



OC3 COOKER (3-Oven Oil Fired Aga)

Servicing Instructions

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 INSTALLING THIS APPLIANCE

CE For use in GB and IE

01/08 EINS 514126

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HEALTH & SAFETY

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 NOTE: 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

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 Aga it should be serviced once a year.

This appliance must be installed and commissioned by a competent engineer.

An additional flueway and combustion chamber clean halfway through the season may be necessary in some cases.

The Aga cannot be serviced whilst hot, so the thermostat should be turned **OFF** on the evening before the service visit.

SERVICE SCHEDULE

Annual Service

BURNER REMOVAL - for cleaning and inspection.
CLEANING - Flueways, oven and hotplate together with ceramic fibre burner chambers.

BURNER SERVICING

OIL PUMP SERVICING - Cleaning of fuel line strainer.

RE-COMMISSIONING

REPLACEMENT PARTS

IMPORTANT: FLEXIBLE OIL LINE MUST BE RENEWED AT EACH SERVICE ON A 12 MONTHLY BASIS.

PREPARATION

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

The burner cannot be removed without disconnecting the oil supply pipe. The oil supply pipe should be turned **OFF** and arrangements made to catch any oil which will leak from the oil pump.

BURNER ACCESS

1. Open up the burner access door. Remove door and put in a safe place.
2. Remove 4 fascia retaining fixings and thermostat control knob, then withdraw fascia.

BURNER REMOVAL

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

SEE FIG. 2

1. Place a sheet on the floor in the front of the cooker to act as a working area.
2. Retrieve 6-pin plug and disconnect burner harness.
3. Disconnect flexible oil line and position away from burner.
4. Remove 4 burner fixing bolts.
5. Withdraw burner unit.
6. Inspect condition of burner sealing gaskets and replace if necessary. (See Fig. 3).

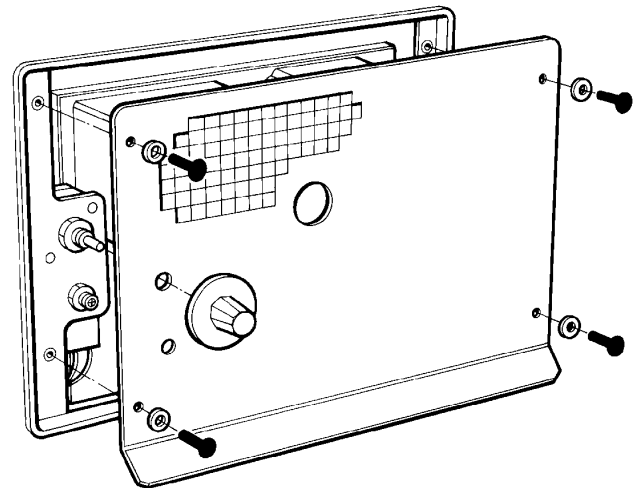


FIG. 1

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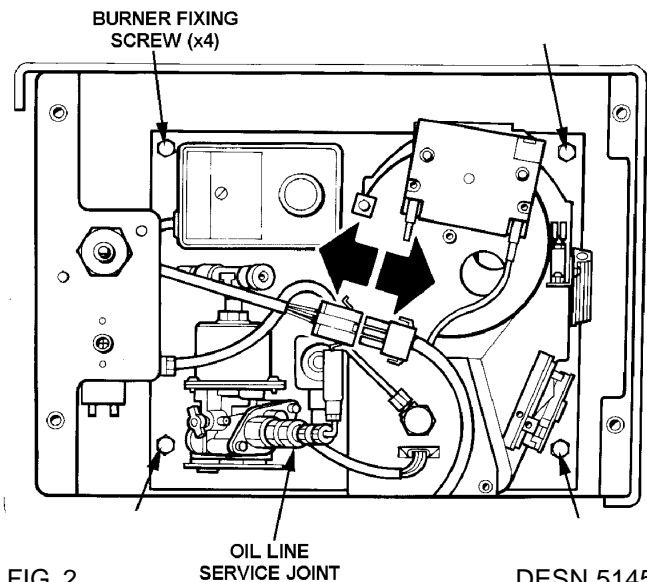


FIG. 2

OIL LINE SERVICE JOINT

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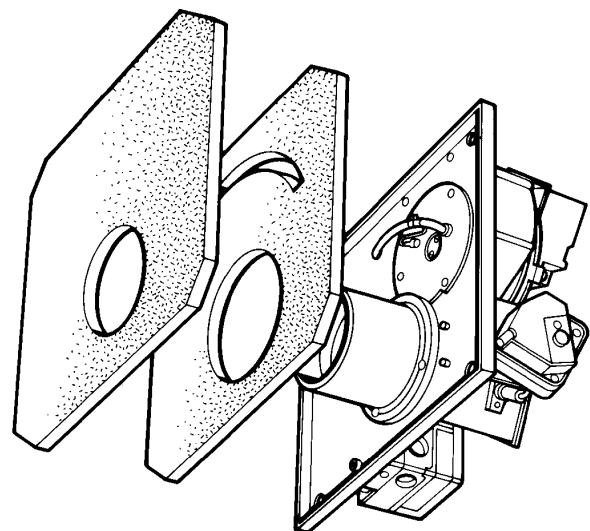


FIG. 3

DESN 513583

Cleaning

BURNER CHAMBER

IMPORTANT: DURING CLEANING, CARE MUST BE TAKEN NOT TO DAMAGE THE CERAMIC FIBRE INSULATION.

SEE FIG. 4

1. Lift insulation covers, remove hotplate and simmering plate.
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.

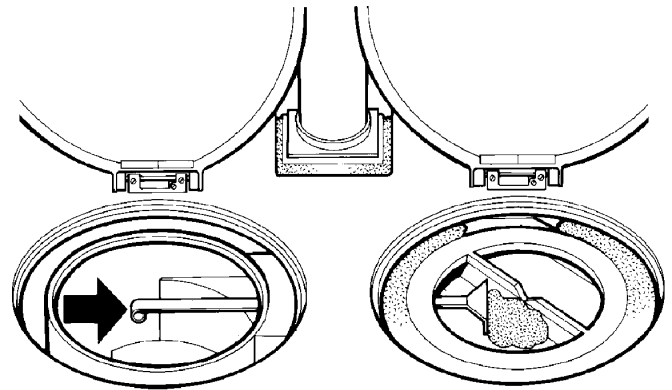


FIG. 4

DESN 513912

FLUE CHAMBER CLEANING

SEE FIG. 5

1. Remove inspection plate from flue.
2. Clean flueway by inserting the flexible brush down.
3. Remove debris.
4. Follow BURNER CHAMBER, Steps 1 to 4.

