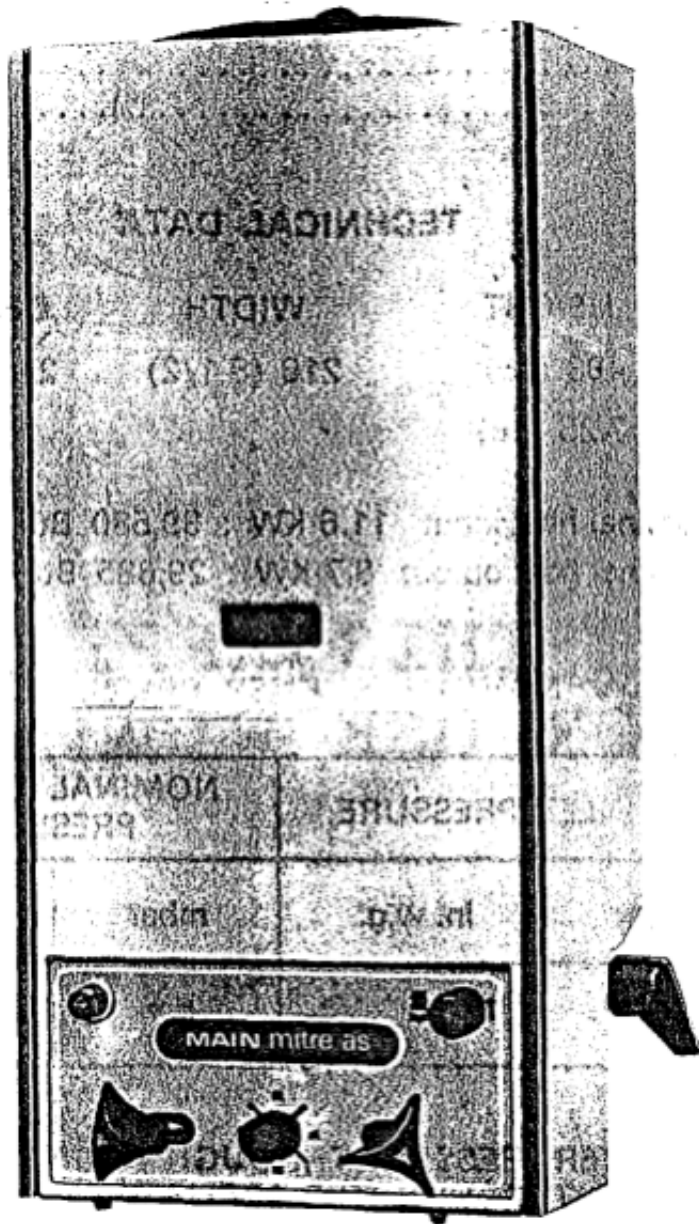


INSTALLATION & SERVICE

INSTRUCTIONS

MITRE-AS

GAS FIRED -INSTANTANEOUS SINK WATER HEATER



G. C. APPLIANCE N° 51 476 33

THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS 1984

In your own interest, and that of safety, 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.

Follow these instructions carefully and comply with conditions set out in the current edition of the Building Regulations Local Water Authority Regulations and relevant Codes of Practice relating to installation of Domestic Water Heating Appliances. (CP 342. and BS.5546).

LEAVE THESE INSTRUCTIONS BY THE METER



| | |
|---|---------|
| Ventilation | Page 2 |
| Fixing | Page 3 |
| Water connection | Page 3 |
| Water spout connection | Page 4 |
| Gas connection | Page 4 |
| Commissioning appliance | Page 4 |
| Checking burner pressure | Page 5 |
| Servicing instructions | Page 6 |
| To remove case front | Page 7 |
| To remove spark igniter | Page 7 |
| To remove. thermocouple/pilot/spark electrode | Page 7 |
| To remove heating unit | Page 8 |
| To remove electro. mag. unit | Page 9 |
| To remove burner assembly and injectors | Page 9 |
| To remove slow ignition diaphragm | Page 9 |
| To remove water diaphragm | Page 9 |
| Short spare parts list | Page 11 |

TECHNICAL DATA

| DIMENSIONS | HEIGHT | WIDTH | DEPTH |
|-------------------------|-----------|-------------|--|
| Overall mm (in) | 483 (19) | 216 (8 1/2) | 210 (8 1/4) Not including swivel spout |
| WEIGHT EMPTY kg (1b) | 7.25 (16) | | |

Nominal heat input 11.6 KW : 39,580 Btu/h.

Nominal heat output 8.7 KW : 29,685 Btu/h.

NOMINAL BURNER PRESSURE

| GAS GROUP | GAS INLET PRESSURE | | NOMINAL BURNER PRESSURE | | INJECTOR SIZE |
|-----------|--------------------|----------|-------------------------|----------|---------------|
| | mbar | in. w.g. | mbar | in. w.g. | mm dia |
| N. G. | 20- | 8 | 5.7 | 2.3 | 1.25 |

THE MAXIMUM PERMITTED WATER PRESSURE THROUGH THIS APPLIANCE IS 10 BAR. THE MINIMUM OPERATING HEAD THROUGH THIS APPLIANCE IS 10ft. (3 BAR).

ANY OTHER PRESSURE LOSSES INCURRED THROUGH THE ADDITION OF EXTERNAL PIPES AND FITTINGS MUST BE TAKEN INTO ACCOUNT ON INSTALLATION.

THE NOMINAL WATER RATE IS 3.2 LITRES / MIN. (0.7 GALL/MIN.) AT A TEMPERATURE RISE OF 40 °C (72 °F).

THE TEMPERATURE SELECTOR WILL GIVE A VARIATION IN TEMPERATURE RISE BETWEEN 25 °C (45°F) AND 55 °C. (99°F).

VENTILATION AND AIR SUPPLY

This heater must be installed in accordance with B.S.5440 part 2.

This heater must not be installed in any room containing a fixed bath or shower and shall not be used to heat water for a bath.

A clearance of 51 mm (2 in) must be left at both sides of the appliance when installed to facilitate ease of servicing.

FLUELESS INSTALLATION

This appliance incorporates an Atmospheric Sensing Device that will shut down the appliance in the event of the room being insufficiently ventilated.

