

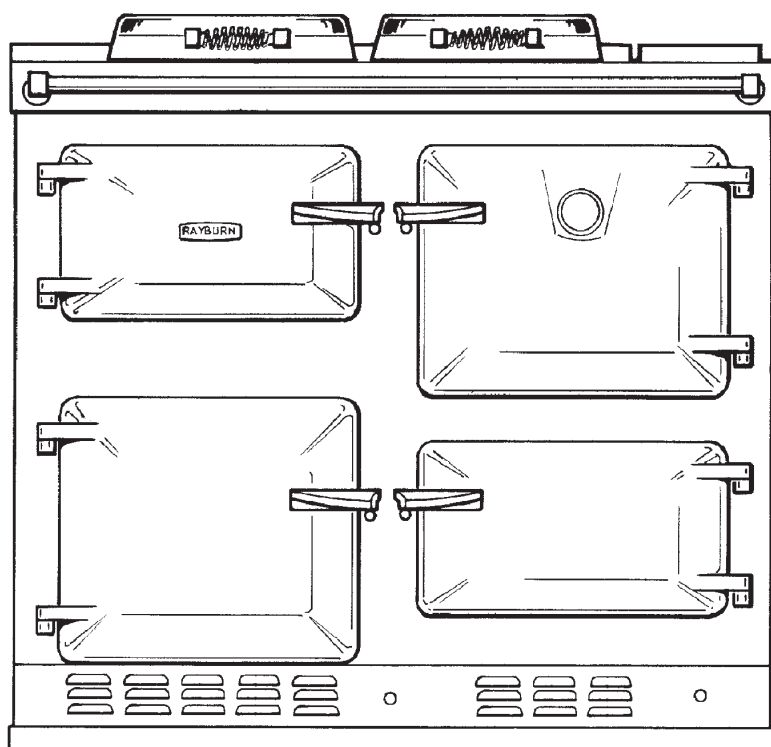


Servicing Instructions

from **AGA**

400GL PX (PF)

For use in GB and IE



DESN 512548 A

Remember, when replacing a part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been clearly authorised by AGA.

PLEASE READ THESE INSTRUCTIONS BEFORE SERVICING THIS APPLIANCE

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Consumer Protection

As responsible manufacturers we take care to make sure that our products are designed and constructed to meet the required safety standards when properly installed and used.

IMPORTANT NOTICE: PLEASE READ THE ACCOMPANYING WARRANTY.

Any alteration that is not approved by AGA could invalidate the approval of the appliance, operation of the warranty and could affect your statutory rights.

Health & Safety

This appliance may contain some of the materials that are indicated. It is the Users/Installers responsibility to ensure that the necessary personal protective clothing is worn when handling where applicable, the pertinent parts that contain any of the listed materials that could be interpreted as being injurious to health and safety, see below for information.

Firebricks, Fuel beds, Artificial Fuels

When handling use disposable gloves.

Fire cement

When handling use disposable gloves.

Glues and Sealants

Exercise caution - if these are still in liquid form use face mask and disposable gloves.

Glass Yarn, Mineral Wool, Insulation Pads, Ceramic Fibre

May be harmful if inhaled. May be irritating to skin, eyes, nose and throat. When handling avoid contact with skin or eyes. Use disposable gloves, face-masks and eye protection. After handling wash hands and other exposed parts. When disposing of the product, reduce dust with water spray, ensure that parts are securely wrapped

INTRODUCTION

To ensure the best performance from your Rayburn it should be serviced once a year; preferably at the start of the heating season.

In your own interest, and that of safety to comply with the law, all gas appliances should be installed/maintained by a competent person, such as a Gas Safe Registered engineer, in accordance with the relative regulations.

Failure to install/maintain appliances correctly could lead to prosecution.

The Rayburn cannot be serviced whilst hot, so the thermostat should be turned off on the evening before the service visit.

On completion, test the gas installation for soundness.

SERVICE SCHEDULE

Annual Service

BURNER REMOVAL - for cleaning and inspection.

CLEANING - Heat exchanger flueways, ovens and hotplate flueways together with ceramic fibre burner chambers.

FLUE TERMINAL

BURNER SERVICING..

REPLACEMENT PARTS.

Oven Door Fit - Both doors must be checked and adjusted if necessary to ensure the alignment with the door catch is correct, the keep is secure and the oven is sealed when the door is closed.

NOTE:- The external extractor fan should be regarded as a consumable item and replaced every 2 years.

Always test joints for gas soundness after re-assembly.

Gas Burner Removal

PREPARATION

WARNING: BEFORE REMOVING SERVICE ACCESS COVERS ENSURE THAT ALL ELECTRICAL SUPPLIES TO THE APPLIANCE HAVE BEEN ISOLATED.

BURNER ACCESS

SEE FIG. 1

1. Open up the bottom burner access door. Remove door and put in a safe place.
2. Remove the (4) inner panel securing screws and remove panel.
3. Remove the (3) plinth securing screws and remove plinth.

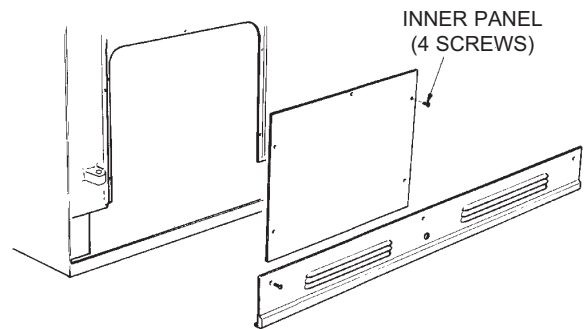


Fig. 1

DESN 511424 A

BURNER REMOVAL

IMPORTANT: DURING BURNER REMOVAL CARE MUST BE TAKEN NOT TO DAMAGE THE CERAMIC FIBRE INSULATION INSIDE THE COMBUSTION CHAMBER.

SEE FIG. 2

1. Place a sheet on the floor in front of the cooker to act as a working area.
2. Turn off gas cock.
3. Break gas cock union connection.
4. Disconnect the terminal plug. (See Fig. 2)
5. Unscrew burner locking nuts (2). (See Fig. 3)
6. Remove burner by twisting clockwise and then remove. (See Fig. 4).

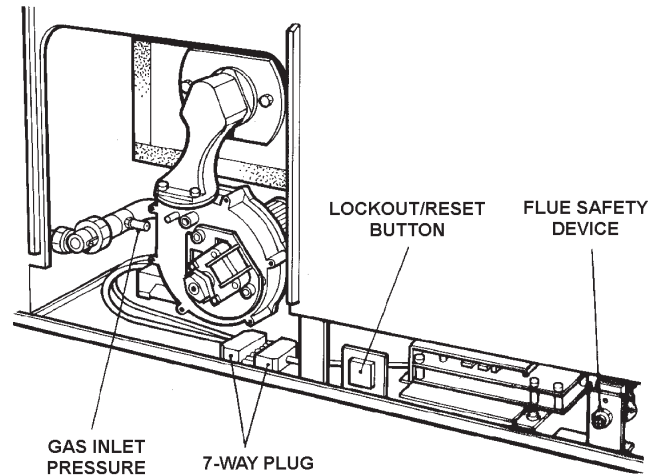


Fig. 2

DESN 512576

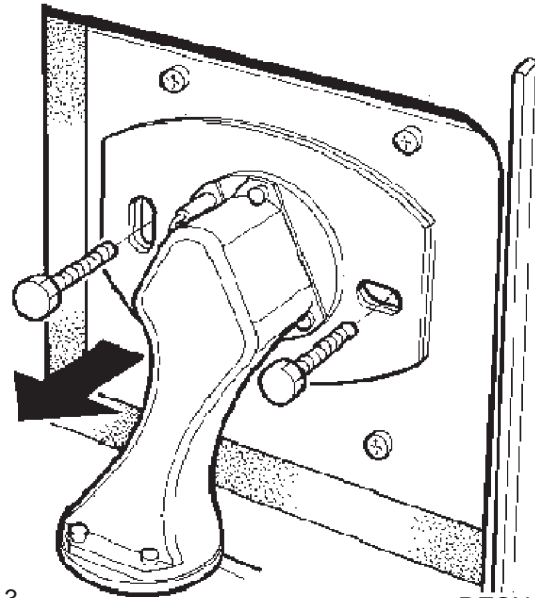


Fig. 3

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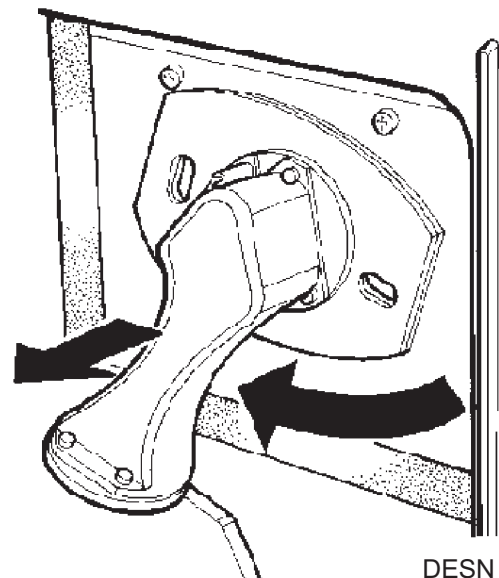


Fig. 4

DESN 512444

Burner Chamber/Servicing

BURNER CHAMBER

IMPORTANT DURING CLEANING CARE MUST BE TAKEN NOT TO DAMAGE THE CERAMIC FIBRE INSULATION INSIDE THE COMBUSTION CHAMBER.

