

OMYSON

INSTALLATION

Olympic 20/35C and 38/50C Wall mounted gas boilers

G.C. Appliance No's. Olympic 20/35C 41 789 42 Olympic 38/50C 41 789 43
For use with Natural Gas only—(Leave these instructions adjacent to the gas meter)
Read these instructions thoroughly before installing the boiler

General

These open flued wall mounted boilers are for use on natural gas only.

The Olympic 38/50C is range rated from 11.14 to 14.65 kW (38 000 to 50 000 Btu/h).

The Olympic 20/35C is range rated from 5.86 to 10.26 kW (20 000 to 35 000 Btu/h).

The boiler must be installed in accordance with:

The Gas Safety Regulations 1972.

The Gas Safety (Installation and Use) Regulations 1984.

Local Building Regulations.

By-Laws of the local Water Undertaking.

I.E.E. Wiring Regulations.

Detailed recommendations are stated in the following British Standard Codes of Practice: CP331:3:1974, BS5376:2:1976, BS5546:1979, BS5440:1:1978, BS5440:2:1976 and BS5449:1:1977.

Note: Gas Safety Regulations: It is the law that all gas appliances are installed by competent persons, 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.

Delivery

The complete boiler is delivered in a single package. A boiler mounting plate is included.

A plug-in programmer kit is also available to fit inside the boiler casing. This programmer simplifies wiring and is suitable for use with all external control systems shown in this instruction.

Gas supply

The 38/50C requires 1.84 m³/h (66 ft³/h) of natural gas, the 20/35C requires 1.28 m³/h (46 ft³/h). The meter and supply pipes must be capable of delivering this quantity of gas in addition to the demand from any other appliances in the house.

The complete installation must be tested for gas soundness and purged as described in CP331:3.

Electricity supply

240V 50Hz via a fused double pole switch with a contact separation of at least 3 mm in both poles or preferably a fused 3-pin plug and shuttered outlet socket, adjacent to the boiler.

Fuse the supply at 3 amp.

Mains cable: 0.75 mm² (24 x 0.20 mm).

The external wiring between the appliance and the electrical supply shall comply with the latest IEE Wiring Regulations, and any local regulations which apply.

The appliance must be earthed.

In the event of an electrical fault after installation of the appliance, preliminary electrical systems checks can be carried out as described in the British Gas multimeter instruction book.

Air supply

Air supply for combustion and ventilation must be provided in accordance with BS5440:2.

1. If the boiler is installed in a room, the room must have a permanent air vent either direct to the outside air or to an adjacent room which itself has a permanent air

vent to the outside air. The minimum effective area of the air vent(s) required is:

20/35C 30cm² (5 in²)

38/50C 60cm² (10 in²)

2. If the boiler is installed in a cupboard or compartment, permanent air vents are required in the cupboard or compartment, one at high level and one at low level, either direct to the outside air or to a room. Both high and low level air vents must communicate with the same room or must be on the same wall to outside air. The minimum effective areas required are given in the following table.

Boiler		20/35C	38/50C
Vents to outside air	High level	60 cm ² (10 in ²)	90 cm ² (15 in ²)
	Low level	120 cm ² (20 in ²)	180 cm ² (30 in ²)
Vents into a room	High level	120 cm ² (20 in ²)	180 cm ² (30 in ²)
	Low level	240 cm ² (40 in ²)	360 cm ² (60 in ²)

Where the cupboard or compartment is ventilated to a room, the room itself must have an air vent direct to outside air of minimum effective area of 30 cm² (5 in²) for the 20/35C and 60cm² (10 in²) for the 38/50C.

3. If there is any type of extract fan fitted in the premises, there is a possibility that if adequate air inlet areas from outside is not provided, spillage of the products from the boiler flue could occur when the fan is in operation. Where such installations occur, a spillage test with the fan running must be carried out as described in BS5440:1. The air inlet areas given above may have to be increased to prevent spillage.

Flue system

The boiler must be connected to a suitable flue which will provide a consistent updraught without undue cooling of the flue gases. The requirements of BS 5440:1 should be followed. Horizontal flue runs should be avoided and the flue should terminate in accordance with the relevant recommendations given in BS 5440:1. The flue must be fitted with a terminal, preferably one which has been tested and found satisfactory by British Gas.

Existing chimneys may be suitable but must be swept first and require an approved liner to be fitted.

If in doubt regarding the suitability of a flue, consult the local Gas Region for advice.

If the flue is required to be taken through the wall on which the boiler is mounted, adequate space should be allowed between the ceiling and the top of the boiler for a suitable bend to be fitted. Check the height of the boiler above any working surface when deciding on the flue run.

A minimum clearance of 25 mm should be maintained between the flue pipe and any adjacent combustible materials.

Note: When the boiler is mounted at the minimum distance from the ceiling and into the roof space, or the room above, and provided with a sleeve of non-combustible material sufficient to allow an air space between sleeve and flue of 25 mm minimum. A suitable non-combustible plate must be fitted to centre the flue and maintain the 25 mm air gap. Nominal flue size 100 mm.

Installation

The boiler must be mounted on a flat wall which is sufficiently robust to take the weight of the boiler. If the wall is of combustible material it must be protected by a sheet of non-combustible material of thickness not less than 25 mm (1 in).

Note: If the boiler is to be fitted into a house of timber frame construction, advice is available from your trade organisation or local Gas Region.

The boiler is designed for use with a fully pumped open or sealed central heating system and an indirect hot water cylinder. IT MUST NOT BE CONNECTED TO A DIRECT CYLINDER.

The boiler should not be installed in a bedroom and must not be installed in a room containing a bath or shower. Where the installation of the boiler will be in an unusual position, special procedures may be necessary and BS5376:2 and BS5546 give detailed guidance on this aspect.

A cupboard or compartment used to enclose the boiler must be designed and constructed specifically for this purpose. An existing cupboard or compartment may be used provided that it is modified for the purpose.

Details of essential features of cupboard/compartment design including airing cupboard installations are given in BS5376:2 and BS5546.

Boiler dimensions, minimum clearances and connection details are shown in frames 1 and 2.

When siting the boiler, check that the flue and boiler mounting plate positions meet the requirements given under the heading 'Flue system'.

Fit one or more drain cocks to enable the water system to be fully drained.

Note: THE PUMP MUST BE WIRED BACK TO THE BOILER, see wiring diagrams frames 25 and 26.

Data

Heat inputs and outputs together with burner setting pressures are given in frame 22.

Boiler	20/35C	38/50C
Burner	Bray AB 200015	Bray AB 200016
Burner Injector	Bray Cat 16/1000	Bray Cat 16/1400
Pilot Injector	Bray Cat 968 size 7½	
Gas Valve	Honeywell V4600A 1023	
Thermocouple	Junkers CT101222	
Piezo unit	Vernitron 60053	
Boiler thermostat	Ranco C77 PO105	
Weight empty	57 kg (125 lb)	62 kg (136 lb)
Water content	3.86 litre (0.85 gal)	4.55 litre (1.0 gal)
Head loss*	0.23 m (9 in)	0.35 m (14 in)
Max static hd.	30.5 m (100 ft)	
Min static hd. (gravity)	1.0 m (3.25 ft)	
Min static head (fully pumped)	0.05 m (2 in)	
Spark electrode	Kigass 7941, gap 3.0/4.0 mm	

* Head loss given is applicable only when the heating return is connected to the ¾ in connection under the boiler, and the temperature rise across the boiler is 11°C (20°F).

In the event of any fault occurring during the commissioning of the boiler a fault finding guide is available in the maintenance instructions.

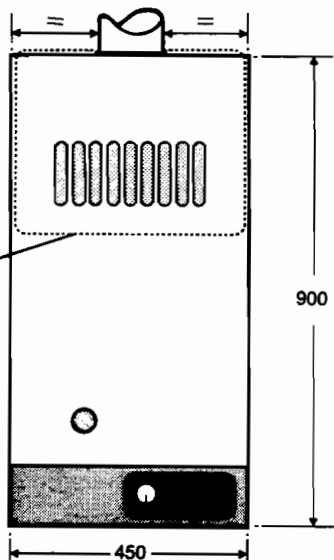
1 BOILER DIMENSIONS AND MINIMUM CLEARANCES

Projection from rear wall: 300mm

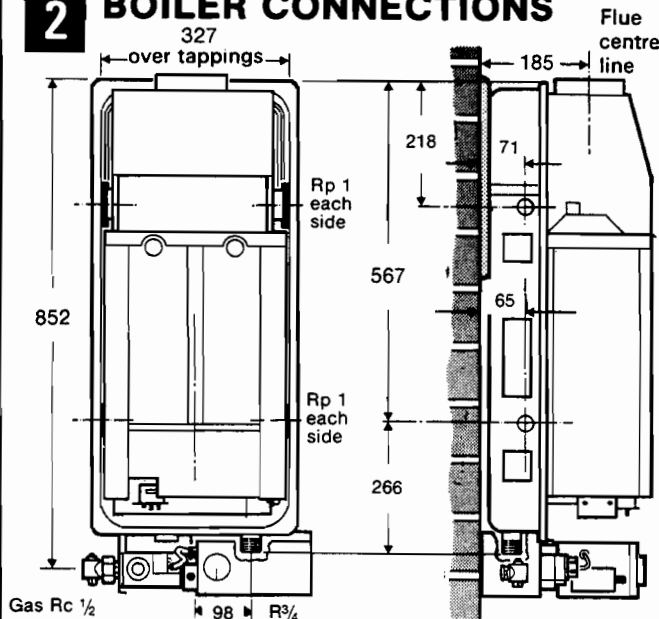
Outline of boiler mounting plate (See frame 8)

Clearance required for installation and service:

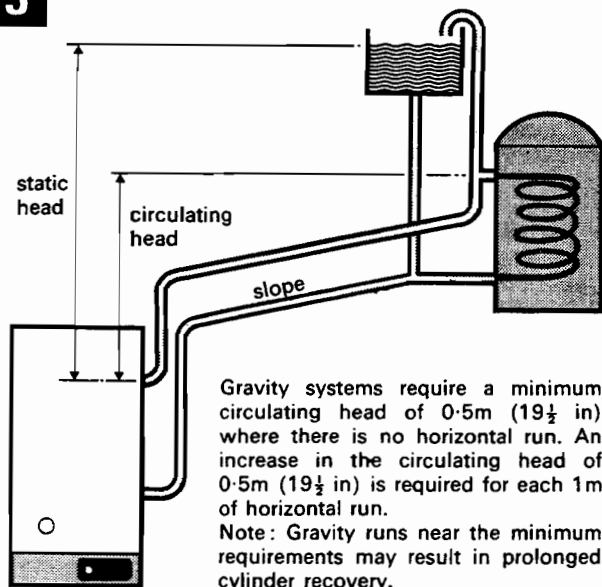
Top: 75mm
Each side: 5mm
Bottom: 114mm
Front: 300mm
Nominal flue size: 100mm



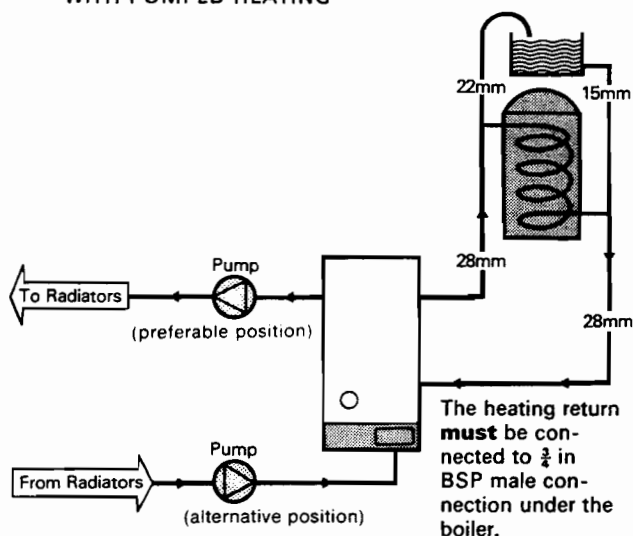
2 BOILER CONNECTIONS



3 GRAVITY SYSTEM LIMITS

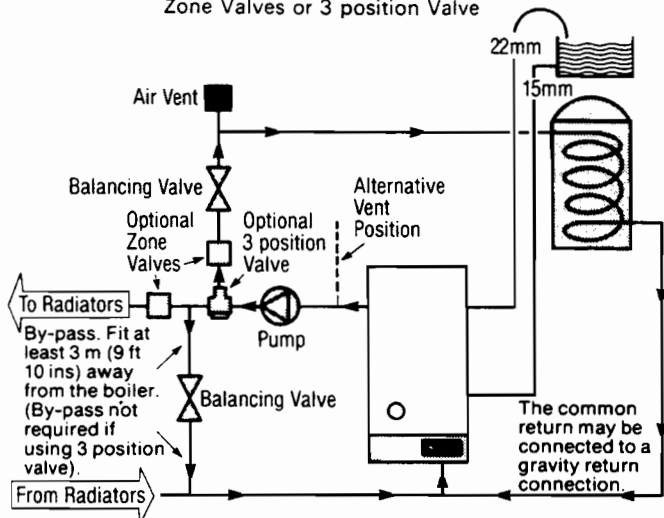


4 GRAVITY HOT WATER SYSTEM PIPING DIAGRAM WITH PUMPED HEATING

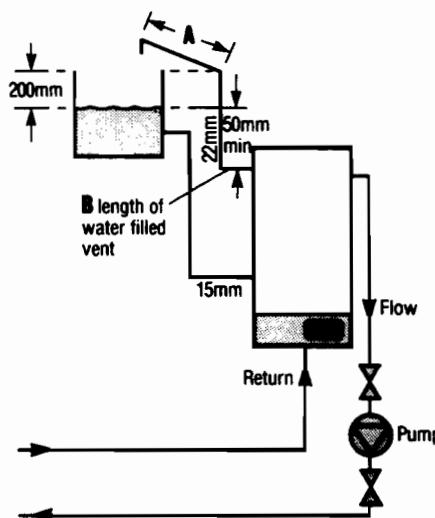


5 FULLY PUMPED SYSTEM PIPING DIAGRAM

For use with Thermostatic Radiator Valves
Zone Valves or 3 position Valve



6 LOW HEAD SYSTEM



The open vent, cold feed and combined flow can be taken from either side of the boiler. The combined return must be connected to the pumped return tapping. The pump must be installed in the combined flow. The system can have 3-port valve, circuit valves or thermostatic radiator valves.

