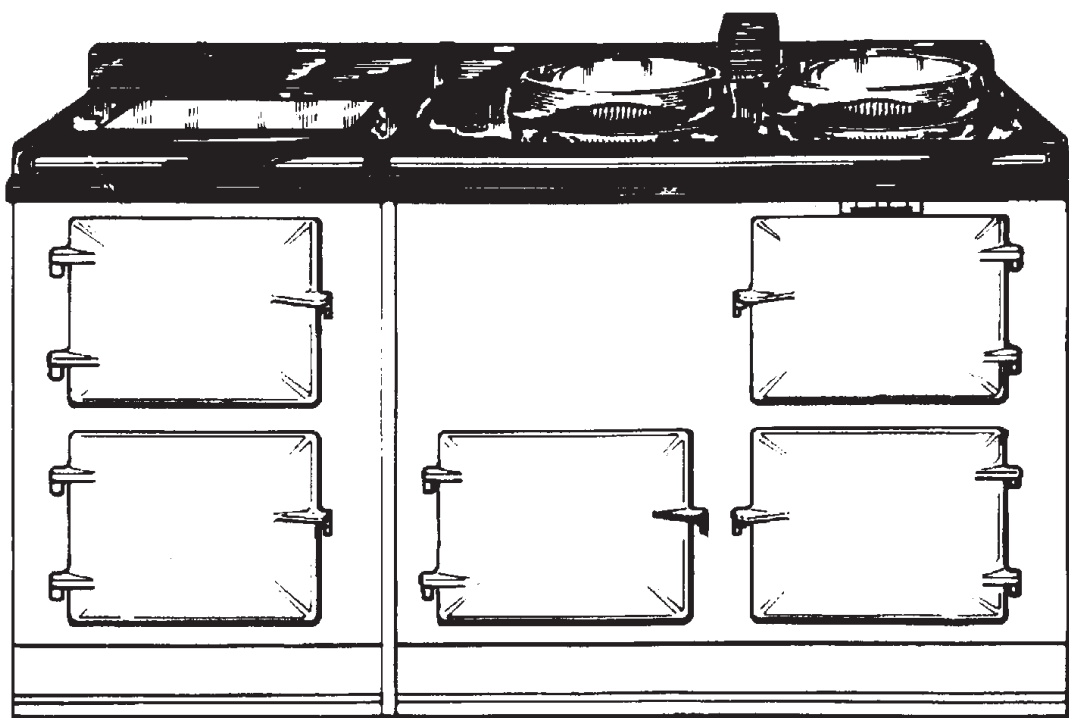




AGA DIESEL 2 & 4 OVEN (DC & DE)



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-RAYBURN.

PLEASE READ THESE INSTRUCTIONS BEFORE USING THIS APPLIANCE



For use in GB and IE

02/05 EINS 513667

SECTION	CONTENTS	PAGE
	CONSUMER PROTECTION	3
	HEALTH & SAFETY	3
	INTRODUCTION	4
	SERVICE SCHEDULE	4
BURNER REMOVAL	PREPARATION	5
	BURNER ACCESS	5
	BURNER REMOVAL	6
CLEANING	BURNER CHAMBER	7
	FLUE CHAMBER CLEANING	7
BURNER SERVICING	BURNER NOZZLE REMOVAL	8
	IGNITION ELECTRODE	8
	PHOTO ELECTRIC CELL (PEC) CLEANING	9
	FAN CLEANING	9
	OIL LINE FILTER CLEANING	10
	FLEXIBLE OIL LINES	10
RE-COMMISSIONING	BLEED AIR FROM OIL SUPPLY	11
	FIT PRESSURE GAUGE	11
	SWITCH ON ELECTRICITY	11
	VENT OIL PUMP	11
	ADJUST OIL PRESSURE	11
	SET COMBUSTION AIR	12
	CHECK SMOKE	12
REPLACEMENT OF PARTS (BURNER)	FAN MOTOR REMOVAL	13
	AIR PRESSURE SWITCH	13
	PUMP ACCESS	13
	SOLENOID COIL	14
	IGNITION TRANSFORMER	14
	IGNITION ELECTRODES	14
	PRE-HEATER REMOVAL	15
	CONTROL BOX	15
	PEC	15
REPLACEMENT OF PARTS (ELECTRICAL CONTROLS)	ELECTRICAL COMPONENT ACCESS	16
	TO FIT NEW OVEN CONTROL THERMOSTAT	16
ELECTRICAL CONTROLS	TERMINAL STRIP CONNECTIONS	17
FAULT FINDING	WIRING DIAGRAM	18
	FAULT FINDING - BURNER	19
	FAULT FINDING - GENERAL	19
	HIGH SMOKE NUMBERS/OIL SMELL	21

Consumer Protection

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

IMPORTANT NOTE: PLEASE READ THE ACCOMPANYING WARRANTY

Any alteration that is not approved by Aga-Rayburn 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.