SEE FIG. 5

1. Lift insulation covers and remove hotplate using lifting hooks provided.
2. Clean the flueway by inserting the flexible brush through top plate aperture, directing it towards the flue outlet, Scrape the deposits towards the burner chamber.
3. Thoroughly clean burner chamber flueway.
4. Carefully vacuum any debris that has fallen down into the burner chamber.
5. Replace the hotplate ensuring the underside ribs lie over the oven, and that it seals to the top plate.

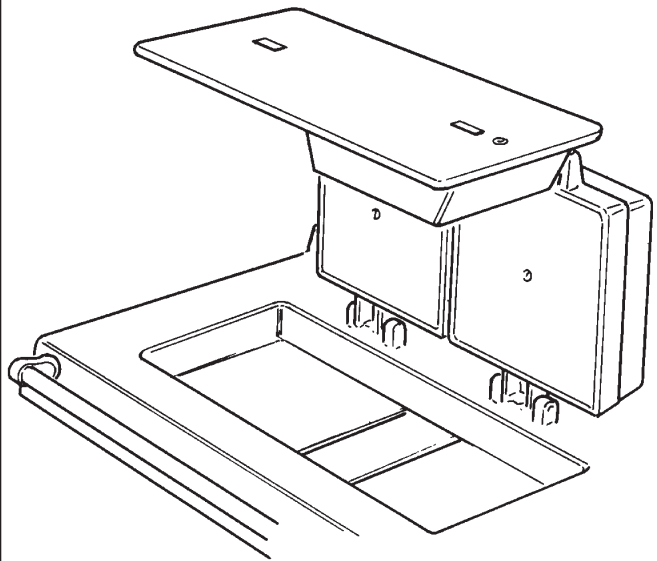


Fig. 5

DESN 511434

OVEN & HOTPLATE FLUEWAY CLEANING

SEE FIG. 5 & 6

1. Remove the top oven door and place in a safe position.
2. Remove side and base access doors using hex. driver.
3. Thoroughly clean, top side and base flueways through access apertures with brush.
4. Remove all debris with vacuum cleaner.
5. Replace side and base access doors. Secure in place using hex. driver.
6. Brush and clean in between hotplate ribs on underside.
7. Examine soft rope seal located around hotplate aperture in top plate. Replace if frayed or damaged.
8. Replace hotplate ensuring the underside ribs lie over the oven.

NOTE: Ensure that the hotplate is fitted correctly as this forms part of the cooker combustion circuit.

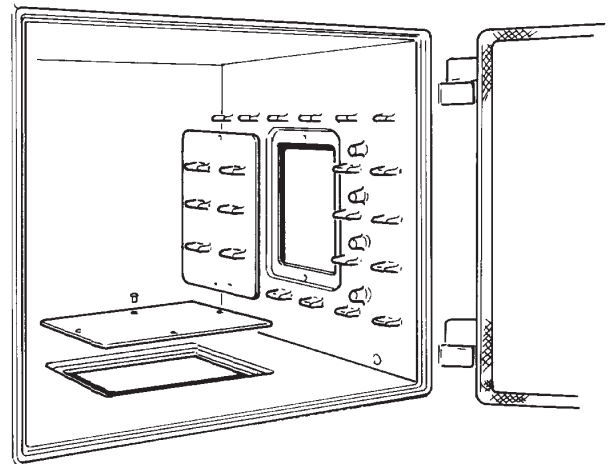
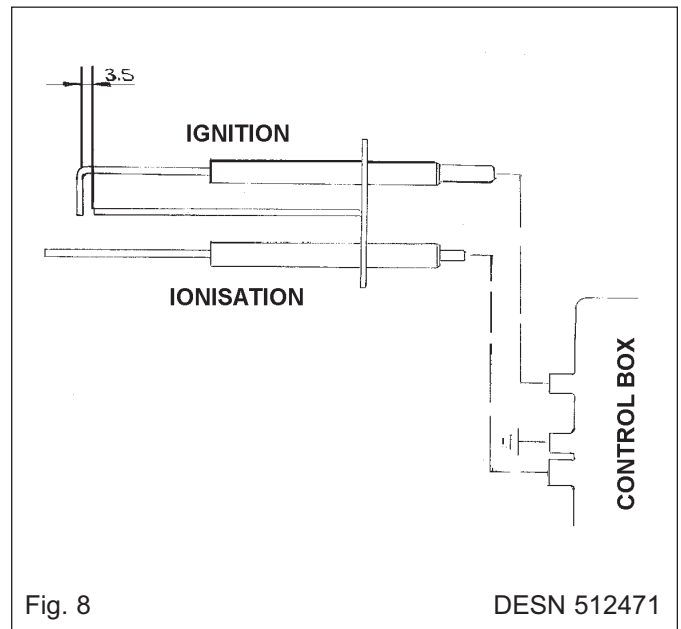
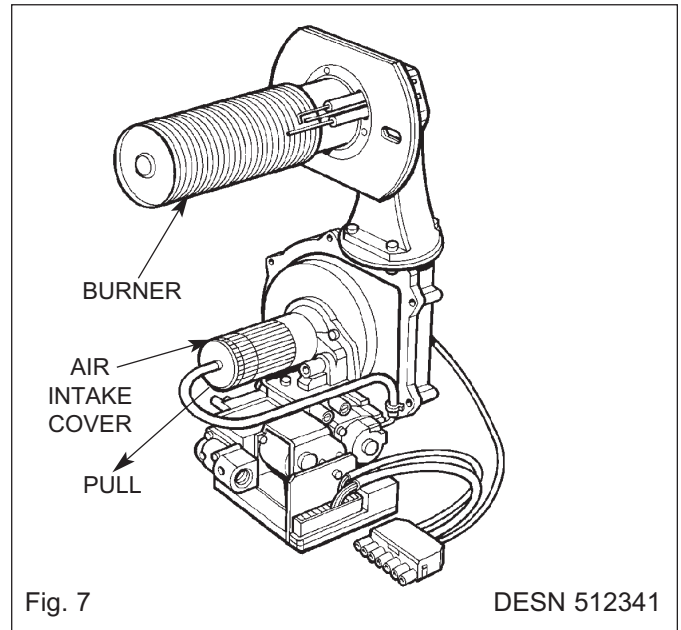


Fig. 6

DESN 511435

BURNER HEAD CLEANING

1. Examine the condition of the electrodes and that they are not damaged or loose, do they need cleaning. (See Fig. 8).
2. Check the burner head for any signs of damage or degrading. Renew if necessary.
3. Unfasten 3 retaining nuts and lift off burner bar. Remove any lint or dust from inside. If necessary, the burner can be washed, but must be dried before re-assembly. Always renew both burner gaskets using service kit RG4M996313.
4. Check that all electrical connections and cables are sound, undamaged and have not worked loose.
5. Clean the combustion air fan.
6. Refit all parts, ensuring they are correctly fitted.
7. Refit burner, using a new mounting gasket. Check for gas soundness and electrical safety before switching on.
8. Check combustion levels (8.2 - 9.9% CO₂).
See Combustion Air, Page 9.



Gas Burner

COMBUSTION AIR

IMPORTANT: ENSURE THAT THE BOTTOM LOUVERED PLINTH IS IN PLACE DURING COMBUSTION TESTING AND SETTING PROCEDURES. ENSURE THE OUTER DOOR IS CLOSED.

TURN THE BURNER ON

After 15 minutes, lift up the R.H. insulating cover and remove the countersunk screw and insert the sensing end of a portable indicator to check the CO² (Carbon Dioxide) level.

CO	0 - 50 ppm
CO ₂	8.2% - 9.9%

If these values cannot be obtained, check gas rate, adjust throttle screw if required and allow readings to stabilise. (See Fig. 9).

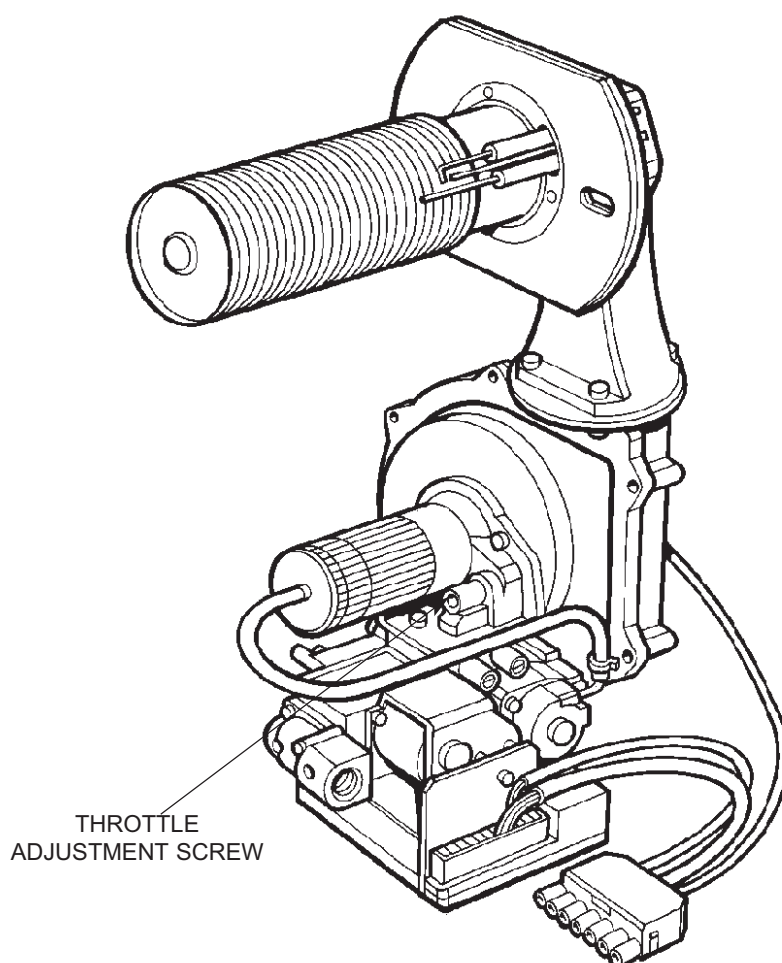


Fig. 9

DESN 512341

TEST BURNER ON DRY RUN (NO GAS)

SEE FIG. 10

Switch on the electricity supply.

