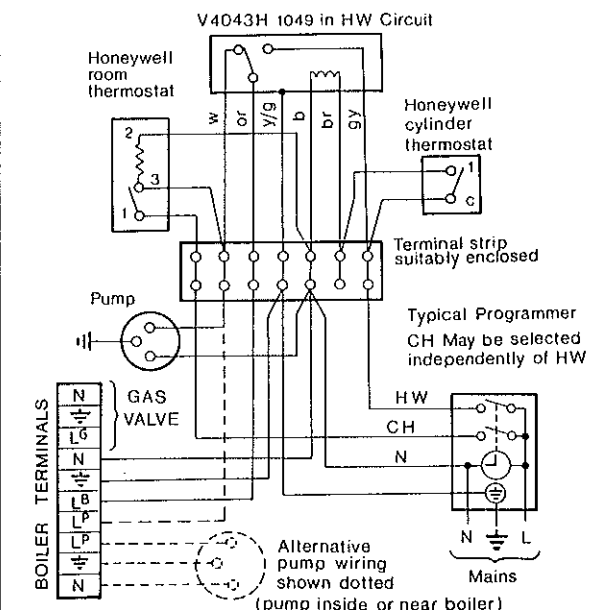
Ideal Mexico 2 CF 70 & CF 80 boiler

Detail shows gas control valve as used on the Ideal Mexico 2 CF 100, CF 125 & CF 140 boilers

16 HONEYWELL 'C' PLAN

Gravity H.W & pumped C.H.

1. SOME EARTH WIRES ARE OMITTED FOR CLARITY. ENSURE PROPER EARTH CONTINUITY WHEN WIRING.
2. Numbering of the thermostat terminals is specific to the manufacturer shown.



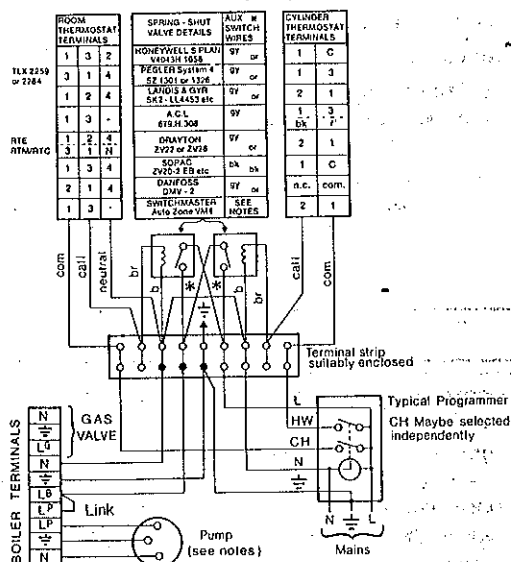
LEGEND

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

17 TWO SPRING CLOSED VALVES

Pumped only

1. SOME EARTH WIRES ARE OMITTED FOR CLARITY. ENSURE PROPER EARTH CONTINUITY WHEN WIRING.
2. This is a fully controlled system, therefore set the boiler thermostat to it's highest position.
3. Numbering of thermostat terminals is specific to the manufacturer indicated.
4. 'Switchmaster Autozone' valve also has grey & orange leads, but the ORANGE wire (not the grey wire) must be connected to the in-coming live supply.
5. Black dots denote alternative pump connections.



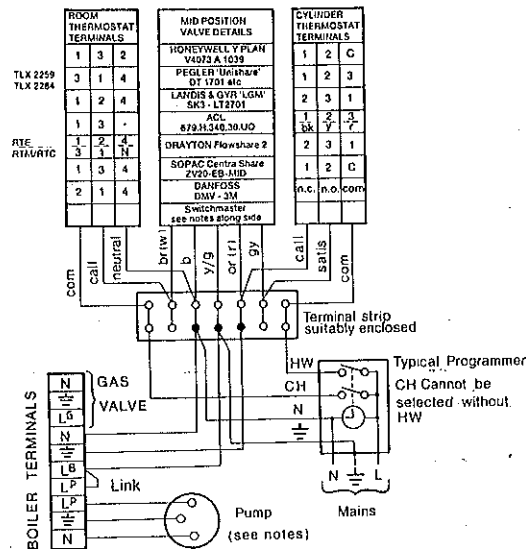
LEGEND

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

18 MID POSITION VALVE

Pumped only

1. SOME EARTH WIRES ARE OMITTED FOR CLARITY. ENSURE PROPER EARTH CONTINUITY WHEN WIRING.
2. This is a fully controlled system, therefore set the boiler thermostat to it's highest position.
3. Numbering of thermostat terminals is specific to the manufacturer indicated.
4. 'Switchmaster Midi' operates similarly, but the wiring is not identical- see the manufacturer's wiring diagram.
5. Black dots denote alternative pump connections.

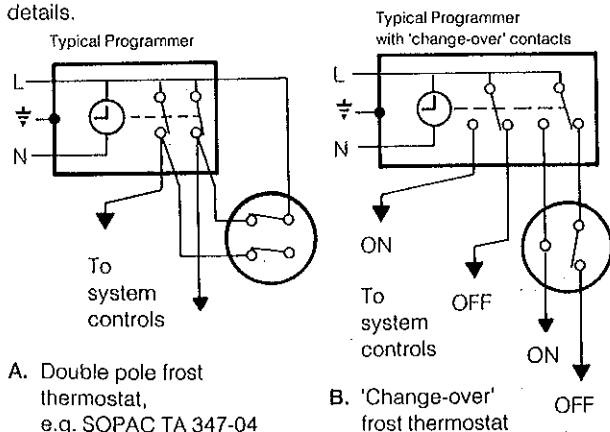


LEGEND

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

19 FROST PROTECTION

Central Heating systems fitted inside the house do not normally require frost protection, since the house acts a 'storage heater' & can normally be left at least 24 hrs without frost damage. However, if parts of the pipework run outside the house, or if the boiler will be left off for more than a day or so, then a frost 'stat' should be wired into the system. This is usually done at the programmer, in which case the programme selector switches are set to 'OFF' & all other controls MUST be left in the running position. The frost 'stat' should be sited in a cold place, but where it can sense heat from the system. Wiring should be basically as shown, with minimal disturbance to other wiring to the programmer. Designation of the terminals will vary, but the programmer & thermostat manufacturer's leaflets will give full details.



A. Double pole frost thermostat, e.g. SOPAC TA 347-04

B. 'Change-over' frost thermostat

Diagram A shows a double pole frost 'stat', which should suffice for all systems not using the 'OFF' terminals of the programmer. Diagram B shows a 'change-over' frost 'stat', which will cover most systems which use 'CH OFF'. However if the HW pipework is in an isolated part of the house, a 2nd frost 'stat' may be used to protect it. If in doubt, ask your Installer for advice.

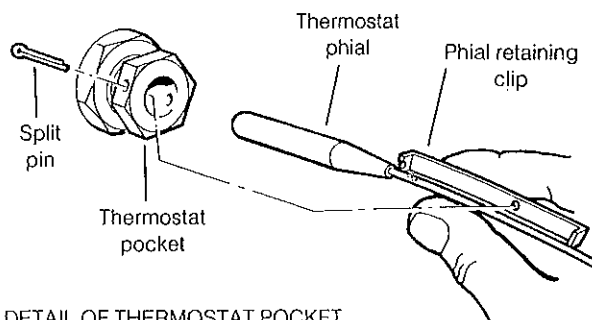
20 FITTING THE CASING

Refer to Frame 4 'Boiler Casing Removal' (pg. 6) for illustration of the procedure detailed below.

1. Offer up the R.H. side panel, locating it with the peg in the baseplate, & push the panel back.
2. Secure the panel to the baseplate and the flue collector using the screws previously removed.
3. Repeat steps 1 & 2 to refit the L.H. side panel.

IMPORTANT. Wiring within the boiler casing **MUST** be neatly secured with the cable straps provided & **MUST NOT** be allowed to touch the burner front plate, or the cleanout cover and the collector hood.

4. Place the top panel in position & push back.
5. Secure the top panel to the side panels using the screws previously removed.
6. Replace the control box cover & re-fit the control panel using the screws previously removed.
7. Insert the thermostat phial & phial retaining clip into the thermostat pocket.
Take care NOT to kink the thermostat capillary as it is unwound & secure it with the split pin- as shown.



DETAIL OF THERMOSTAT POCKET

21 COMMISSIONING & TESTING

(a) Electrical Installation

1. Checks to ensure electrical safety should be carried out by a competent person.
2. ALWAYS carry out the preliminary electrical system checks as detailed on the Instructions for the British Gas Multimeter, or a similar test meter.

(b) Gas Installation

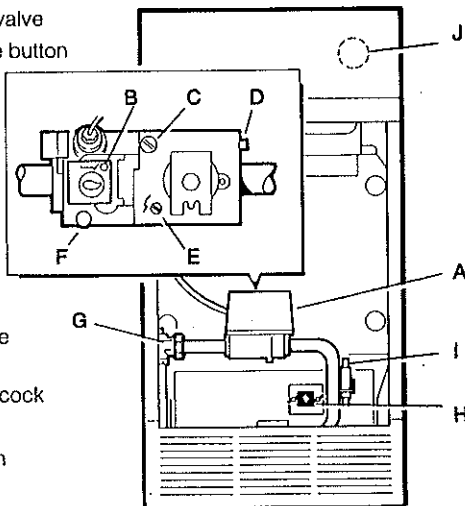
1. The whole of the gas installation, including the meter, should be inspected & tested for soundness, & purged in accordance with the recommendations of BS 6891: 1988.
WARNING: Whilst effecting the required gas soundness test & purging air from the gas installation, open all windows & doors, extinguish naked lights & DO NOT SMOKE.
2. Purging air from the gas installation may be expedited by loosening the union on the gas service cock and purging until gas is smelled.
3. Retighten the union and check for gas soundness.

22 INITIAL LIGHTING; CF 70 & CF 80 ONLY

LEGEND

- A. Gas control valve
- B. Control valve button
- C. Pilot pressure adjuster
- D. Burner pressure test nipple
- E. Main burner pressure adjuster
- F. Inlet pressure test nipple
- G. Gas service cock
- H. Sightglass
- I. Piezo ignition button
- J. Boiler thermostat knob

BOILER CONTROLS



Note. The pilot burner connection can be tested for gas soundness, refer to Frame 23.

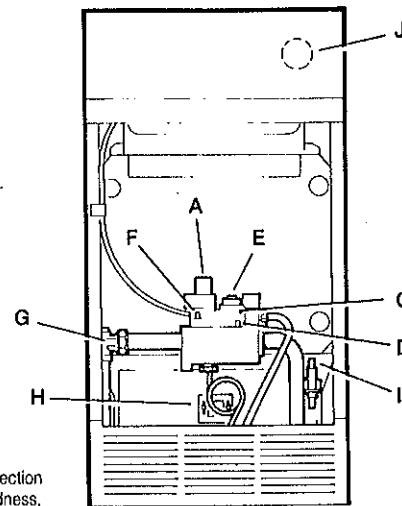
1. Connect the gas valve electrical leads.
2. Check that the gas service cock (G) is ON, & the boiler thermostat knob (J) is OFF.
3. Loosen the screw in the burner pressure test nipple (D) & connect a gas pressure gauge via a flexible tube.
4. Slide the gas control button (B) to the RIGHT until resistance is felt & then release it.
5. Push in & retain fully depressed the gas control button (B), press & release piezo ignition button (I) repeatedly until the pilot lights.
6. Hold the gas control button (B) depressed for 15 seconds after the pilot burner has ignited. If the pilot burner fails to remain alight at this stage repeat the procedure detailed above, but wait longer than 15 sec.s before releasing the gas control button (B).
7. Check the appearance of the pilot flame to ensure that it envelopes the tip of the thermocouple & is approximately 25mm (1 in.) long. The pilot flame is factory set but if adjustment is necessary refer to Frame 11- Servicing.
8. Switch the electricity supply ON & check that all external controls are calling for heat.
9. Turn the boiler thermostat knob (J) to position 6 & check that the burner cross-lights smoothly.
10. Test for gas soundness around the boiler gas components using leak detection fluid.
11. Operate the boiler for 10 minutes to stabilise the burner temperature. The boiler is pre-set at the factory to it's maximum nominal rating, but can be range rated to suit the sytem design requirements, refer to Table 2, page 2. If the burner pressure setting requires adjustment, turn the pressure adjusting screw (E) CLOCKWISE to DECREASE the pressure.
12. If the boiler output is set to MID or MINIMUM affix the appropriate indicator label, supplied, to the Data Plate (front of baseplate).
13. Immediately check that there is no spillage of combustion products from the draught diverter outlets by carrying out a spillage test as detailed in BS. 5440:1.
Note. This must be done before any building in.
14. Turn the boiler thermostat knob (J) to OFF.
15. Remove the pressure gauge & tube. Retighten the screw in the pressure test nipple, ensuring that a gas-tight seal is made.
16. Refit the gas control valve cover.