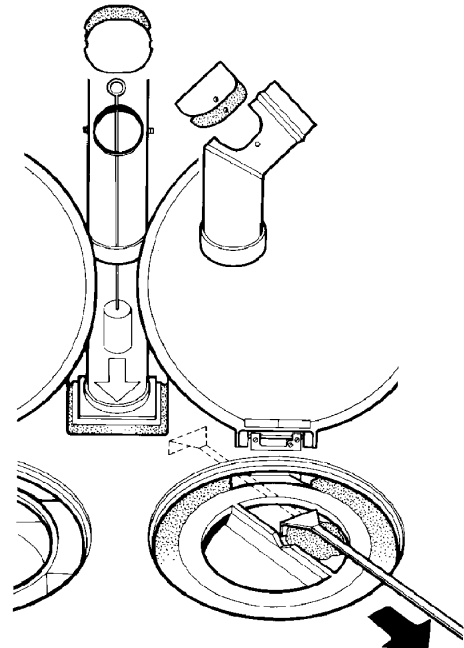


FIG. 5

DESN 513913

BURNER NOZZLE REMOVAL

SEE FIG. 6

CHANGE THE NOZZLE AT THE ANNUAL SERVICE.

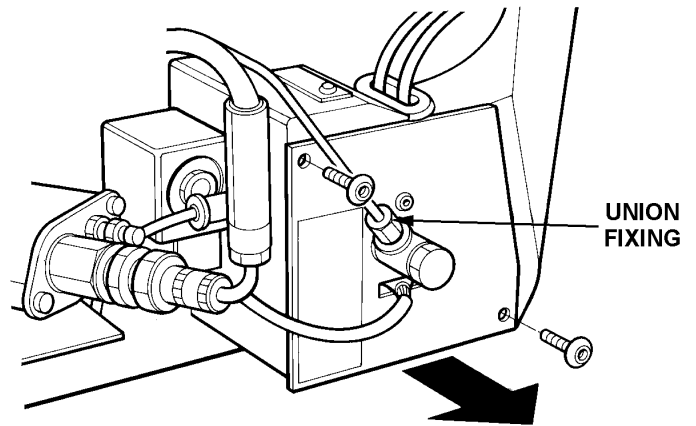
1. Undo oil feed pipe union.
2. Undo 2 M5 retaining pins.
3. Push down on oil feed pipe and withdraw head assembly.
4. Slacken ignitor retaining screw, slide off head assembly.
5. Use 2 spanners, one to hold pre-heater assembly, one to remove nozzle.
6. Fit new nozzle of correct type and spray angle (0.3 US gal 60° H Danfoss or equivalent).
7. Re-assemble in reverse order, ensuring ignitor leads and grommet are located securely.

NOTE: Do not touch the face of the nozzle to avoid blocking of fine drilling.

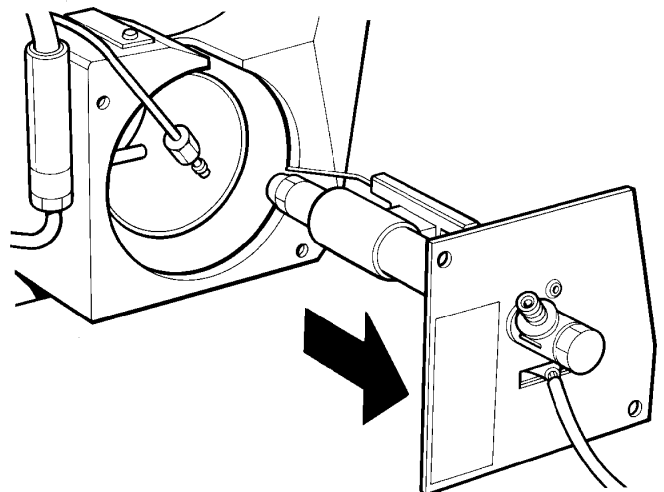
IGNITION ELECTRODE

SEE FIG. 6

Inspect the ignition electrodes for crazing in the porcelain. Replace if there are any signs of deterioration.



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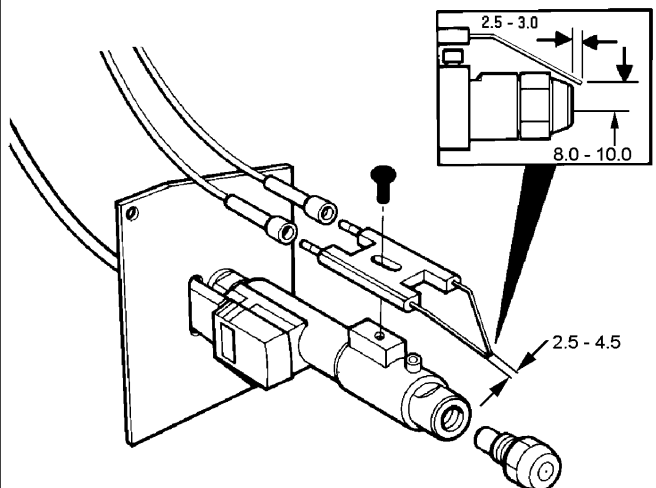


FIG. 6

DESN 513596

Burner Servicing

PHOTO ELECTRIC CELL (PEC) CLEANING

SEE FIG. 7

Withdraw Photo Electric Cell from the burner head. Clean PEC sensing end with a soft cloth taking care not to scratch the light sensitive body. Re-insert the PEC taking care to insert the correct way round.

IF BADLY DISCOLOURED OR DE-FORMED CHANGE IT.

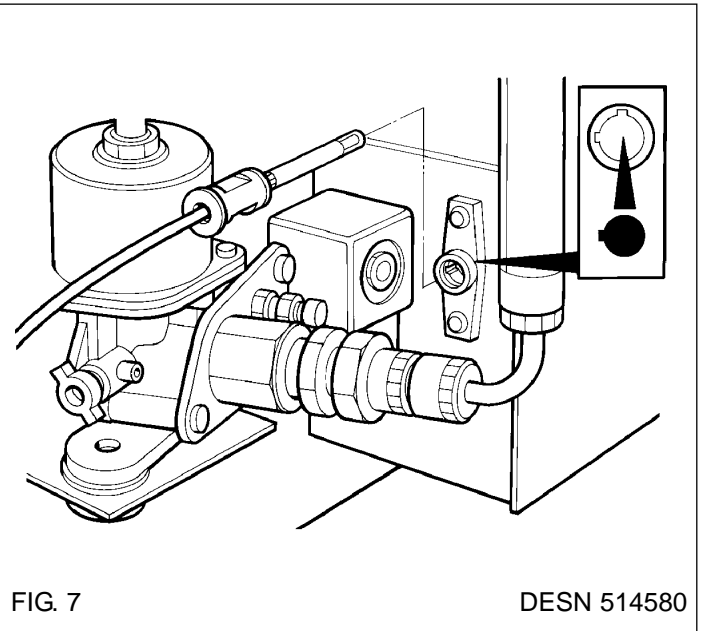


FIG. 7

DESN 514580

FAN CLEANING

SEE FIG. 8 - 9

INSPECT AND CLEAN IF NECESSARY

1. Remove 2 screws securing transformer bracket.
2. Remove 2 push on electrode leads from transformer.
3. Remove 2 socket head screws as indicated and remove air shutter device.
4. Clean fan and impeller as necessary.
5. Spin motor to check that fan turns easily.
6. Assemble in reverse order.