Gas Oil fuels (mineral oils)

1. The effect of mineral oils on the skin vary according to the duration of exposure.
2. The lighter fractions also remove the protective grease normally present on the surface of the skin. This renders the skin dry, liable to crack and more prone to damage caused by cuts and abrasions.
3. 'Oil acne' is recognised by the presence of skin rashes. The arms are most often affected, but may occur where there is contact with oil or oily clothing.
 - Seek medical attention for any rash.
 - Avoid skin contact with mineral oil or clothing contaminated with mineral oil.
4. Inhalation of mineral oil vapours must be avoided. Never fire the burner in the open as unburnt oil vapours are likely to occur.
5. Use a suitable barrier cream which will give protection against mineral oil, lanolin based hand creams are usually very effective.
6. Never syphon mineral oils by use of the mouth. If accidentally swallowed, call a doctor, do not induce vomiting.

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.

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

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 bottom burner access door. Remove door and put in a safe place.
2. Remove 2 air inlet retaining fixings and withdraw air inlet shield.

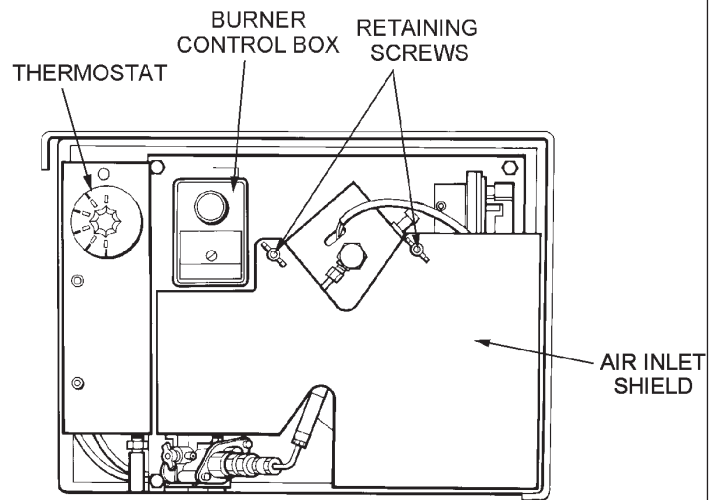


FIG. 1

DESN 513591

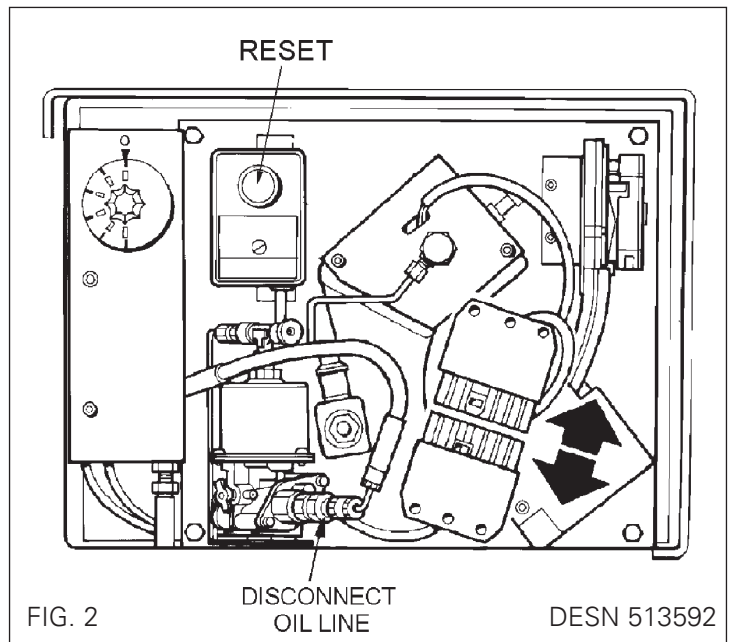
Burner Removal

BURNER REMOVAL

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

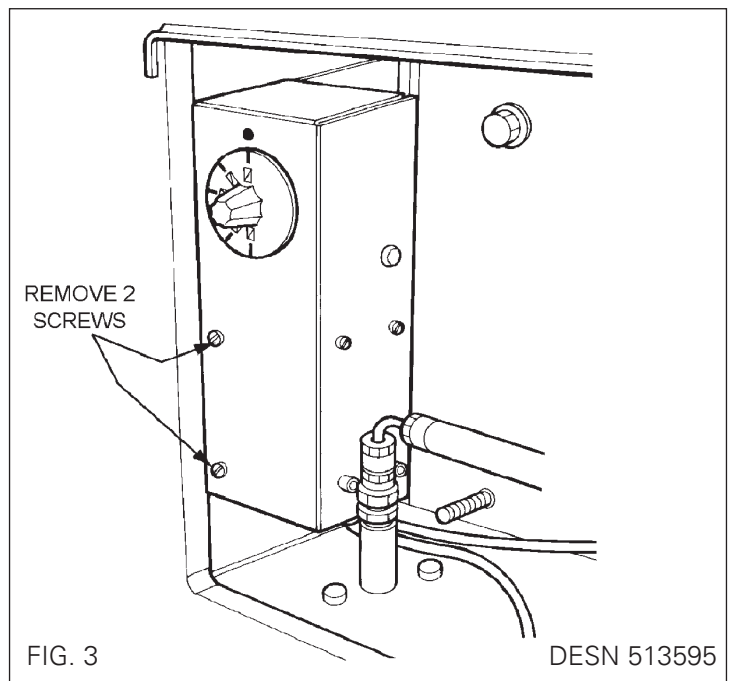
SEE FIG. 2

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.