INITIAL LIGHTING; CF 100, CF 125 & CF 140 ONLY

LEGEND

- A. Gas control knob
- C. Pilot pressure adjuster
- D. Burner pressure test nipple
- E. Main burner pressure adjuster
- F. Inlet pressure test nipple
- G. Gas service cock
- H. Sightglass
- I. Piezo ignition button
- J. Boiler thermostat knob

BOILER CONTROLS



Note. The pilot burner connection can be tested for gas soundness, refer to Frame 23.

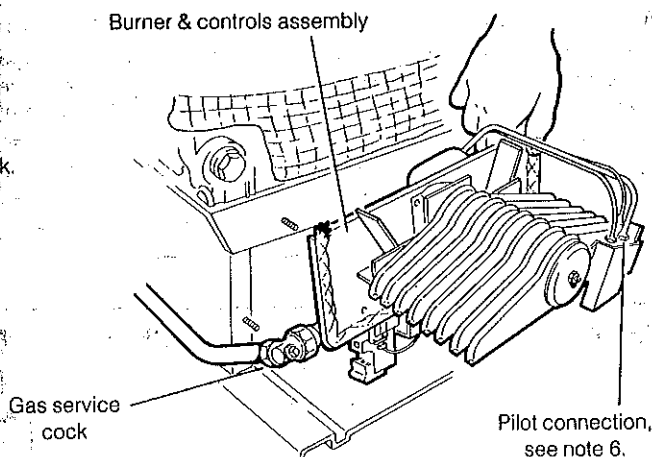
1. Connect the gas valve electrical leads & refit the cover.
2. Check that the gas service cock (G) is ON, & the boiler thermostat knob (J) is OFF.
3. Loosen the screw in the burner pressure test nipple (D) & connect a gas pressure gauge via a flexible tube.
4. Turn the gas control knob (A) CLOCKWISE until resistance is felt & then release it.
5. Push in & retain fully depressed the gas control knob (A). Press & release piezo ignition button (I) repeatedly until the pilot lights.
6. Hold the gas control knob (A) depressed for 15 seconds after the pilot has ignited. If the pilot burner fails to remain alight at this stage repeat the procedure detailed above, but wait longer than 15 seconds before releasing the gas control knob (A).
7. Check the appearance of the pilot flame to ensure that it envelopes the tip of the thermocouple & is approximately 25 mm (1 in.) long. The pilot flame is factory set but if adjustment is necessary refer to Frame 11- Servicing.
8. Switch the electricity supply ON & check that all external controls are calling for heat.
9. Turn the boiler thermostat knob (J) to position 6 & check that the burners cross-lights smoothly.
10. Test for gas soundness around the boiler gas components using leak detection fluid.
11. Operate the boiler for 10 min.s to stabilise burner temperature. The boiler is pre-set at the factory to it's maximum nominal rating, but can be range rated to suit the system design requirements, refer to Table 2, page 2. If the burner pressure setting requires adjustment, remove the protective cap & turn the pressure adjusting screw (E) ANTICLOCKWISE to DECREASE the pressure. Note: Always use a suitable screwdriver to avoid damaging the plastic head of the adjuster. Refit protective cap.
12. If the boiler output is set to MID or MINIMUM affix the appropriate indicator label, supplied, to the Data Plate (front of baseplate).
13. Immediately check that there is no spillage of combustion products from the draught diverter outlets by carrying out a spillage test as detailed in BS. 5440:1.
Note. This must be done before any building in.
14. Turn the boiler thermostat knob (J) to OFF.
15. Remove the pressure gauge and tube. Retighten the screw in the pressure test nipple, ensuring that a gas-tight seal is made.

23 PILOT BURNER CONNECTION GAS SOUNDNESS

RS 70 & RS 80 boiler shown

1. Turn the gas service cock to OFF and undo the union nut.
2. Remove the four wing nuts and withdraw the burner and controls assembly, complete, from the boiler.
3. Invert the burner assembly & re-connect to the gas service cock.
4. Turn the gas service cock to ON.
5. Light the pilot burner- refer to Frame 22.
6. Test for gas soundness around the pilot burner connection, using leak detection fluid.
7. Turn the gas service cock to OFF, & return the burner & controls assembly to the normal working position.

Burner & controls assembly



24 GENERAL CHECKS

Make the following checks for correct operation;

1. Turn the boiler thermostat OFF and ON to check that the main burner lights and extinguishes in response.
2. Check that the programmer, if fitted, and all other system controls function correctly. Operate each control separately and check that the main burner or circulating pump, as the case may be, responds.

3. Flame Failure Device

Check the operation of the flame failure device in the gas control valve as follows;

- (a) Extinguish the pilot flame by closing the gas service cock and note the time taken for the flame failure device to shut down, identified by a click within the gas control valve. This MUST NOT be longer than 60 seconds.

- (b) Open the gas service cock and re-light the pilot.

- (c) Turn the boiler thermostat ON and the burner should light.

- (d) Slide or turn the gas control knob to the OFF position- refer to Frame 22. The main burner and pilot flame should shut down immediately.

Note: A latch in the gas control valve provides a safety delay period of approximately 30 seconds before the boiler can be re-lit.

4. Water Circulation System

- (a) With the system HOT, examine all water connections for soundness.

- (b) With the system still hot turn off the gas, water and electricity supplies to the boiler and drain down in order to

complete the flushing process.

- (c) Re-fill and vent the system, clear all air locks and again check for water soundness.

- (d) Balance the system.

Finally

Set the controls to the User's requirements, refit the lower front panel and grille assembly (2 screws) and close the controls door.

Notes:

- (a) If an optional Programmer Kit is fitted, refer to the Programmer Kit Installation and User's Instructions.

- (b) The temperatures quoted below are approximate and may vary between installations.

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

25 HANDING OVER

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

1. Hand the User's Instructions to the Householder and explain his/ her responsibilities under the Gas Safety (Installation and Use) Regulations 1984.
2. Draw attention to the Lighting Instruction label affixed to the inside of the controls door.
3. Explain and demonstrate the lighting and shutting down procedures.
4. The operation of the boiler and use or 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.

5. Explain the function and use of the boiler thermostat and external controls.
6. Explain and demonstrate the function of time and temperature controls/ radiator valves, etc. for the economic use of the system.
7. If an optional Programmer Kit is fitted, then draw attention to the Programmer Kit User's Instructions and hand them to the Householder.
8. Stress the importance of regular servicing by the Local Gas Region or by a qualified Heating Engineer, and that a comprehensive service should be carried out AT LEAST ONCE A YEAR.

1 SCHEDULE

THE FOLLOWING SHOULD BE CARRIED OUT AT PERIODS NOT EXCEEDING ONE YEAR.

- Light the boiler and carry out a pre-service check, noting any operational faults.
- Clean the main burner(s) and lint gauze(s).
- Clean the grille assembly lint gauze (CF 100, CF 125 & CF 140 ONLY).
- Clean the heat exchanger.
- Clean the main injector(s).
- Check the condition of the thermocouple.
- Check that the flue is unobstructed and that the flue system, including the flue clean-out cover, is sealed correctly.
- If the appliance has been installed in a compartment check that the ventilation areas are clear.

THE SERVICING PROCEDURES ARE COVERED MORE FULLY IN FRAMES 2 TO 11 & MUST BE CARRIED OUT IN SEQUENCE.

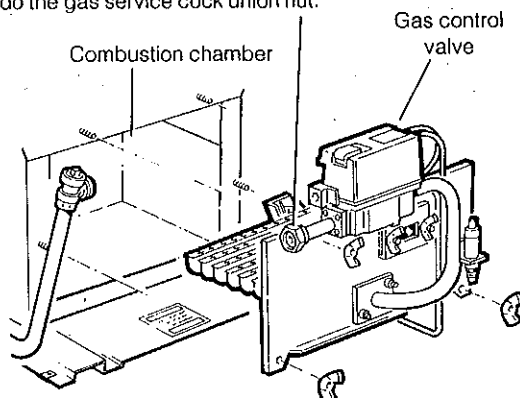
WARNING. Always turn OFF the gas supply at the gas service cock and switch OFF and DISCONNECT the electricity supply to the appliance BEFORE SERVICING.

IMPORTANT. After completing servicing or exchange of components always test for gas soundness & carry out functional checks as appropriate & test for spillage, (Frame 22 'Installation'). Note: It may be necessary to remove the boiler casing to carry out the spillage test, refer to Frame 4 'Installation'.

3 BURNER & CONTROLS ASSEMBLY REMOVAL

CF 70 & CF 80 SHOWN

- Undo the gas service cock union nut.

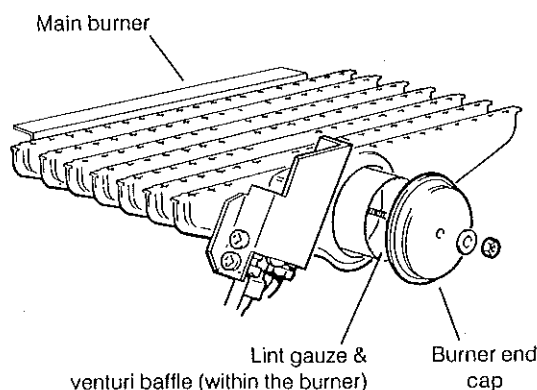


- Remove the four wing nuts and withdraw the burner and controls assembly, complete, from the boiler.

4 LINT GAUZE REMOVAL.

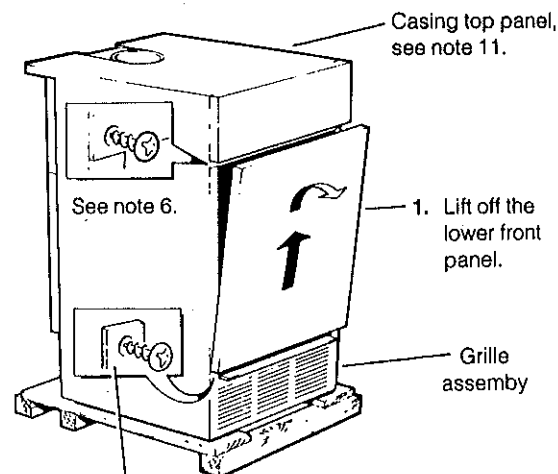
CF 70 & CF 80 Boilers ONLY.

- Remove the burner end cap.



- Withdraw the venturi baffle and lint gauze.

2 BOILER CASING FRONT REMOVAL

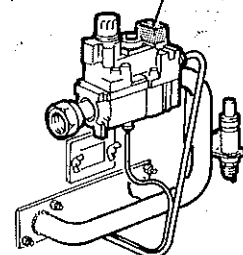
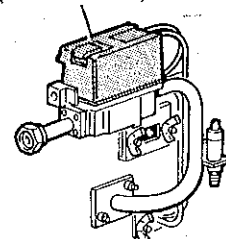


- Remove the 2 securing screws & lift off the grille assembly.

VIEW OF GAS CONTROL VALVE (Behind the lower front panel)

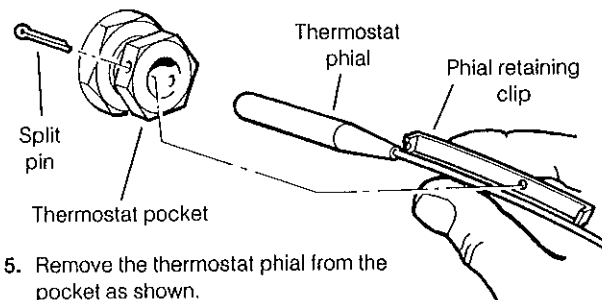
Gas valve cover (RS 70 & RS 80)

Gas valve electrical cover (RS 100, RS 125 & 140)



- Remove the gas valve cover (CF 70 & CF 80) or electrical cover (RS 100, RS 125 & RS 140) & disconnect the electrical leads.
- Release the gas valve lead from the retaining clip.