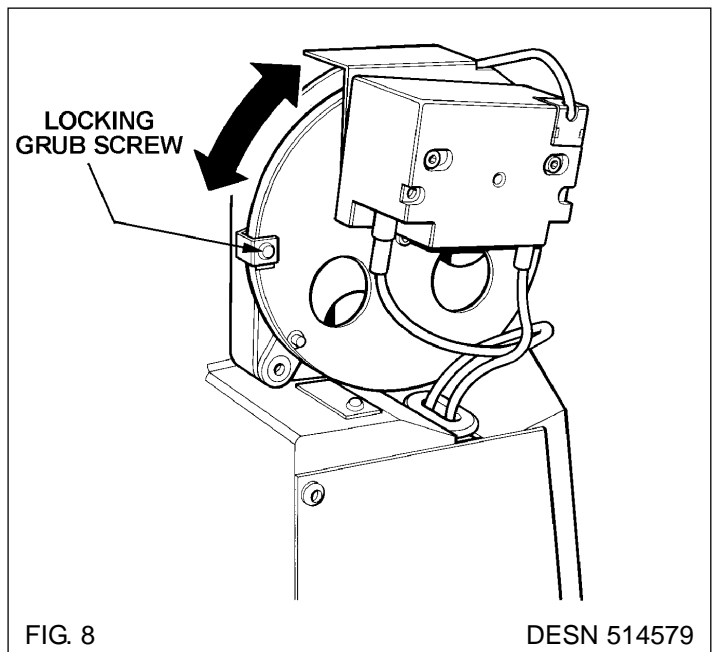


FIG. 8

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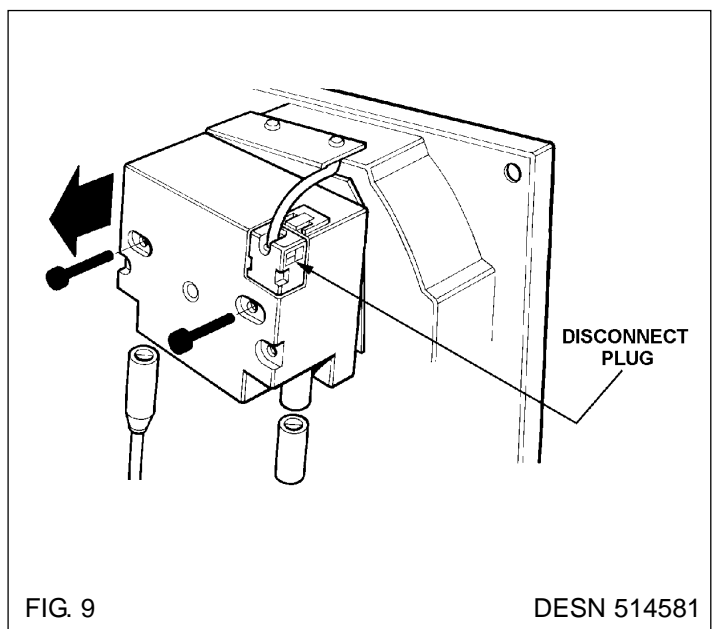


FIG. 9

DESN 514581

OIL LINE FILTER CLEANING

SEE FIG. 10

1. Turn **OFF** the line isolating valve fitted prior to the oil line filter.
2. Dismantle filter by unscrewing bolt at base of bowl.
3. Make arrangements to catch oil.
4. Replace element and thoroughly clean the bowl.
5. Re-assemble filter in reverse order of removal.

FLEXIBLE OIL LINES

REMEMBER:

Do not kink hoses.
Always flush oil through before final connection.

Check hose for signs of discolouration, cracking or oil seepage. Replace if necessary, but at least annually.

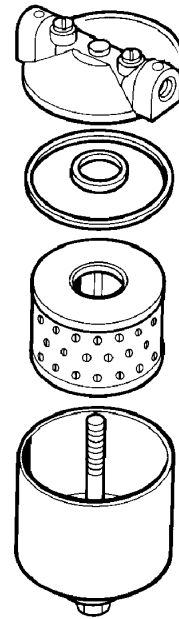


FIG. 10

DESN 514582

Re-commissioning

BLEED AIR FROM OIL SUPPLY

Disconnect the flexible oil pipe at the pump inlet, open the stop valve slowly and run off some of the oil into a receptacle to establish an air free supply to the pump. Remake the connection oil tight and leave valve open.

FIT PRESSURE GAUGE

SEE FIG. 11

Remove the bleed screw from the pump and fit an oil pressure gauge with R 1/8 connection to check the pump output pressure.

SWITCH ON ELECTRICITY

Set the thermostat to maximum, wait 2 minutes for the pre-heater. The burner should run on pre-purge for 10 to 20 seconds, with the ignition spark energised. The oil solenoid valve should open allowing the burner to fire.

Until all the air from the oil pump is flushed out there may be some flame instability resulting in the burner locking out. This will be shown by the burner stopping and the illumination of the signal light in the reset button of the control box. (See Fig. 12). **IN THIS EVENT, WAIT AT LEAST ONE MINUTE** then press the re-set button to restart.

NOTE: This appliance is fitted with a pulse burner which has a 4 minute on and 4 minute off cycle.

VENT OIL PUMP

SEE FIG. 11

Whilst the burner is running, vent air from the pump by slackening the pressure gauge port sufficient to allow air to bleed out. When bubble free air seeps out re-tighten.

ADJUST OIL PRESSURE

SEE FIG. 11

With the burner running check the oil pressure on the pressure gauge.

If the pressure gauge is not indicating the correct reading then adjust the pressure by turning the pressure regulator clockwise to increase or anti-clockwise to decrease the pressure until the pressure gauge reads 5.2 bar (80 lbf/in²).