Page 2

A minimum clearance of 450 mm (18 in.) must be observed between the top of the appliance and the ceiling installed.

The room in which the appliance is fitted must be of greater volume than 6 m³ (215 ft.³). In addition rooms between 6 - 11 m³ (215 - 390 ft.³) must be provided with an air vent to the outside atmosphere having minimum effective area of 35cm². (5in²) in addition to an openable window.

For room greater than 11 m³ (390ft.³) an air vent is not required but the room must still contain an openable window.

IMPORTANT

The heater is supplied ready for connecting the gas supply from the left hand side. If connection of the gas supply from the right hand side is preferred the gas tap should be re-positioned before fixing. See gas connection section page 4.

FIXING THE HEATER

Pull handles and knobs from front of appliance.

Remove the two fixing screws 1. [Fig. 1](#) .

Carefully swing out bottom edge of case front to clear tap spindles. Disconnect wire lead from rear of spark igniter and lift off case front. Determine the correct position for the heater taking into account instructions given under "VENTI-LATION AND AIR SUPPLY".

Place appliance in position on the wall and mark the wall for top fixing point.

Drill hole in wall using an 8mm. drill and insert plastic plug. Screw stud into plug down to the depth of the threads. Remove any burrs from screw. Place appliance on the wall ensuring that the stud engages into the fixing hole in rear of appliance. Using a spirit level ensure that the appliance is vertical temporarily tighten the grub screw at the top rear of the appliance case. Hold clips in position towards outside edge of slots as shown in [Fig. 2](#) and mark wall. Slacken grub screw and lift off appliance. Drill and plug wall to take clip securing screws. Place appliance into position on wall, tighten grub screw and secure at bottom using the fixing clips.

WATER INLET CONNECTION

It is strongly recommended that the use of loose jumper washer type cocks be avoided.

Flush out all foreign matter from the supply pipe before connecting to the appliance.

Connect copper tail and sealing washer to water service cock 2. [Fig. 3](#) and connect water supply using 15 mm. copper pipe to B.S. 2871.

IMPORTANT. Remove the sealing washer from copper tail before making any soldered joints to prevent damage from heat. Replace washer on completion.

WATER OUTLET SHORT SPOUT (WHERE APPLICABLE)

Connect short spout and sealing washer 4 [Fig. 3](#) to water outlet 3 [Fig. 3](#) .

IMPORTANT: Remove swivel spout if already fitted.

SWIVEL SPOUT CONNECTION (WHERE APPLICABLE)

Connect swivel spout and sealing washer 4. [Fig. 3](#) to water outlet 3 [Fig. 3](#) .

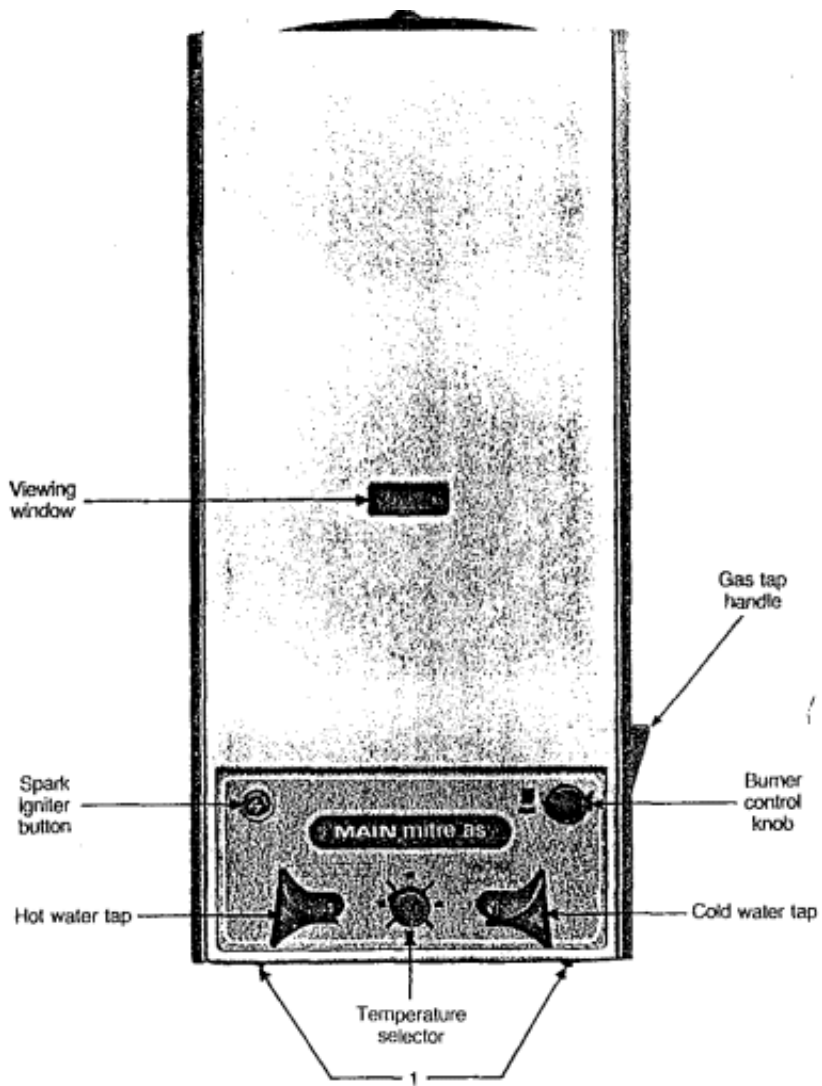


Fig. 1

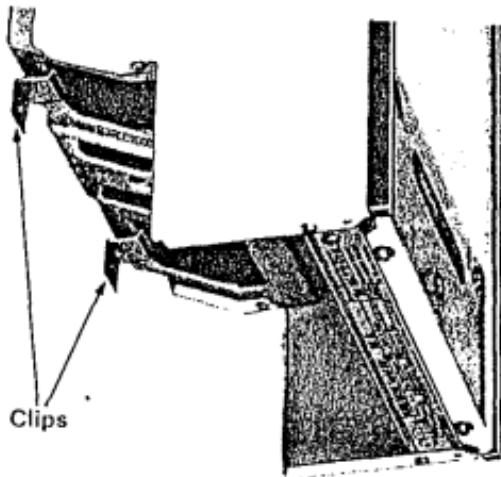


Fig. 2

TO THE USER

PLEASE NOTE THIS APPLIANCE IS NOT SUITABLE FOR USE WITH SHOWERS.