DETAIL OF THERMOSTAT POCKET



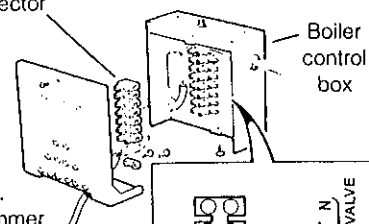
- Remove the thermostat phial from the pocket as shown.
- Remove the two screws securing the control panel and disengage the panel by lowering and pulling it forward.

VIEW OF BOILER CONTROL BOX & TERMINAL WIRING

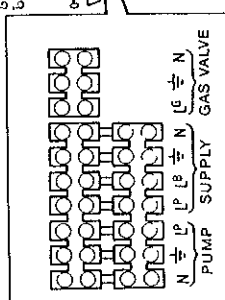
- Remove the securing screw and lift off the control box cover.

Plug-in connector

- Remove the plug-in connector and withdraw the electrical leads.



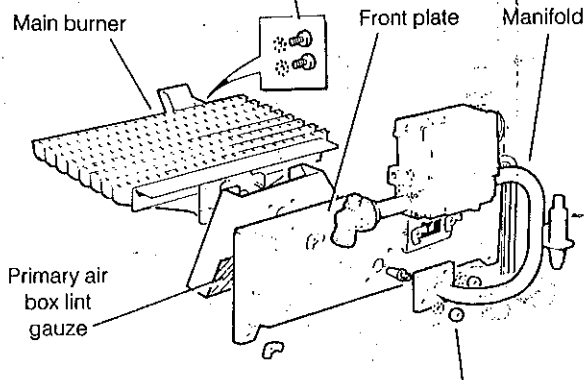
- Disconnect the programmer if fitted. Refer to the Programmer Installation Instructions.
- Release the two screws securing the programmer connection box to the back of the programmer.
- Disengage the box by unhooking the lugs from the slots.
- Place the control panel safely to one side.



- Remove the 2 securing screws & lift off the casing top panel.

5 EXTERNAL LINT GAUZE REMOVAL CF 80 Boilers ONLY.

1. Remove the two screws securing the pilot burner & pull the assembly clear of the main burner.



2. Remove the two nuts & washers securing the burner to the front plate & manifold. Withdraw the burner.
3. Withdraw the primary air box with the integral lint gauze.

7 CLEANING THE BURNER ASSEMBLY

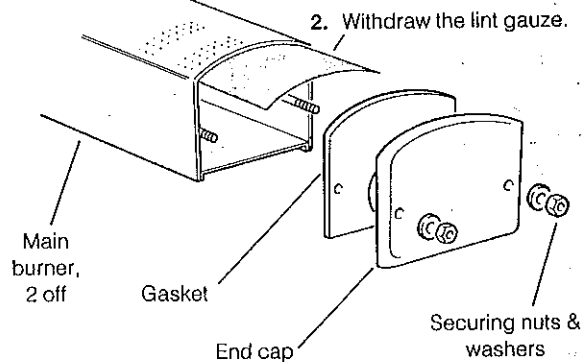
1. Clean the lint gauze(s) to remove any deposits of lint, fluff, etc.
2. Brush off any deposits that may have fallen onto the burner head, ensuring that the flame ports are unobstructed. Remove any debris that may have collected on the assembly components.
Note. Brushes with metallic bristles **MUST NOT** be used.
Re-place lint gauzes and end plates in reverse order.
Note. CF 80 ONLY: Do not replace external gauze until the main burner injector has been checked.
3. Remove the main burner injector(s). Ensure that there is no blockage or damage. Clean or renew as necessary.
4. Refit the injector(s) using an approved jointing compound.
5. Inspect the pilot, thermocouple and spark electrode; ensure that they are clean and in good condition.
In particular check that:
 - (a) The pilot burner is clean and unobstructed.
 - (b) The spark electrode is clean and undamaged.
 - (c) The spark lead is in good condition & securely connected.
 - (d) The spark gap is correct, refer to Frame 16.
 - (e) The thermocouple tip is not burned or cracked.
 - (f) The position of the thermocouple relative to the pilot burner correct, refer to Frame 16.
 - (g) The thermocouple terminal at the gas valve is clean.

Clean or renew components as necessary.

6 LINT GAUZE REMOVAL. CF 100, CF 125 & CF 140 Boilers ONLY

From each burner,

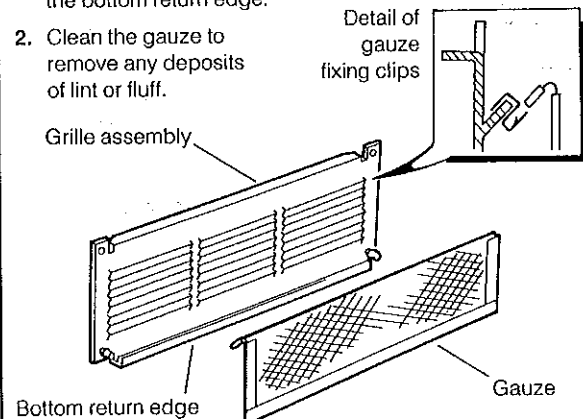
1. Remove the two securing nuts and washers and carefully remove the end cap and gasket.
Note. The end cap fastenings also retain the burner body, so take care NOT to put a strain on the pilot burner gas pipe, or burner air guide baffle fixed to the underside of the burner bodies.



8 CLEANING GRILLE ASSEMBLY LINT ARRESTING GAUZE

CF 100, CF 125 & CF 140 boilers ONLY

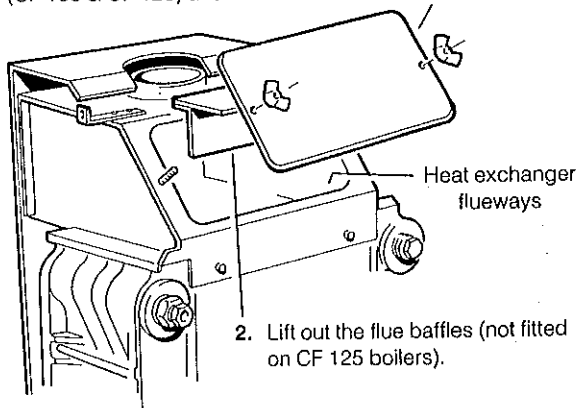
1. Unclip the gauze from the grille assembly and lift it clear of the bottom return edge.
2. Clean the gauze to remove any deposits of lint or fluff.



3. Refit the gauze by entering the bottom edge behind the grille return edge and engaging the top in the clips.

9 CLEANING THE FLUEWAYS

1. Remove the two wing nuts (CF 70, CF 80 & CF 140) or bolts (CF 100 & CF 125) and lift off the cleanout cover.



2. Lift out the flue baffles (not fitted on CF 125 boilers).
3. Remove all loose deposits from the heat exchanger, especially from between the fins, using a suitable brush. Remove all debris from the combustion chamber base.
4. Check that the flue outlet is unobstructed.

10 RE-ASSEMBLY

Re-assemble the boiler in the following order:

1. Replace the flue baffles into the boiler flueways ensuring that they are correctly repositioned, refer to Frame 5 'Installation'.
2. Refit the flue cleanout cover, renewing any damaged or deteriorating sealing gasket.
3. Refit the casing top panel.
4. Re-connect the electrical wiring and refit the controls panel, ensuring that the thermostat phial and phial retaining clip are correctly located in the thermostat pocket and secured by the split pin. Refer to Frame 2.
5. Check the sight glass in the front plate. Clean or renew as necessary.
6. Renew any damaged or deteriorating front plate gasket.
7. Refit the burner and controls assembly.
8. Reconnect the gas service cock.
9. Refit the grille assembly.

11 GAS PRESSURE ADJUSTMENT**2. Pilot pressure**

Light the boiler and check that the flame is 25 mm (1 in.) long. Refer to Frame 16. The pilot adjuster screw is factory set to maximum and no further adjustment should be necessary. However if the pilot flame length is incorrect proceed as follows:

- Slide the gas control button to the RIGHT (CF 70 & CF 80) or turn the gas control knob CLOCKWISE (CF 100, CF 125 & 140) until resistance is felt & then release it.
- Remove the gas control cover (CF 70 & CF 80 ONLY).
- Turn pilot pressure adjuster screw CLOCKWISE until CLOSED.
- Turn the pilot pressure adjuster screw ANTI-CLOCKWISE four full turns to give maximum setting.
- Re-light the pilot. If the pilot flame length is still incorrect replace the pilot injector. Refer to Frame 17.

2. Main Burner pressure

After any servicing, reference should be made to Table 2, which quotes details of the rated output with the related burner setting pressure and heat input. Any required adjustments, should be made using the pressure adjustment screw- refer to 'Initial Lighting' Frame 22- Installation. Re-fit the gas control cover (CF 70 & CF 80 Only). Finally, refit the lower front panel.

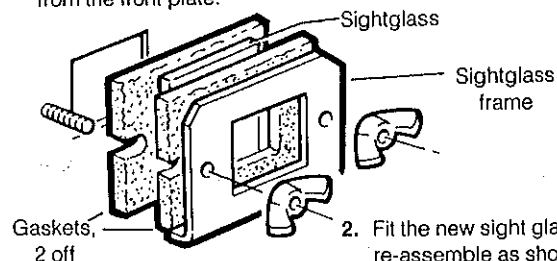
COMPONENT REPLACEMENT

To replace the components in Frames 12 to 23 the lower front panel & grille assembly must be removed. Refer to Frame 2.

For replacement of pumps or programmer units, refer to the Pump Kit or Programmer Kit Instructions.

12 SIGHTGLASS REPLACEMENT

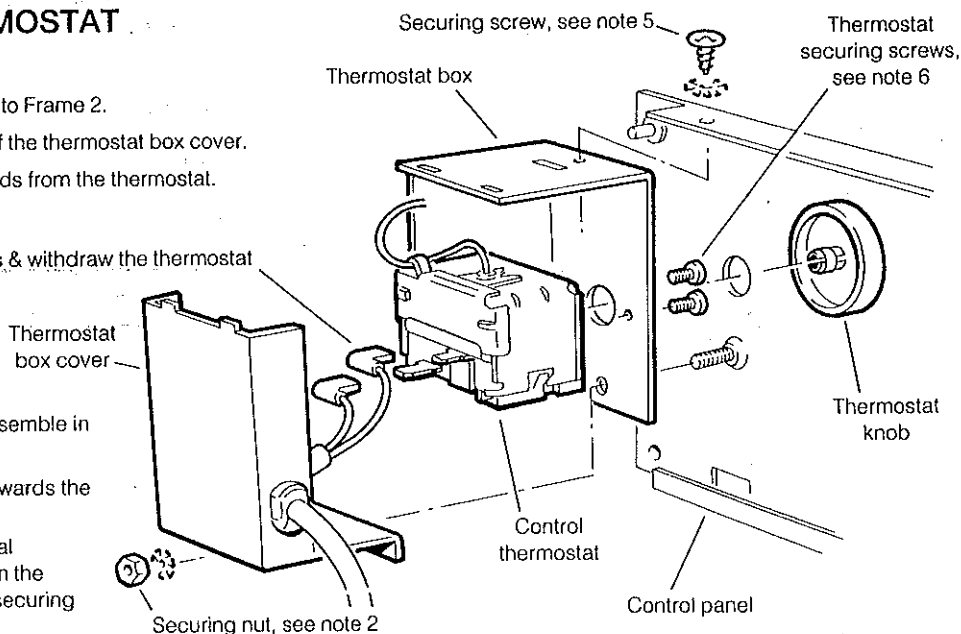
- Unfasten the two wing nuts & washers. Remove the assembly from the front plate.