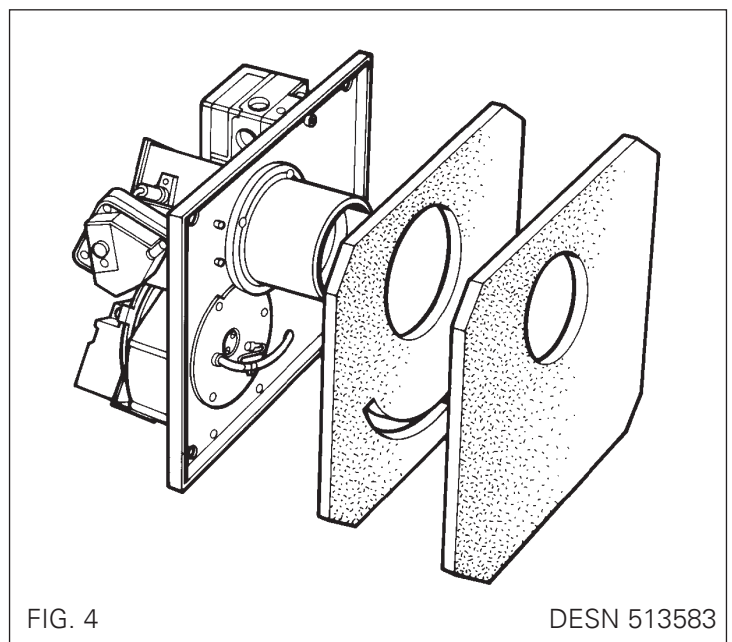


SEE FIG. 3

3. Disconnect flexible oil line and position away from burner.
4. Remove 2 screws fixing thermostat housing assembly and withdraw complete thermostat housing assembly.
5. Remove 4 burner retaining bolts.
6. Withdraw the burner unit.



7. Inspect condition of burner sealing gaskets and replace if necessary. (See Fig. 4).



BURNER CHAMBER

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

SEE FIG. 5

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.

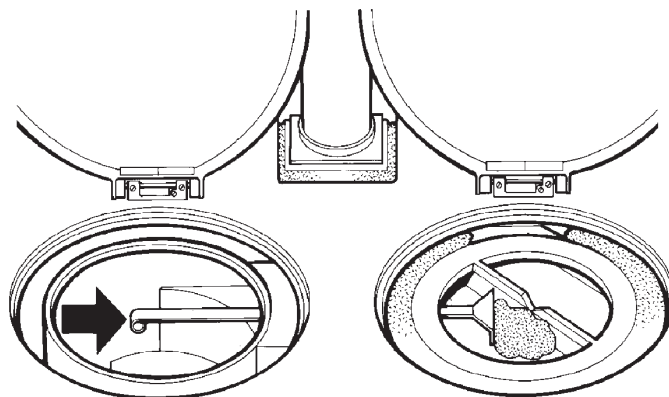


FIG. 5

DESN 513912

FLUE CHAMBER CLEANING

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

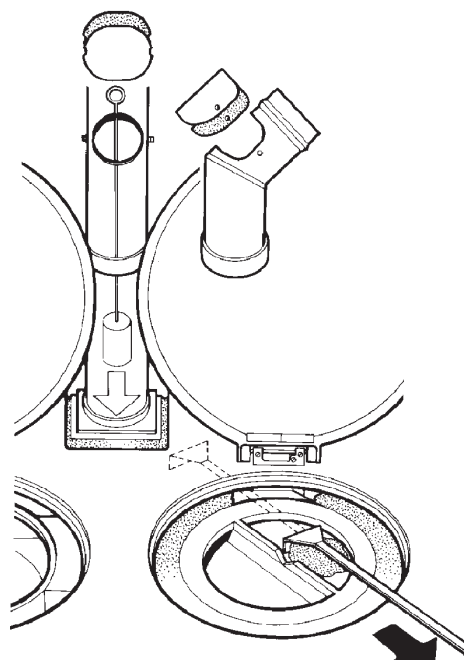


FIG. 6

DESN 513913

Burner Servicing

BURNER NOZZLE REMOVAL

SEE FIG. 7

CHANGE THE NOZZLE AT THE ANNUAL SERVICE.

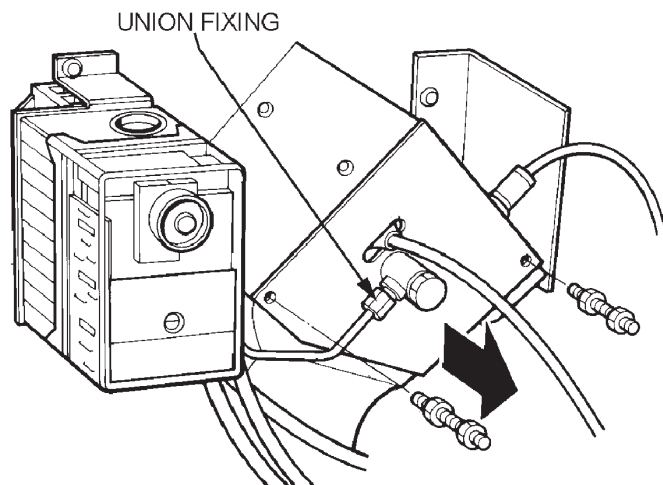
1. Undo oil feed pipe union.
2. Undo 2 M5 retaining studs.
3. Push down on oil feed pipe and withdraw head assembly.
4. Slacken ignitor retaining screw, slide off head assembly.
5. Use 2 spanners, one to hold pre-heater assembly, one to remove nozzle.
6. Fit new nozzle of correct type and spray angle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