Page 3A

IMPORTANT: Remove short spout if already fitted.

REMOTE HOT WATER OUTLET CONNECTION

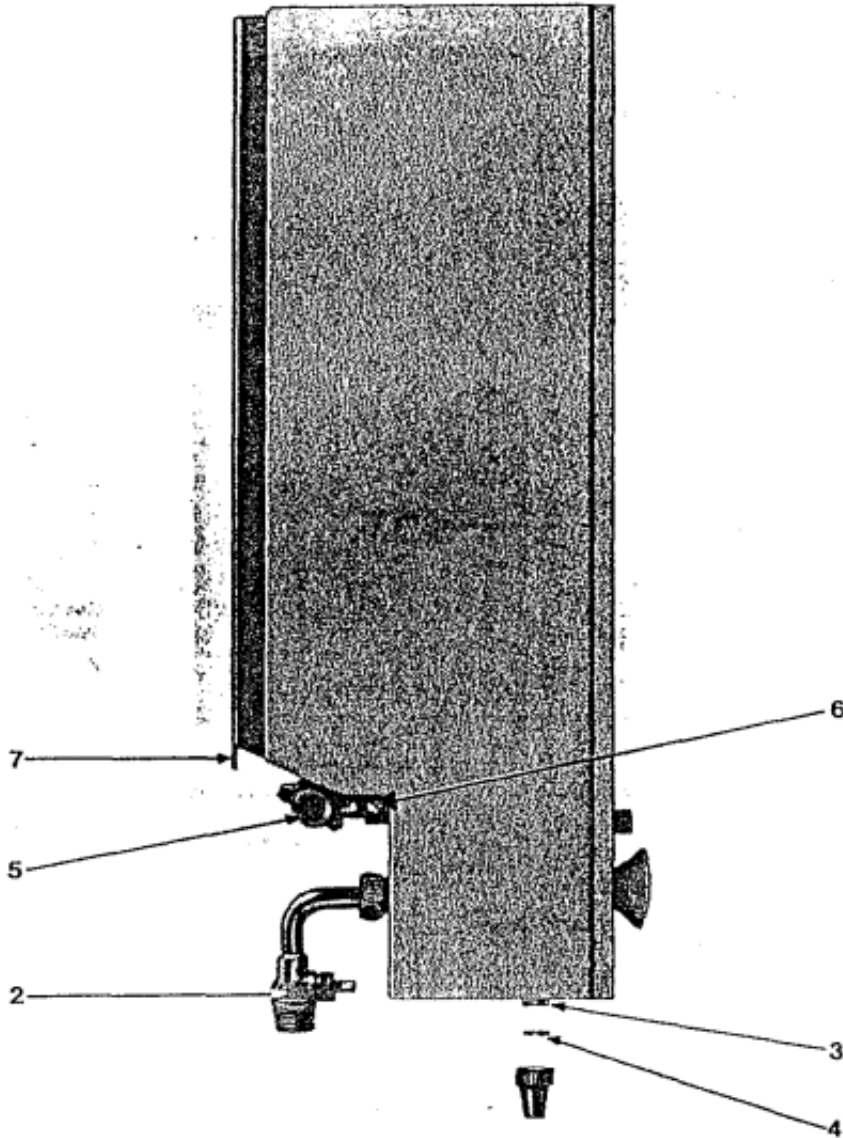


Fig. 3

IMPORTANT: SEE SECTION ON VENTILATION AND AIR SUPPLY

The appliance is fitted with a remote hot water outlet. This outlet is for use when a hot water supply is required in a room other than the room in which the appliance is fitted.

The remote hot water outlet is situated on the water section to the left rear of the spout connection.

Remove nut and blanking washer and connect copper tail (available from the manufacturer part number 30011). Connect pipework from appliance to remote tap or shower.

IMPORTANT: Remove the sealing washer from copper tail before making any soldered joints to prevent damage from heat. Replace washer on completion.

IMPORTANT: The hot and cold taps on the appliance DO NOT control the remote outlet.

If the spout outlet is not to be used on the appliance blank off the outlet to guard against accidental use of taps. The nut and blanking washer taken from the remote hot outlet should be used for this purpose.

NOTE : The swivel spout or the remote outlet or both can be connected to the appliance as required.

GAS CONNECTION

The supply may be connected from the opposite side of the appliance by repositioning the gas tap after releasing the two fixing screws 6. [Fig. 3](#) . The meter must be capable of passing 1.13 m³ /h (40 ft³ /h) of natural gas CV. 1000 in addition to other requirements. The gas pressure required at the appliance inlet connection is 20 mbar (8 in w.g.). A forward facing pressure test point is located on the gas inlet body. Connect copper tail and sealing washer to gas inlet 5. [Fig. 3](#) and connect supply using 15 mm copper pipe to B.S. 2871.

IMPORTANT: Remove the sealing washer from copper tail before making any soldered joints to prevent damage from heat. Replace washer on completion.


COMMISSIONING THE APPLIANCE

Turn on gas and water supply and check for soundness.

Remove screw and sealing washer and attach a pressure test gauge to burner pressure test point 7. [Fig. 3](#) .

Push spark electrode lead into rear of spark igniter and replace case front by locating lugs in the top of the front panel into the mating slots in the appliance case. Push bottom of case front into place and secure with two screws 1. [Fig. 1](#) . Re-fit all handles and knobs ensuring that the blue marked knob is fitted to the right hand front spindle and the red marked knob is fitted to the left hand front spindle.

Open gas tap fully, anti-clockwise, the tap is in the open position when the "FLAME" symbol on the gas tap handle is visible.

Turn the burner control knob to the spark position marked .

Repeatedly press and release the spark igniter button marked  until the pilot is lit.

The pilot flame can be observed through the viewing window.

Once the pilot is lit wait 10 seconds and turn the burner control knob to the working position

marked 

If the pilot goes out wait one minute and repeat the above operations.