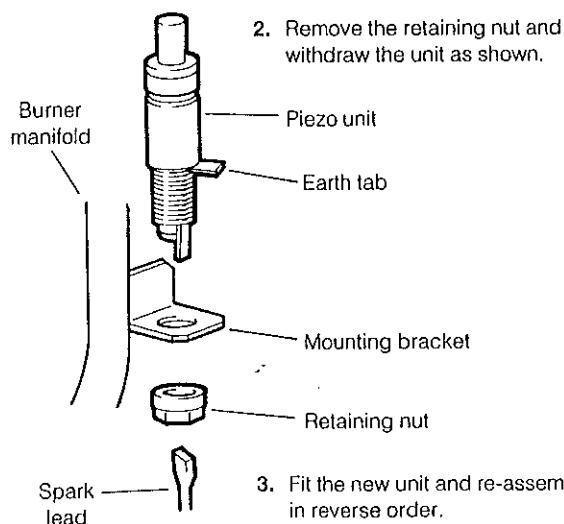
- Fit the new sight glass & re-assemble as shown.
- Retighten the two wing nuts to ensure an airtight seal, but DO NOT OVERTIGHTEN.

13 CONTROL THERMOSTAT REPLACEMENT

- Remove the control panel. Refer to Frame 2.
- Remove the securing nut & lift off the thermostat box cover.
- Disconnect the two electrical leads from the thermostat.
- Pull off the thermostat knob.
- Remove the top securing screws & withdraw the thermostat box.
- Remove the two securing screws & withdraw the thermostat.
- Fit the new thermostat and re-assemble in reverse order, ensuring that:
 - The thermostat capillary is towards the top of the box.
 - The thermostat phial and phial retaining clip are in position in the thermostat pocket BEFORE securing with the split pin.

**14 PIEZO UNIT REPLACEMENT**

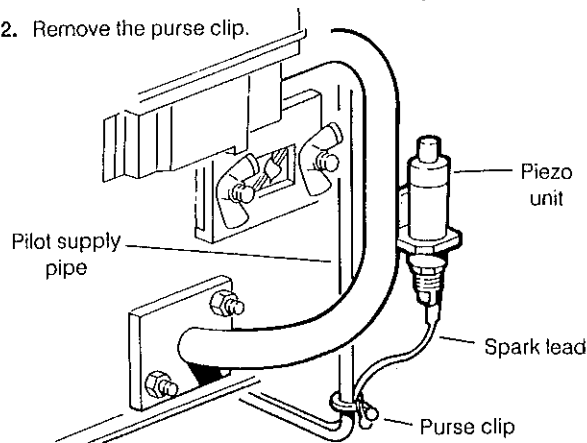
- Disconnect the spark lead from the piezo unit body.



- Fit the new unit and re-assemble in reverse order.

15 SPARK LEAD REPLACEMENT

- Remove the burner and controls assembly. Refer to Frame 3.
- Remove the purse clip.



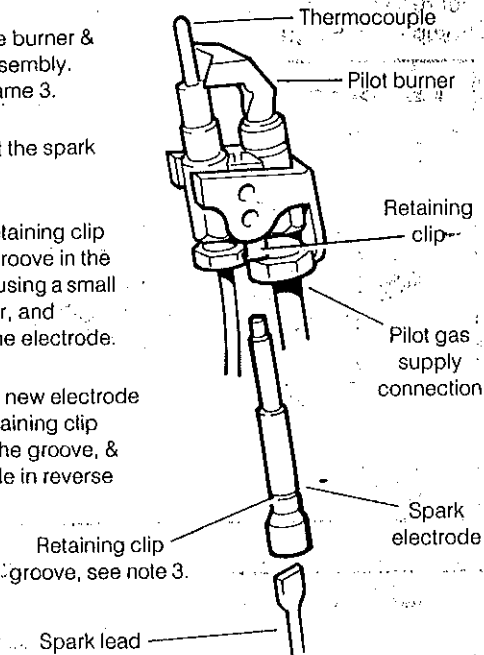
- Disconnect the lead from the base of the electrode and the piezo unit, and withdraw the lead.
- Fit the new lead and re-assemble in reverse order.

16 SPARK ELECTRODE REPLACEMENT. Showing pilot flame length & spark gap

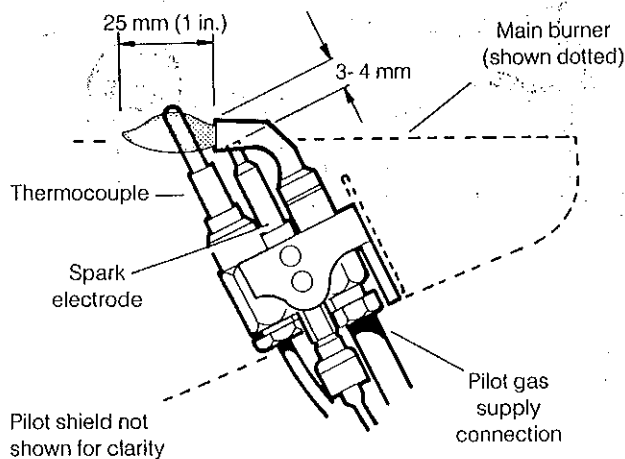
Ideal Mexico Super 2 CF 70 & CF 80 boilers ONLY

DETAIL OF PILOT BURNER ASSEMBLY
(Main burner not shown)

1. Remove the burner & controls assembly. Refer to Frame 3.
2. Disconnect the spark lead.
3. Pry the retaining clip out of the groove in the electrode, using a small screwdriver, and withdraw the electrode.
4. Push in the new electrode until the retaining clip locates in the groove, & re-assemble in reverse order.



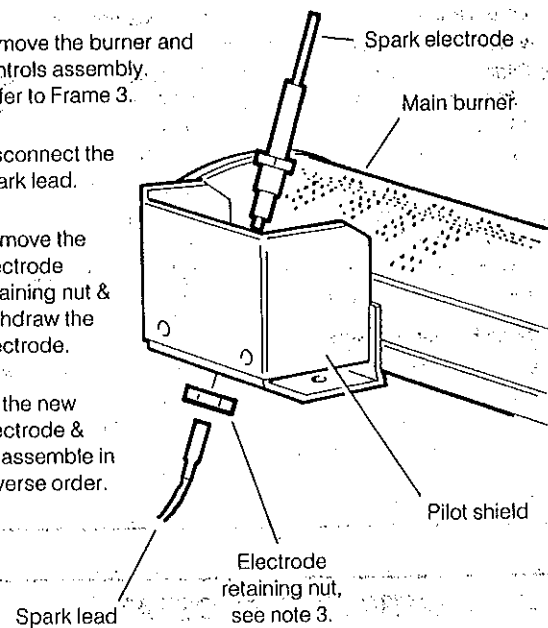
DETAIL OF PILOT FLAME LENGTH & SPARK GAP



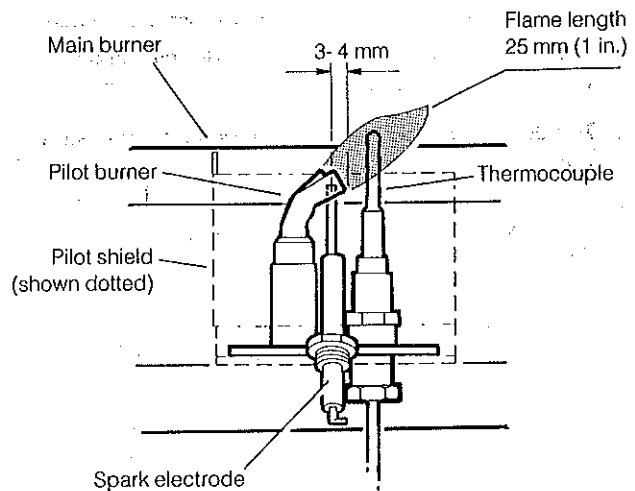
Ideal Mexico Super 2 CF 100, CF 125 & CF 140 boilers ONLY

DETAIL OF PILOT BURNER ASSEMBLY

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Disconnect the spark lead.
3. Remove the electrode retaining nut & withdraw the electrode.
4. Fit the new electrode & re-assemble in reverse order.



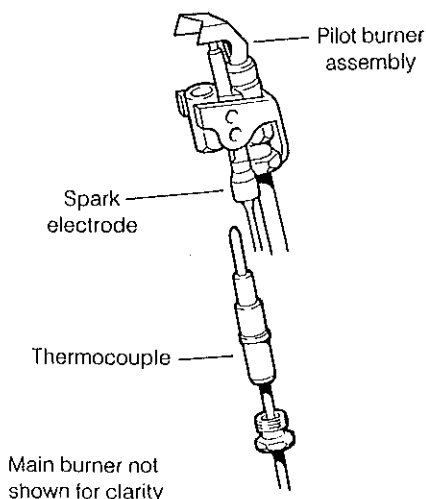
DETAIL OF PILOT FLAME LENGTH & SPARK GAP



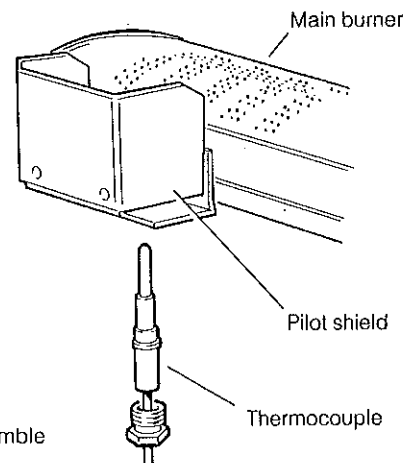
17 THERMOCOUPLE REPLACEMENT

DETAIL OF THERMOCOUPLE:
CF 70 & CF 80 BOILERS ONLY

1. Remove the burner and controls assembly. Refer to Frame 3.
2. CF 70 and CF 80 ONLY. Remove the spark electrode. Refer to Frame 16.
3. Remove the purse clip.
4. Undo the thermocouple connection at the pilot burner and pull the thermocouple clear.
5. Undo the thermocouple connection at the gas valve and withdraw the thermocouple.
6. Fit the new thermocouple and re-assemble in reverse order.



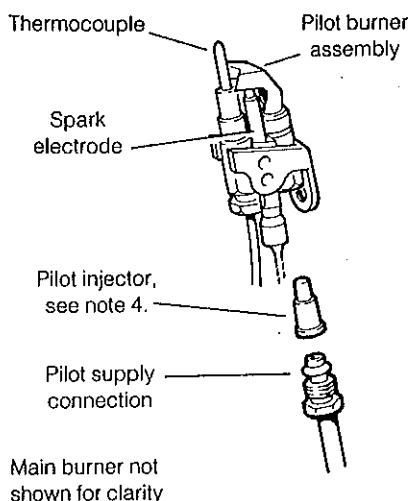
DETAIL OF THERMOCOUPLE:
CF 100, CF 125 & CF 140 BOILERS ONLY



Note: Avoid sharp bends in the thermocouple lead and ensure that it follows the same route as previously.