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

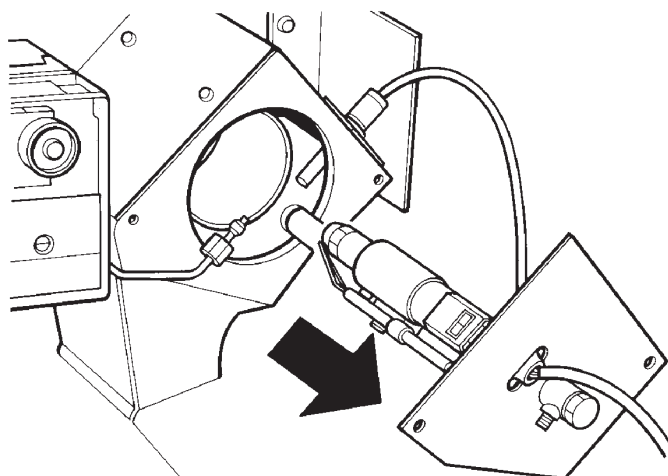
IGNITION ELECTRODE

SEE FIG. 7

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



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DESN 513585

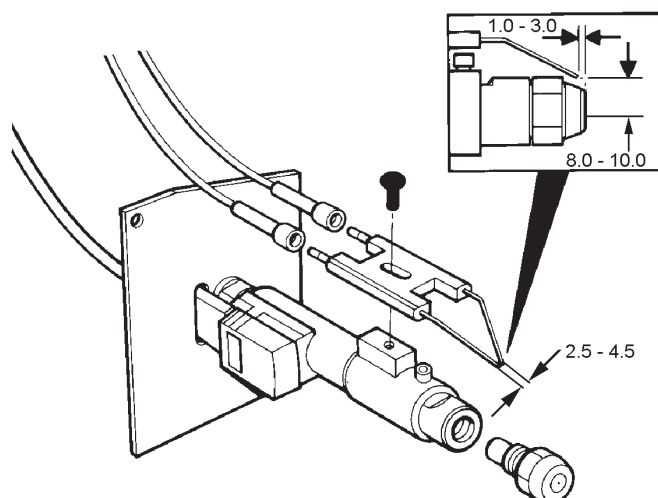


FIG. 7

DESN 513596

PHOTO ELECTRIC CELL (PEC) CLEANING

SEE FIG. 8

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.

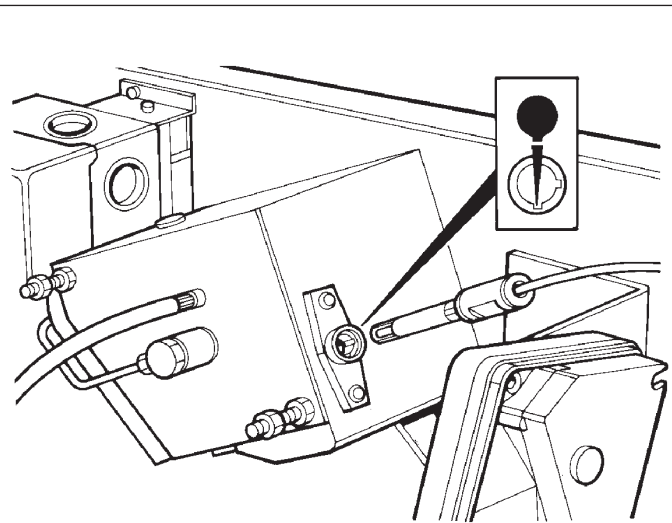


FIG. 8

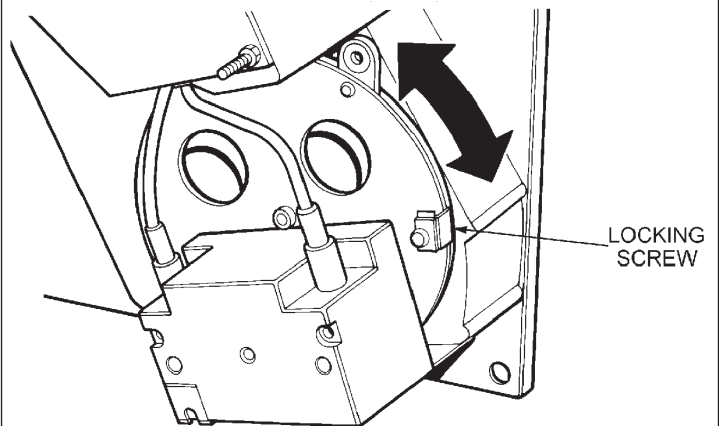
DESN 513594

FAN CLEANING

SEE FIG. 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 impellor as necessary.
5. Spin motor to check that fan turns easily.
6. Assemble in reverse order.