Turn on the hot tap and check ignition of main burners.

CHECKING BURNER PRESSURE

Allow burners to operate for one minute before checking the pressures shown below.

| GAS GROUP | GAS INLET PRESSURE | | NOMINAL BURNER PRESSURE | | INJECTOR SIZE |
|-----------|--------------------|----------|-------------------------|----------|---------------|
| | mbar | in. w.g. | mbar | in. w.g. | mm dia |
| N.G. | 20 | 8 | 5.7 | 2.3 | 1.25 |

After checking, turn off hot water tap. Remove pressure test gauge and replace screw and sealing washer.

IMPORTANT

Remove the protective vinyl film from the namebadge. Draw the attention of the user to the warning label on the outer case. Hand the users instructions to the consumer.

Explain fully how to operate the appliance.

SERVICING INSTRUCTIONS

Operate the heater and check the following points.

| Check List | Action |
|---|---|
| Does the pilot flame ignite? Does the pilot light go out after a short period? | <p>Check the spark igniter and spark electrode and replace the units if necessary.</p> <p>Check for electrical shorting.</p> <p>Check the spark gap, the gap should be between 3 mm-4 mm. See Fig. 6 ..</p> <p>This appliance is fitted with a "Heat Sensor" positioned on the right hand side of the heating unit.</p> <p>Using a B.G.C. multimeter check for continuity through the thermocouple circuit (with the appliance cold). If a fault is found it will be due to either a faulty heat sensor or a faulty thermocouple.</p> <p>To check the heat sensor remove it from the circuit and connect the two leads together. Re-check the circuit, if continuity is established then the heat sensor is faulty and needs replacing. If continuity is not established then the thermocouple is faulty.</p> |

| | |
|-------------------------|---|
| | <p>Remove the deflector from the top of the appliance and check the heat exchanger. If the heat exchanger shows any signs of blockage remove the heating unit and clean by brushing or washing. If after checking the above, the pilot flame will not ignite or the pilot flame ignites and goes out after a short period, turn off the appliance open the doors and windows in the room and well ventilate the room.</p> <p>After ensuring that the room been well ventilated light the pilot flame and check that it remains lit. If not, replace the atmosphere sensing device. See the Short Parts List at the end of this booklet.</p> |
| Is pilot flame correct? | Clean pilot assembly. |

| | |
|---|--|
| Does thermo-electric flame safety device open and close correctly? | <p>This appliance is supplied with an adaptor to enable the thermocouple circuit to be tested using a B.G.C. multimeter.</p> <p>Check that the pilot strikes thermocouple correctly. Replace thermocouple and/or electric magnetic valve if necessary.</p> |
| Is burner pressure correct? | <p>Ensure gas inlet pressure is sufficient.</p> <p>Ensure main gas valve-is fully open.</p> |
| Are there any water leaks? | Check tightness of connections. Replace sealing washers if necessary. |
| Are there any gas leaks? | Check tightness off connections. Replace sealing washers if necessary. |
| Does main burner extinguish quickly when hot water tap is turned off? | Check that push rod in water section moves freely. Lubricate if necessary. |
| Is heater noisy in operation? | Check for flame "lift" on main burners De-scale the heat exchanger if necessary (See Section "TO REMOVE HEATING UNIT"). |

1. TO REMOVE CASE FRONT

Pull handles and knobs from spindles at front of appliance. Remove two fixing screws 8. [Fig. 4](#) . Carefully pull out bottom edge of case front to clear tap spindles.

Disconnect wire lead (push fit) from rear of spark igniter.

Lift case front and remove.

Re-assemble in reverse order ensuring that the red marked knob is fitted to the left hand front spindle and the blue marked knob is fitted to the right hand front spindle.

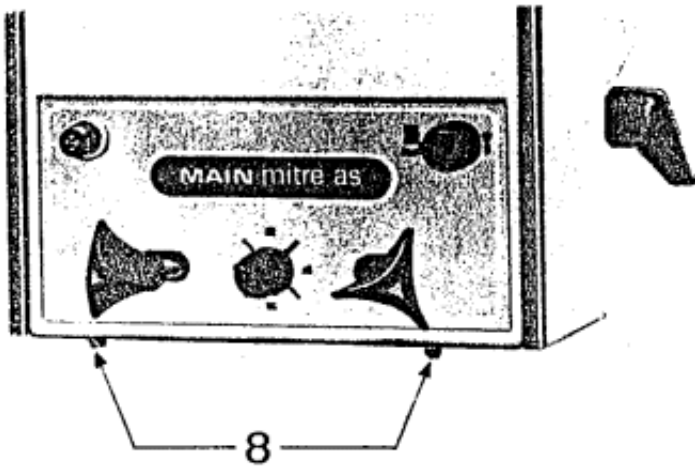


Fig. 4

2. TO REMOVE SPARK IGNITER

Remove case front, see [Section 1](#) .

Pull retaining clip and washer from around the spark igniter behind case front. Pull spark igniter forwards through case front.

Re-assemble in reverse order using a new "Push Fix" retaining clip (Part Number 30265).

3. TO REMOVE THE SPARK ELECTRODE, PILOT, THERMOCOUPLE, HEAT SENSOR, PILOT REGULATOR AND ATMOSPHERE SENSING DEVICE.

IMPORTANT : Care must be taken when handling this assembly. The bi-metal strip **MUST NOT** be touched by hand, skin contact may effect the operation of the control.

Page 6

IMPORTANT: The bi-metal sensor and its valve flap **MUST NOT** be mechanically opened or adjusted in any way.

Turn off the gas. Remove the case front see section 1.

Release pilot supply fixing screw 9. [Fig. 5](#) do not remove the screw from the pilot assembly, do not lose the sealing washer.

Release the thermocouple nut 10. [Fig. 5](#) .

Release the 'Heat Sensor' from the heating unit (centre screw).

Pull assembly carefully forward at the bottom and remove from the appliance by gently pulling downwards to clear the burners.

Release screw 11. [Fig. 6](#) and separate the unit.

The spark electrode and the thermocouple will now be free.

To clean the pilot jet, release union nut 12, [fig. 6](#). and separate unit. **DO NOT** lose the sealing washer. **DO NOT** breakdown' the assembly beyond this point.