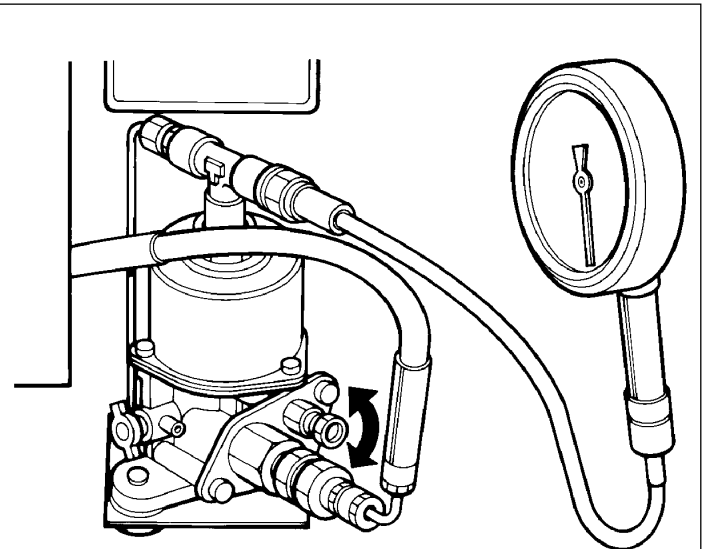


FIG. 11

DESN 513581

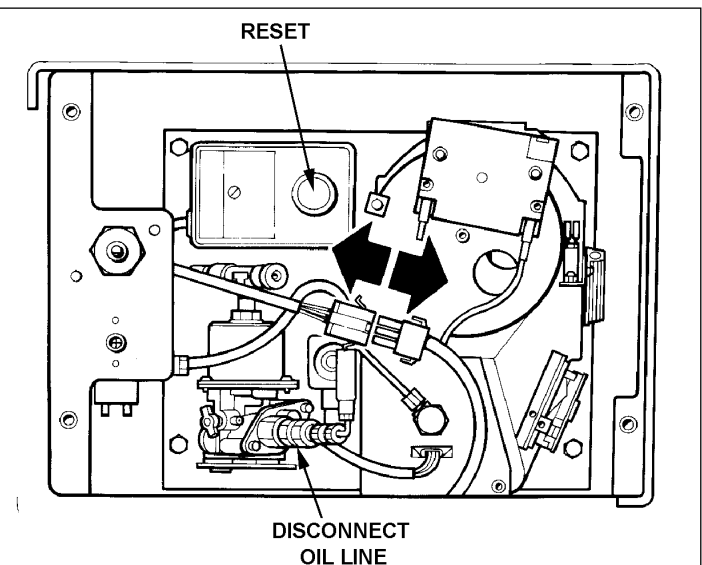


FIG. 12

DESN 514583

SET COMBUSTION AIR

SEE FIG. 13 - 14

After 15 minutes of the burner running.

Remove enamelled outer flue pipe shroud.

Remove sampling screw from the flue pipe spigot.

Insert the sensing end of a portable analyser to check the CO₂ (Carbon Dioxide) levels in the flueway. The burner should be set to 6 - 7% CO₂.

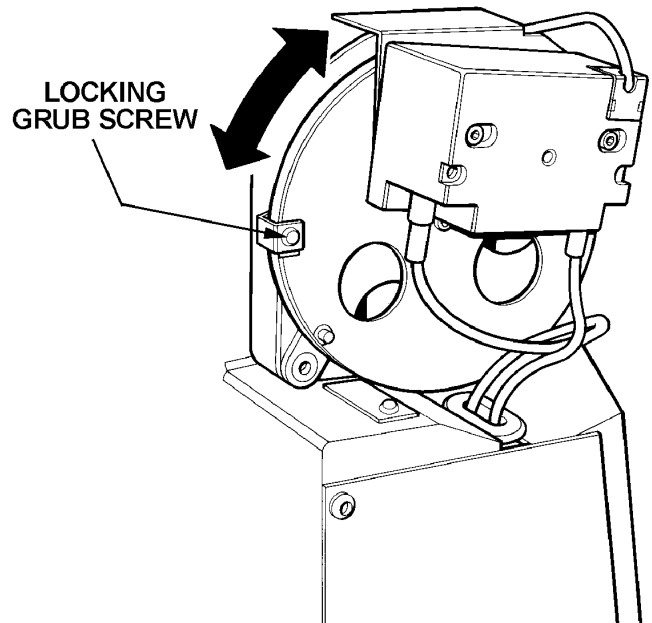


FIG. 13

DESN 514579

CHECK SMOKE

Remove the CO₂ sampling tube and using the same hole for flue sampling, insert the sensing end of a Baccarach Smoke Pump and check that the smoke in the flueways does not exceed 0 - 1 on the scale.

Replace the sampling plug on completion.

Refit the sampling screw.

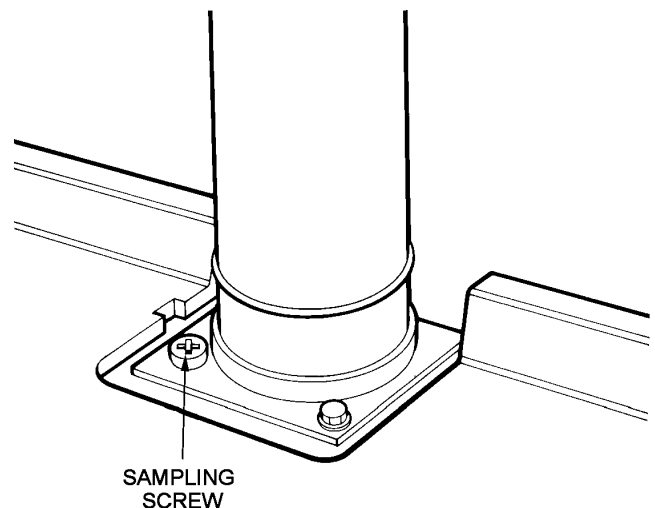


FIG. 14

DESN 513931

Replacement of Parts (Burner)

FAN MOTOR REMOVAL

SEE FIG. 15

With the burner blast tube upper most.

1. Undo 3 socket head fixings and remove the blast tube.
2. Undo 2 countersunk socket head fixings and remove blast tube mounting ring and collar.
3. Undo 2 pozi head fixings and 1 socket head fixing on fan mounting plate and withdraw fan motor assembly.
4. Disconnect fan motor supply lead from 7-pin burner plug and discard.
5. Insert new fan motor assembly, in reverse order, noting correct supply lead routing.
6. Spin wheel to ensure free movement.