Set the time clock as stated in the Users Instructions.

Turn the thermostat to max. allowing the burner to start, the burner should go to lockout

Reset. Open the gas inlet cock, allowing the burner to restart.

When the burner is in 'run' condition close the inlet gas cock. When the flame is extinguished the gas valves solenoids on the burner should be de-energised almost immediately.

The control will then allow one restart attempt and should go to lockout after the expiry of the safety time.

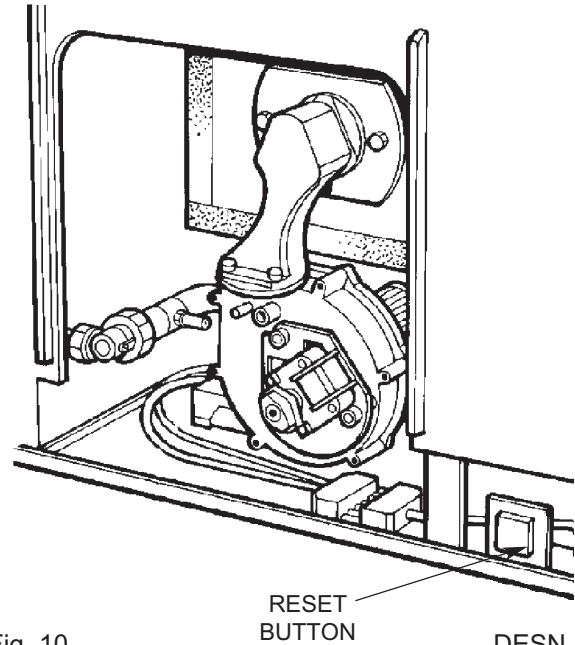


Fig. 10

DESN 512346

Gas Burner

OVERHEAT SAFETY THERMOSTAT

IMPORTANT NOTE: This appliance is fitted with an overheat thermostat which has a manual reset button/

If the overheat stat trips, the cooker will not operate, until the button has been pushed-in (reset). The engineer needs to follow 'Fault Finding Guide' to establish why the stat tripped. (The overheat thermostat and its sensing phial are located on the controls chassis rear). (See Fig. 19).

FLUE SAFETY DEVICE

This thermostat is a safety cut-out device which will operate under adverse wind or a blocked flue condition. It is a manually reset device which can be reset by pressing in the centre.

REMOVAL OF PCB

SEE FIG. 12

1. Remove plinth (3 screws).
2. Unscrew the two fixing screws just in front of the PCB.
3. Lift the PCB slightly and slide forwards.

POWER FLUE CONTROL

SEE FIG. 13

1. Check the control voltage to the fan.
2. Turn the appliance on. Between + and - the voltage will be 24V dc.
3. Between - and sig the voltage should read approximately 4.0 V dc initially, then drop to 2.6V dc after 30 seconds.
4. The fan should also slow down.

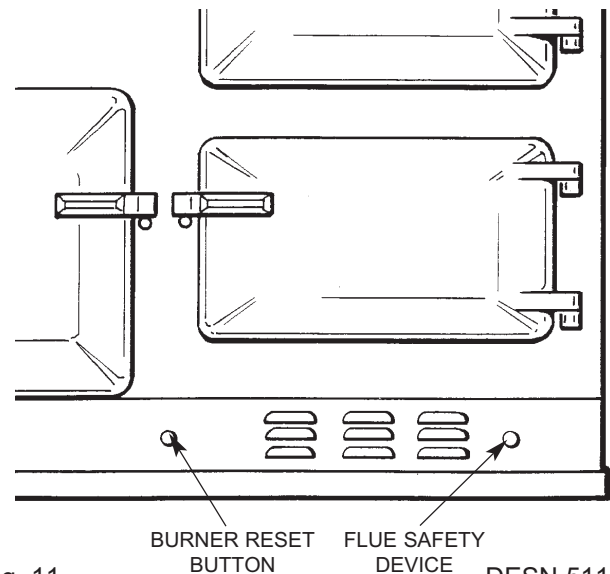


Fig. 11

DESN 511742

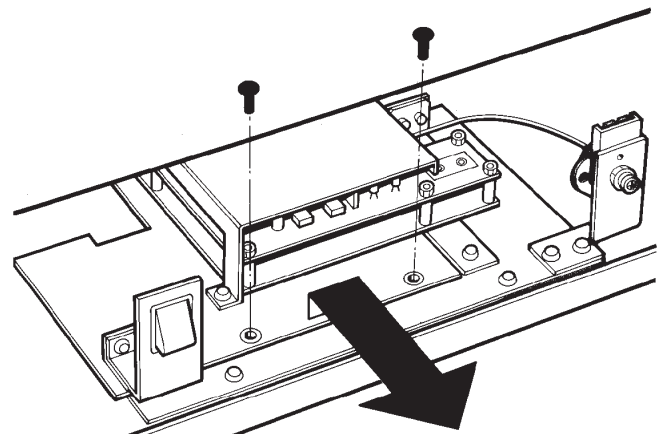


Fig. 12

DESN 512571

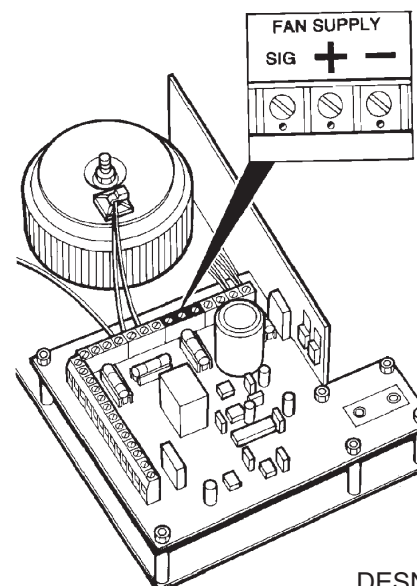


Fig. 13

DESN 512562

TERMINAL COVER REMOVAL

1. Disconnect power to appliance.
2. The terminal cover is secured using 4 screws. Unscrew the 4 screws and remove cover. (See Fig. 13).

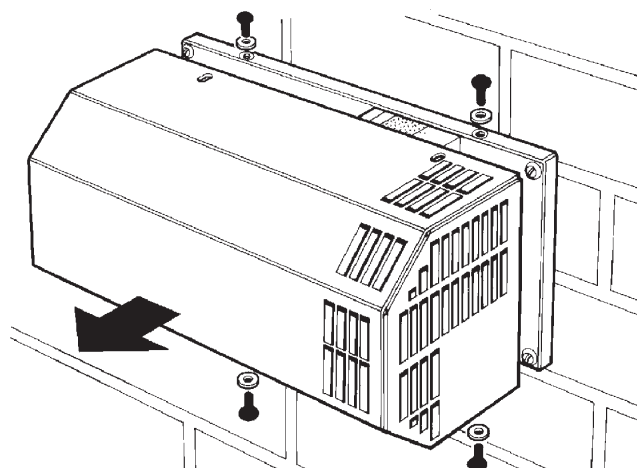


Fig. 13

DESN 513351

FAN REMOVAL

1. Disconnect the power to appliance.
2. Disconnect the 3 wires to the fan.
3. Unscrew 3 M5 fixings and withdraw, fan and mount assembly.
4. Clean fan with a soft brush.
5. Re-fit fan and mount assembly.

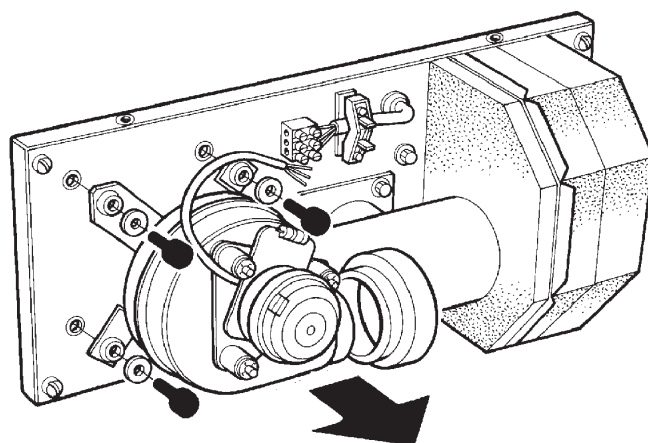


Fig. 14

DESN 513355

FLUE TERMINAL REMOVAL

In order to gain access to the flue for cleaning, it is necessary to remove the flue terminal assembly.

1. Disconnect the power to the appliance.
2. Unscrew 4 M5 fixings that connect the flue pipe to the terminal backplate.
3. Disconnect 3 wires from terminal strip (cooker supply side).
4. Remove cable restraint clamp and free cable.
5. Unscrew 4 wall fixings and withdraw flue back plate assembly.
6. Clean flue pipe as required.
7. Inspect flue terminal gasket and replace if necessary.
8. Assemble in reverse order.