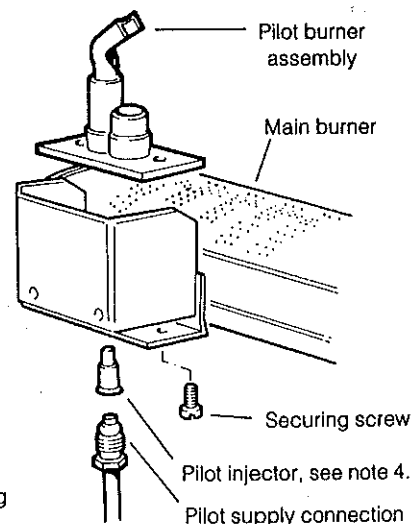
18 PILOT BURNER REPLACEMENT

DETAIL OF PILOT BURNER:
CF 70 & CF 80 BOILERS ONLY



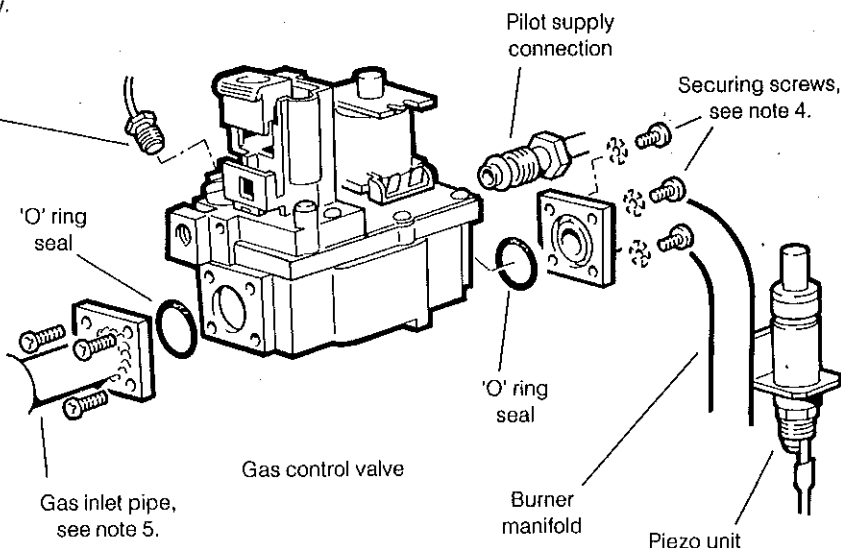
1. Remove the burner and controls assembly. Refer to Frame 3.
2. Remove the spark electrode. Refer to Frame 16.
3. Undo the thermocouple connection & pull the thermocouple clear. Refer to Frame 17.
4. Undo the pilot supply connection and ease clear of the pilot burner. DO NOT lose the pilot injector which is a push fit in the pilot burner housing.
5. Remove the two securing screws & washers and withdraw the pilot burner.
6. Fit the new pilot burner and re-assemble in reverse order ensuring that:
 - (a) The injector is in position when refitting the pilot supply.
 - (b) A gas-tight joint is made.
 - (c) The spark gap is correct. Refer to Frame 16.

DETAIL OF PILOT BURNER:
RS 100 & RS 125 BOILERS ONLY



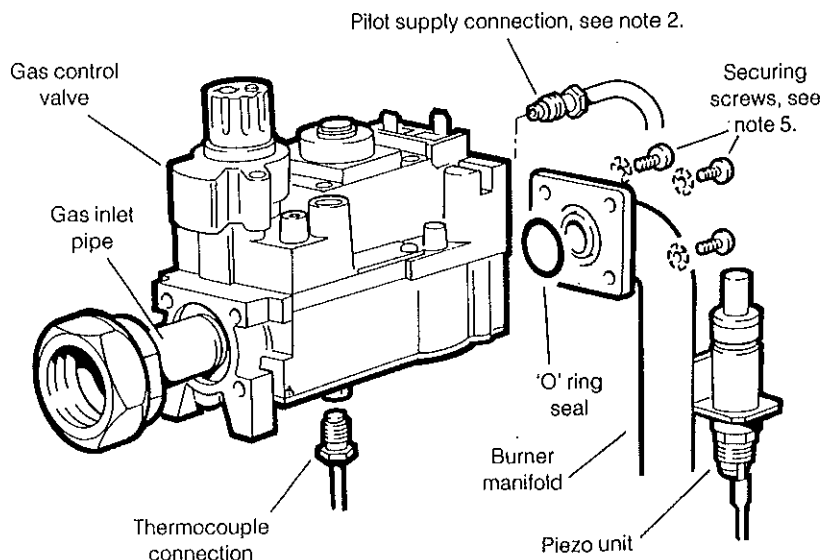
19 GAS VALVE REPLACEMENT. CF 70 & CF 80 Boilers ONLY.

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Undo the pilot supply connection.
3. Undo the thermocouple connection.
4. Remove the four securing screws and withdraw the valve from the burner manifold.
5. Transfer the gas inlet pipe to the new valve.
6. Fit the new gas valve ensuring that;
 - (a) The valve is fitted the right way round- an arrow engraved on the valve indicates the direction of flow.
 - (b) The sealing 'O' rings supplied with the valve are correctly fitted at the inlet and outlet flanges.



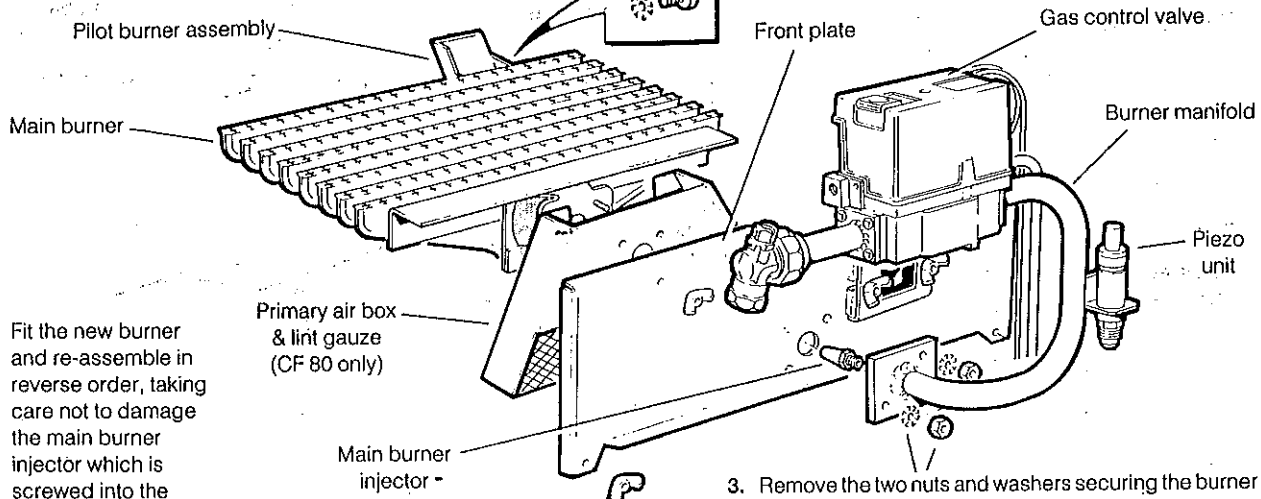
20 GAS VALVE REPLACEMENT. CF 100, CF 125 & CF 140 Boilers ONLY.

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Undo the pilot supply connection.
3. Undo the thermocouple connection.
4. Unscrew the gas inlet pipe from the valve.
5. Remove the 4 securing screws and withdraw the valve from the burner manifold.
6. Fit the new gas valve ensuring that
 - (a) The valve is fitted the right way round- an arrow engraved on the valve indicates the direction of flow.
 - (b) The sealing 'O' ring supplied with the valve is correctly fitted at the outlet flange.
 - (c) An approved jointing compound is used when re-connecting the gas inlet pipe.



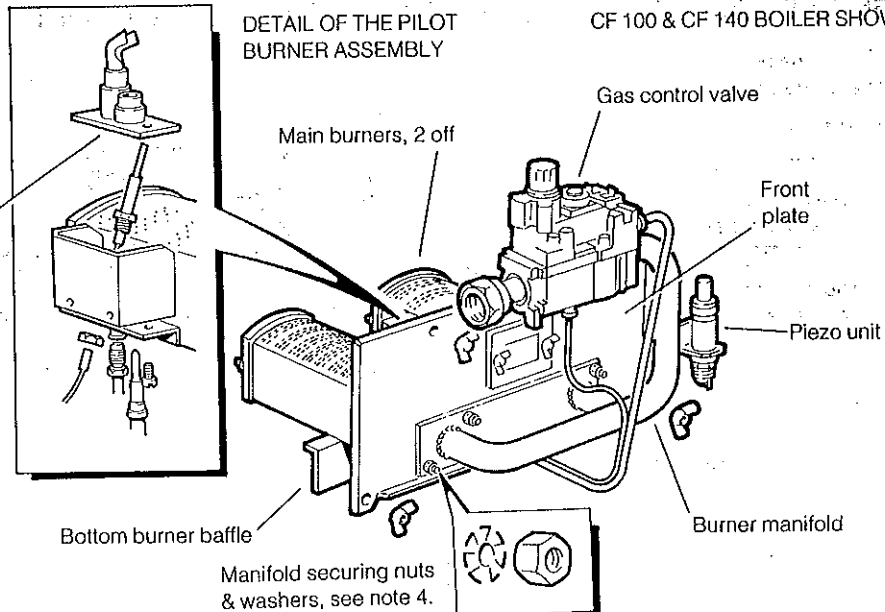
21 MAIN BURNER REPLACEMENT. CF 70 & CF 80 Boilers ONLY.

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Remove the two screws securing the pilot burner and pull the assembly clear of the main burner.
3. Remove the two nuts and washers securing the burner to the front plate and manifold. Withdraw the burner.
4. Fit the new burner and re-assemble in reverse order, taking care not to damage the main burner injector which is screwed into the burner manifold.



MAIN BURNER REPLACEMENT. CF 100, CF 125 & CF 140 Boilers ONLY.

1. Remove the burner and controls assembly. Refer to Frame 3.
2. Remove the two nuts and washers securing the bottom burner baffle, and remove the baffle.
3. Remove the pilot burner assembly. Refer to Frame 18 (CF 100 & CF 140- R.H burner, CF 125- L.H. burner).
4. Remove the nuts and washers securing the burner(s) to the front plate and manifold. Withdraw the burner.
5. Fit the new burner(s) and re-assemble in reverse order, taking care not to damage the main burner injector(s) screwed into the burner manifold.

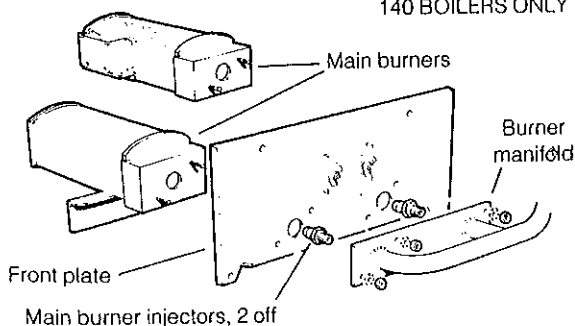


22 MAIN BURNER INJECTOR REPLACEMENT

Refer to Frame 21- 'Servicing' or Frames 25 & 26- 'Exploded Views' for illustration of the procedure detailed below.

1. Remove the burner and controls assembly. Refer to Frame 3.
2. CF 80 ONLY. Remove the external lint gauze, refer to Frame 5.
3. Unscrew the burner injector(s) from the manifold.
4. Fit the new injector(s) using an approved jointing compound, and re-assemble in reverse order.