DESN 513589

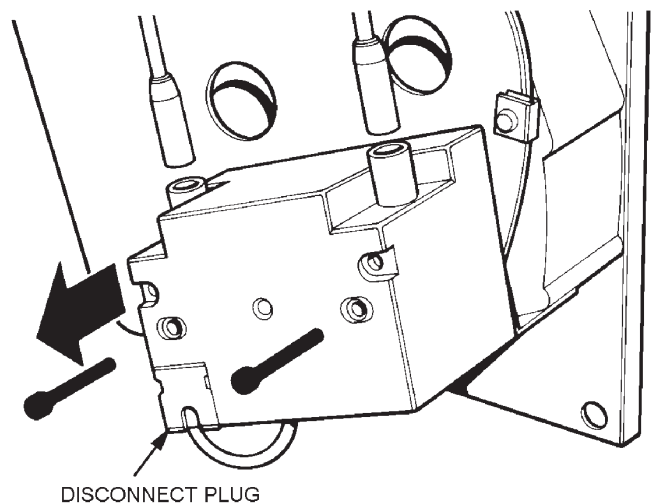


FIG. 9

DESN 513590

Burner Servicing

OIL LINE FILTER CLEANING

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 gas oil.
4. Replace element and thoroughly clean the bowl.
5. Re-assemble filter in reverse order of removal.

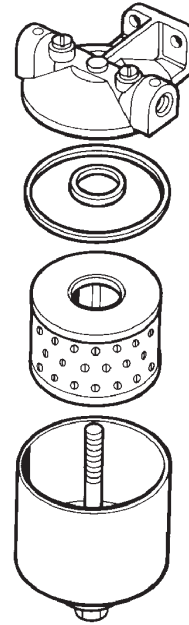


FIG. 10

DESN 513930

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.

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 oil 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 7.2 bar (100 lbf/in²).

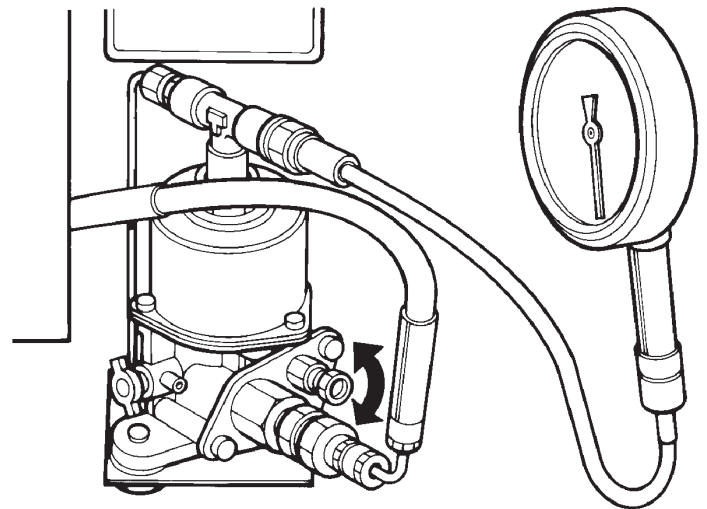


FIG. 11

DESN 513581

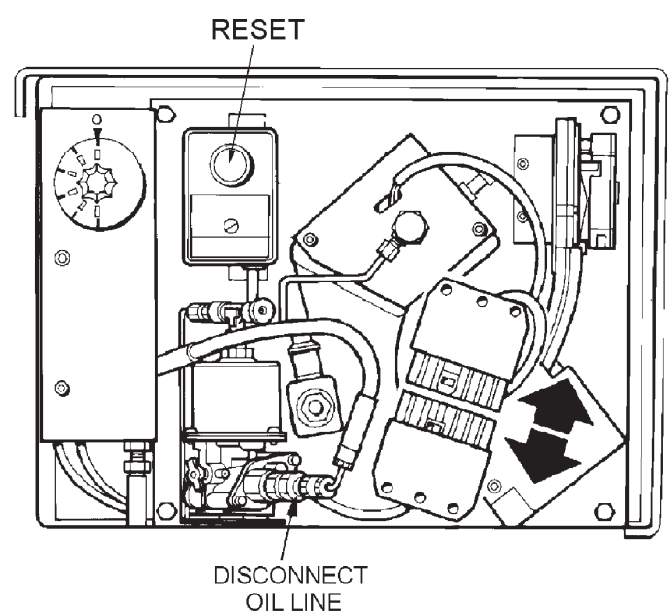


FIG. 12

DESN 513592

Re-commissioning

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.

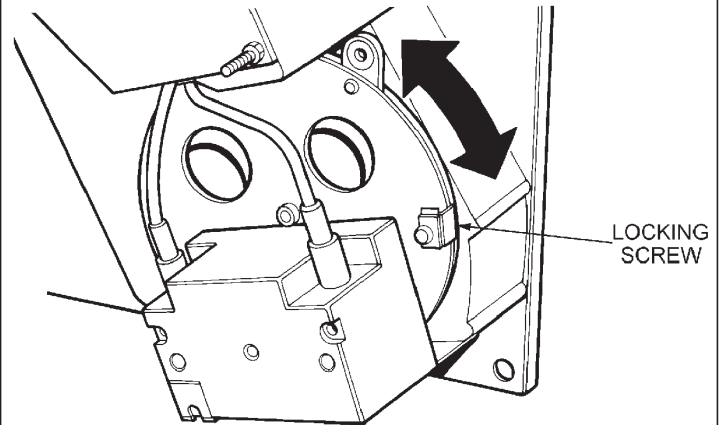


FIG. 13

DESN 513589

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.