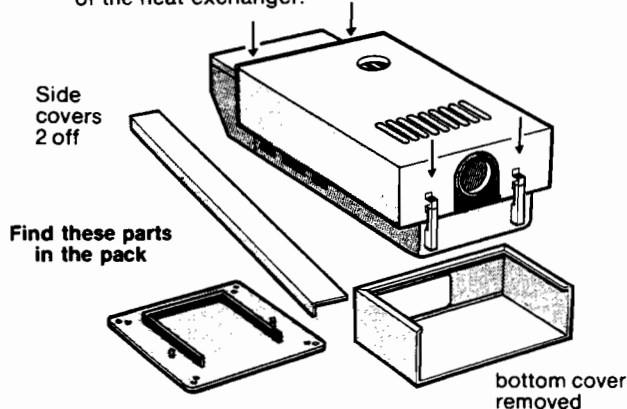
HEATING LOAD Btu/h	MYSON RADS A(mm)B(mm)	OTHERS A(mm)B(mm)
50 000	420 330	580 450
40 000	330 290	450 400
30 000	230 260	320 360
20 000	140 200	190 270
10 000	50 200	70 200

Ensure that the pump has sufficient static head. Check the pump manufacturer's minimum head.

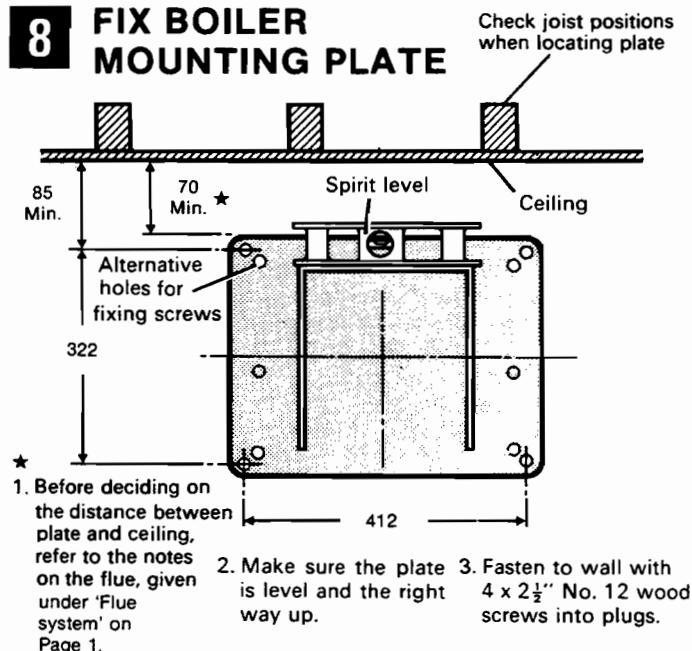
7 UNPACK THE BOILER

When unpacking the boiler take care not to damage the floor.

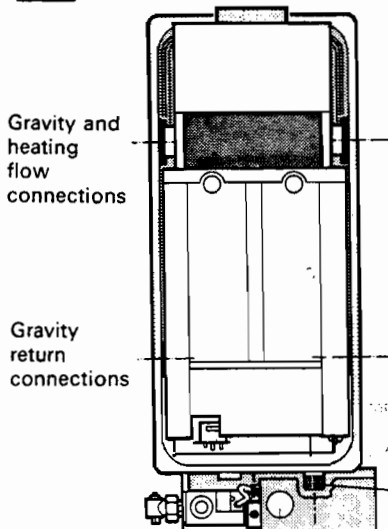
- Slide off the bottom cover.
- Remove the boiler case. The case is secured by four screws, to gain access to the bottom R/H screw remove the wiring centre as described in frame 15. Replace wiring centre after case is removed. 38/50C only. Discard the packing piece from the top of the heat exchanger.



8 FIX BOILER MOUNTING PLATE



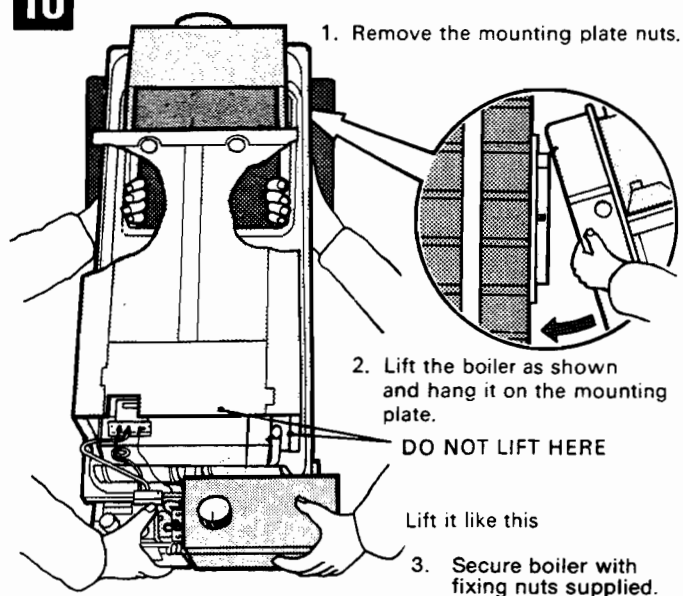
9 PREPARE THE BOILER CONNECTIONS



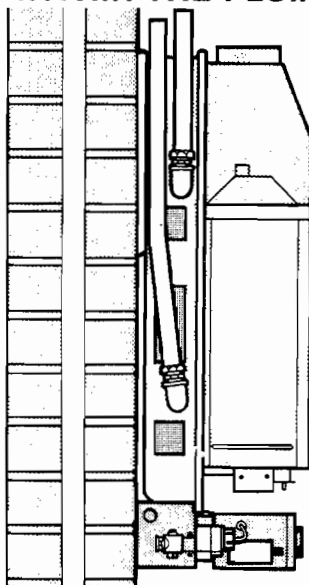
- Stand the boiler up and fit and seal fittings to the boiler connections.
- Use 1 in. BSP M/F elbows for the side tappings with compression adaptors fitted.
- Where the installed position will provide minimum side access, short lengths of copper tube should be fitted to the connections as shown in frame 11. These connections should be tested for soundness before installation.
- Plug all unused tappings.

Heating return connection.
For fully pumped systems the common return may be connected to a gravity return connection.

10 ATTACH THE BOILER

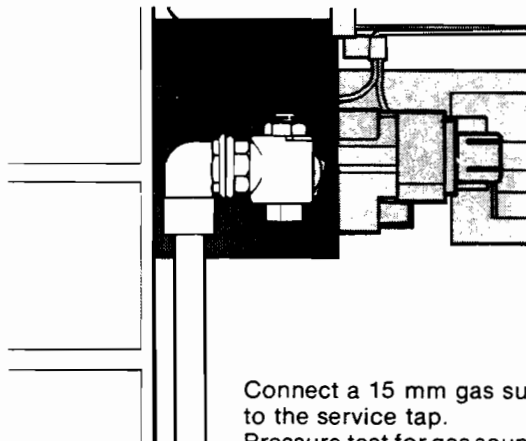


11 TO ACCOMMODATE PIPEWORK WITHIN THE PLUMBING SPACE



1. To enable the pipework to be accommodated within the plumbing space where side access is restricted, short lengths of copper tube should be fitted to the connections to terminate just clear of the top and/or bottom of the boiler.
2. When two tubes are connected to the same side of the boiler and both run in the same direction, e.g. vertically upwards as shown, the lower elbow should be set to give the necessary clearance between the tubes.

12 GAS SUPPLY



Connect a 15 mm gas supply to the service tap.
Pressure test for gas soundness (CP331:3)

13 COMPLETE THE INSTALLATION

After connecting the flue, gas and water connections, complete the electric wiring (see frames 14 to 18).

Thoroughly flush the whole system with cold water without the pump in position. Ensure all valves are open. With the pump fitted, fill, vent and check for soundness rectifying where necessary.

When the system has been commissioned (see frame 22) drain the system while the water is still hot in order to complete the flushing process. Refill, vent and make a final check for water soundness.

Test the flue for correct operation.

14 ELECTRIC WIRING

Read this **BEFORE** wiring the Boiler

To simplify wiring, the boiler electric circuit can be made suitable for connection to a fully pumped system or to a gravity hot water system by exchanging a coloured wiring selector plug in the wiring selector socket.

GRAVITY HOT WATER SYSTEM: use the **BLUE** Plug.

FULLY PUMPED SYSTEM: use the **RED** Plug.

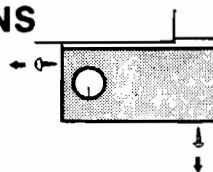
The boiler is supplied for connection to a **GRAVITY HOT WATER** system.

The **RED** plug will be found packed in the wiring centre.

When replacing the control box cover ensure that the thermostat capillary is located in the cut out in the left hand side of the control box.

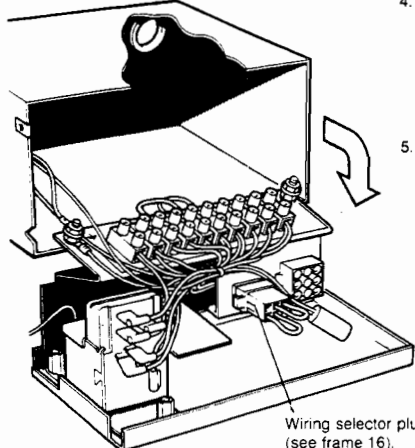
15 CONNECT THE MAINS

1. Take out the 2 fixing screws.
2. Pull out the wiring centre and hang it on the control box by the screws in the rear of the wiring centre.
3. Slacken the two screws in the cable clamp on the back of the wiring centre. Feed the mains lead under the clamp and through the grommet.



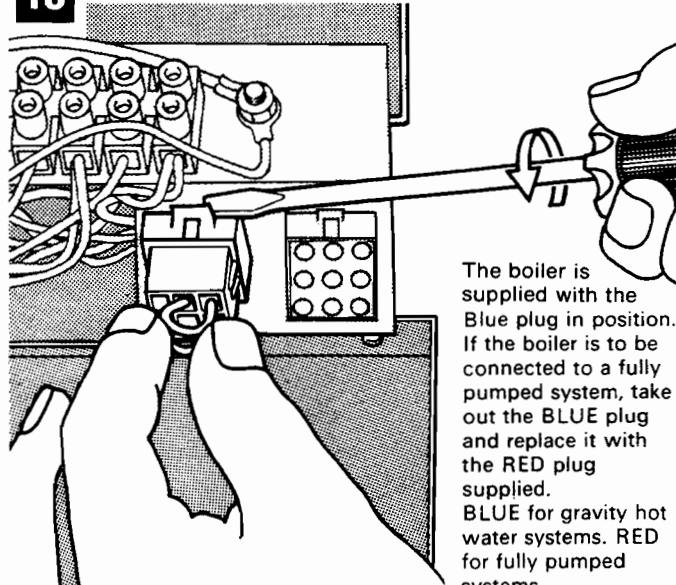
4. Connect the wires, brown to L and blue to N on the terminal block and green and yellow to the earthing stud. The pump lead and any external controls wiring should also be fed under the clamp, through the grommet and connected to the terminal block. See wiring diagrams frames 25 and 26.
5. Keep the wiring centre in the open position, take up excess slack in the cables between the terminal block and the cable clamp, then tighten the cable clamp screws. Check that the wiring centre will open and close freely without straining the cables.

Note: when connecting the mains lead to the terminal block and earthing stud, ensure that the length of the earth wire is such, that if the mains lead slips out of the cable clamp the live and neutral wires become taut before the earth wire.



