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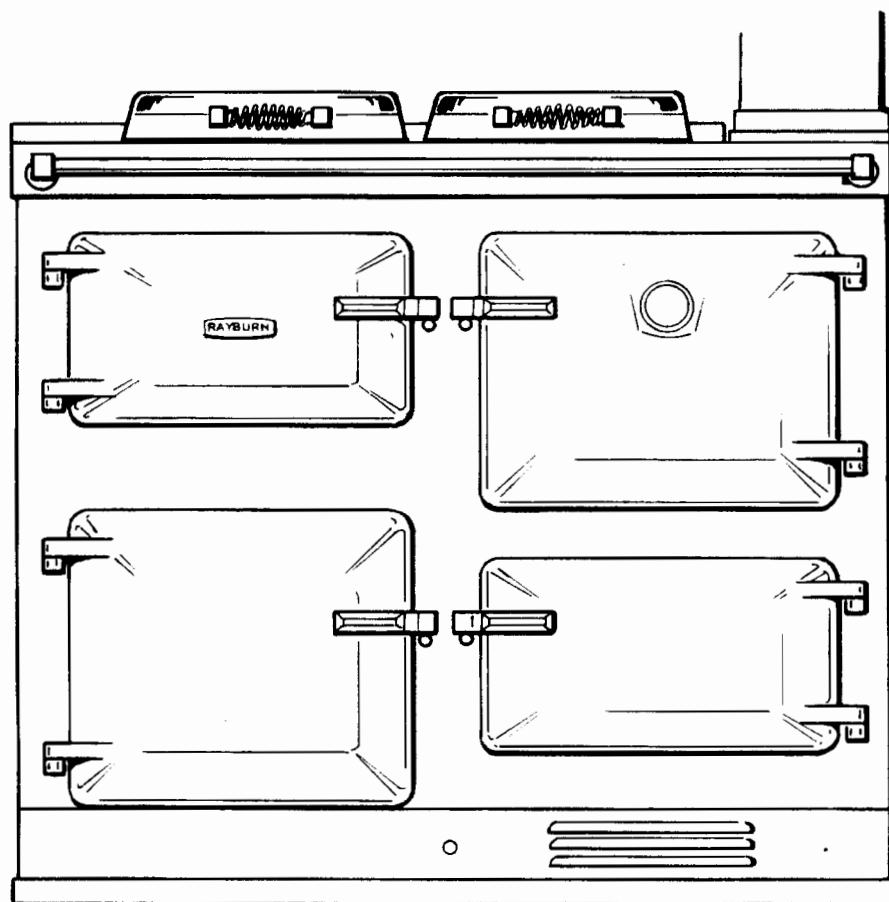


Home on the Range.