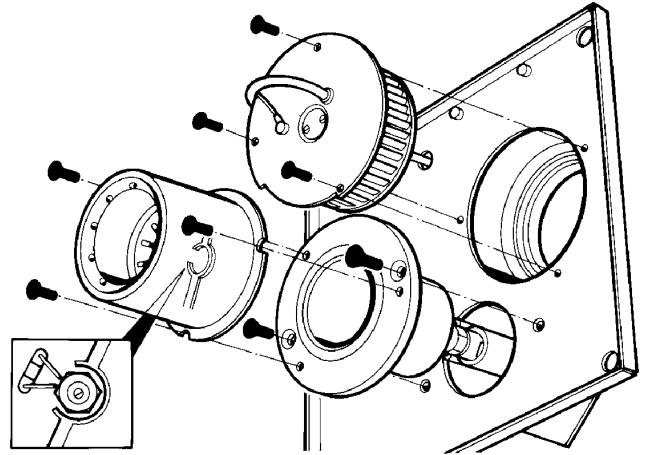


FIG. 15

DESN 513582

AIR PRESSURE SWITCH

SEE FIG. 16

1. Gently remove outer plastic cover.
2. Disconnect air tubes, noting location.
3. Disconnect electrical connections.
4. Remove 2 socket head fixings and withdraw.
5. Refit in reverse order.

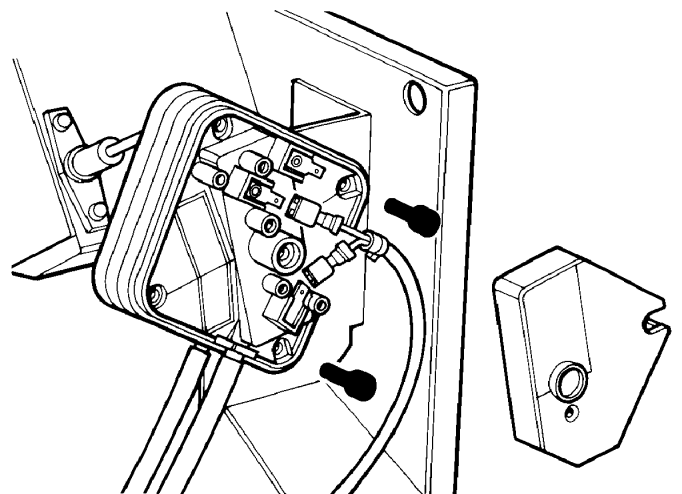


FIG. 16

DESN 513584

PUMP ACCESS

SEE FIG. 17

Follow instructions in section BURNER ACCESS, Steps 1 to 3 and BURNER REMOVAL, Steps 1 to 5.

1. Isolate fuel supply.
2. Disconnect flexible hose.
3. Disconnect pump outlet supply tube.
4. Remove 2 socket head securing screws and remove pump.
5. Disconnect wiring from control box noting terminal position and numbers.

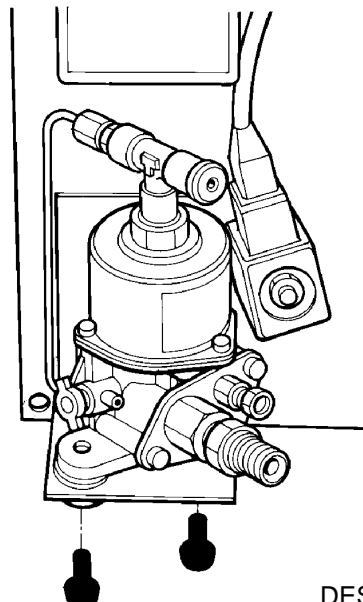


FIG. 17

DESN 513580

Replacement of Parts (Burner)

SOLENOID COIL

SEE FIG. 18

Follow instructions in section BURNER ACCESS, Steps 1 to 3.

1. Remove solenoid securing nut and remove coil.
2. Pull off electrical connection socket from solenoid.
3. Fit new solenoid coil, re-assemble in reverse order.

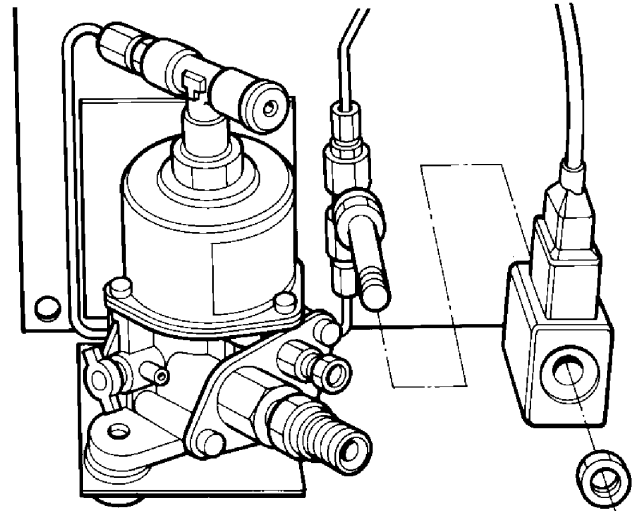


FIG. 18

DESN 513579

IGNITION TRANSFORMER

SEE FIG. 19

Follow instructions in section BURNER ACCESS, Steps 1 to 3.

1. Remove 2 screw securing transformer.
2. Remove both HT leads from transformer.
3. Disconnect the plug.
4. Remove transformer.
5. Fit new transformer, re-assemble in reverse order.

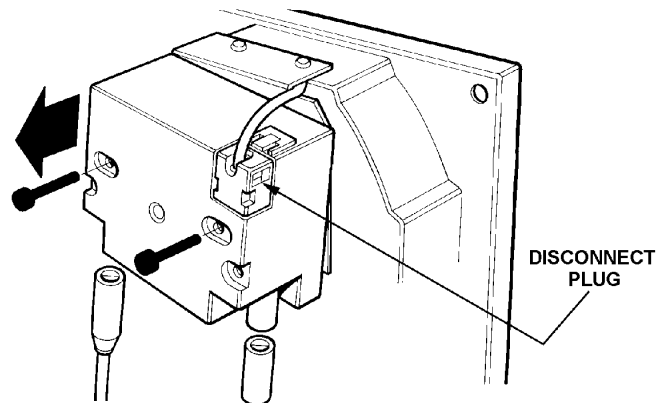


FIG. 19

DESN 514581

IGNITION ELECTRODES

SEE FIG. 20

Follow instructions in sections BURNER ACCESS, Steps 1 to 2 and BURNER NOZZLE REMOVAL, Steps 1 to 4.