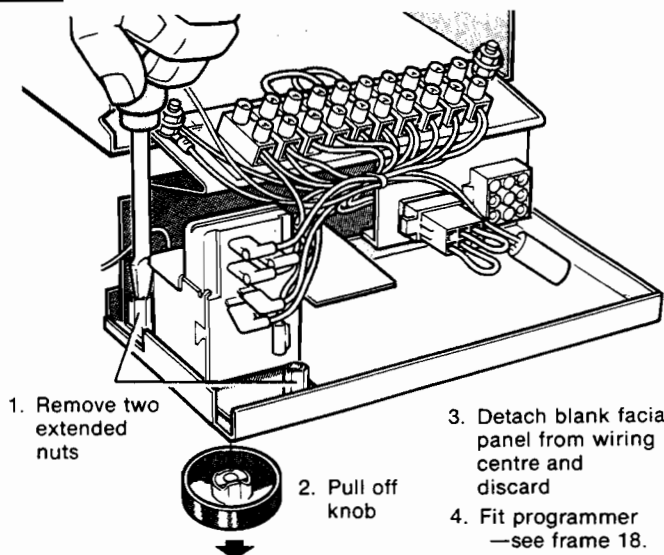
Wiring selector plug (see frame 16).

16 WIRING SELECTOR PLUGS



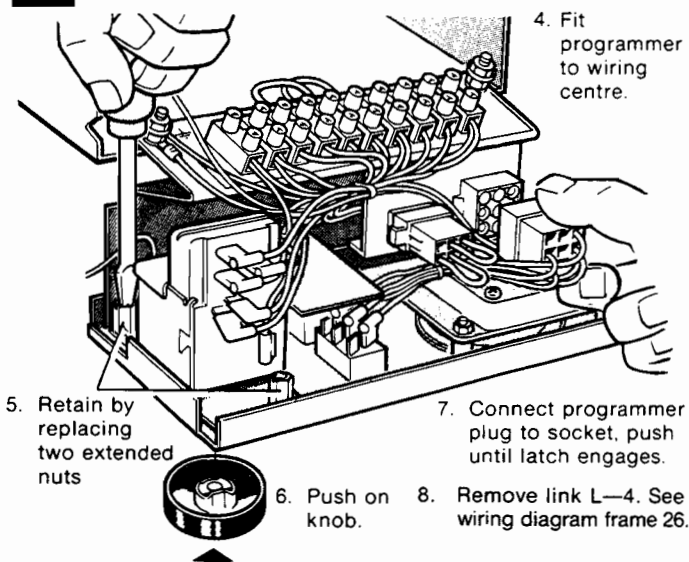
The boiler is supplied with the **Blue** plug in position. If the boiler is to be connected to a fully pumped system, take out the **BLUE** plug and replace it with the **RED** plug supplied. **BLUE** for gravity hot water systems. **RED** for fully pumped systems.

17 TO FIT PROGRAMMER KIT



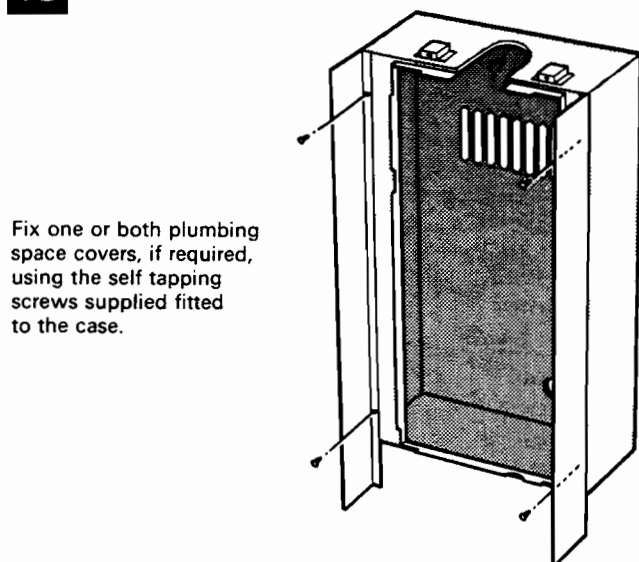
1. Remove two extended nuts
2. Pull off knob
3. Detach blank face panel from wiring centre and discard
4. Fit programmer —see frame 18.

18 Programmer kit—continued



4. Fit programmer to wiring centre.
5. Retain by replacing two extended nuts
6. Push on knob.
7. Connect programmer plug to socket, push until latch engages.
8. Remove link L—4. See wiring diagram frame 26.

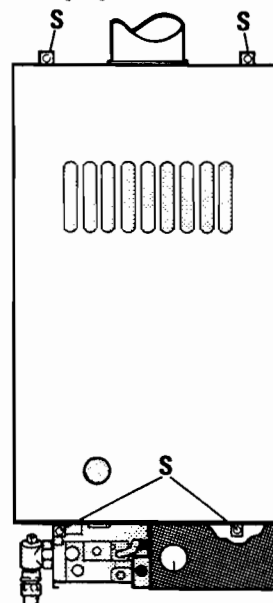
19 FINAL ASSEMBLY (A)



Fix one or both plumbing space covers, if required, using the self tapping screws supplied fitted to the case.

20 FINAL ASSEMBLY (B)

1. Slide the case in position over the boiler and push back.
2. Secure the case with 4 screws S.
3. Replace the wiring centre and fix in position with 2 screws.



21 COMMISSION THE BOILER (A)

SEE FRAME 23 FOR BOILER CONTROLS

1. Ensure that the electricity supply is OFF.
2. Set the boiler thermostat to OFF.
3. Loosen the gas valve inlet pressure test point screw one turn.
4. Turn on the gas supply and open the boiler service tap to purge in accordance with CP 331:3.
5. Retighten the gas valve inlet pressure test point screw. Test for gas soundness around the screw.
6. Fully depress the gas valve operating button and keep it pressed in. At the same time operate the igniter button, to light the pilot, which can be seen through the inspection window. If the pilot does not light, operate the igniter repeatedly until it does. When the pilot lights, continue to hold the gas valve operating button in for a further 10 to 20 seconds, then release it slowly.
Caution: If the pilot does not stay alight, release the gas valve operating button and twist it in the direction of the arrow. Wait for 3 minutes and repeat operation 6 until the pilot is lit. Continue to hold the gas valve button in for 20 seconds, then release it slowly.
7. Check that the pilot throttle is fully open and that the pilot flame (approximately 20 mm long) envelops the thermocouple tip.
8. Check the burner setting pressure as follows:
 - a) Loosen the burner setting pressure test point screw one turn and connect a pressure gauge.
 - b) Turn on the electricity supply and check that all system controls are turned on, and that the pump is running.
 - c) Set the boiler thermostat to 5. The main burner will light. Allow the burner to run for 10 minutes.

22 COMMISSION THE BOILER (B)

- d) If necessary adjust the burner setting pressure to give the heat input required. To decrease the burner setting pressure turn the governor adjuster anti-clockwise.

Note: The boiler is factory set to the maximum input.

NOMINAL BOILER RATINGS

BOILER	OUTPUT		INPUT		BURNER SETTING PRESSURE	
	kW	Btu/h	kW	Btu/h	mbar	in w.g.
Olympic 20/35C	5-86	20 000	8-06	27 500	5-0	2-0
	8-21	28 000	11-14	38 000	9-6	3-8
	10-26	35 000	13-66	46 600	14-4	5-8
Olympic 38/50C	11-14	38 000	15-24	52 000	9-7	3-9
	12-89	44 000	17-29	59 000	12-4	5-0
	14-65	50 000	19-52	66 600	16-0	6-4

9. Set the boiler thermostat to OFF, disconnect the pressure gauge and re-tighten the test point screw. Test for gas soundness around the screw.
10. Ensure the arrow on the data plate is against the correct boiler rating.
11. When the system has been tested, drain the water while it is still hot in order to complete the flushing process. Refill, vent and make a final check for water soundness.

Note: If the electricity is cut off for any reason, check that the pilot is alight when it is restored.

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Registered in England No. 412935

"All descriptions and illustrations contained in this catalogue have been carefully prepared, but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this catalogue"

OMYSON

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MAINTENANCE

Olympic 20/35C and 38/50C Wall mounted gas boilers

G.C. Appliance No's. Olympic 20/35C 41 789 42 Olympic 38/50C 41 789 43
(Leave these instructions adjacent to the gas meter)

General

This booklet describes the annual maintenance procedure, provides instruction on the replacement of faulty parts and information on fault finding and spare part identification.

Before commencing work slide off the bottom cover and twist the gas valve operating button in the direction of the arrow to turn off the pilot. Allow the boiler to cool. Isolate the electricity supply and turn off the gas supply at the service tap, see frame 34.

IMPORTANT: ALWAYS test for gas soundness after completing any servicing or exchange of gas carrying components.

NOMINAL BOILER RATINGS

BOILER	OUTPUT		INPUT		BURNER SETTING PRESSURE	
	kW	Btu/h	kW	Btu/h	mbar	in w.g.
Olympic 20/35C	5.86	20 000	8.06	27 500	5.0	2.0
	8.21	28 000	11.14	38 000	9.6	3.8
	10.26	35 000	13.66	46 600	14.4	5.8
Olympic 38/50C	11.14	38 000	15.24	52 000	9.7	3.9
	12.89	44 000	17.29	59 000	12.4	5.0
	14.65	50 000	19.52	66 600	16.0	6.4

ANNUAL MAINTENANCE

1 DISMANTLING

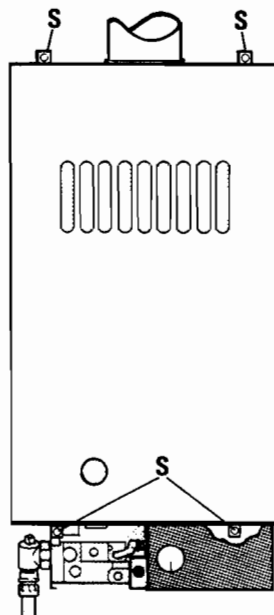
Remove the boiler case. The case is secure by four screws (S) to gain access to the bottom R/H screw remove the wiring centre as described in frame 21. Replace the wiring centre after case is removed.

The heat exchanger and burner should be examined to determine if cleaning is necessary before completely dismantling.

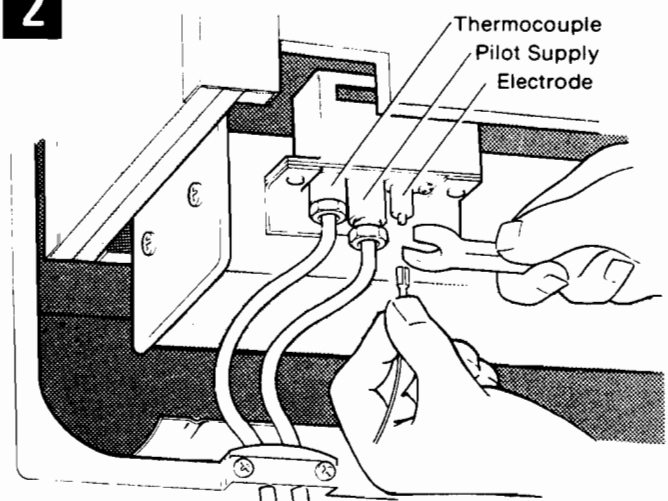
Remove the deflector plate (frame 5).

Examine the heat exchanger and burner.

Should the burner not require cleaning it should be covered over before cleaning the heat exchanger.