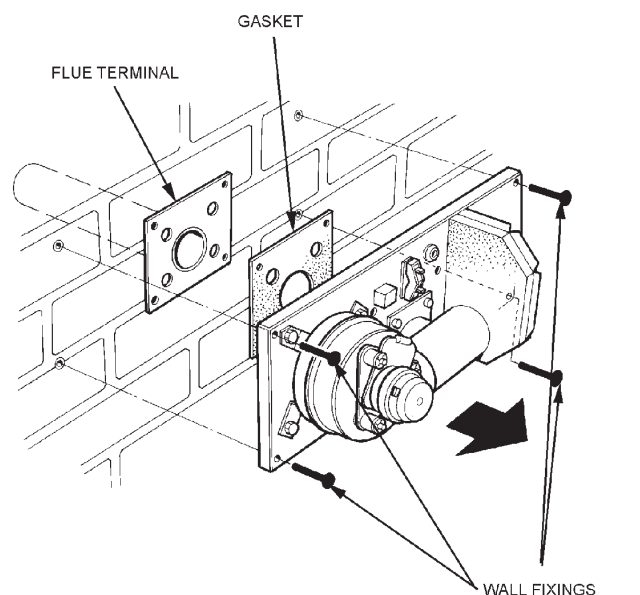


Fig. 15

DESN 513354

Replacement of parts (Gas Burner)

The only parts to be replaced are:-

Electrodes
Electrode Leads
Control Box

If any other parts fails then the whole burner is to be replaced.

ELECTRODES

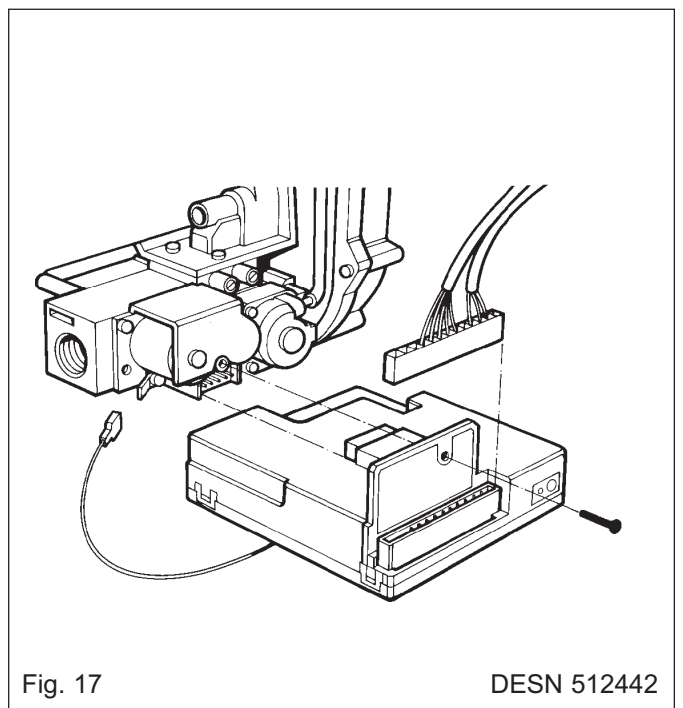
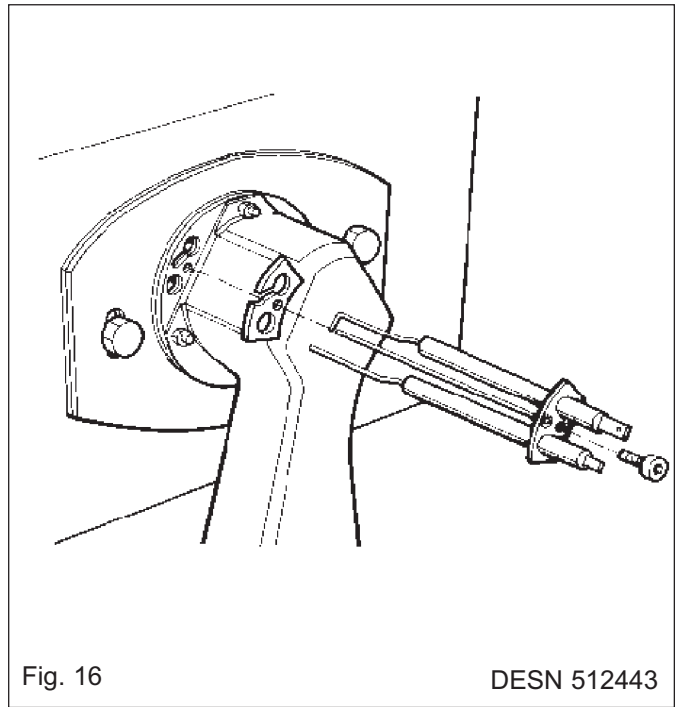
SEE FIG. 16

1. Turn off power to appliance.
2. Unscrew the fixing screw and withdraw the electrodes.
3. Carefully replace the electrodes, ensuring the gasket is in place. Tighten screw.

CONTROL BOX

SEE FIG. 17

1. Turn off power to appliance.
2. Unplug 12-way connector.
3. Disconnect ignition lead, earth lead and ionisation lead.
4. Unscrew single fixing screw, withdraw box.
5. Replace control box fixing screw and wires.
(Electrode Wires - See Page 8 , Fig. 7).



ELECTRICAL COMPONENT ACCESS

BEFORE REMOVING SERVICE ACCESS COVERS ENSURE THAT ALL ELECTRICAL SUPPLIES TO THE APPLIANCE HAVE BEEN TURNED OFF.

SEE FIG. 18

1. Remove the controls door and place in a safe position.
2. Remove thermostat control knob.
3. Remove the (2) cover panel fixing screws.
4. Remove cover panel. It will be necessary to disconnect the push on tags from the timer, noting position of wiring.
5. Remove the (4) control panel fixing screws.
6. Tilt the chassis forwards from the top and lift out. To fully access the rear of the control chassis, the oven thermostat capillary should be removed from the oven. Follow instructions in section 'TO FIT NEW OVEN CONTROL THERMOSTAT', Steps 3 to 6.

PCB REPLACEMENT

SWITCH OFF POWER TO THE APPLIANCE

1. See Page 11 for removal of PCB.
2. Disconnect all the wires.
3. Fit wires to new PCB (wiring on page 19).

FAN REPLACEMENT

SWITCH OFF POWER TO THE APPLIANCE

1. Access and Removal, see page 12.

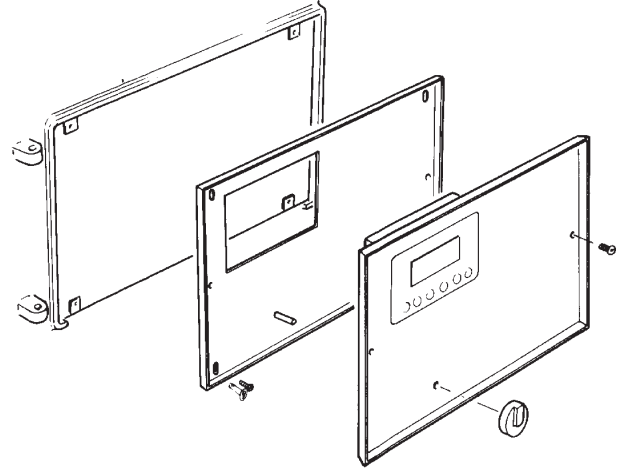


Fig. 18

DESN 511443

Replacement of parts (Electrical controls)