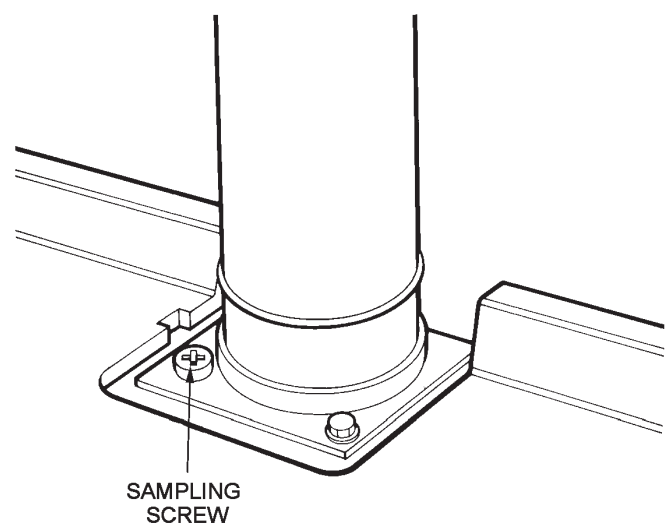


FIG. 14

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.

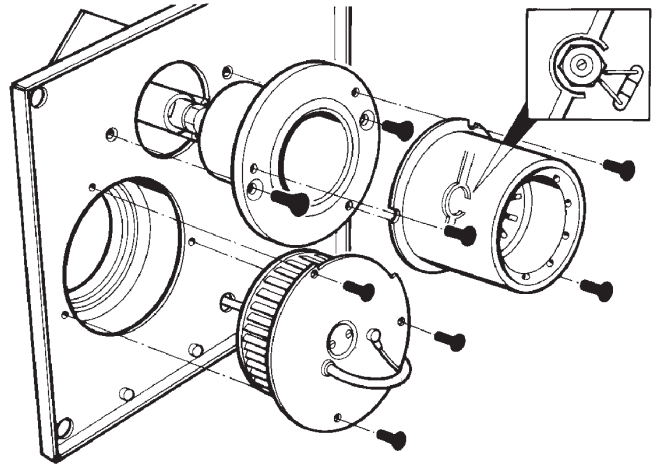


FIG. 15

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.

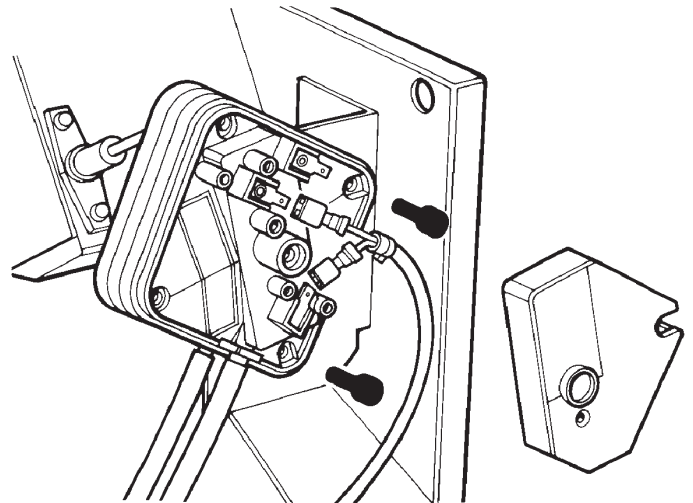


FIG. 16

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.

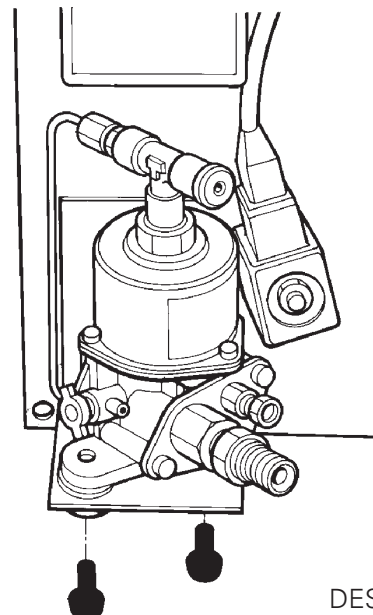


FIG. 17

DESN 513580

Replacement of Parts (Burner)

SOLENOID COIL

SEE FIG. 18

Follow instructions in sections 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.