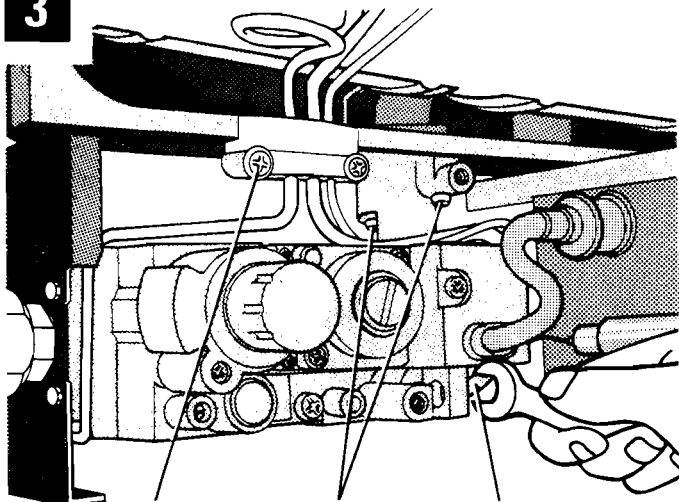


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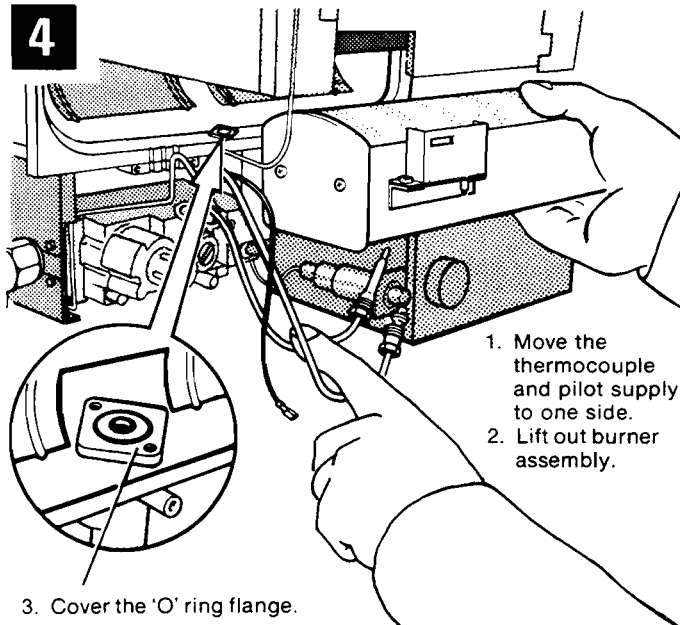


1. Pull off electrode lead.

2. Undo the nuts and disengage the thermocouple and pilot supply.

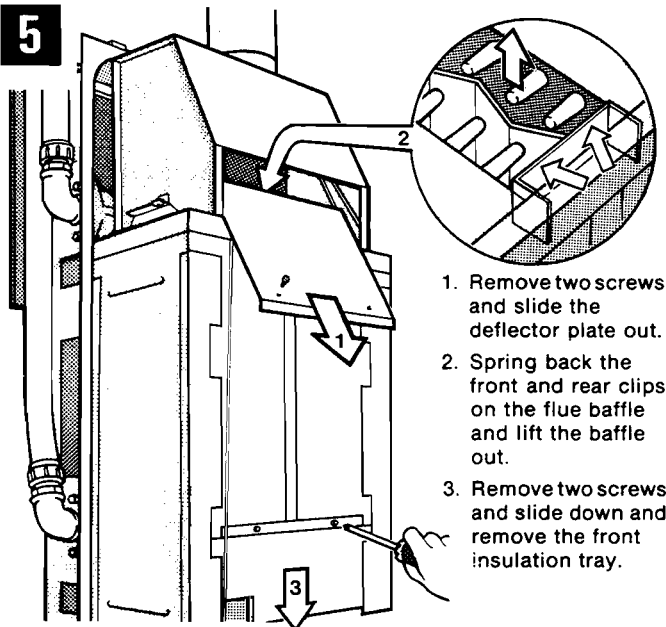
3

1. Undo two screws and remove clamp bracket.
2. Loosen pilot supply at gas valve.
3. Remove two burner screws.

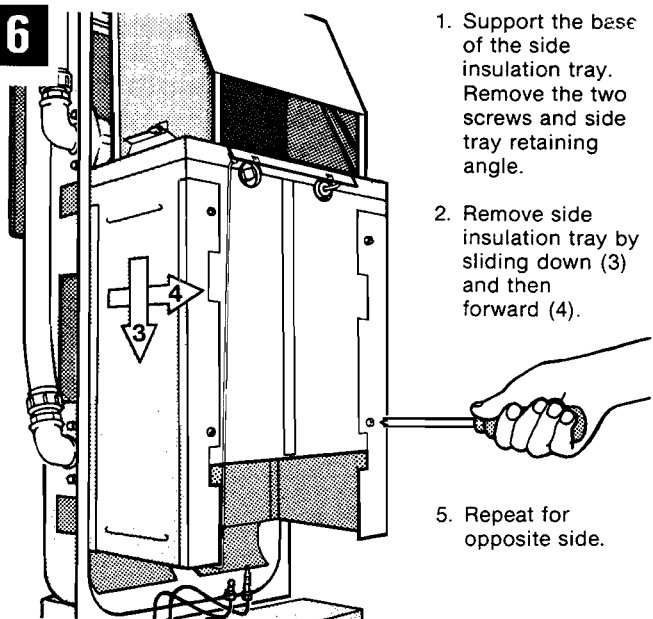
4

1. Move the thermocouple and pilot supply to one side.
2. Lift out burner assembly.

3. Cover the 'O' ring flange.

5

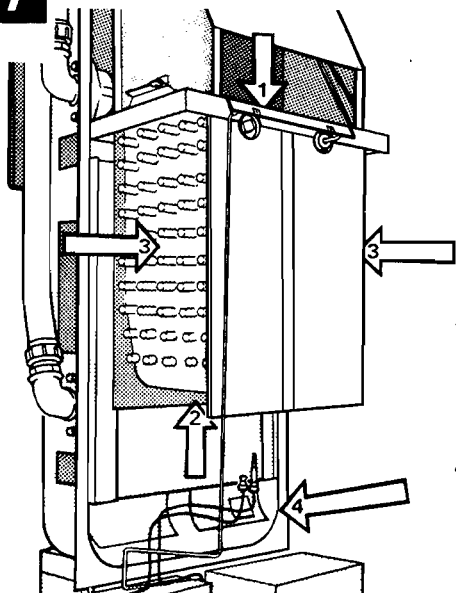
1. Remove two screws and slide the deflector plate out.
2. Spring back the front and rear clips on the flue baffle and lift the baffle out.
3. Remove two screws and slide down and remove the front insulation tray.

6

1. Support the base of the side insulation tray. Remove the two screws and side tray retaining angle.
2. Remove side insulation tray by sliding down (3) and then forward (4).

5. Repeat for opposite side.

7 CLEANING THE HEAT EXCHANGER

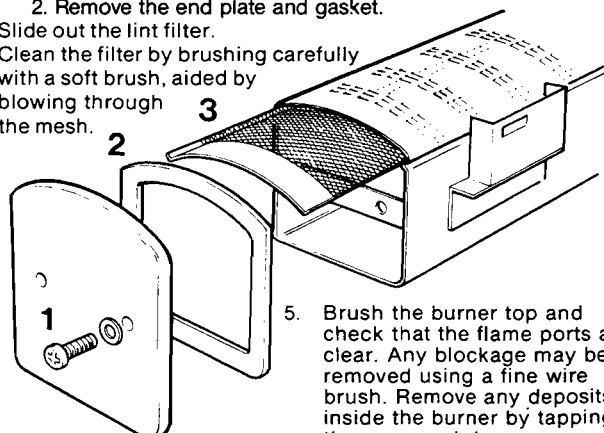


1. and 2. Brush centre section from above and below.
3. Brush both sides of heat exchanger.
4. Remove deposits from deflector and boiler base.

8

CLEANING THE BURNER

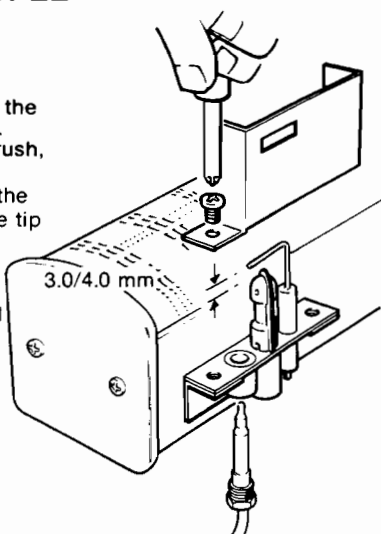
1. Remove two screws and washers fixing the burner end plate.
2. Remove the end plate and gasket.
3. Slide out the lint filter.
4. Clean the filter by brushing carefully with a soft brush, aided by blowing through the mesh.



5. Brush the burner top and check that the flame ports are clear. Any blockage may be removed using a fine wire brush. Remove any deposits inside the burner by tapping the open end down.
6. Replace the lint filter. Slide the gauze in carefully against the top of the burner and on top of the side grooves. Push fully home.
7. Refit the end plate and gasket. Make sure that the sealing washers are fitted under the screws.

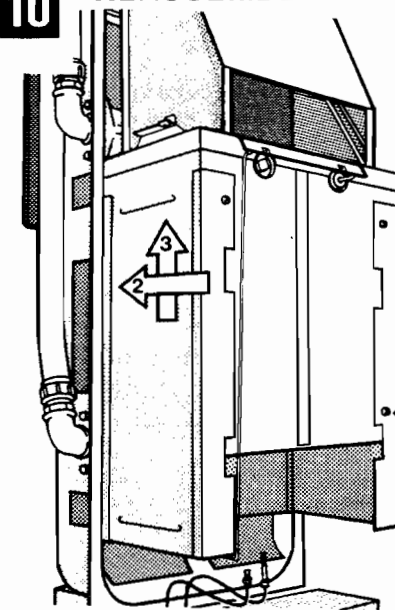
9 CLEANING THE PILOT AND THERMOCOUPLE

1. Undo two screws fixing the pilot shield and remove shield.
2. **Pilot Burner.** Check that the slots and ports are clear. Clean with a fine wire brush, if necessary.
3. Check the gap between the pilot burner head and the tip of the spark electrode.
4. **Thermocouple** Excessive build up of carbon on the tip should be removed with a fine wire brush.
5. Replace the pilot shield and secure with two screws.



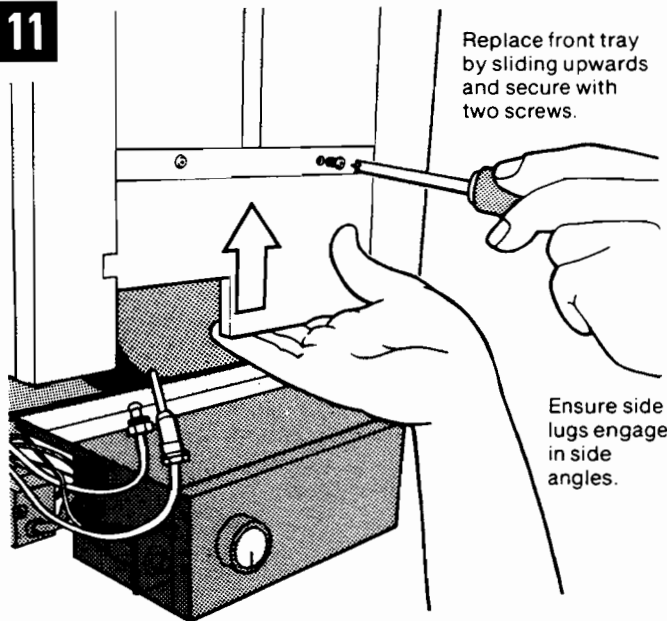
10 REASSEMBLY

1. Replace side insulation tray by sliding backwards (2) then up (3), and hold in position.
 4. Replace the side tray retaining angle ensuring that the return edge is at the bottom and goes under the side insulation tray to support it. Secure with two screws.
 5. Repeat for opposite side.
- Note:** There is a left and right hand angle.

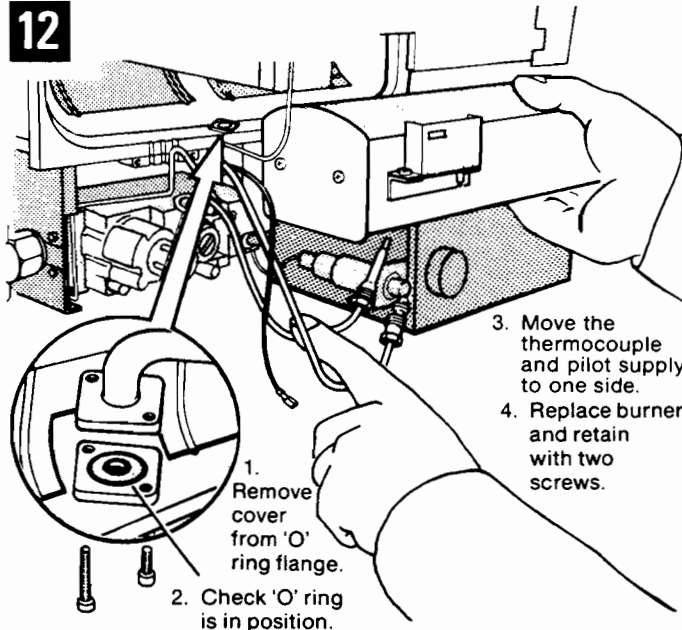


11

Replace front tray by sliding upwards and secure with two screws.