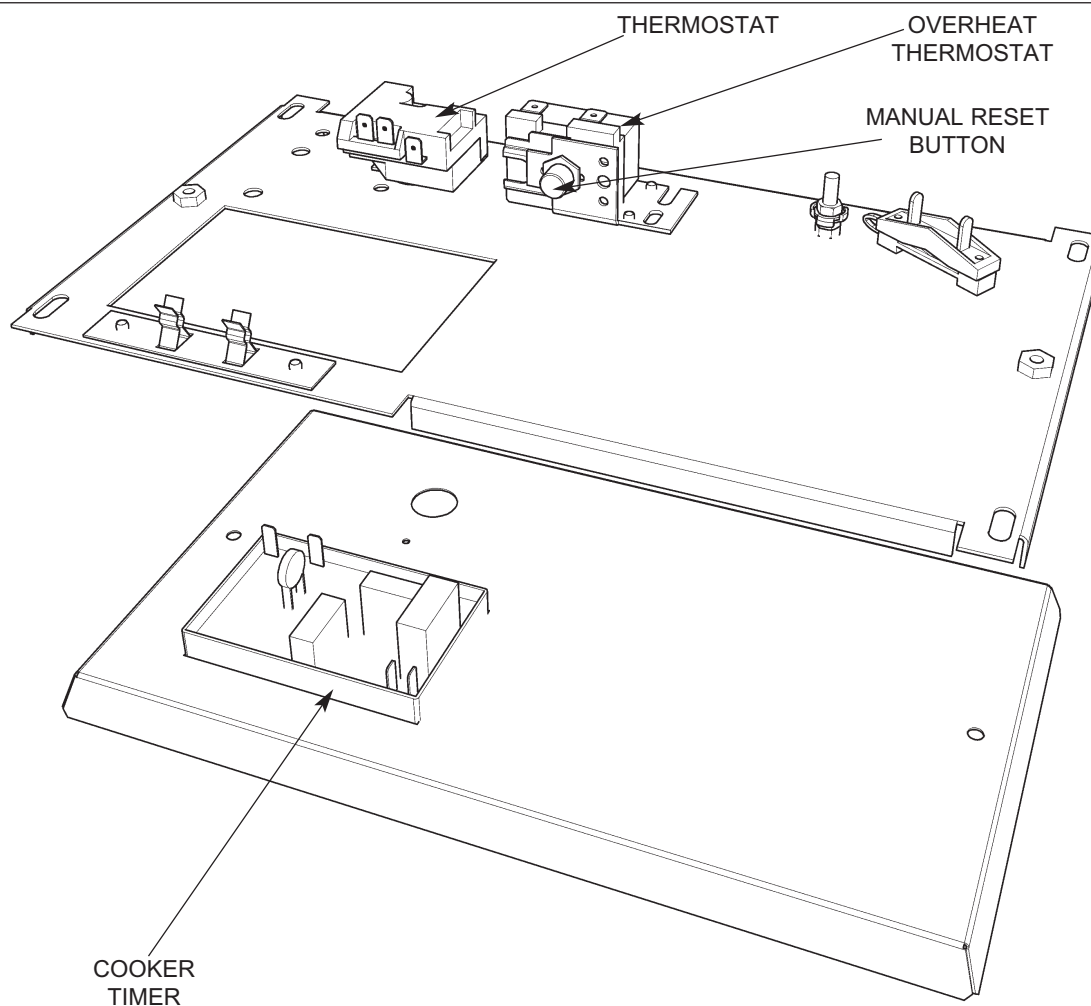


Fig. 19

DESN 516692

TO FIT NEW FLUE SAFETY DEVICE

ENSURE THAT ALL ELECTRICAL SUPPLIES TO THE APPLIANCE HAVE BEEN TURNED OFF.

SEE FIG. 20

1. Remove PCB.
2. Unscrew flue safety device bracket.
3. Remove bracket and unclip phial.
4. Disconnect the two wires on the switch.
5. Unscrew nut holding the stat body and remove.
6. Replace in reverse order of removal.

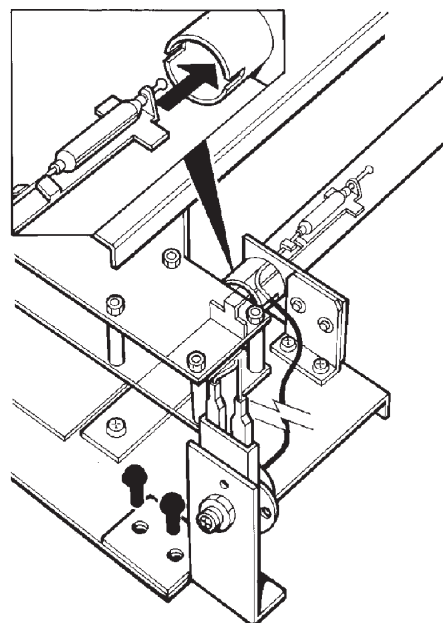


Fig. 20

DESN 512569

Replacement of parts (Electrical Controls)

TO FIT NEW OVERHEAT THERMOSTAT

SEE FIG. 19

Follow instructions in section ELECTRICAL COMPONENT ACCESS, Steps 1 to 6.

1. Undo the locknut, which holds the overheat thermostat to the bracket on the rear of the chassis.
2. Remove the 2 push on connectors from back of overheat thermostat.
3. Remove the phial from the 2 spring clips on the rear of the chassis.
4. Withdraw overheat thermostat from chassis.
5. Fit replacement overheat thermostat and assemble in reverse order.

TO FIT NEW OVEN CONTROL THERMOSTAT

SEE FIG. 21

Follow instructions in section ELECTRICAL COMPONENT ACCESS, Steps 1 to 6.

1. Undo the two screws on the front of the chassis which holds the thermostat in place.
2. Remove the (2) push on connectors from back of thermostat.
3. Open Roasting Oven door and using a screwdriver, loosen the rear fixing screws and remove the front fixing screw of the inner L.H. oven side to expose the thermostat stat phial.
4. Slacken the single screw where the phial passes through the roasting oven side and rotate the cover plate to open the access hole.
5. Slacken the single screw on the phial securing bracket and rotate the cover bracket.
6. Withdraw the capillary and phial from the oven.
7. Fit replacement thermostat and assemble in reverse order.

To complete, follow instructions in 'RE-ASSEMBLE', Steps 1 to 5.

TO FIT NEW TIMER

Follow instructions in section 'ELECTRICAL COMPONENT ACCESS', Steps 1 to 4.

1. Remove timer by depressing retaining clips.

To complete follow instructions in section 'RE-ASSEMBLE', Steps 2 to 5.

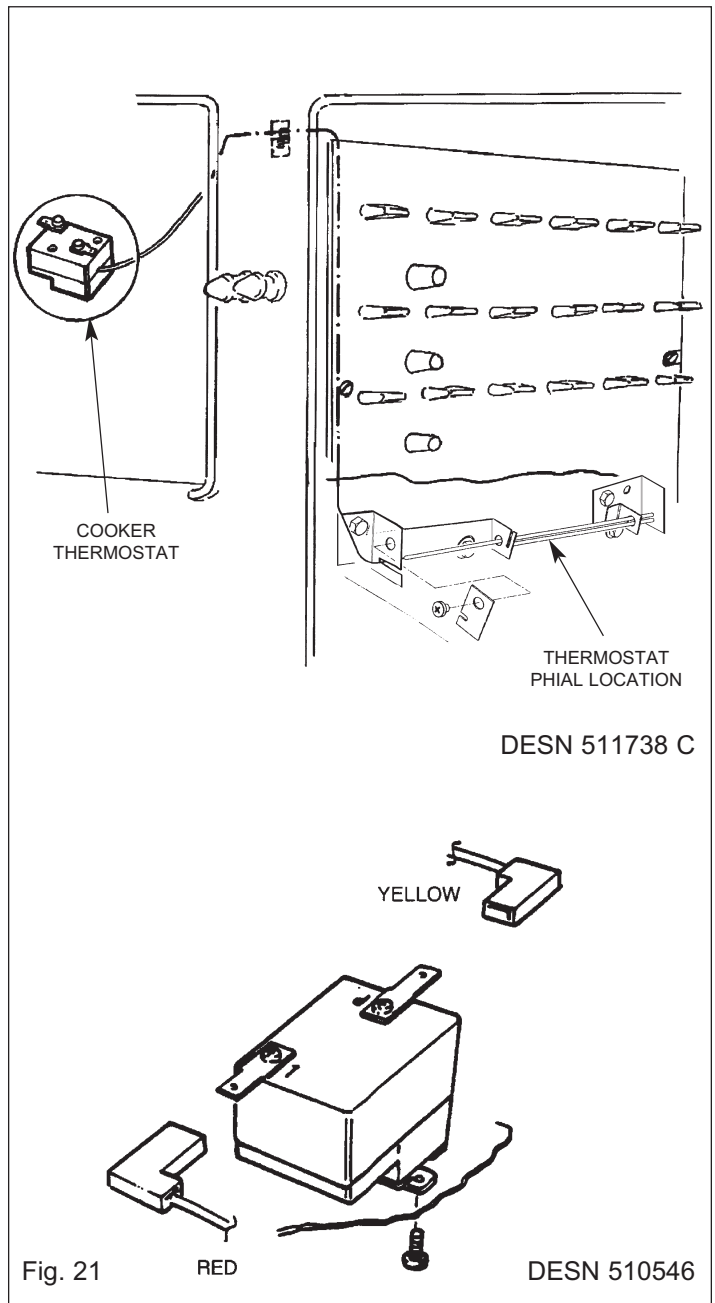


Fig. 21

RE-ASSEMBLE

1. Locate the base of the control chassis into the bottom of the doorway aperture, tilt the chassis backwards into position and secure with the (4) screws.
2. Thread the wires for the cooker timer through the aperture and connect them onto the rear of the cooker timer fitted in the outer panel.
3. Refix the outer panel in position and secure with the (2) screws.
4. Replace the thermostat knob.
5. Replace the controls door.