Clean by blowing through in the opposite direction to the gas flow. **DO NOT** clean by brushing or poking through the orifice.

The pilot tube assembly, that incorporates the Atmosphere Sensing Device, may be cleaned by rinsing in paraffin or metholated spirits or a similar volatile solvent. Care must be taken when handling this unit, the bi-metal strip is extremely sensitive and easily damaged.

Re-assemble the top unit first, the electrode, pilot tube and thermocouple locate into their respective sections in the metal plate, hook the remaining plate into position and secure with the fixing screw 11. [Fig. 6](#) . Check that all the components are correctly positioned.

Attach the regulator assembly to the pilot tube assembly 12. [Fig. 6](#) ensure that the sealing washer is in place, do not tighten the union nut.

With the electrode towards the back of the appliance push assembly into position between the centre burners so that it locates behind the retaining strip.

Secure the assembly at 9. [Fig. 5](#) ensure that the sealing washer is in place.

Tighten the union nut 12. [Fig. 6](#) .

Re-connect the thermocouple at 10. [Fig. 5](#) . TIGHTEN THERMOCOUPLE NO MORE THAN 1/4 TURN BEYOND HAND TIGHTNESS.

Re-connect the 'Heat Sensor' and ensure that the thermocouple leads are routed away from any hot surfaces.

4. TO REMOVE HEATING UNIT

Turn off gas and water supply and drain unit by releasing drain screw and washer 14. [Fig. 7](#) .

Remove case front see [section 1](#) .