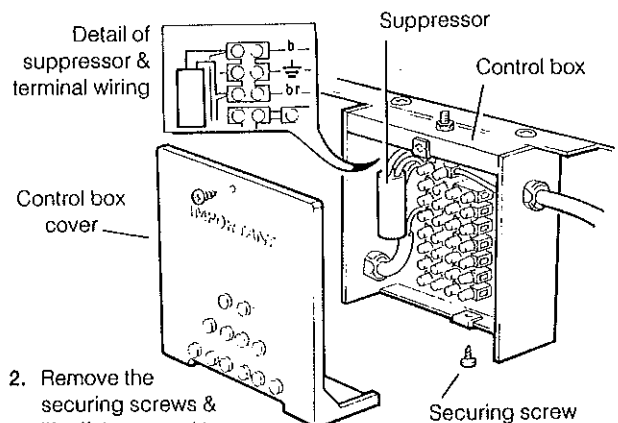
DETAIL OF MAIN BURNER INJECTORS- CF 100, CF 125 & CF 140 BOILERS ONLY



23 SUPPRESSOR REPLACEMENT

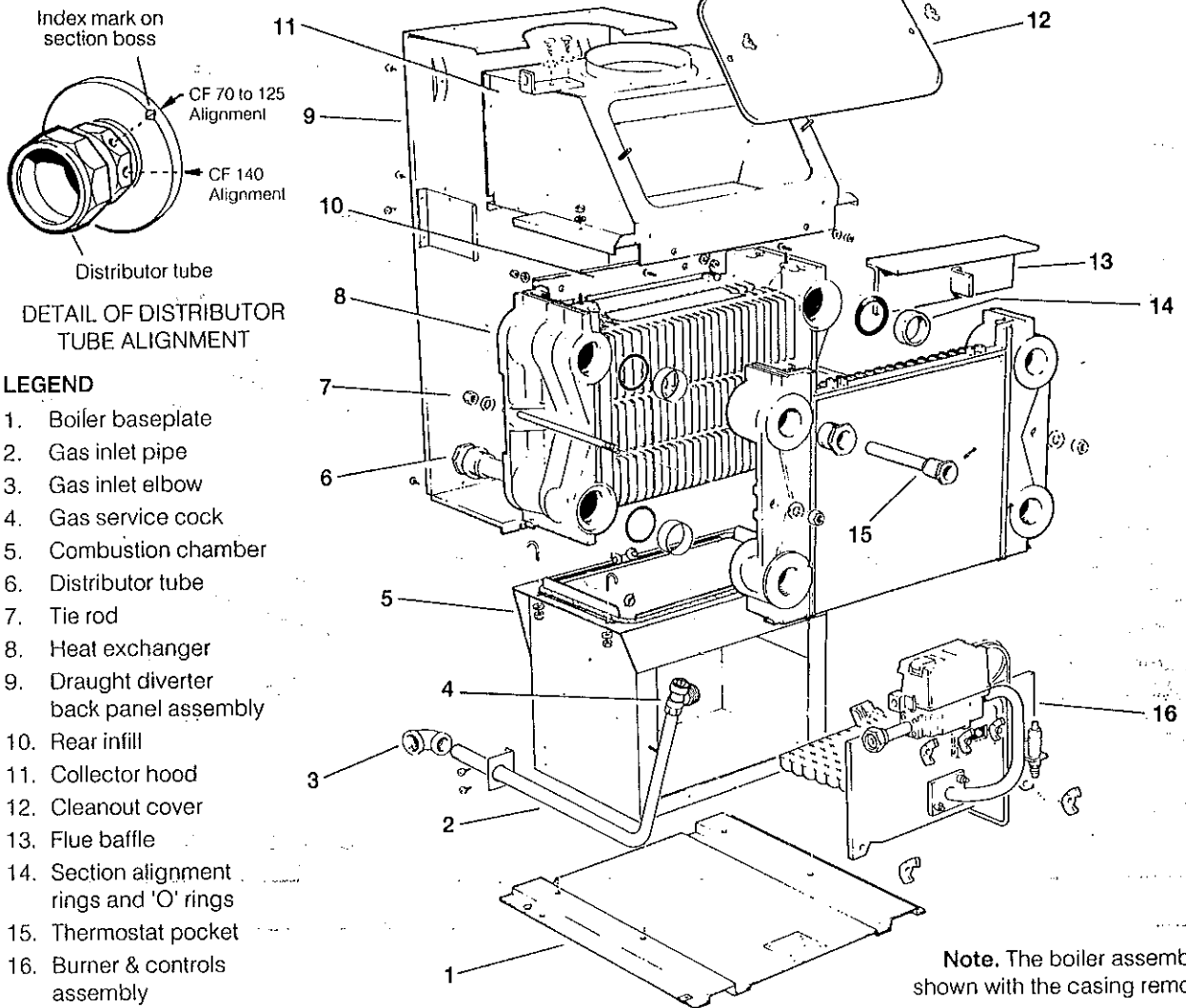
1. Remove the control panel. Refer to Frame 2.

2. Remove the securing screws & lift off the control box cover.
3. Disconnect the suppressor leads from the terminal strip and withdraw the suppressor.
4. Fit the new suppressor and re-assemble in reverse order, ensuring that all electrical connections are correctly re-made.

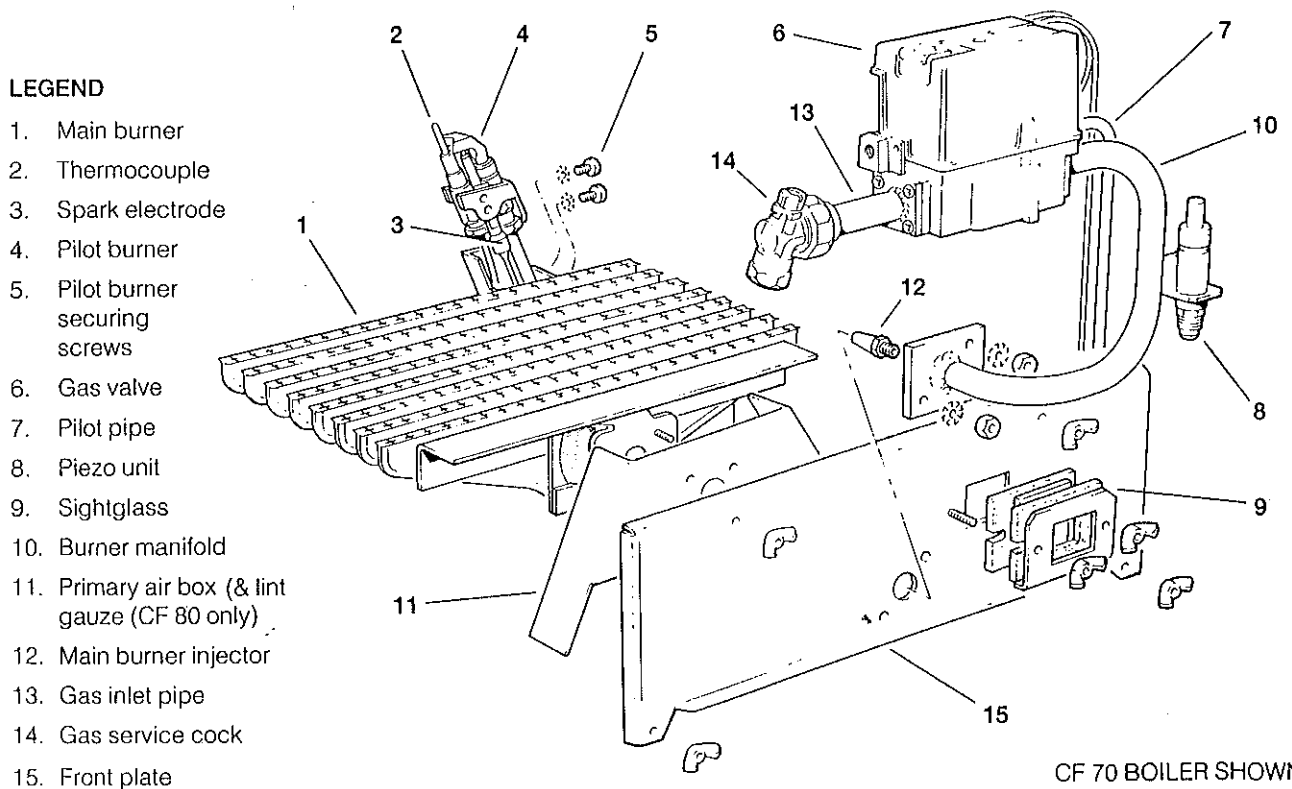


24 BOILER ASSEMBLY- Exploded View.

Ideal Mexico 2 CF 80 Shown



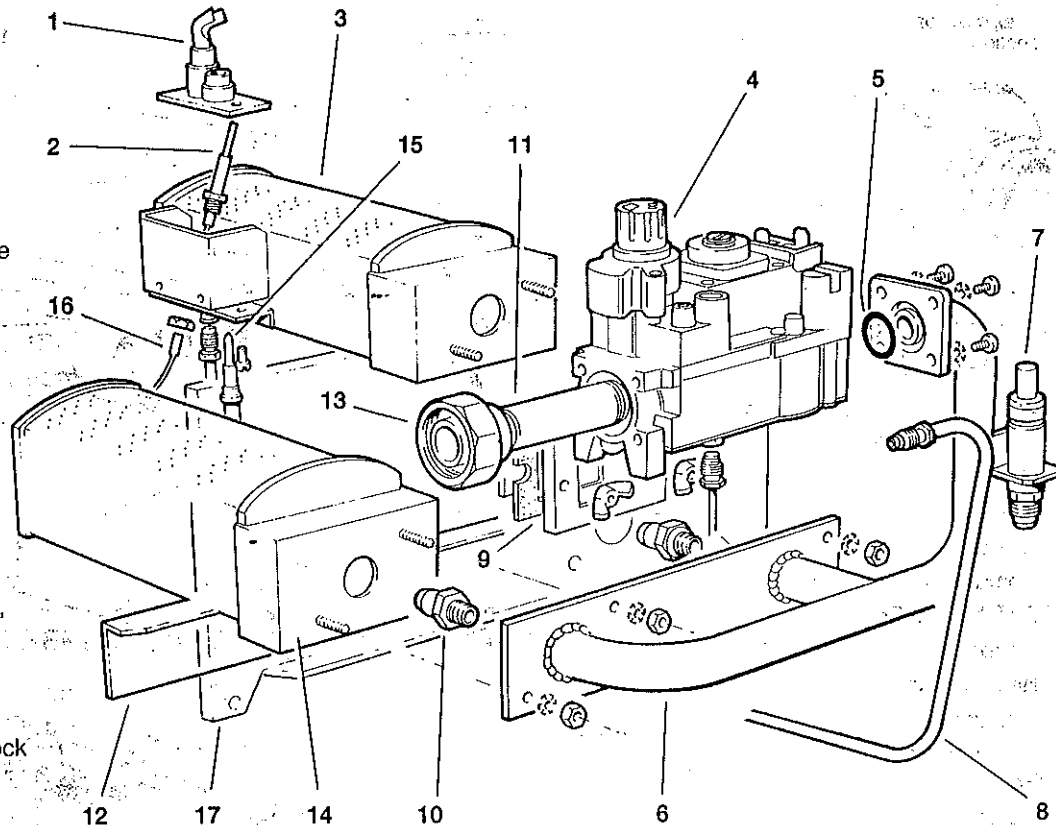
25 BURNER & CONTROLS ASSEMBLY- Exploded View. CF 70 & CF 80 Boilers ONLY



26 BURNER & CONTROLS ASSEMBLY- Exploded View. CF 100, CF 125 & CF 140 Boilers ONLY

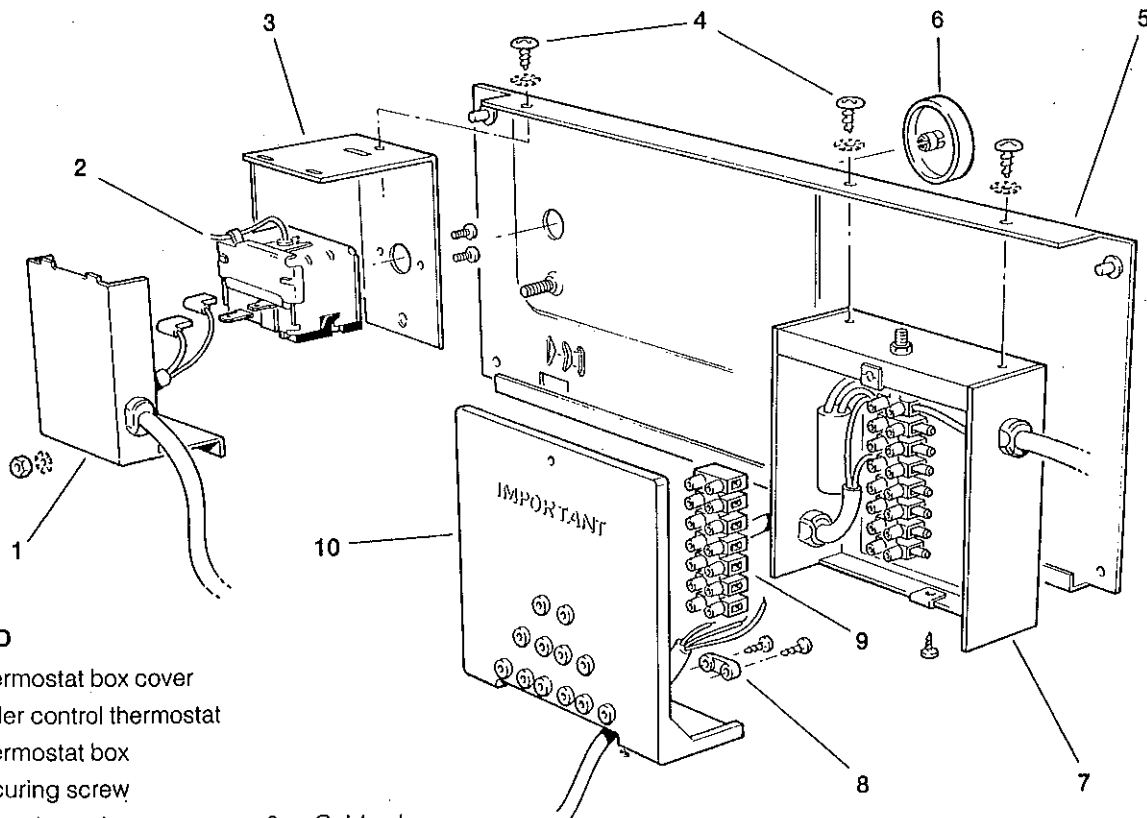
LEGEND

1. Pilot burner
2. Spark electrode
3. R.H. burner
4. Gas valve
5. 'O' ring seal
6. Burner manifold
7. Piezo unit
8. Pilot pipe
9. Sightglass
10. Burner injector, 2 off
11. Gas inlet pipe
12. Burner baffle
13. Gas service cock
14. L.H. burner
15. Thermocouple
16. Spark lead
17. Front plate