Electrical Controls

PCB CONNECTIONS

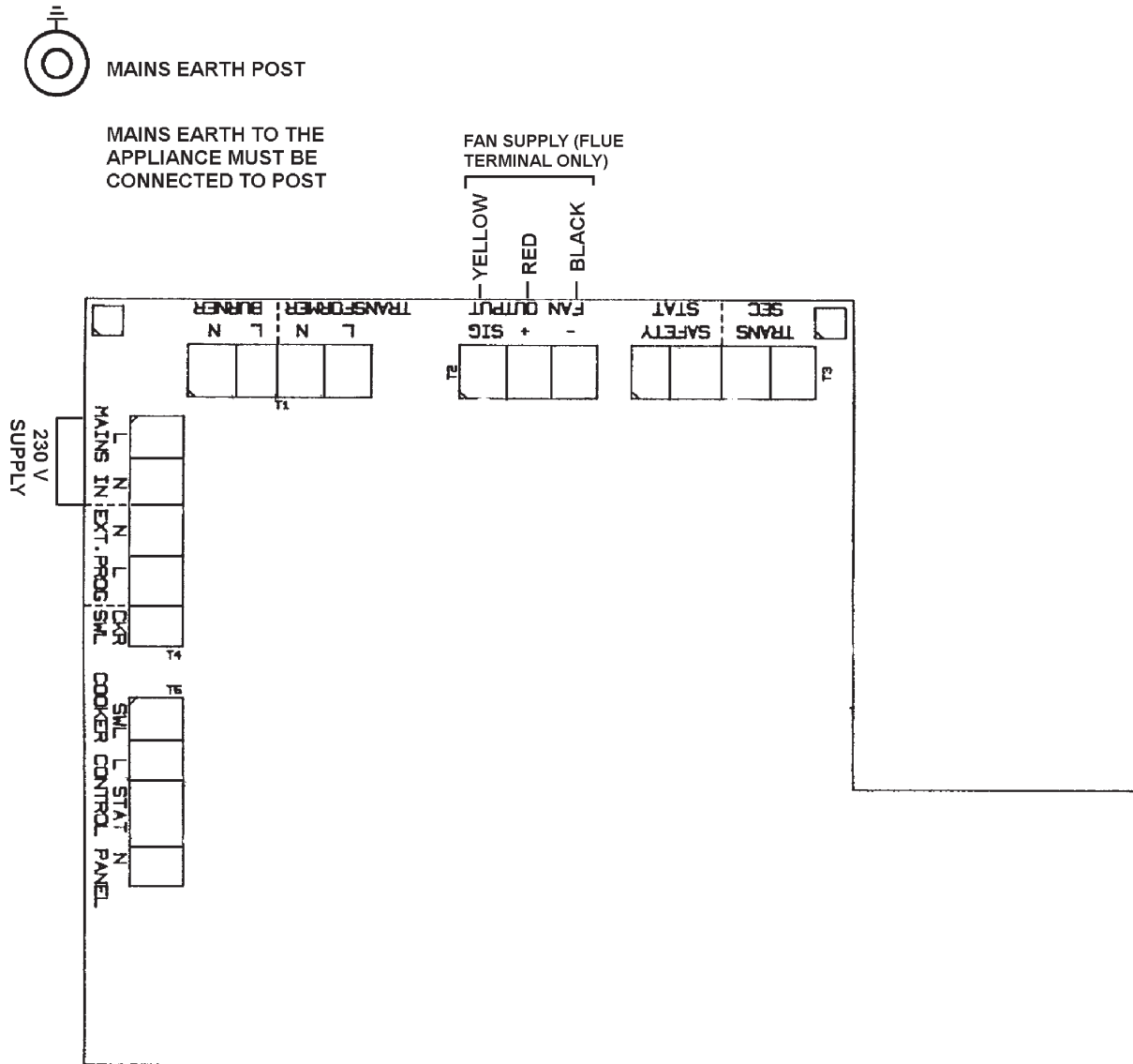


Fig. 22

WIRING DIAGRAM - BURNER ONLY

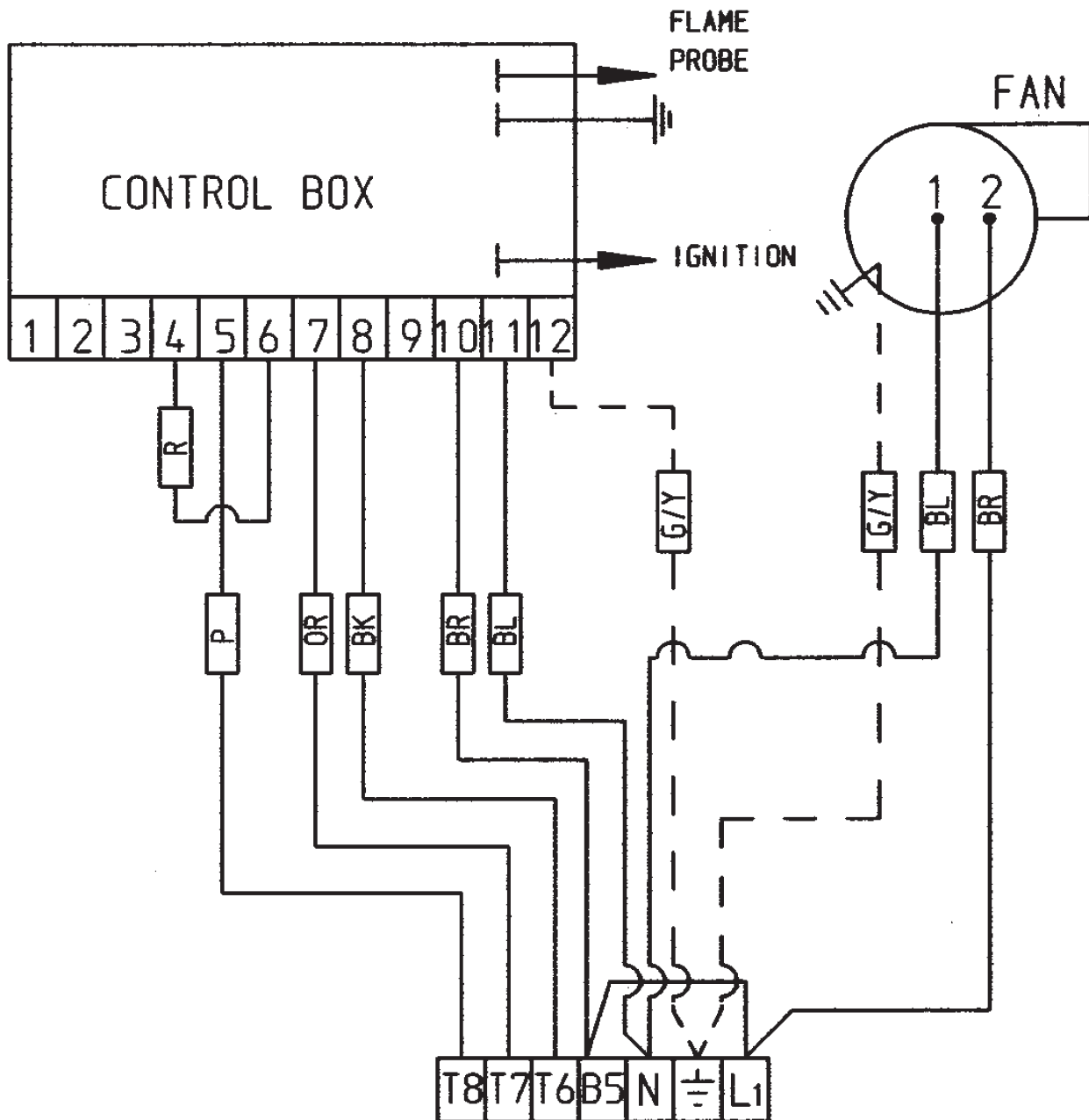


Fig. 23

Fault Finding

WIRING DIAGRAM - APPLIANCE

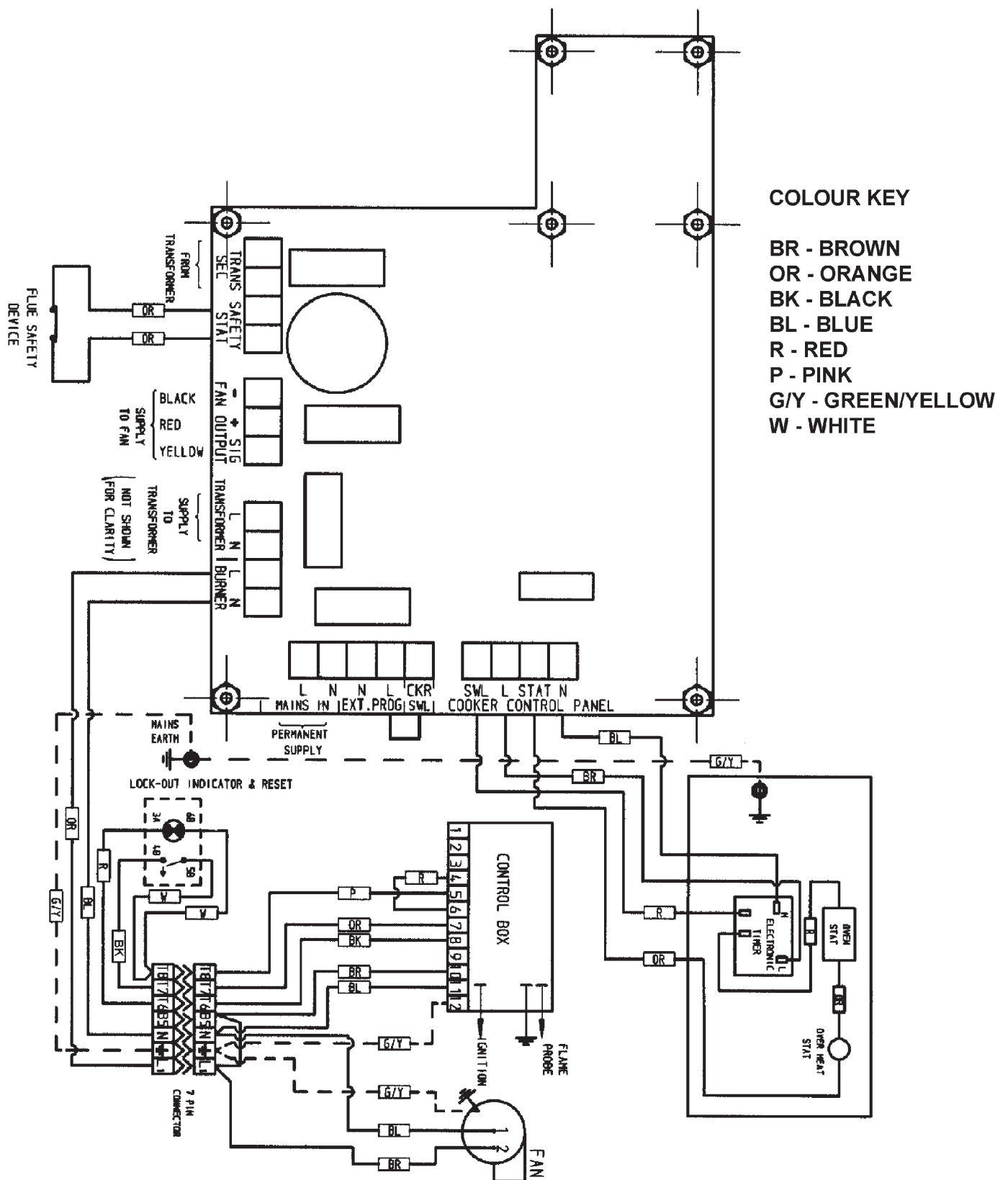


Fig. 24

BURNER DOES NOT START

Burner

Check that the burner has not gone to lockout.