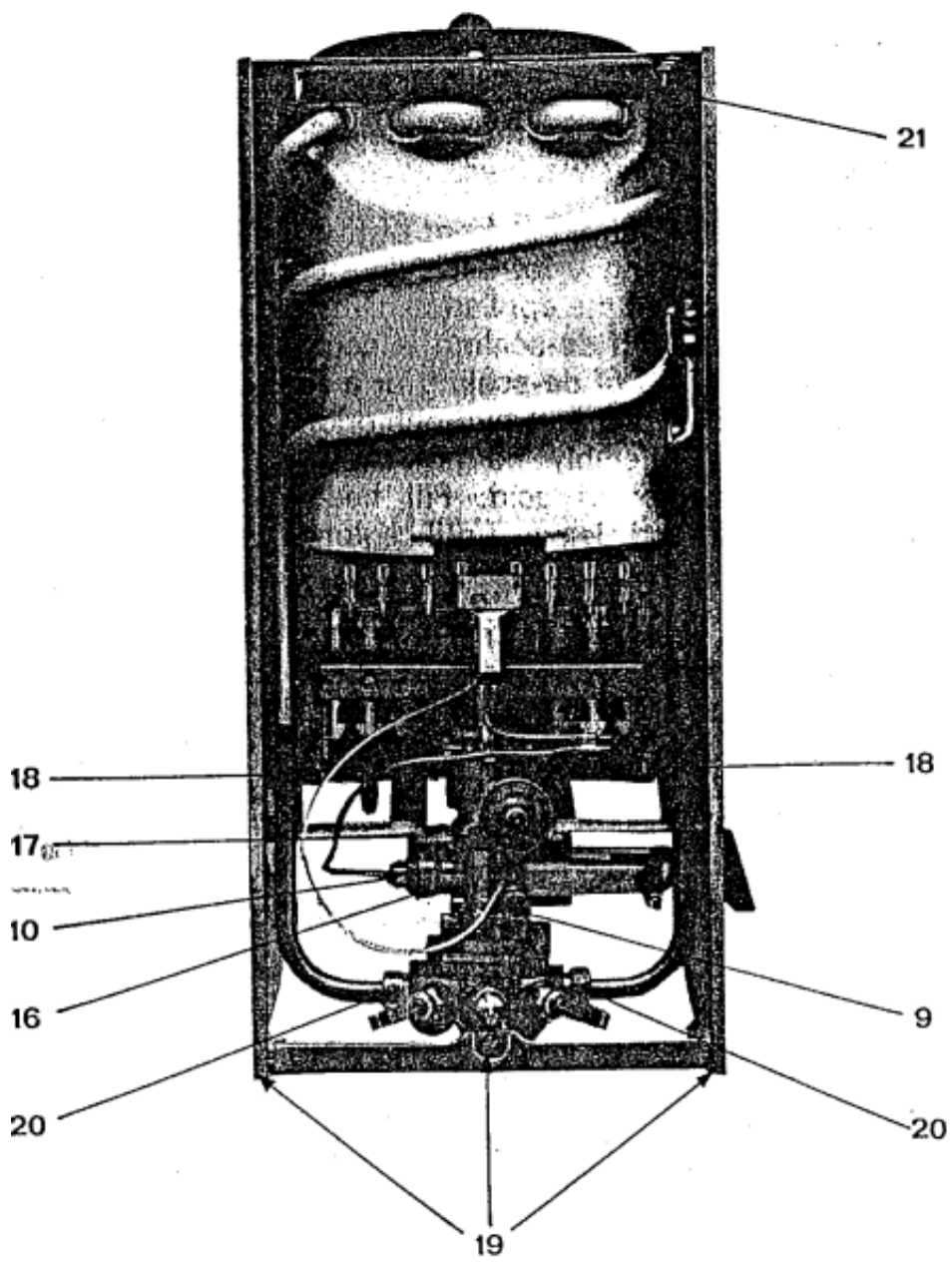


Fig. 5

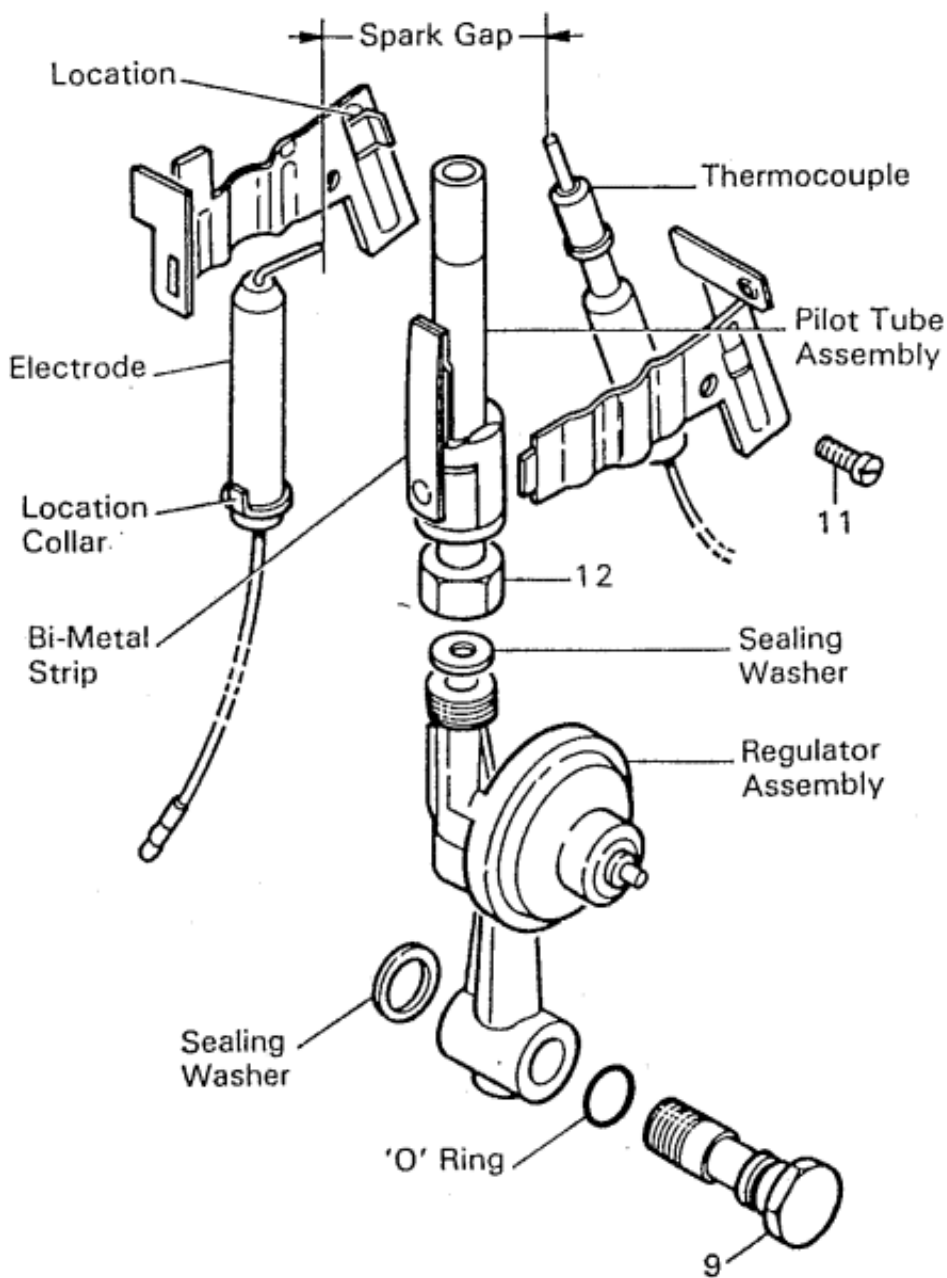


Fig. 6

Page 7

Remove the complete pilot and sensing device assembly see [section 3](#) .

Release two union nuts and washers 20. [Fig. 5](#) . DO NOT lose sealing washers.

Release screw 21. [Fig. 5](#) at front of flue deflector and remove retaining strip. Carefully pull heating unit forwards out of the appliance. Brush or wash clean if necessary. If de-scaling is necessary use a proprietary brand of de-scaling or a solution of 10 parts water to one part hydrochloric acid. The water should preferably be hot. Add ACID to WATER not water to acid. Fill heating body with solution and leave until solution stops bubbling. Flush thoroughly before re-fitting.

Re-assemble in reverse order ensure sealing washers are fitted, and that the thermocouple leads are routed away from hot surfaces.

WARNING

ACID/WATER SOLUTION MUST BE USED WITH EXTREME CAUTION. TAKE CARE NOT TO SPLASH ONTO SKIN OR INTO EYES. WASH ANY AFFECTED AREAS WITH LARGE AMOUNTS OF COLD WATER AND SEEK MEDICAL ADVICE.

5. TO REMOVE ELECTRO-MAG. UNIT

Remove case front see [section 1](#) .

Release thermocouple nut 10. [Fig. 5](#) .

Release securing nut 16. [Fig. 5](#) and pull electro-mag. unit clear of assembly.

Replace in reverse order.

6. TO REMOVE BURNER ASSEMBLY AND INJECTORS

Turn off gas and water supply. Open a hot outlet to release pressure. Remove case front, see section 1. Remove the complete pilot and sensing device assembly see [section 3](#). Release union nut 17. [Fig. 5](#). Lift burner assembly vertically to fully expose spring and sealing washer. Remove washer and spring assembly. Remove burner assembly.

Remove two fixing screws 18. [Fig. 5](#) and pull burner assembly off manifold. To clean injectors remove from manifold and blow through in op po-site direction to gas flow. Do not clean by brushing or poking through orifice.

When re-fitting injectors re-seal the threads using an approved sealing compound, do not allow sealing compound to block the injectors. When re-assembling the main valve spring and washer ensure that the blind hole in the brass valve is correctly located on the push rod before re-fitting the burner assembly.

Re-assemble the burner unit in reverse order ensuring that the location peg at the rear of the unit engages in the positioning hole in the rear panel.