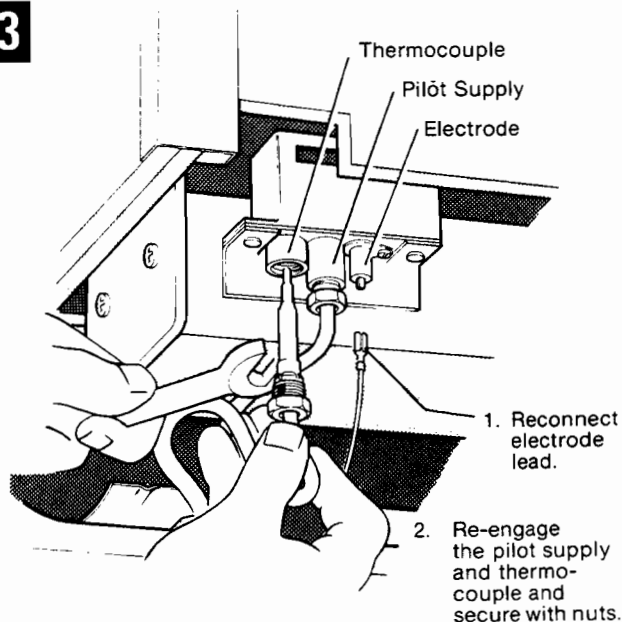
12



3. Move the thermocouple and pilot supply to one side.
4. Replace burner and retain with two screws.

1. Remove cover from 'O' ring flange.
2. Check 'O' ring is in position.

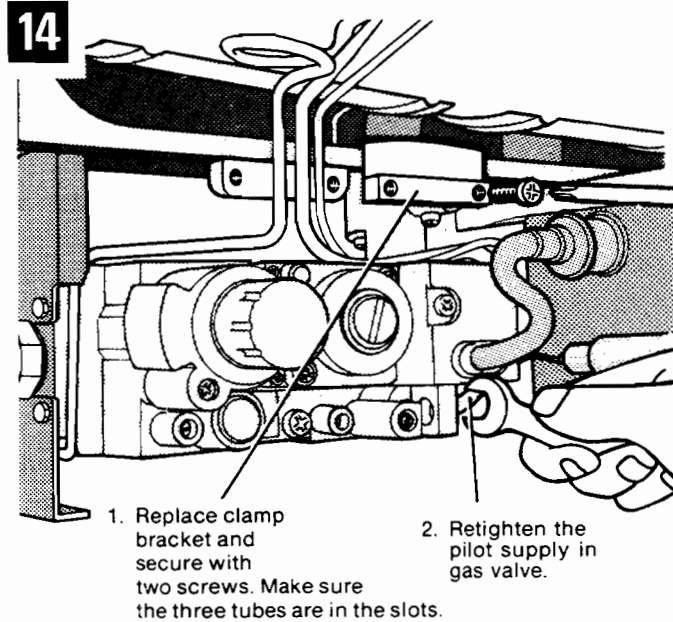
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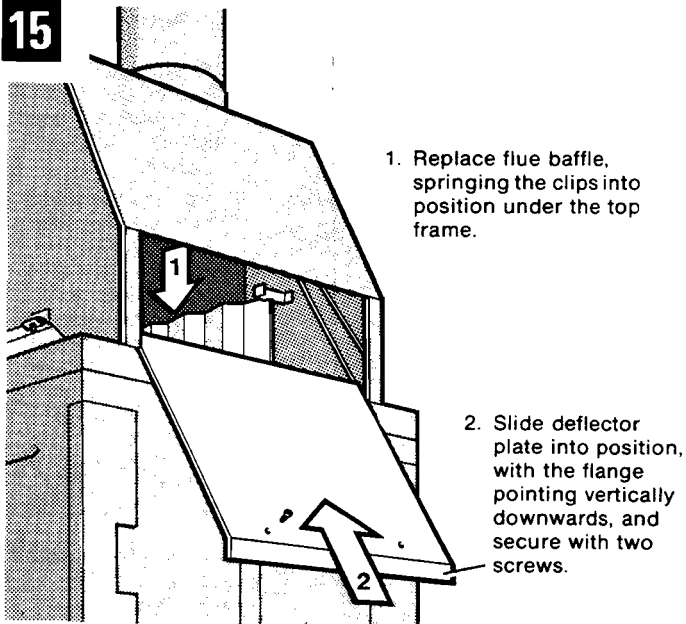
1. Reconnect electrode lead.

2. Re-engage the pilot supply and thermocouple and secure with nuts.

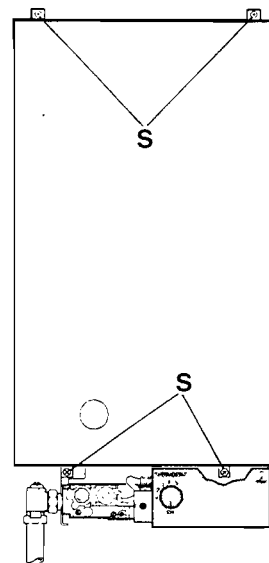
14



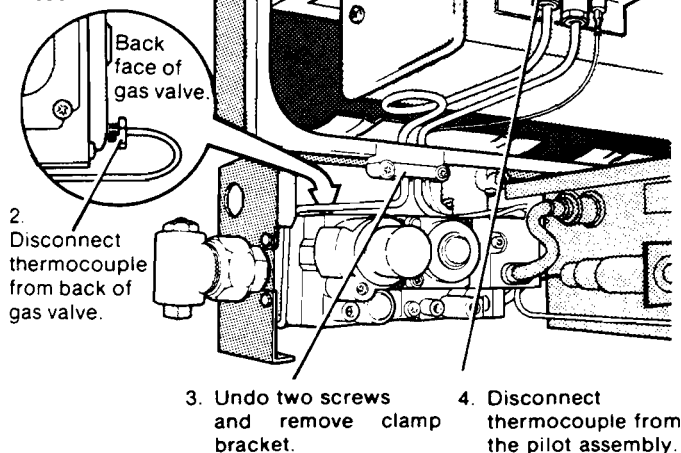
1. Replace clamp bracket and secure with two screws. Make sure the three tubes are in the slots.
2. Retighten the pilot supply in gas valve.

15**16**

1. If the burner was not removed for cleaning, take out the protective covering.
2. Turn on the gas at service tap.
3. Refer to lighting instructions and light the pilot.
4. Test pilot connections for gas soundness.
5. Check that the pilot flame envelops the thermocouple tip (flame length approximately 20 mm).
6. Remove the wiring centre.
7. Fit the case and retain with four screws S.
8. Replace the wiring centre.
9. Light the boiler and check the operation and setting of the boiler and system controls.
10. Replace the bottom cover.

**17 TO REPLACE THE THERMOCOUPLE**

1. Remove the outer case, see frame 1.

**18 Thermocouple—continued**

1. Carefully bend the replacement thermocouple to match the discarded one.
2. Connect the thermocouple to the pilot assembly and gas valve.
3. Replace the clamp bracket making sure that the three components are engaged in their grooves.
4. Remove the wiring centre.
5. Replace the case and secure with the four screws.
6. Replace the wiring centre.
7. Refer to lighting instructions. Light the pilot and check that the gas valve operating button may be released after 20 seconds, with the pilot remaining alight.
8. Replace the bottom cover.

19 TO REPLACE THE BURNER

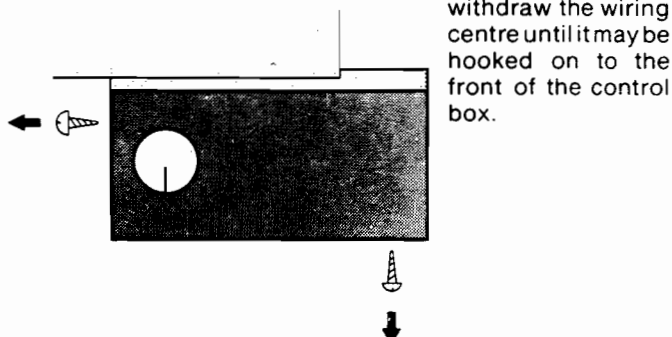
1. Remove the outer case (see frame 1).
2. Remove the burner and manifold from the boiler (see frames 2, 3 and 4).
3. Remove the burner assembly from the manifold by removing the two screws.
4. Fit the manifold tube to the new burner.
5. Fit the burner and manifold assembly using a new 'O' ring (see frames 12, 13 and 14).
6. Remove the wiring centre.
7. Replace the case and secure with the four screws.
8. Replace the wiring centre.
9. Refer to the lighting instructions. Light the boiler and test for gas soundness.
10. Check the operation of the controls.
11. Replace the bottom cover.

20 TO REPLACE THE LINT FILTER

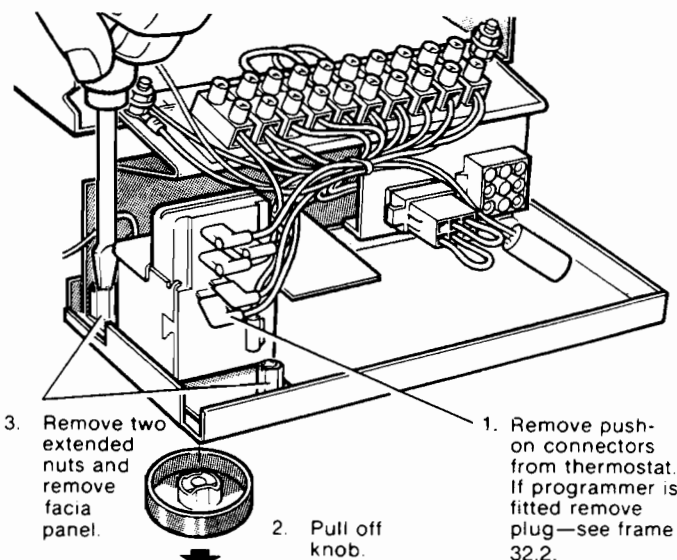
1. Remove the outer case (see frame 1).
2. Remove the burner (see frames 2, 3 and 4).
3. Remove the lint filter from the burner (see frame 8).
4. Fit the new filter to the burner and replace gasket and end plate (see frame 8).
5. Check that the burner 'O' ring is in position and refit the burner (see frames 12, 13 and 14).
6. Remove the wiring centre.
7. Replace the case and secure with the four screws.
8. Replace the wiring centre.
9. Refer to the lighting instructions. Light the boiler and test for gas soundness.
10. Check the operation of the controls.
11. Replace the bottom cover.

21 TO REPLACE THE THERMOSTAT

1. Remove the outer case, (see frame 1).
2. Remove the clamp bracket, (see frame 3).
3. Release the clamp holding the thermostat capillary to the heat exchanger.
4. Undo the screw locking the tab on the end of the thermostat pocket.
5. Remove two screws in the control box cover and withdraw the wiring centre until it may be hooked on to the front of the control box.

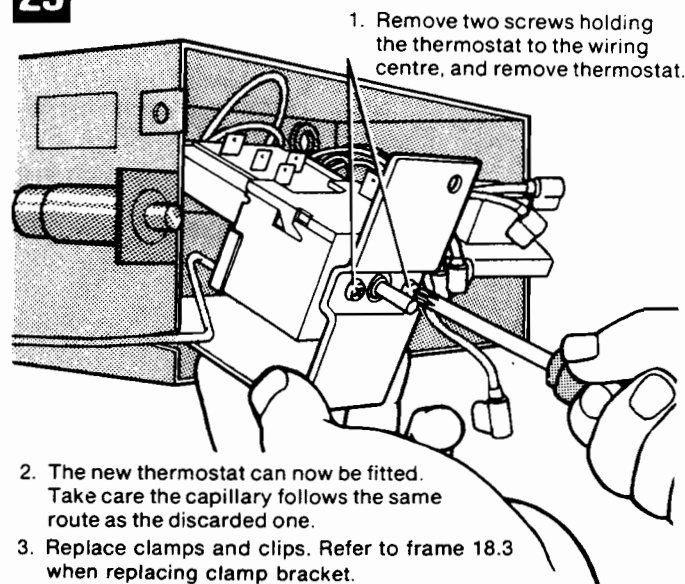


22 Thermostat—continued



1. Remove push-on connectors from thermostat. If programmer is fitted remove plug—see frame 32.2.
2. Pull off knob.
3. Remove two extended nuts and remove facia panel.

23 Thermostat—continued

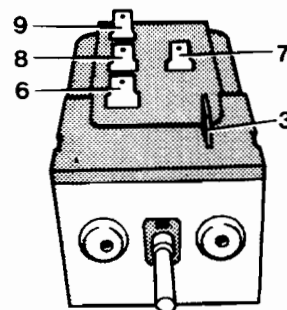


1. Remove two screws holding the thermostat to the wiring centre, and remove thermostat.

2. The new thermostat can now be fitted. Take care the capillary follows the same route as the discarded one.
3. Replace clamps and clips. Refer to frame 18.3 when replacing clamp bracket.