Causes of lockout can be:-

- No ignition. Electrode incorrectly positioned or insulation cracked, control box faulty.
- No gas supply.
- Poor combustion.
- Flame probe in contact with earth, moisture present on probe affecting insulation.
- Live and Neutral connections reversed.
- Inadequate earth control with flame.

General

For access to individual controls refer to section on Replacement Parts and for wiring continuity checks refer to schematic wiring layouts.

To check out the electrical wiring at the burner you will first have to access to the burner chamber. Use the following procedure:-

1. Isolate the electrical power supply.
2. Open up the bottom burner access door. Remove door and put in a safe place.
3. Unscrew the 4 screws holding the inner panel in place and remove panel.
4. Unscrew the 3 screws holding the louvered plinth in place and remove plinth.

The external mains connection are made to the PCB situated in the front right hand corner of the cooker under the oven. Re-connect the electrical supply and check that there is a 230v power supply available across the mains input connections L & N on the PCB. If not then check connecting leads, fuse and whether power is available at mains plug. If power is available across L & N check the appliance

Fault Finding

TROUBLESHOOTING - BURNER

BURNER WILL NOT START

1. Check that the external wiring is correct.
2. Check the 230v supply on terminal 10 and 11 at control box base, this will also determine if the thermostats are calling for heat. (See Fig. 25).
3. Press reset button to ensure that the control box has not gone to lockout.
4. Check filter is clean on fan inlet.
5. If burner still refuses to start, change control box.

BURNER STARTS, FLAME NOT ESTABLISHED, CONTROL BOX GOES TO LOCKOUT AFTER END OF SAFETY

1. Check gas supply to valves is turned on.
2. Check ignition is present after end of pre-purge period.
3. Check electrodes.
4. Check earth continuity.
5. Check ignition lead and flame lead are fitted correctly and soundly.

BURNER STARTS FLAME ESTABLISHED, CONTROL BOX GOES TO LOCKOUT

1. Check polarity of wiring for Live and Neutral to control box base, live to terminal 10, Neutral onto terminal 11 at control box base.
2. Check flame detection probe is correctly positioned. Ensure that the probe insulation is sound, free from cracks or moisture. Check that the probe is not in contact with other metallic parts of the burner.
3. Check the burner is effectively earthed and bonded to the incoming earth wire from the mains supply.
4. Check for interference to the flame signal from the ignition spark. This can be determined with a d.c micro-ammeter (μA). Connect the meter between the terminal and the incoming wire to the flame probe. Correct polarity of the meter connections must be correctly observed with the positive side of the meter connected onto terminal at the control box. If flame is established and the meter tends to move in a reverse direction this can be an indication that the ignition is causing interference to the flame signal. It may also be an indication that there is insufficient earth contact with the flame. A correct reading should be approximately 3 - 7 μA .
5. Change control box if necessary.

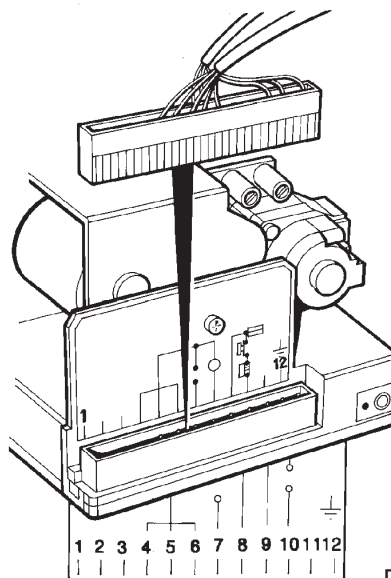


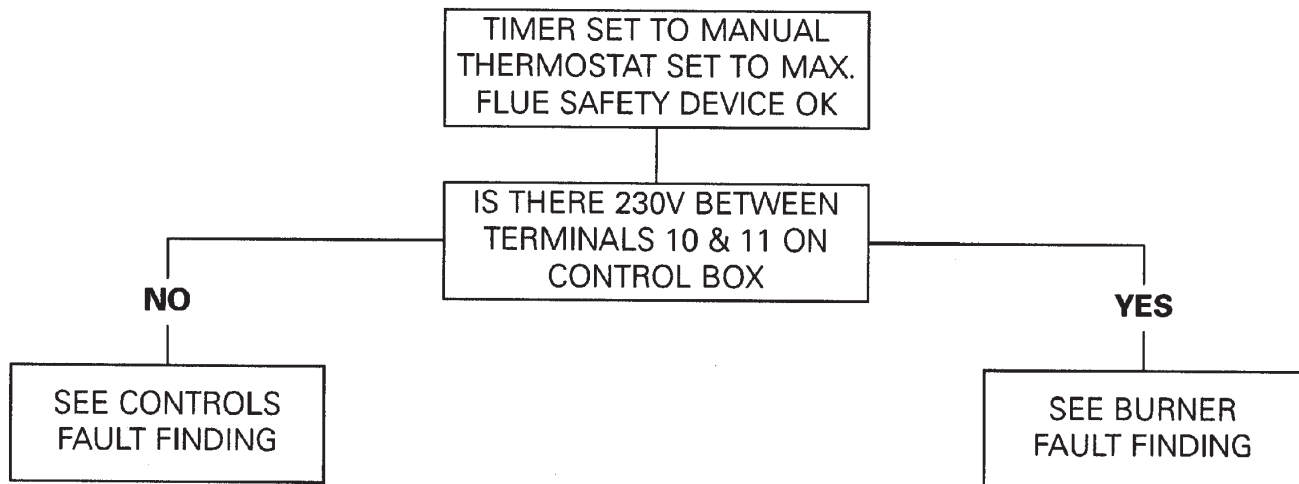
Fig. 25

DESN 512344

FAULT FINDING

400 G/L PX (P/F)

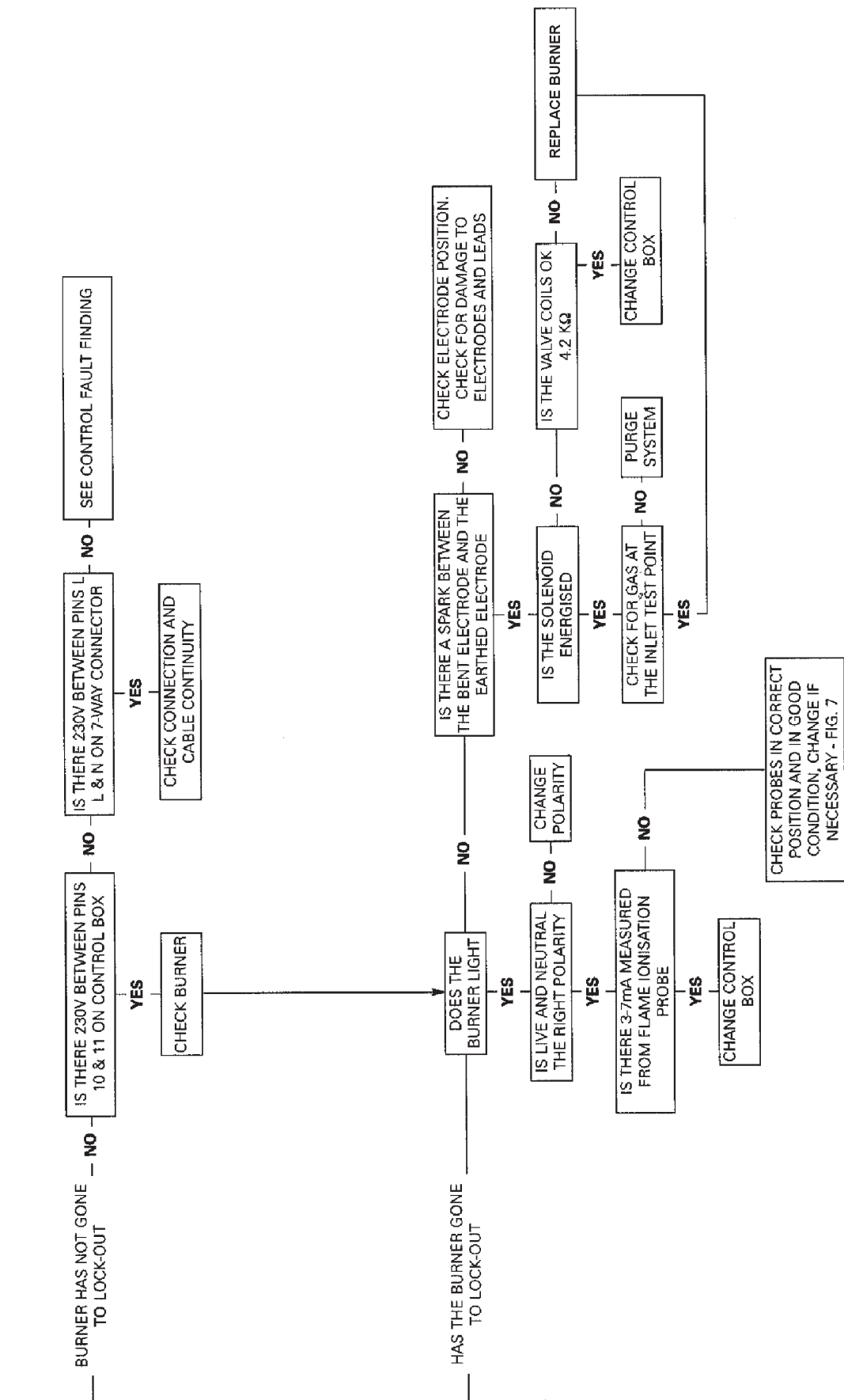
IMPORTANT NOTE: REFER TO OVERHEAT THERMOSTAT', PAGE 11.