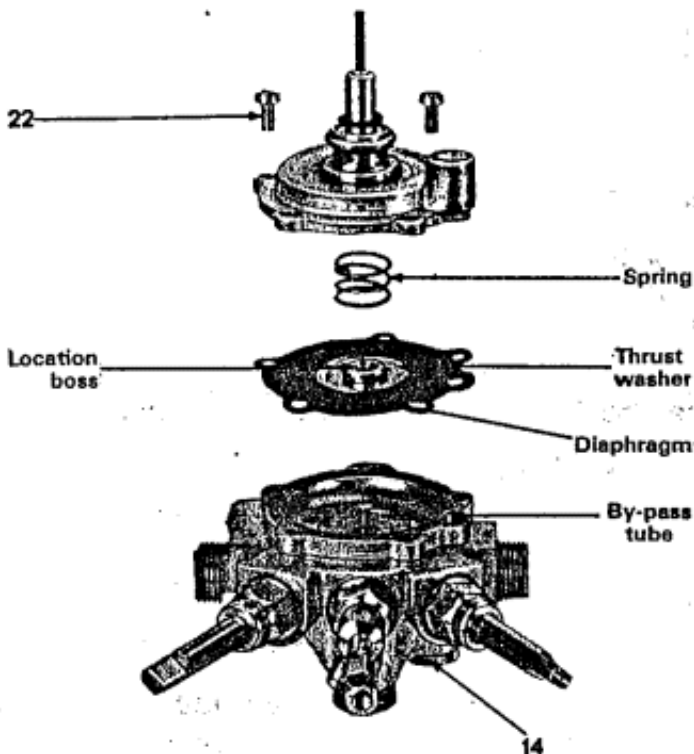


Fig. 7



Fig. 8

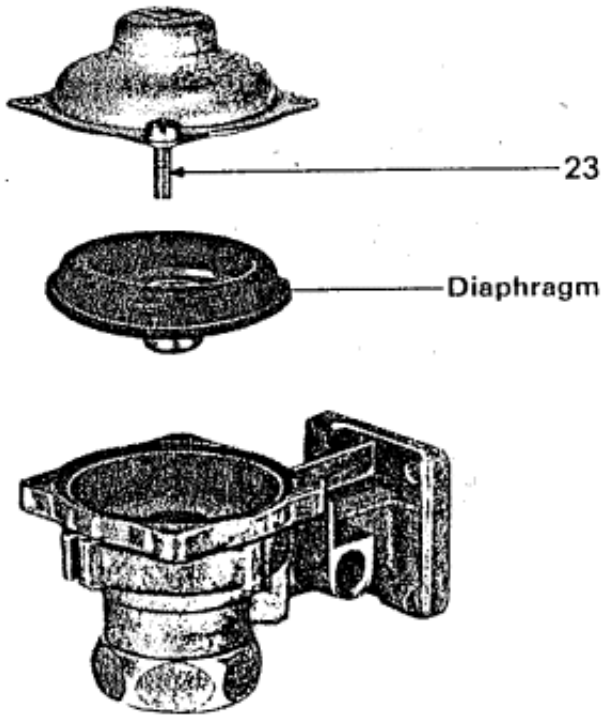


Fig. 9

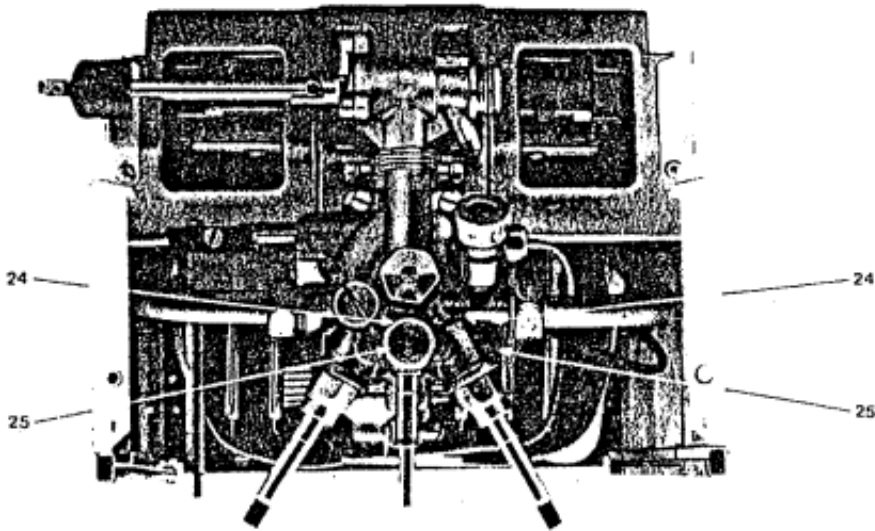


Fig. 10

Page 8

7. TO REMOVE SLOW IGNITION DIAPHRAGM

Remove burner assembly see [section 6](#) .

Remove four screws 23. [Fig. 9](#) and lift off the cover.

Lift out diaphragm assembly, replace if necessary.

Re-assemble in reverse order ensuring that the brass weight is on the under side of the diaphragm and locates in the gas chamber.

8. TO REMOVE WATER DIAPHRAGM

Turn off gas and water supply and drain unit by releasing drain screw and sealing washer 14. [Fig. 7](#) .

Remove case front see [section 1](#) .

Disconnect water supply at rear of water diaphragm assembly.

Remove front retaining plate by releasing three fixing screws 19. [Fig. 5](#) and easing free.

Remove burner assembly see [section 6](#) . Remove union nuts 20. [Fig. 5](#) . DO NOT lose sealing washers. Remove two vertical screws 24. [Fig. 10](#). Release two horizontal screws 25. [Fig. 10](#) by turning each four complete turns anti-clockwise and pull assembly forwards and out of appliance. DO NOT lose rubber sealing washer from gas connection. Release two screws 26. [Fig. 11](#) by turning each four complete turns anti-clockwise. Separate water diaphragm assembly from the Flame Safety Device. Separate water diaphragm assembly by releasing five screws 22 [Fig. 7](#). DO NOT lose small by-pass tube when separating assembly.

When re-assembling ensure that the small by-pass tube is in position in the unthreaded hole in the skirt of the water diaphragm assembly.

The diaphragm assembly must be fitted with the thrust washer and location boss on the top of the diaphragm and the spring around the location boss on the top of the thrust washer. See [Fig. 7](#).

Re-assemble in reverse order ensuring that the gas and water tap spindles face forwards. Re-fit drain screw and washer.