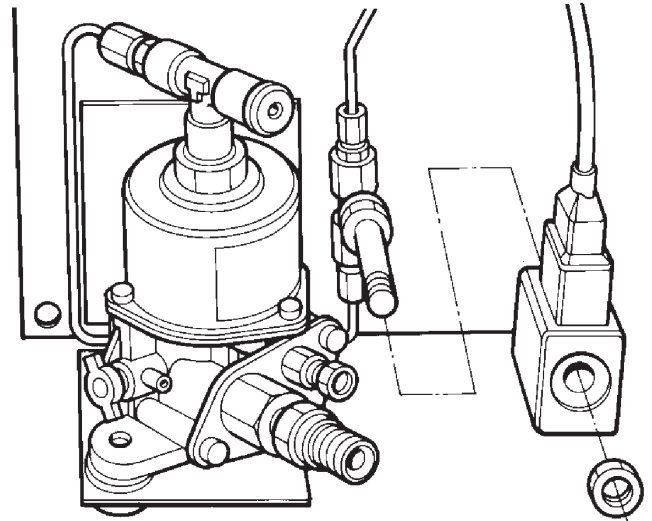


FIG. 18

DESN 513579

IGNITION TRANSFORMER

SEE FIG. 19

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

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

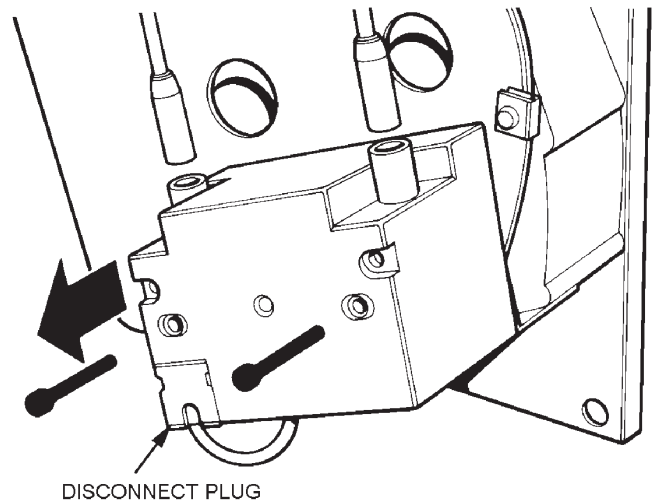


FIG. 19

DESN 513590

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.

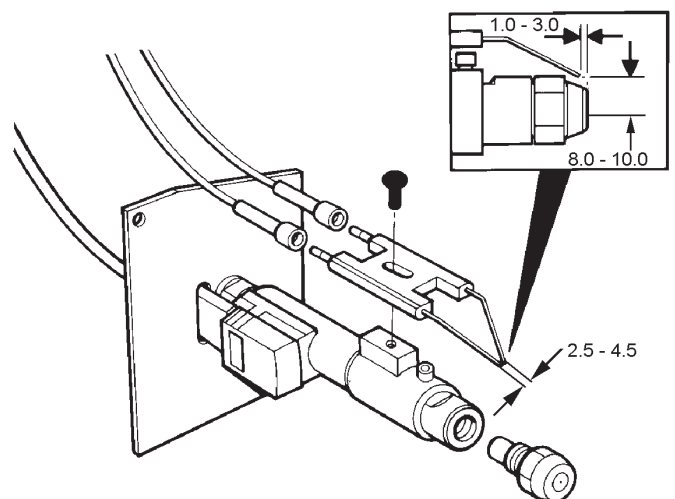


FIG. 20

DESN 513596

Replacement of Parts (Burner)

PRE-HEATER REMOVAL

Follow instructions in section, BURNER NOZZLE REMOVAL, Steps 1 to 4. (See Fig. 7)

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.