1. Fit new ignition electrode assembly, in reverse order of removal.
2. Check electrode gap and reset if necessary.

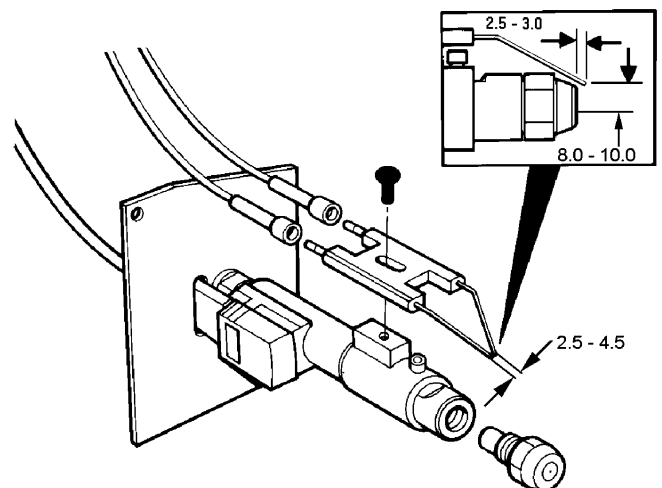


FIG. 20

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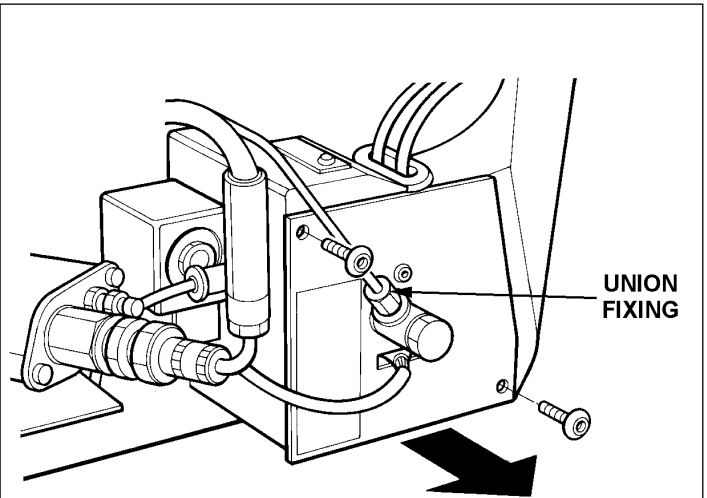
Replacement of Parts (Burner)

PRE-HEATER REMOVAL

SEE FIG. 21

Follow instructions in section BURNER NOZZLE REMOVAL, Steps 1 to 4. (See Fig. 6).

1. Using two spanners, hold nozzle pre-heater and undo banjo union, and remove pre-heater.
2. Disconnect plug and discard.
3. Re-assemble in reverse order, ensuring that new fibre washers are fitted and that banjo is correctly aligned with oil feed pipe.



DESN 514577

CONTROL BOX

SEE FIG. 22

Follow instructions in section BURNER ACCESS, Steps 1 to 2.

1. Using flat bladed screwdriver, undo central locking screw.
2. Gently pull control box away from mounting plate.
3. Fit new control box, re-assemble in reverse order.

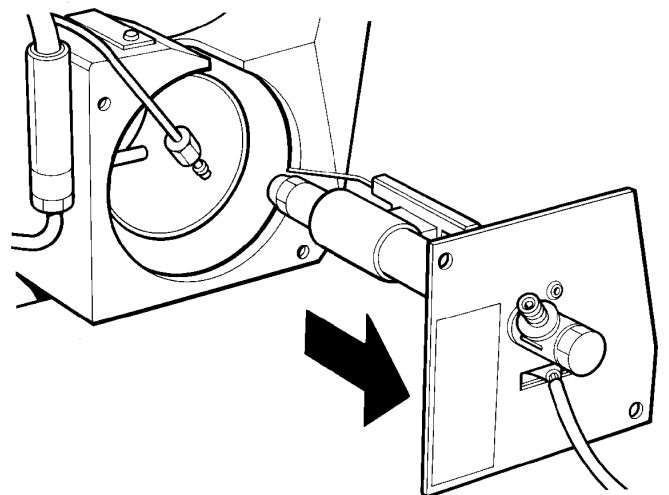


FIG. 21

DESN 514578

PEC

SEE FIG. 7

Follow instructions in sections BURNER ACCESS, Steps 1 to 2.

1. Unplug PEC.
2. Undo wire connections from control box. (See CONTROL BOX, Steps 1 to 3).
3. Withdraw PEC cable.
4. Fit new PEC, re-assemble in reverse order.

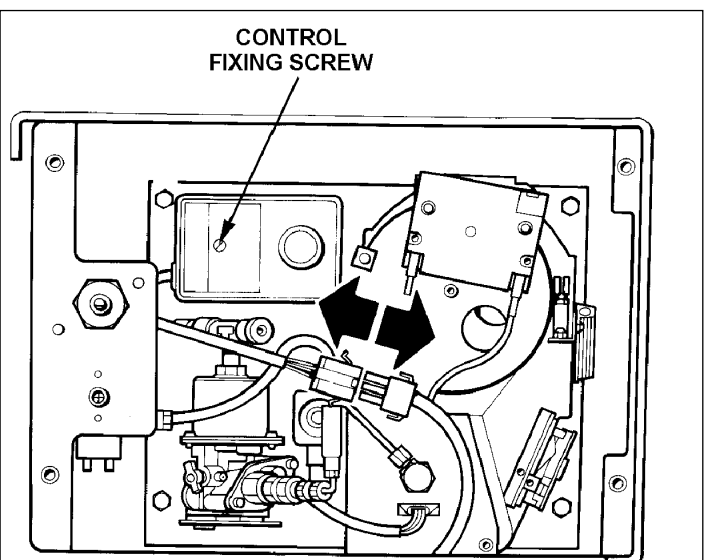


FIG. 22

DESN 514584

Replacement of Parts (Electrical Controls)

ELECTRICAL COMPONENT ACCESS

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

Follow instructions in section BURNER ACCESS, Steps 1 to 2.