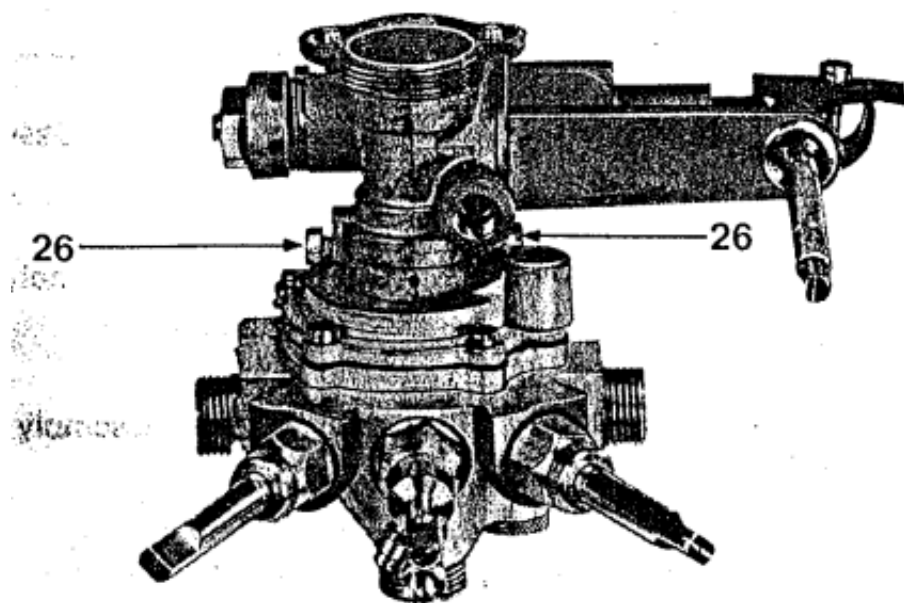
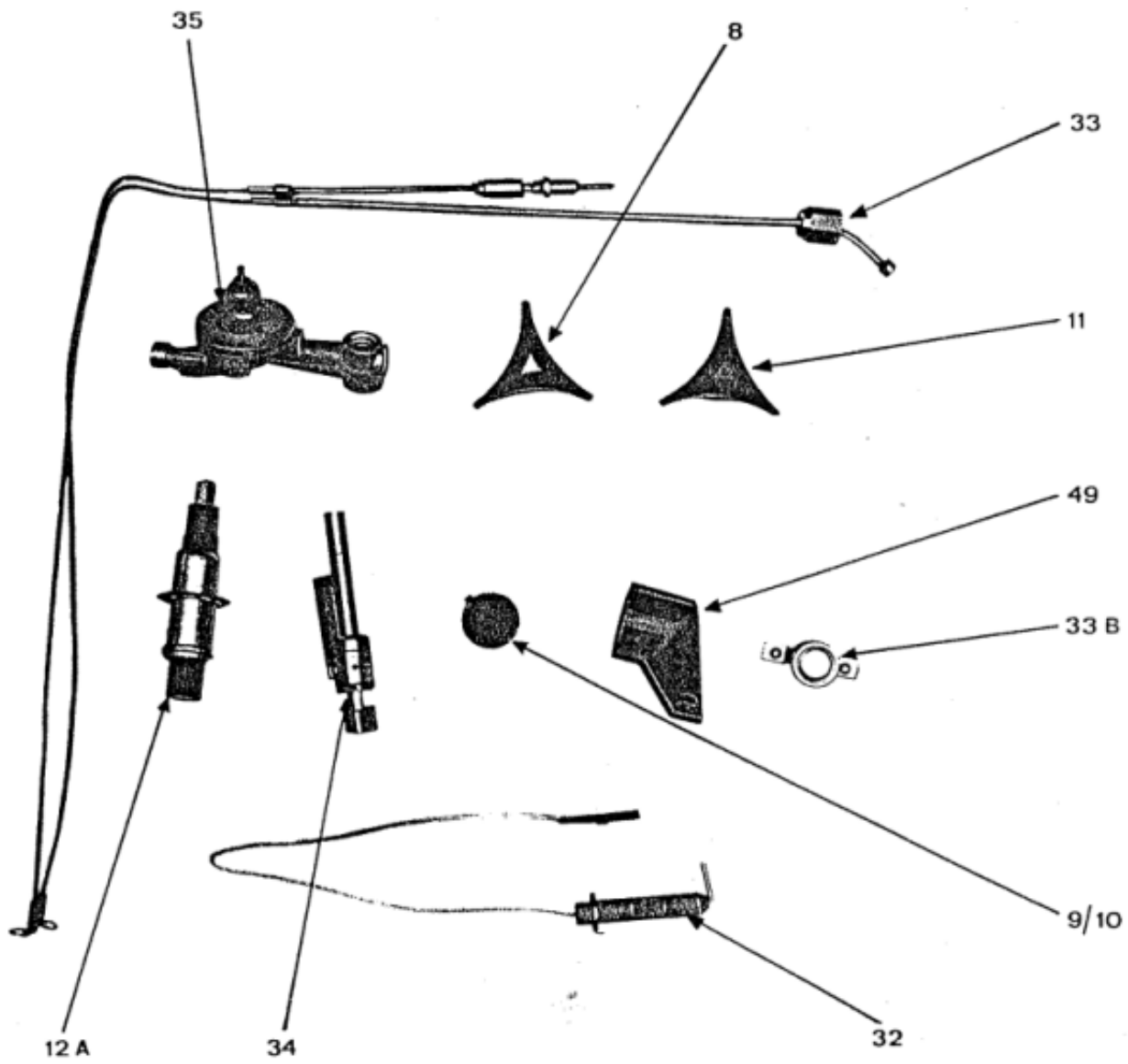


Fig. 11

SHORT SPARE PARTS LIST

| Key No. | G. C. PART No. | Description | No. Off | Makers Part No. |
|---------|----------------|--|---------|-----------------|
| 35 | 257694 | Pilot regulator assembly | 1 | 27691 |
| 32 | | Spark Electrode | 1 | 38742 |
| 33 | - | Thermocouple | 1 | 27783 |
| 12A | 340453 | Spark Igniter Assembly (Cosic P 1862-79) | 1 | 30260 |
| 33B | - | Heat Sensor | 1 | 27581 |
| 34 | 257622 | Pilot burner/injector Assembly | 1 | 27747 |
| 8 | 285594 | Hot Water Knob | 1 | 31206 |
| 11 | 285597 | Cold Water Knob | 1 | 31207 |
| 9/10 | 285595 | Temperature Selector/Burner Control Knob | 2 | 22527 |
| 49 | 285622 | Gas Tap Handle | 1 | 20858 |



Page 10

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Page 11