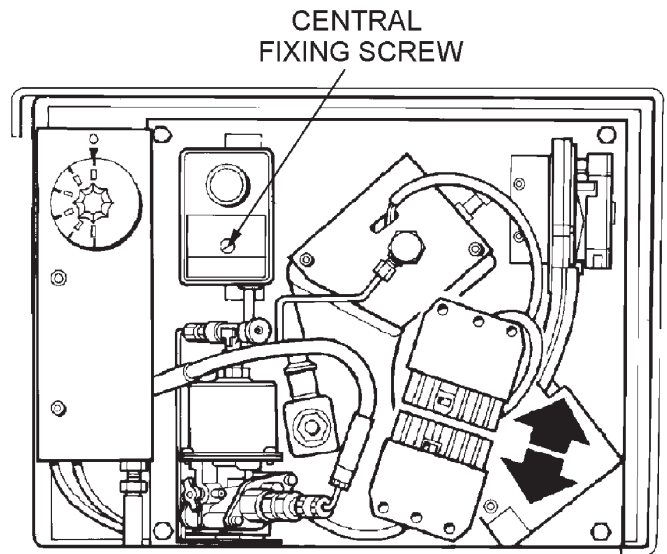


FIG. 21

DESN 513914

CONTROL BOX

SEE FIG. 21

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

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

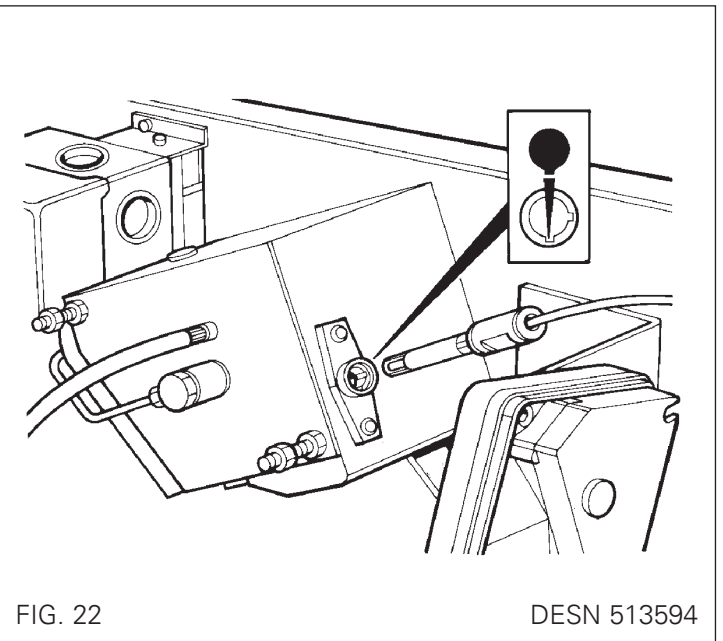


FIG. 22

DESN 513594

PEC

SEE FIG. 8

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.

Replacement of Parts (Electrical Controls)

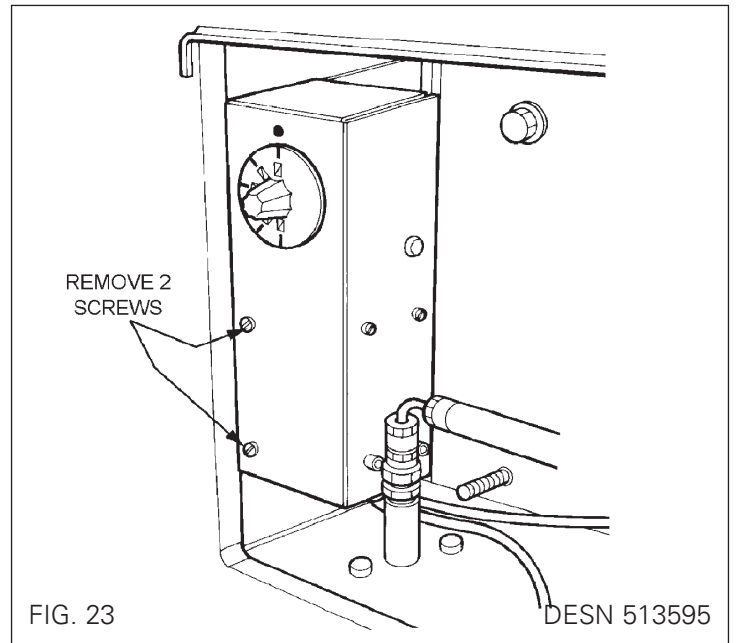
ELECTRICAL COMPONENT ACCESS

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

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

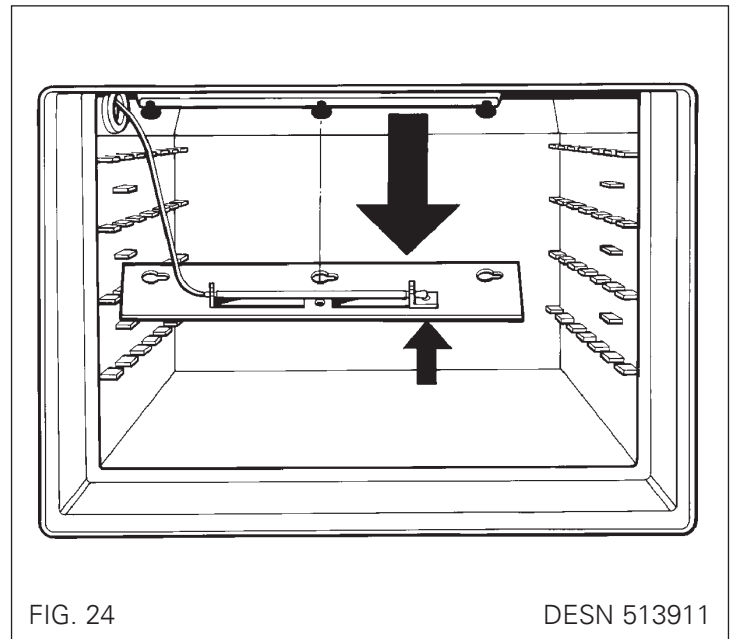
SEE FIG. 23

1. Remove 2 screws fixing thermostat housing assembly and withdraw complete thermostat housing assembly.
2. Withdraw bracket from cooker.



TO FIT NEW OVEN CONTROL THERMOSTAT

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.



CONTROL CIRCUIT - EXTERNAL

TERMINAL STRIP CONNECTIONS

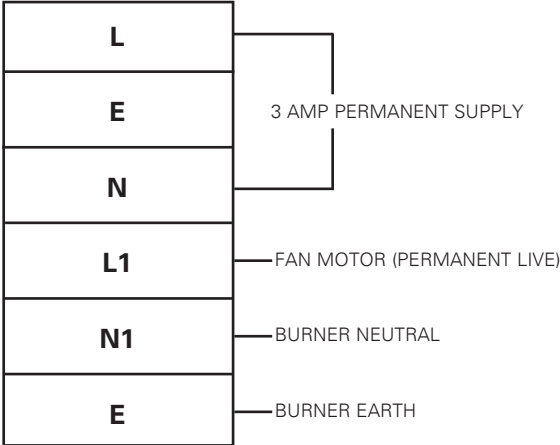


FIG. 25

Fault Finding