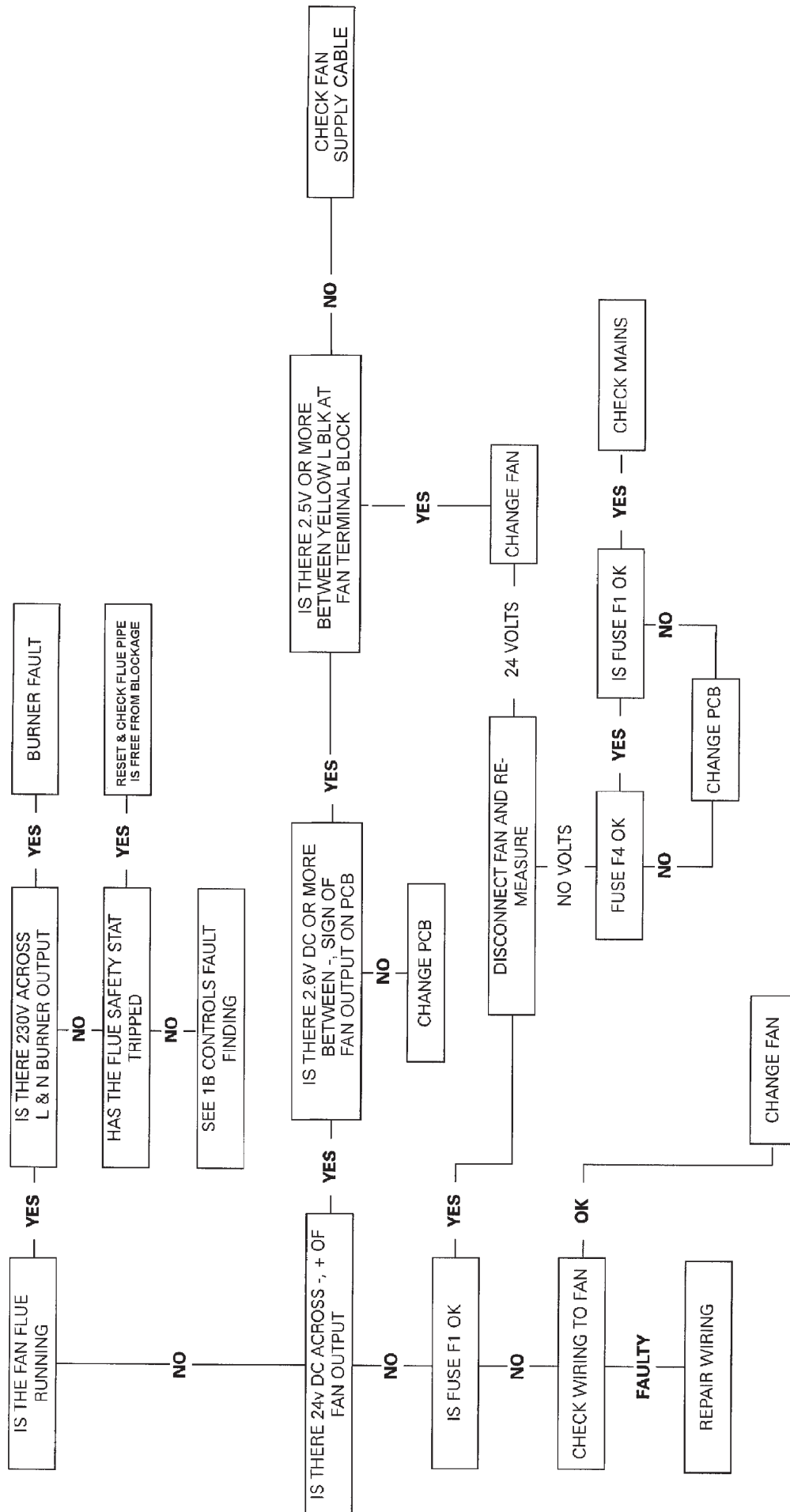
FAULT FINDING - 400G/L PX (P/F) BURNER

IS THERE: POWER TO THE APPLIANCE (230V)
THE PROGRAMMER (IF FITTED) SET TO CONSTANT
THE TIMER IN MANUAL MODE
THE STAT SET TO MAX.
CHECK FLUE STAT (IF NECESSARY RESET)

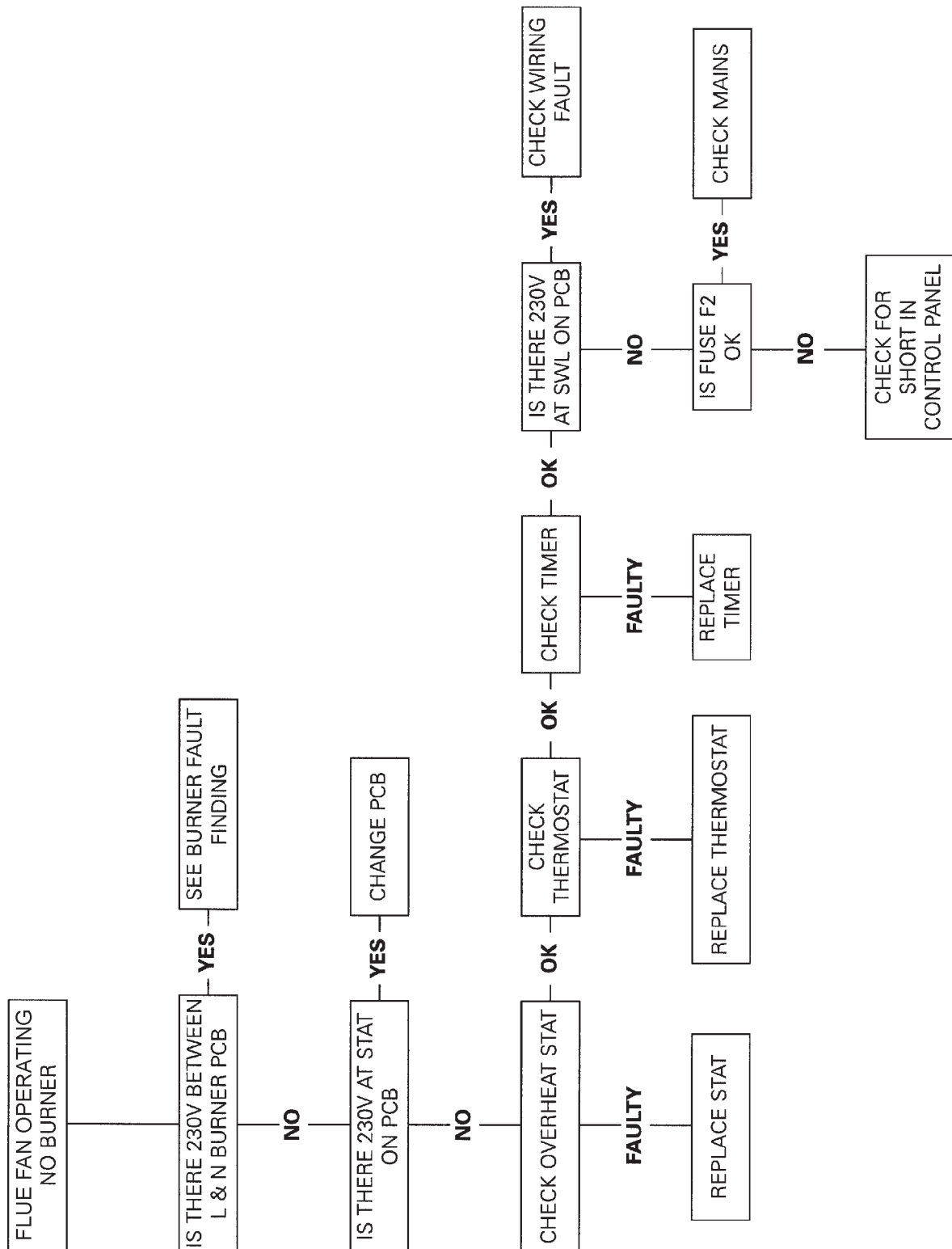
BURNER NOT OPERATING



FAULT FINDING - 400 G/L PX (P/F) (1A)



FAULT FINDING - 400 G/L PX (P/F) (1B)



**For further advice or information contact
your local distributor/stockist**

With AGA Rangemaster's policy of continuous product improvement, the Company reserves the right to change specifications and make modifications to the appliance described at any time.



from The word "from" is in a lowercase, sans-serif font, followed by the AGA logo, which consists of the letters "AGA" in a bold, white, sans-serif font inside a black, horizontally-oriented oval with a metallic, brushed-metal texture.

Manufactured by
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England

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www.agacookshop.co.uk