SEE FIG. 23

1. Remove 2 screws wiring assembly and withdraw complete assembly.

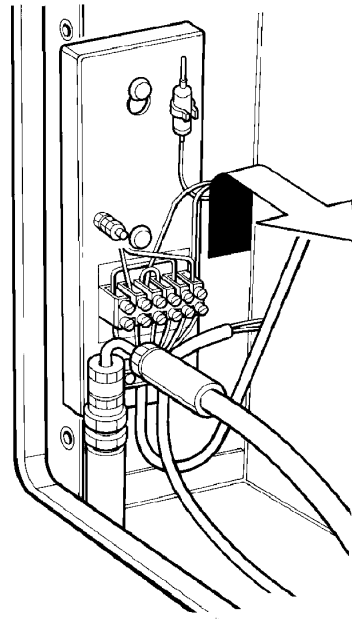


FIG. 23

DESN 514585

TO FIT NEW OVEN CONTROL THERMOSTAT

SEE FIGS. 24 & 25

1. Open roasting oven door and using a screwdriver, loosen the 3 pozi head screws retaining the phial bracket.
2. Remove the phial bracket from the top of the oven to expose thermostat phial.
3. Slacken the single screw and remove thermostat phial.
4. Pull off thermostat control knob.
5. Undo central retaining screw and withdraw thermostat body from mounting bracket.
6. Disconnect the supply wires.
7. Remove capillary and phial from appliance and discard.
8. Fit replacement thermostat and assemble in reverse order of removal.

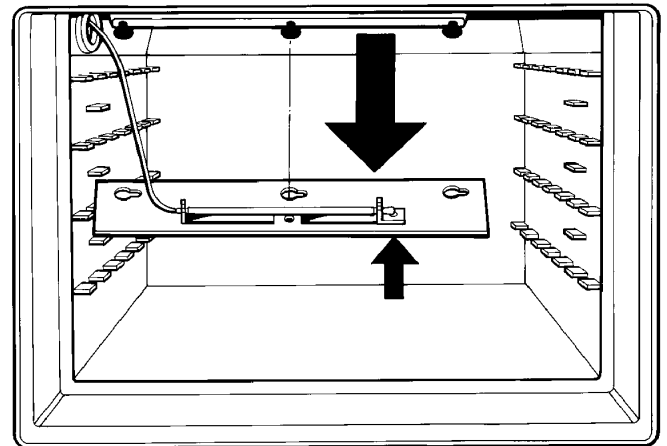


FIG. 24

DESN 513911

OVERHEAT THERMOSTAT

SEE FIG. 25

Follow instructions in section BURNER ACCESS, Steps 1 to 2.

1. Remove electrical connections.
2. Remove thermostat retaining nut and withdraw body from cooker.
3. Replace in reverse order of removal.

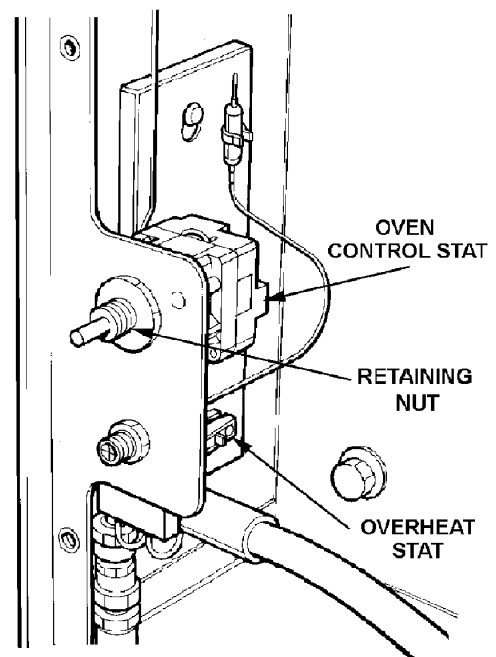
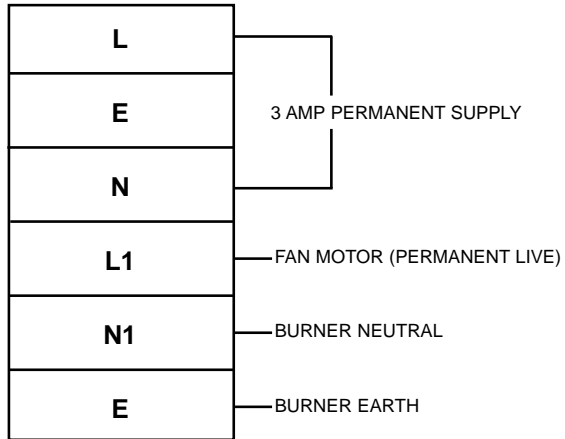