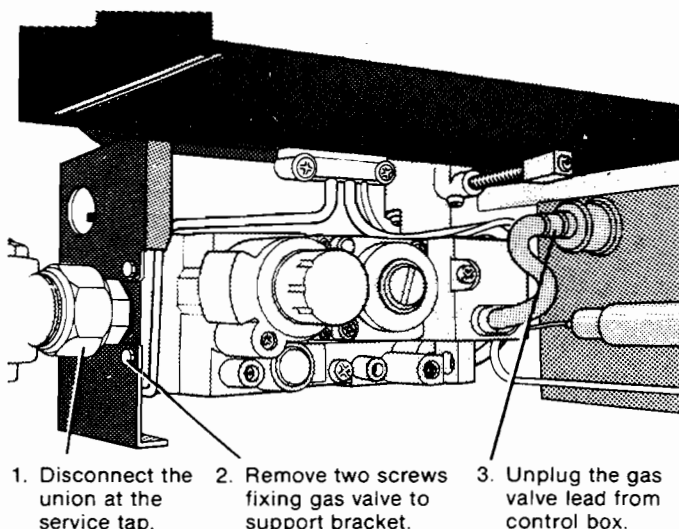
24 Thermostat—continued

1. When reconnecting the push-on connectors ensure that the numbered leads are connected to the same number tag on the thermostat.
2. These numbers are moulded on the thermostat, and annotated on this illustration for positive identification. In addition connect the twin adaptor with two un-numbered leads to terminal 6 of the thermostat.
3. Replace the wiring centre in the control box. (Plug in programmer if fitted—see frame 33.3).
4. Replace the case and secure with four screws.
5. Replace the cover on the control box, making sure that the capillary enters the notch in the side of the control box. Bend the capillary to run neatly to the clamp bracket.
6. Refer to the lighting instructions and light the main burner. Allow the boiler to heat up and check that the thermostat switches the boiler off when turned to a low setting.



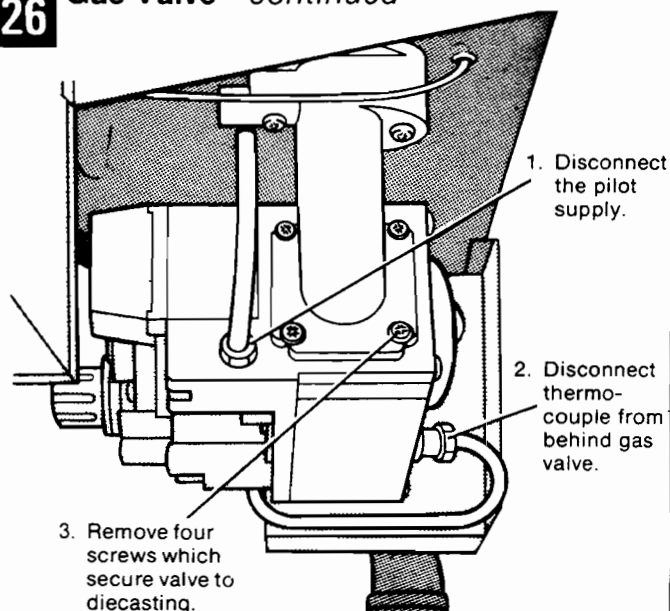
25 TO REPLACE THE GAS VALVE

Ensure that the gas supply is OFF.



1. Disconnect the union at the service tap.
2. Remove two screws fixing gas valve to support bracket.
3. Unplug the gas valve lead from control box.

26 Gas Valve—continued



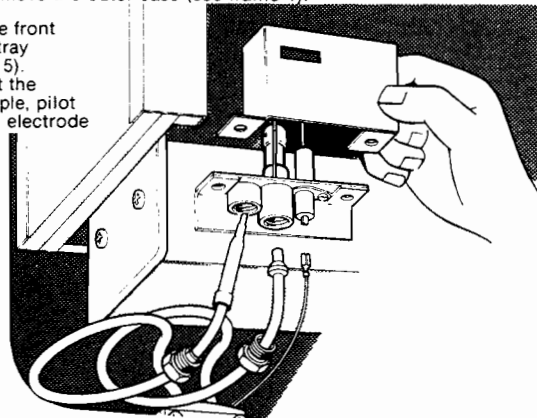
1. Disconnect the pilot supply.
2. Disconnect thermocouple from behind gas valve.
3. Remove four screws which secure valve to diecasting.

27 Gas Valve—continued

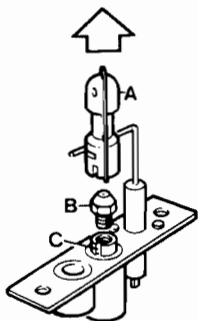
1. Move the pilot supply tube clear and take out the gas valve.
2. Undo the fixing screw and lift the terminal cover forward. Disconnect the push-on terminals (The polarity of these wires is not important), unscrew the earth terminal and remove cable and cover. Fit cable and cover to the replacement valve.
3. Remove the service tap union tail and nut and fit to the replacement valve.
4. Fit the new 'O' ring supplied in the recess in the outlet end of the gas valve.
5. Re-assemble the new gas valve to the boiler in the reverse order of frames 25 and 26.
6. Refer to lighting instructions. Turn on gas, purge supply of air, light the pilot and test service tap union and pilot unions for gas soundness.
7. Adjust the pilot throttle so that the pilot flame (approximately 20 mm long) envelops the thermocouple tip.
8. Light the boiler and test for gas soundness at the outlet of the gas valve.
9. Check the operation of the gas valve. Allow the burner to run for 10 minutes then adjust the burner setting pressure (see frame 34) to the output arrowed on the on the data plate.
10. Replace the bottom cover.

28 TO REPLACE PILOT OR COMPONENTS

1. Remove the outer case (see frame 1).
2. Remove the front insulation tray (see frame 5).
3. Disconnect the thermocouple, pilot supply and electrode lead.
4. Undo two screws fixing the pilot shield and remove shield.
5. Remove defective part. Fit new part and re-assemble, see frame 29. Check that the spark gap is 3.0/4.0 mm.
6. Refit insulation tray.
7. Remove the wiring centre.
8. Replace the case and secure with four screws.
9. Replace the wiring centre. Light the boiler and check operation.
10. Replace the bottom cover.



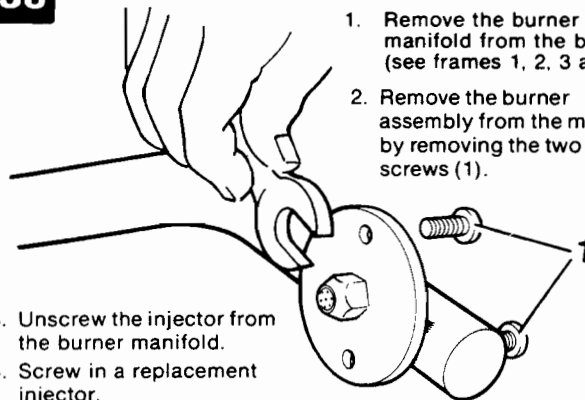
29 PILOT ASSEMBLY



1. Lift off the pilot burner head A.
2. Unscrew the injector B and fit a new one.
3. Replace the pilot burner head. Make sure that the key in burner head lines up with the keyway C.

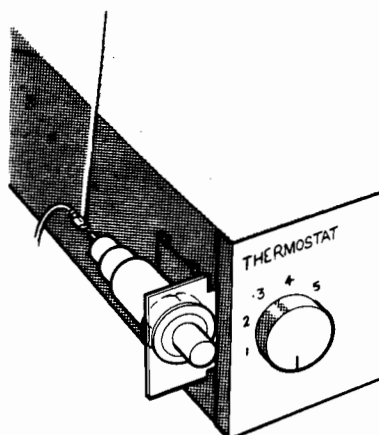
30 TO REPLACE THE BURNER INJECTOR

1. Remove the burner and manifold from the boiler, (see frames 1, 2, 3 and 4).
2. Remove the burner assembly from the manifold by removing the two screws (1).
3. Unscrew the injector from the burner manifold.
4. Screw in a replacement injector.
5. Refit the manifold tube to the burner assembly.
6. Replace the burner assembly to the boiler.
7. Remove the wiring centre.
8. Replace the case and secure with four screws.
9. Replace the wiring centre. Light the boiler.
10. Test for gas soundness.
11. Check the operation of the boiler and controls.
12. Replace the bottom cover.



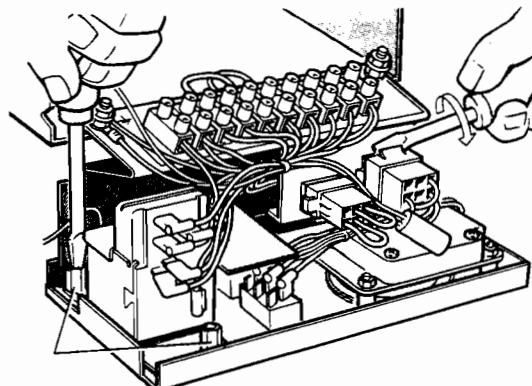
31 TO REPLACE THE PIEZO UNIT

1. Disconnect electrode lead from piezo unit.



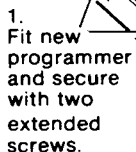
2. Undo the nut securing the piezo unit and remove unit.
3. Fit new unit and re-connect electrode lead and check spark is present at pilot.
4. Replace the bottom cover.

32 TO REPLACE PROGRAMMER



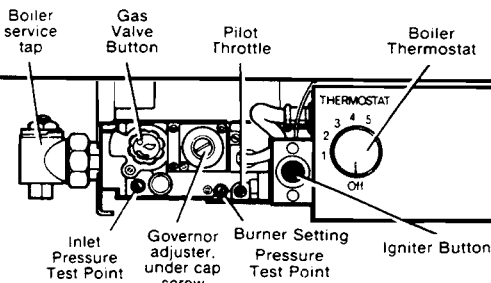
1. Remove two screws and withdraw wiring centre.
2. Lift latch with screwdriver and pull out plug.
3. Pull off knob.
4. Remove two extended nuts and remove programmer from wiring centre.

33

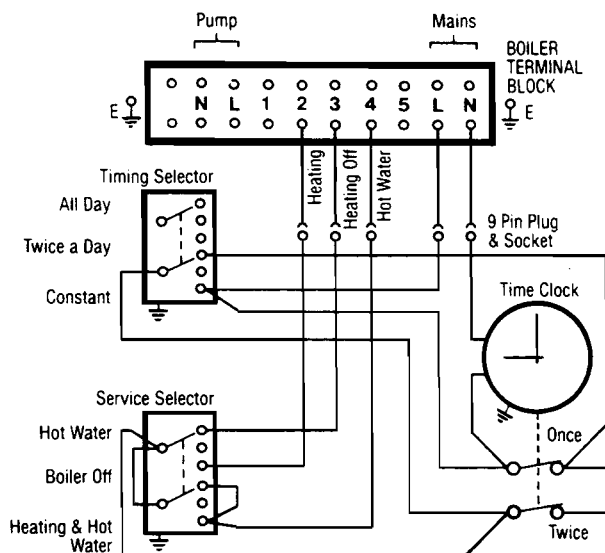


3. Reconnect plug and push until latch engages.
4. Replace wiring centre and secure with two screws.
5. Replace the bottom cover.