CF 100 & CF 140 BOILER SHOWN

27 BOILER CONTROL PANEL- Exploded View



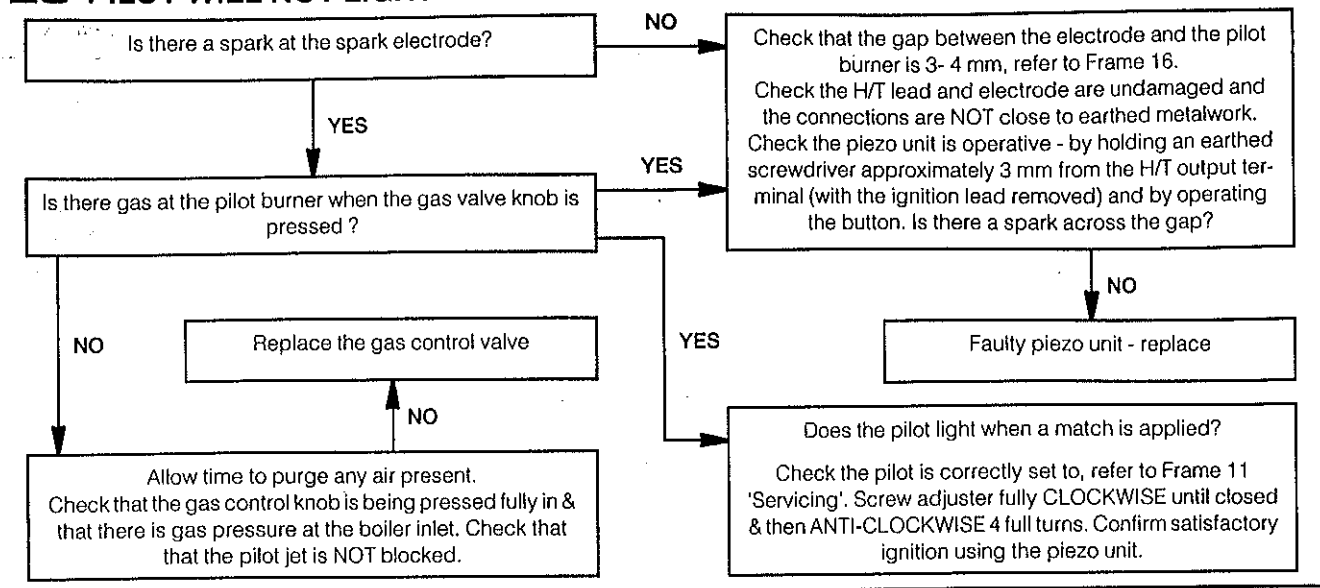
LEGEND

1. Thermostat box cover
2. Boiler control thermostat
3. Thermostat box
4. Securing screw
5. Control panel
6. Thermostat knob
7. Control box
8. Cable clamps
9. Plug-in connector
10. Control box cover

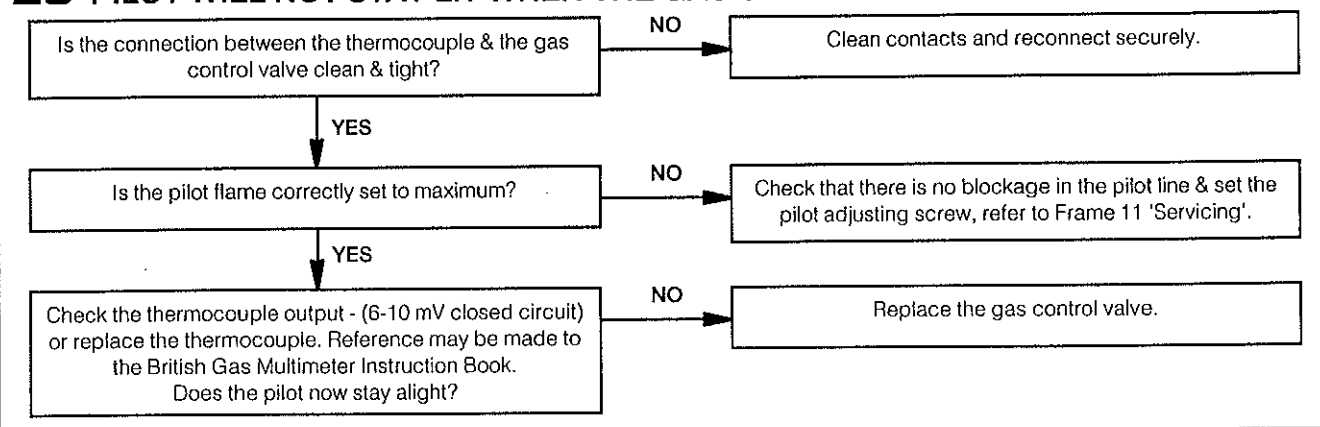
Before attempting any electrical fault finding, ALWAYS carry out the preliminary electrical system checks as detailed in the Instructions for the British Gas Multimeter, or other similar commercially

available meter. Detailed instructions on the cleaning & adjustment or replacement of faulty components are contained in the 'Servicing' section, of this publication.

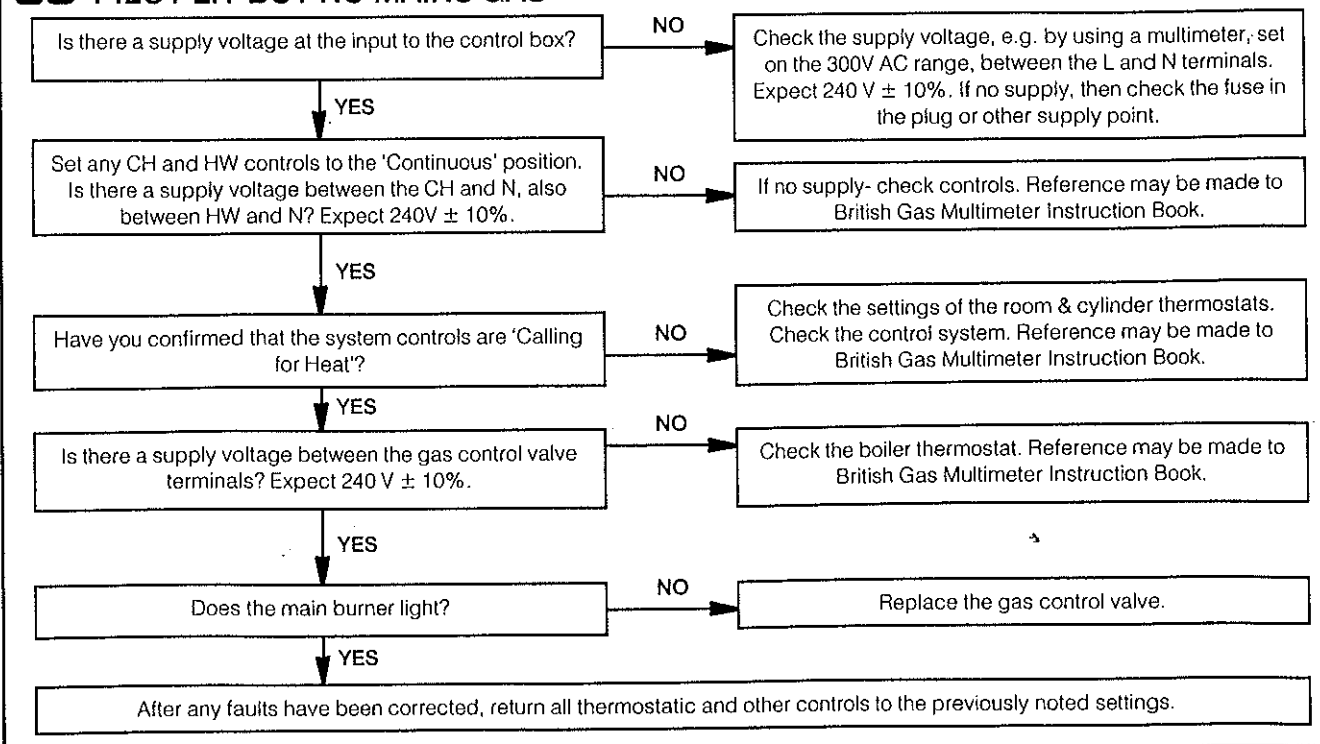
28 PILOT WILL NOT LIGHT



29 PILOT WILL NOT STAY LIT WHEN THE GAS CONTROL VALVE KNOB IS RELEASED



30 PILOT LIT BUT NO MAINS GAS



SERVICING

SHORT LIST OF PARTS

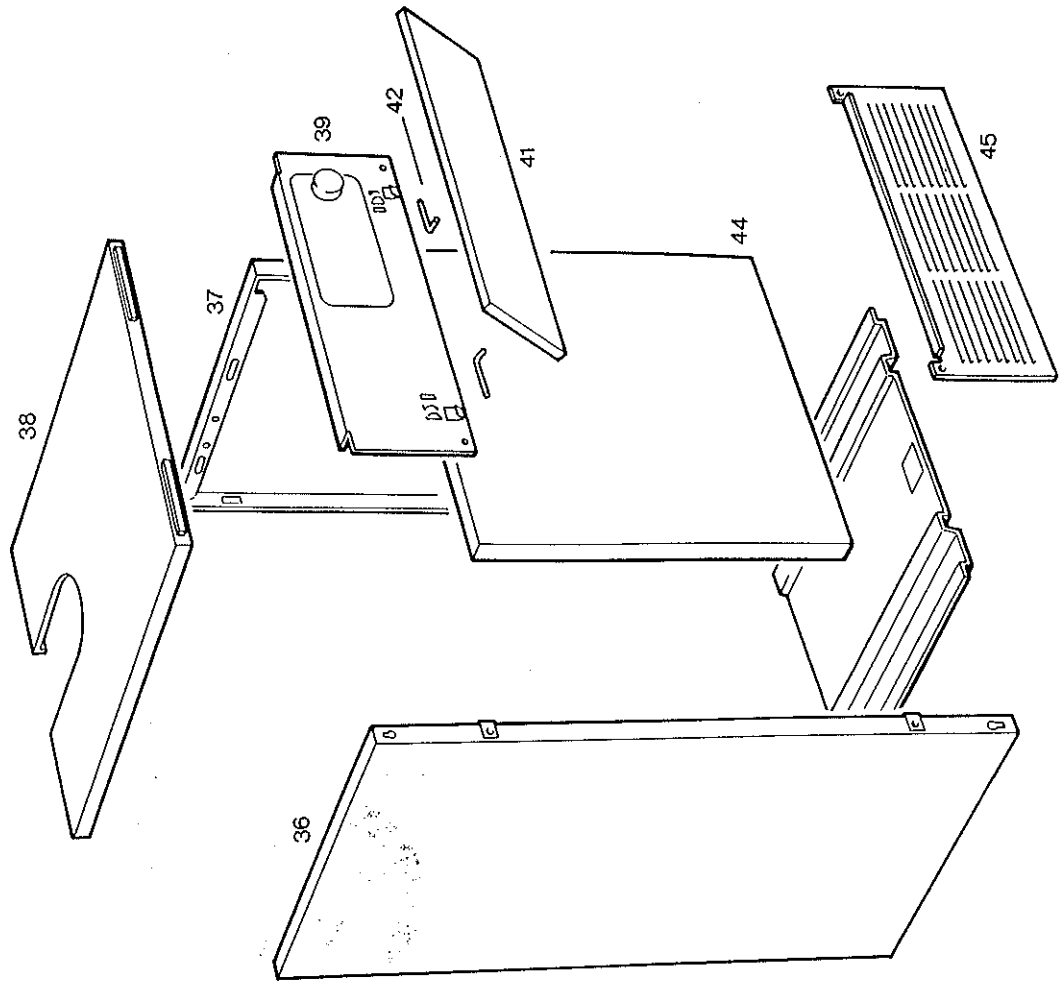
The following list comprises parts commonly required as replacements due to damage, expendability, or such that their failure, or absence, is likely to affect safety or performance. This List is extracted from the British Gas List of Parts, which contains all available spare parts. Details of the British Gas Lists are held by Gas Regions, STELRAD Distributors and by Merchants.