FIG. 25

DESN 514586

CONTROL CIRCUIT - EXTERNAL

TERMINAL STRIP CONNECTIONS



WIRING DIAGRAM - BURNER AND CONTROL PANEL

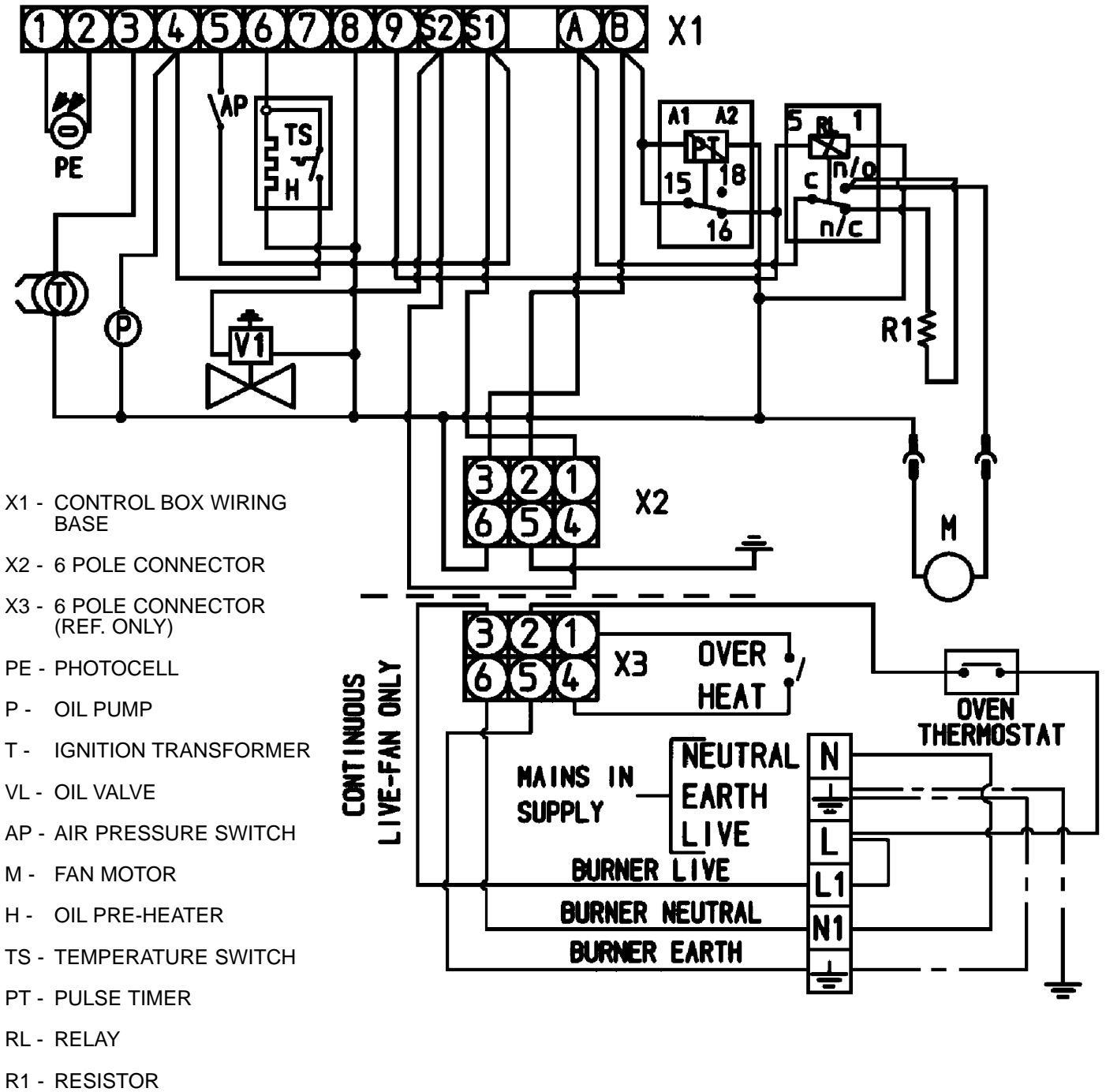


FIG. 26

Fault Finding

Burner

If the burner fails to start , faulty pre-heater - fuse blown on plug/faulty thermostat/poor wiring connection.

Check that the burner has not gone to lock-out.

Causes of lock-out can be:-

- No ignition, ignition electrode incorrectly positioned or insulation cracked, spark generator faulty, check for 230V at spark generator.
- No oil supply.
- Poor combustion.
- Photo electric cell incorrectly positioned, cracked or needs cleaning.
- Live and Neutral connections reversed.
- Oil valves not properly closed in shutdown position.
- Faulty control box.
- Faulty fire valve.
- Faulty oil pump.
- Faulty pressure switch.
- Overheat limit thermostat tripped - reset.

NOTE: When burner is not firing, the burner fan will continue to operate at half speed, if for any reason this does not happen:

Check - Relay
- Resistor

Replace as necessary.

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 the burner chamber. Use the following procedure:-

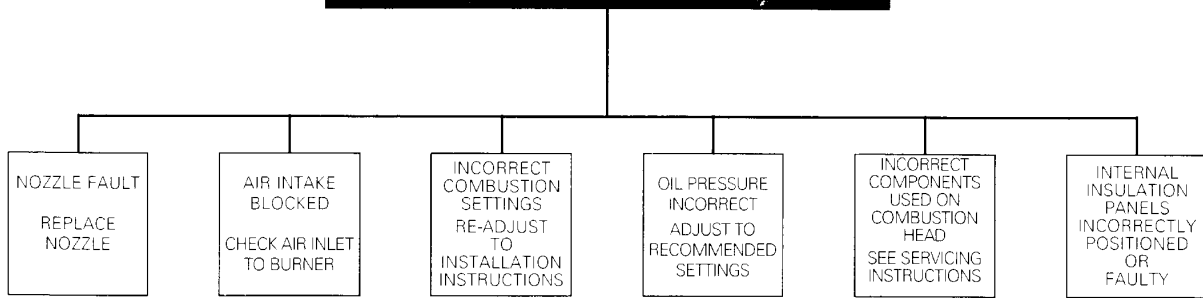
1. Isolate the electrical power supply.
2. Open up the bottom, burner access door. Remove door and put in a safe place.
3. Unscrew the 2 screws holding the air inlet shield in place and remove panel.
4. Unscrew the 2 screws holding the thermostat bracket in place and remove thermostat bracket.

The external mains control are made to a terminal block in the front left hand corner of the burner chamber. Re-connect the electrical supply and check that there is 230V power supply available across the mains input connections L & N on the terminal block. If not, then check connecting leads, connecting fuse and whether power is available at mains plug.

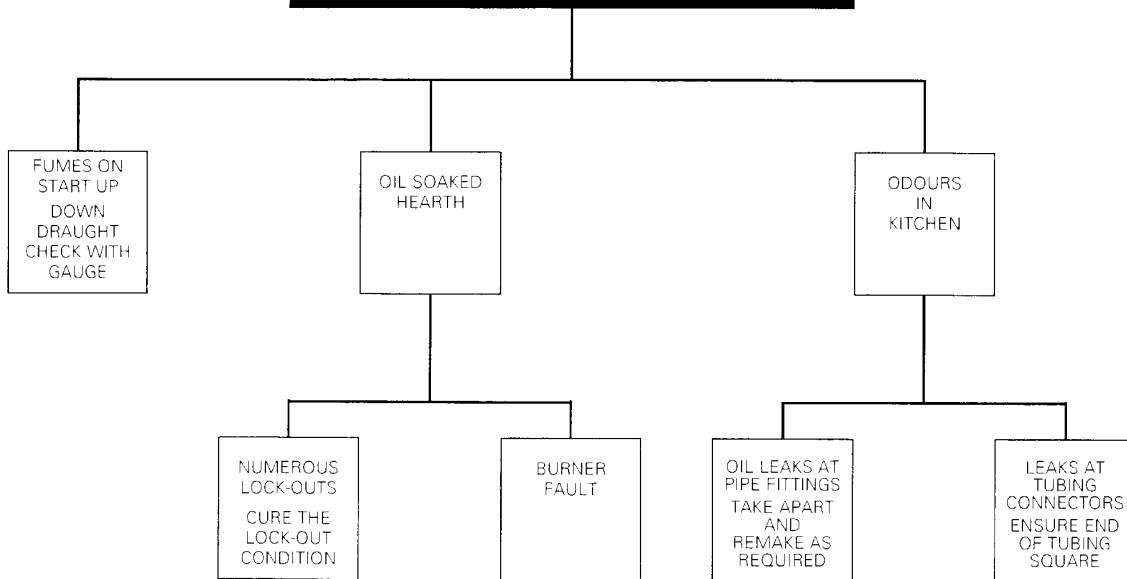
If power is available across L & N check for continuity across cooker control thermostat.

Remember: The burner operates on a 4 minute ON/4 minute OFF cycle.

HIGH SMOKE NUMBERS



OIL SMELLS



**For further advice or information contact
your local Aga Specialist**

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



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www.agalinks.com