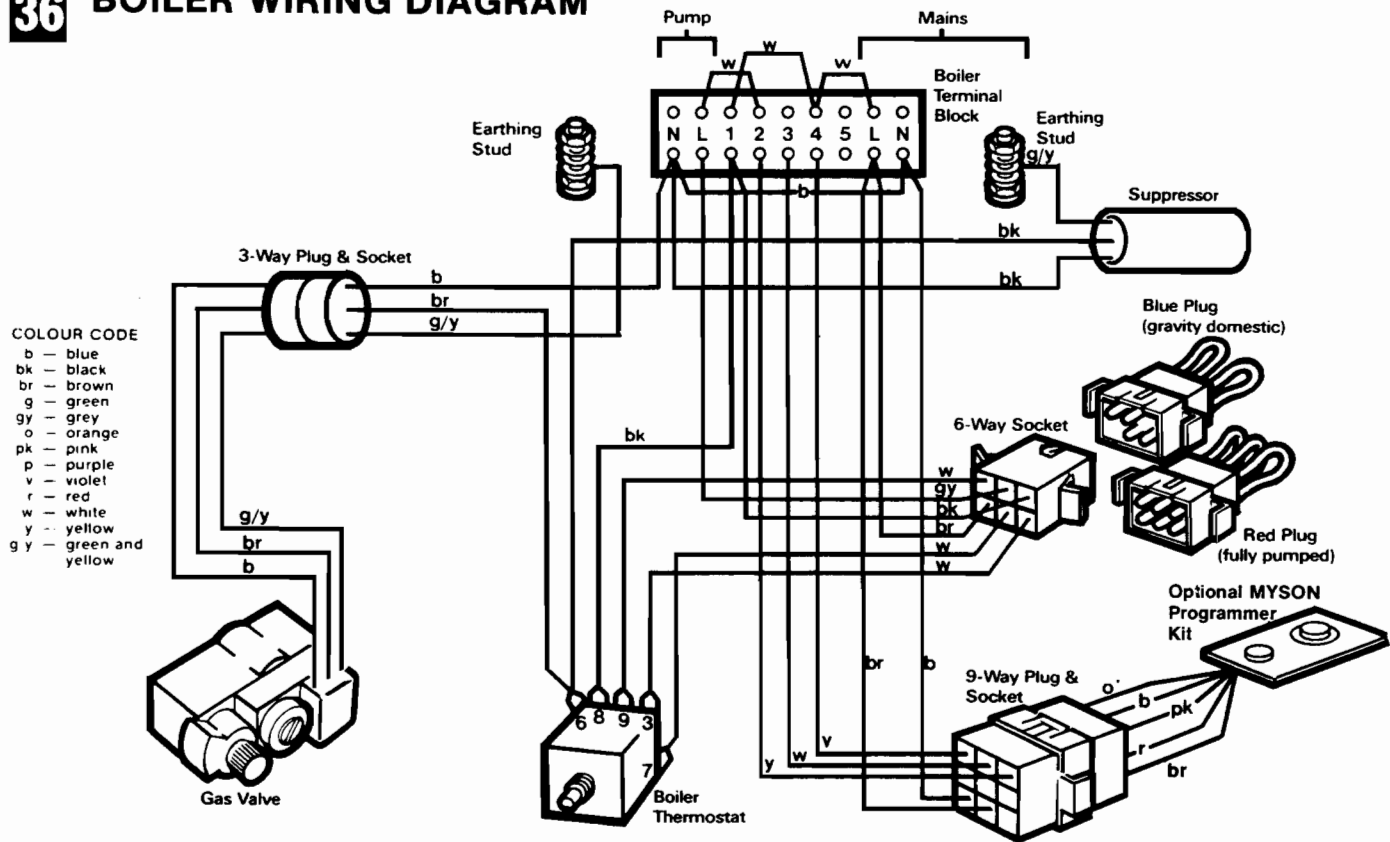
34



35



BOILER WIRING DIAGRAM

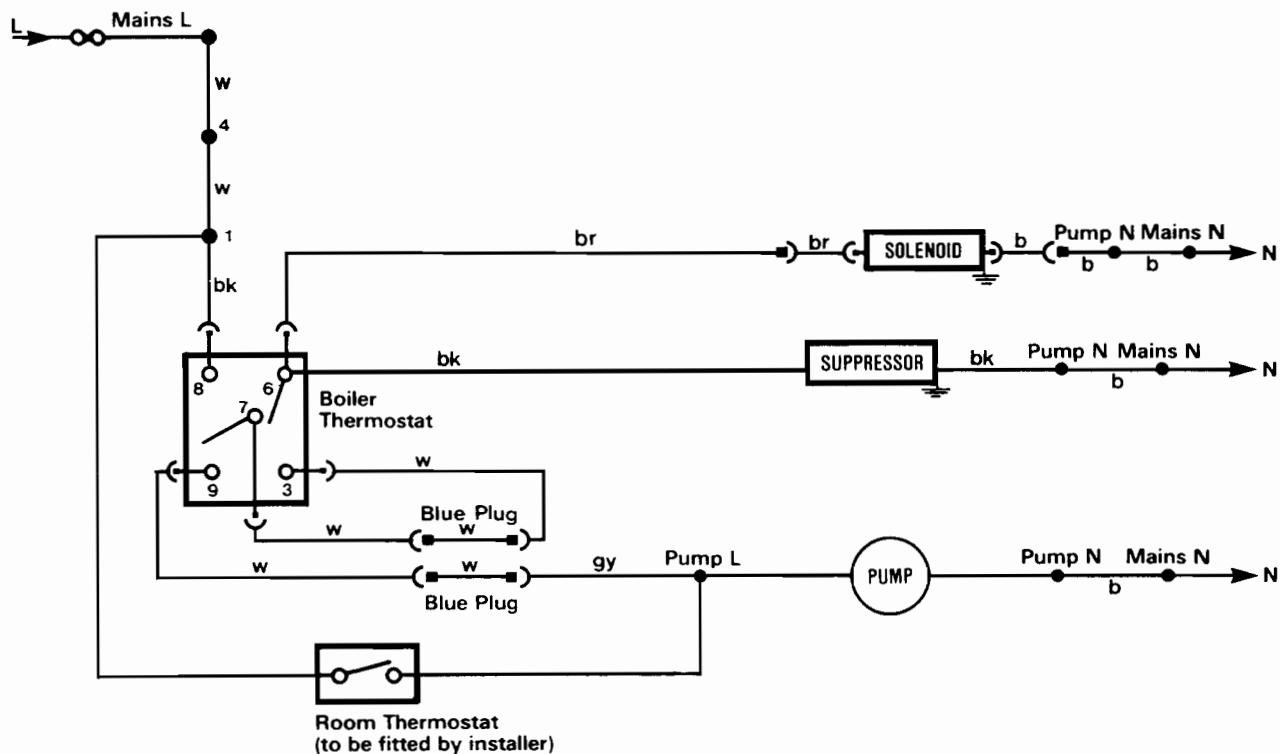


British Patent No. 1507871

NOTE: If a MYSON programmer is fitted remove link L-4

37 FUNCTIONAL FLOW WIRING DIAGRAM (A)

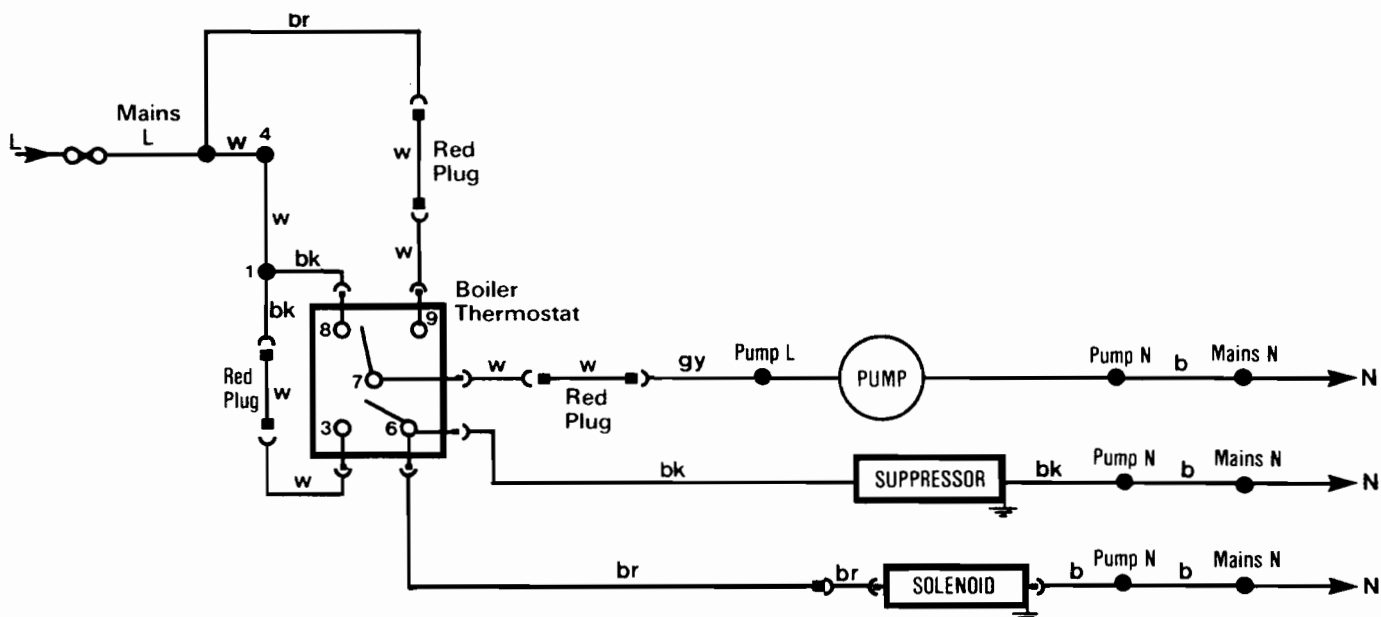
Without programmer (Blue plug fitted) gravity domestic



British Patent No. 1507871

38 FUNCTIONAL FLOW WIRING DIAGRAM (B)

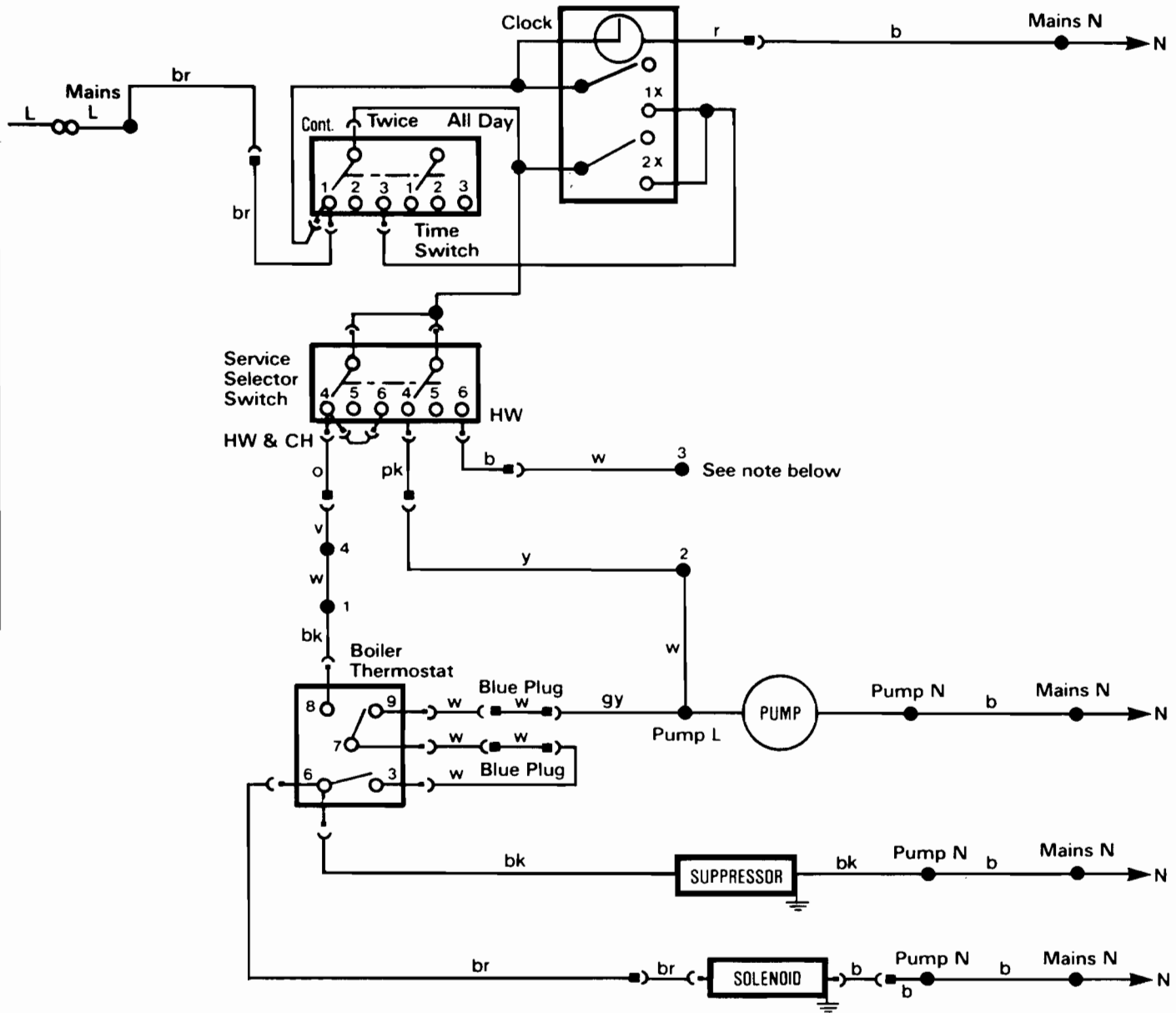
Without programmer (Red plug fitted) Fully pumped