Ideal México Super 2 CF 70, CF 80, CF 100, CF 125 & CF 140 Gas Boilers.

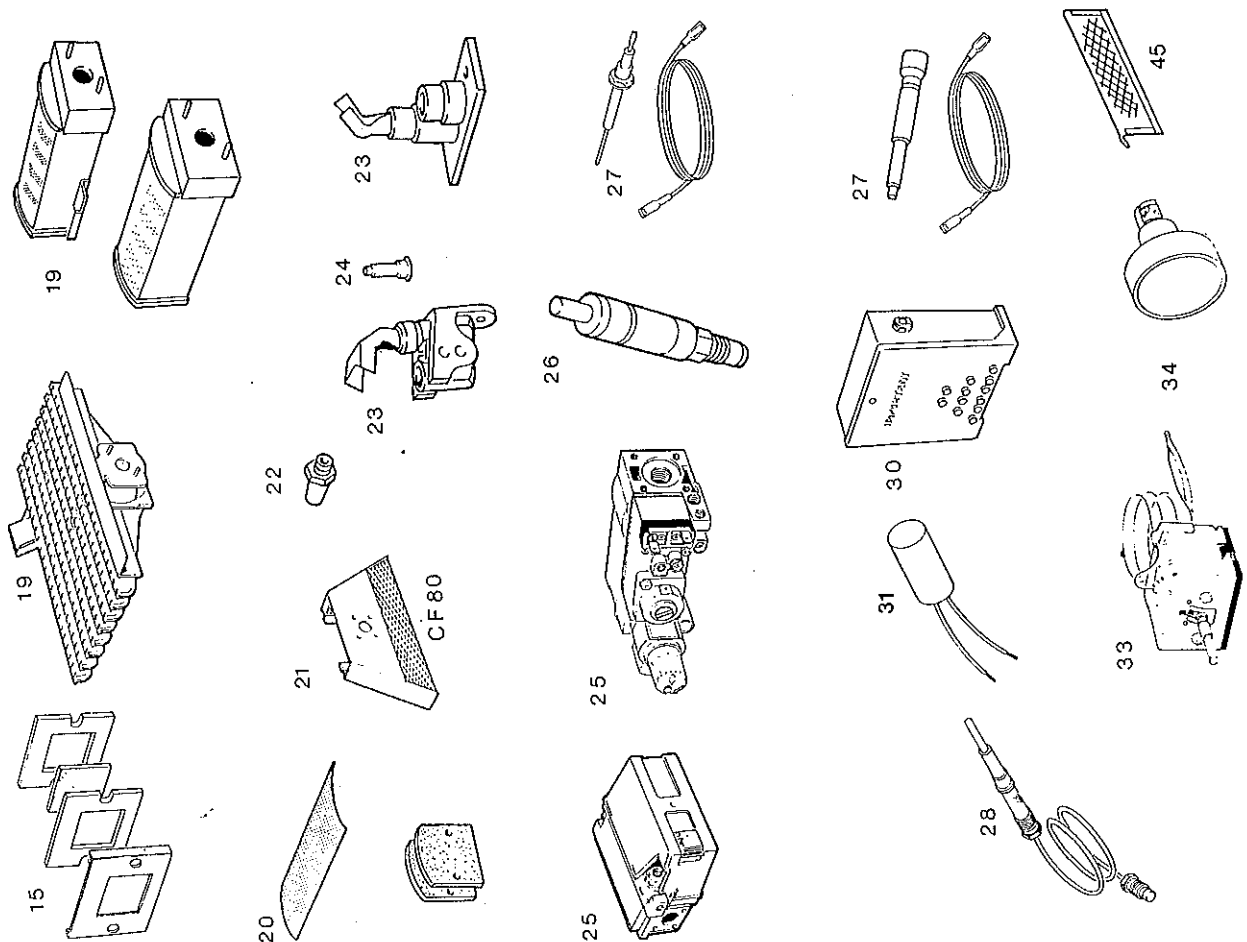
When ordering spares, please quote: 1. Boiler Model: 2. Appliance G.C. Number: 3. Description: 4. Maker's Part Number: 5. Quantity

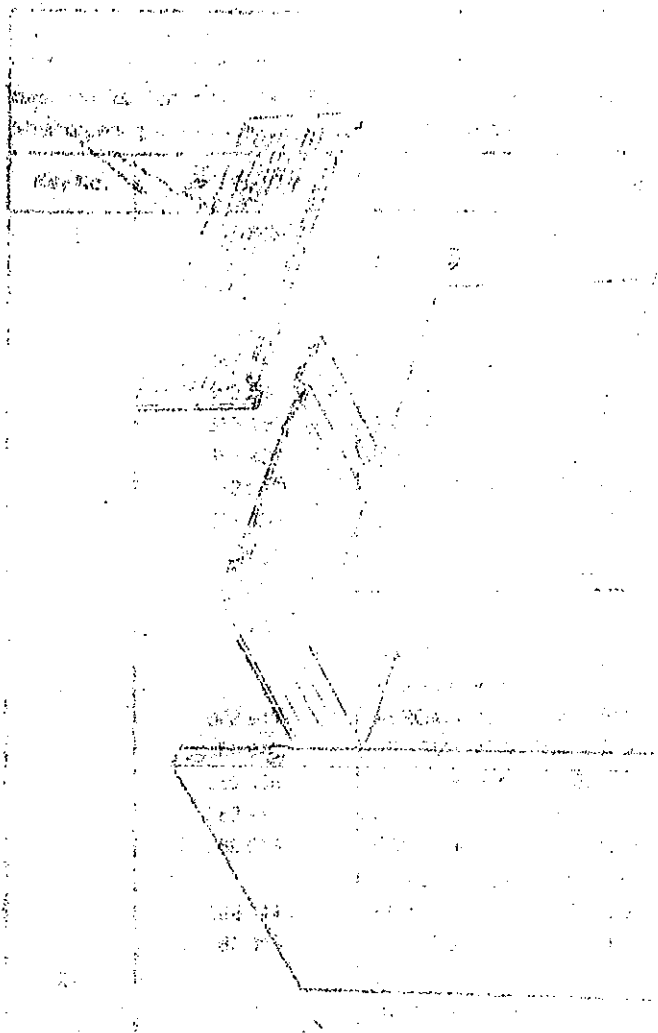
Key No.	G.C. Part No.	Description	No. off	Maker's Part No.
15	341 350	Sight glass assembly, comprising, sight glass, frame, two sight glass gaskets & two M5 wing nuts.	1	129 018 725
19		Main burner,		
	382 936	AEROMATIC No. AC 19/123 247; CF 70 & CF 80	1	129 028 735
	382 937	R.H.- FURIGAS 118 500 058; CF 100	1	129 047 737
	382 938	L.H.- FURIGAS 118 500 059; CF 100	1	129 047 738
	319 456	R.H.- FURIGAS 118 500 062; CF 125	1	129 057 737
	382 939	L.H.- FURIGAS 118 500 060; CF 125	1	129 056 738
	382 940	R.H.- FURIGAS 118 500 061; CF 140	1	129 067 737
	382 830	L.H.- FURIGAS 118 500 056; CF 140	1	129 068 738
20	341 355	Lint arresting gauze with 2 end cap gaskets; CF 100	1	129 048 750
	341 356	Lint arresting gauze with 2 end cap gaskets; CF 125	1	129 058 750
	382 831	Lint arresting gauze with 2 end cap gaskets; CF 140	1	129 068 750
21		Lint arresting gauze; CF 80	1	
22		Main burner injector,		
	382 941	AEROMATIC 935 440; CF 70	1	129 026 060
	382 942	AEROMATIC 935 460; CF 80	1	129 036 060
	389 506	BRAY Cat 103- Size 1500; CF 100	2	199 536 060
	382 943	AEROMATIC 935 390; CF 125	2	129 056 060
	389 518	BRAY Cat. 10- Size 2300; CF 140	2	129 066 060
23		Pilot burner, with injector Key No. 24		
	382 944	HONEYWELL Q 385 A 1020; CF 70 & CF 80	1	589 088 740
	382 945	HONEYWELL Q 349 A 1067; CF 100, CF 125 & CF 140	1	589 108 740
24		Pilot injector,		
		HONEYWELL 4500 4108 001, double orifice (.38/.36); RS 70 & RS 80	1	
		HONEYWELL 4500 4108 005, double orifice (.56/.42); RS 100, RS 125 & CF 140	1	
25		Gas control valve,		
	395 685	HONEYWELL V 4700 E 1007, 240 V; CF 70 & CF 80	1	586 731 900
	393 659	HONEYWELL V 4600 A 1023, 240 V; CF 100, CF 125 & CF 140	1	586 121 900
26	395 705	Spark generator, VERNITRON 60080	1	589 830 086
27		Ignition electrode,		
	319 384	BUCCLEUCH, with H.T. lead; CF 70 & CF 80	1	589 080 088
	395 884	VERNITRON SKNT 1495, with H.T. lead; CF 100, RS 125 & CF 140	1	589 010 088
28		Thermocouple		
	390 083	HONEYWELL Q 309 A 2747- 750 mm lg.; CF 70 & CF 80	1	581 861 906
		HONEYWELL Q 309 A 2739- 600 mm lg.; CF 100	1	
		HONEYWELL Q 309 A 2754- 900 mm lg.; CF 125 & CF 140	1	
30	319 385	Control box, including Key No. 31	1	586 071 271
31	384 689	Suppressor, ITT (can type)	1	589 040 030
33	382 469	Thermostat, RANCO CL6 PO148 000	1	589 960 051
34	341 359	Thermostat knob, FASTEX	1	586 011 517
		Casing, white stove enamel		
36	319 391	L.H. casing side panel assembly; CF 70, CF 80 & CF 100	1	129 077 212
	319 392	L.H. casing side panel assembly; CF 125	1	129 117 212
	319 393	L.H. casing side panel assembly; CF 140	1	129 067 212
37	319 394	R.H. casing side panel assembly; CF 70, CF 80 & CF 100	1	129 077 213
	319 395	R.H. casing side panel assembly; CF 125	1	129 117 213
	319 396	R.H. casing side panel assembly; CF 140	1	129 067 213
38	319 397	Casing top panel assembly; CF 70	1	129 037 214
	319 398	Casing top panel assembly; CF 80 & CF 100	1	129 037 215
	319 399	Casing top panel assembly; CF 125	1	129 057 215
	319 400	Casing top panel assembly; CF 140	1	129 067 215
39	319 401	Casing upper front panel assembly	1	129 077 217
40	319 402	Controls panel assembly	1	129 077 221
41	319 403	Controls panel door with Lighting Instruction Label	1	129 077 222
42	319 404	Controls panel hinge	2	129 077 223
43	319 405	Controls panel hinge retainer	2	129 077 224
44	319 407	Lower front panel	1	129 077 218
45	319 406	Grille assembly- with gauze; CF 100, CF 125 & CF 140 ONLY	1	129 077 219

32 BOILER CASING ASSEMBLY - Exploded View



31 SMALL PARTS





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.

STELRAD GROUP 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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