British Patent No. 1507871

39 FUNCTIONAL FLOW WIRING DIAGRAM (C)

With MYSON programmer (Blue plug fitted) Gravity domestic

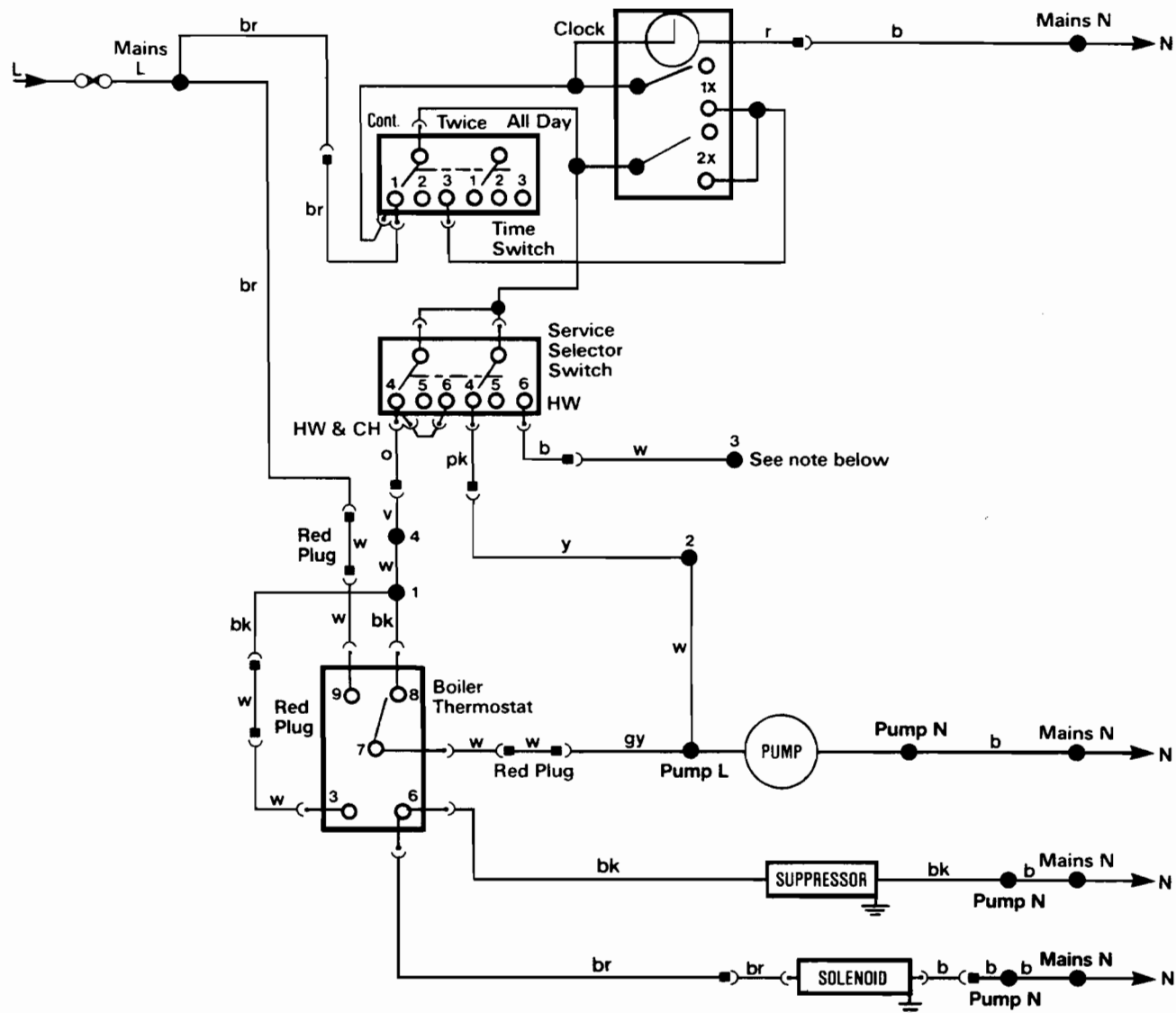


NOTE: Terminal 3 is live when heating is off

SERVICE	SELECTOR SWITCH CONTACT CLOSED					
	1	2	3	4	5	6
OFF						
CH OFF, HW 2×						
CH OFF, HW 1×						
CH + HW 2×						
CH + HW 1×						
CONTINUOUS						

FUNCTIONAL FLOW WIRING DIAGRAM (D)

With MYSON programmer (Red plug fitted) Fully pumped

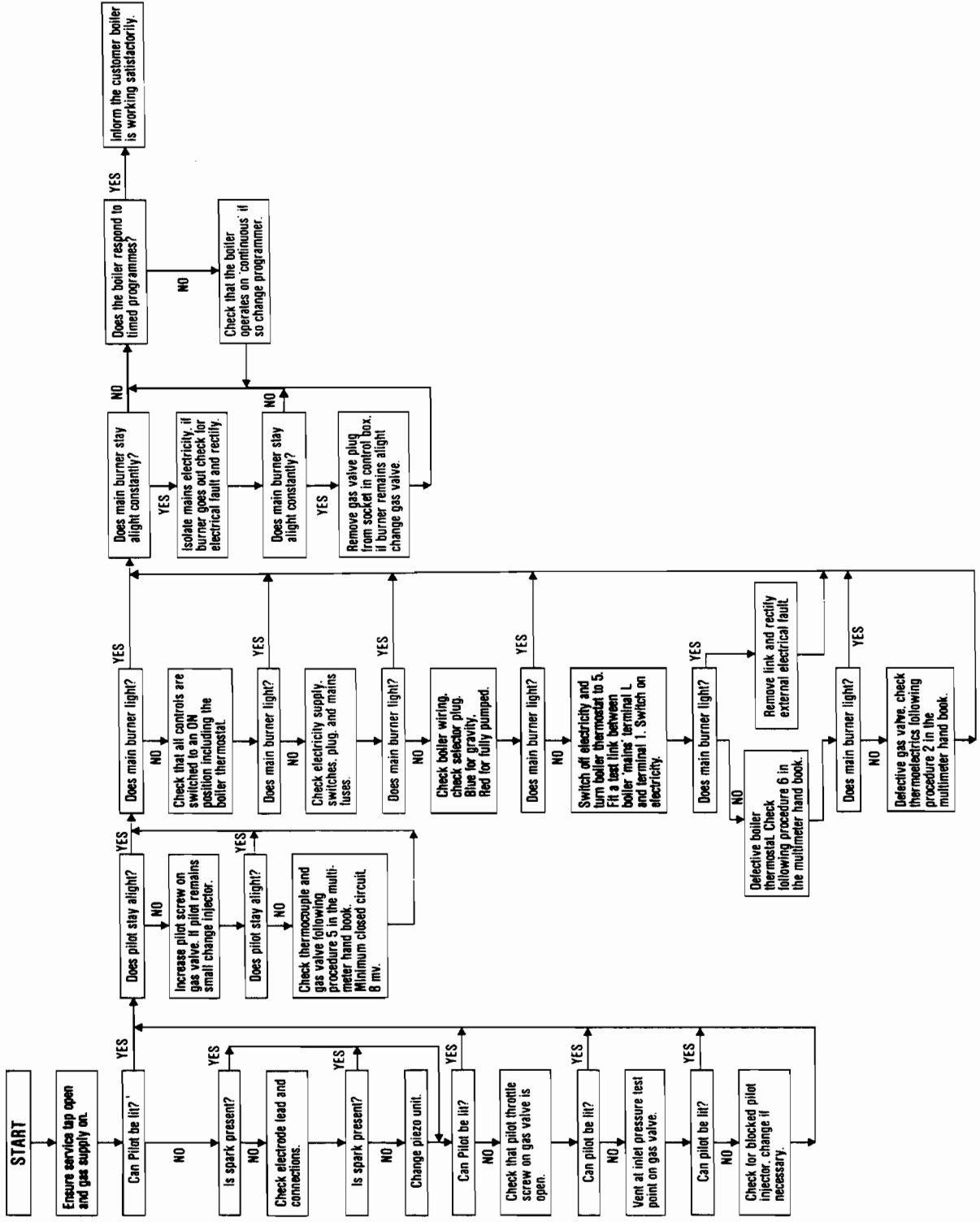


NOTE: Terminal 3 is live when heating is off

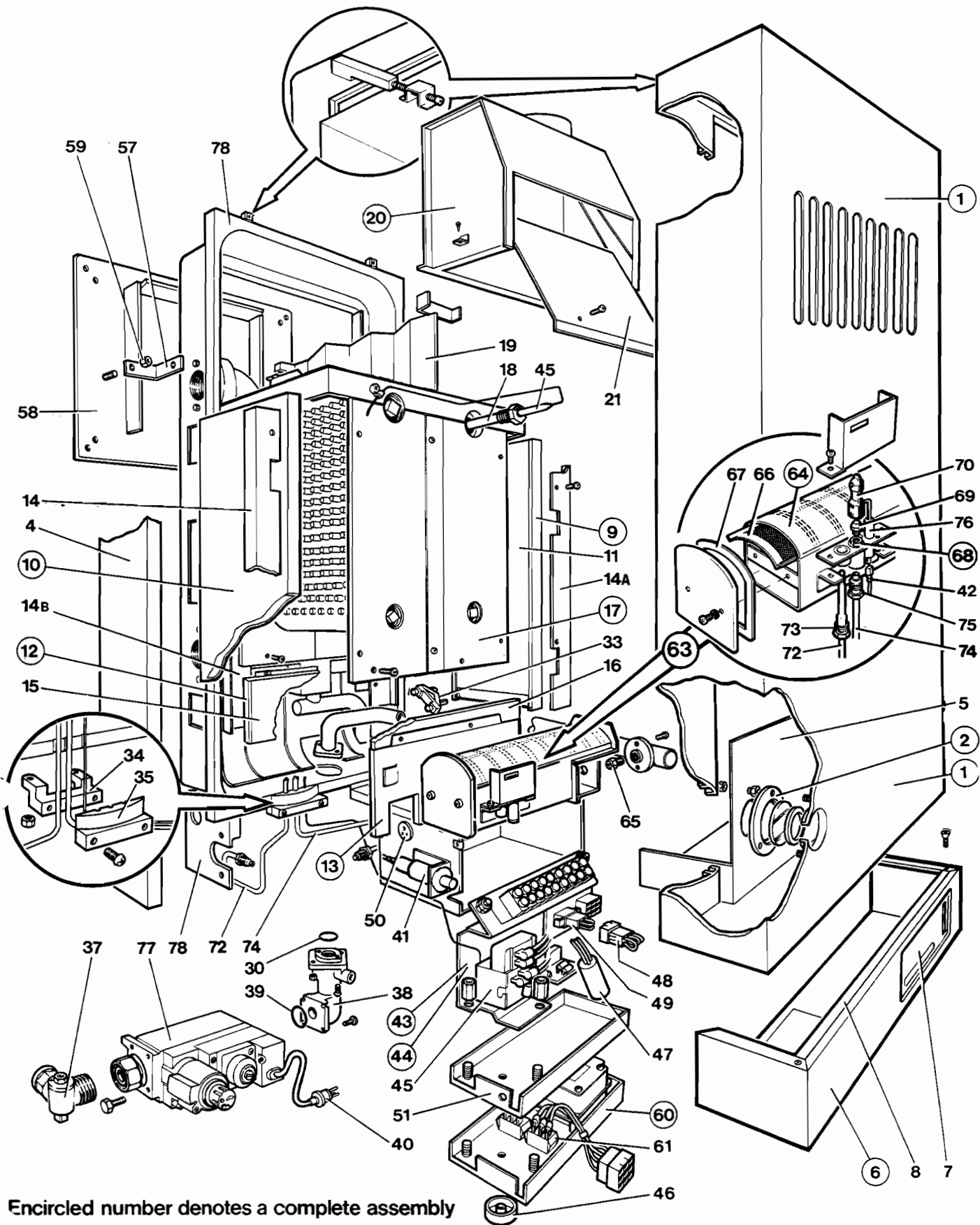
SERVICE	SELECTOR SWITCH CONTACT CLOSED					
	1	2	3	4	5	6
OFF						
CH OFF, HW 2×						
CH OFF, HW 1×						
CH + HW 2×						
CH + HW 1×						
CONTINUOUS						

FAULT FINDING GUIDE

Preliminary electrical system checks as contained in the BGC multimeter instructions book are the first electrical checks to be carried out during a fault finding procedure. On completion of the service/fault finding task which has required the breaking and remaking of electrical connections, then the checks — A. Earth Continuity, C. Polarity and D. Resistance to Earth — must be repeated.



OLYMPIC 20/35C, 38/50C EXPLODED VIEW



OLYMPIC 20/35C, 38/50C SHORT LIST SPARE PARTS

Key No.	GC No.	Description	Qty.	Part No.
1	323 084	Case assembly	1	307A389
2	322 997	Lighting window assembly	1	307A251
7	322 984	Plastic door	1	307A296
11	323 035	Insulation block, (20/35C)	2	307C243
11	323 985	Insulation block, (38/50C)	2	307C050
15	322 991	Insulation pad, (rear)	1	307C144
16	322 992	Insulation pad, (front)	1	307C142
19	323 037	Heat exchanger baffle, (20/35C)	1	307A212
19	322 986	Heat exchanger baffle, (38/50C)	1	307A038
30	322 877	Burner 'O' Ring	1	400-0005-7-00
41	323 018	Piezo unit assembly	1	307A269
42	322 994	Electrode lead with grommet	1	307C154
45	382 322	Boiler thermostat	1	307S133
46	322 570	Thermostat knob	1	305S278
60	323 029	Programmer assembly	1	307A280
63	359 197	Burner and pilot assembly (20/35C)	1	307A728
63	359 202	Burner and pilot assembly, (38/50C)	1	307A729
64	323 258	Burner assembly, (20/35C)	1	307A549
64	323 264	Burner assembly, (38/50C)	1	307A547
65	398 322	Burner injector, (20/35C)	1	307S526
65	398 329	Burner injector, (38/50C)	1	307S527
66	393 370	Lint filter	1	305S434
67	393 369	Burner end gasket	1	305S432
68	359 195	Pilot assembly	1	307A721
69	398 623	Pilot injector	1	307S535
70	359 141	Pilot burner head	1	307S511
72	391 689	Thermocouple	1	307S537
76	384 087	Spark electrode	1	307S720
77	323 261	Gas valve assembly	1	307S546

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Registered in England No. 412935

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OMYSON