400G

Installation Instructions

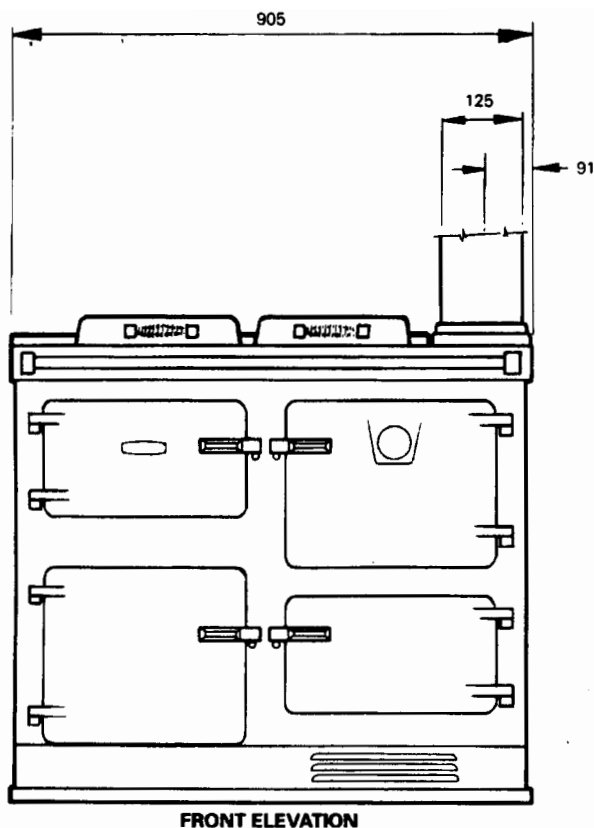
For use in GB and IE



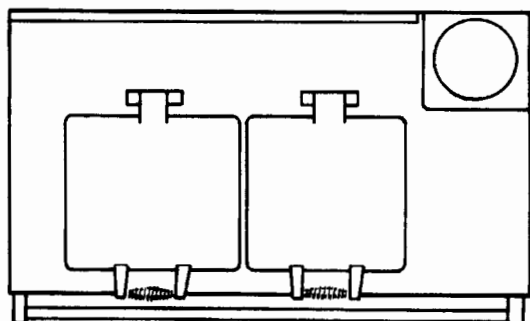
DESN 511420

PLEASE READ THESE INSTRUCTIONS BEFORE INSTALLING THIS APPLIANCE

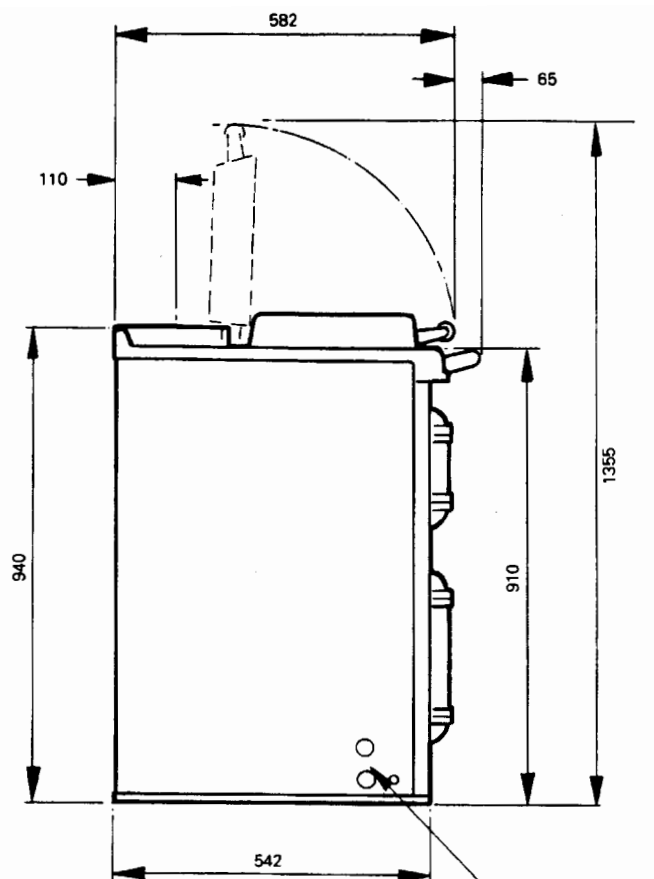
5/98 EINS 511730-MX



FRONT ELEVATION



PLAN



END ELEVATION

R 1/4 (1/4" BSP TAPE)

PLEASE NOTE: IT IS ADVISABLE TO CHECK THE ACTUAL SIZE/WIDTH OF YOUR APPLIANCE BEFORE FINALLY FIXING ANY KITCHEN UNITS, SINCE ENAMELLED CAST IRON CAN VARY IN SIZE

DIMENSIONS IN MM

DESN 511423

TECHNICAL DATA

Gas Inlet R 1/2" (1/2" BSP Taper)

Fuel - Natural Gas (G20) I_{2H}

Electrical Supply 230V ~ 50Hz 3 amp Fused

Unpacked Appliance Weight - 326Kg

Flue Outlet 125mm

Max Flue Temp. 229°C

CO 93 ppm (MAX)

CO₂% 9.2 - 9.5

BURNER	
INLET PRESSURE mbar	20
BURNER PRESSURE mbar	6.0
INJECTOR	16 x ø 4.5mm HOLES
HEAT INPUT kW	14.6

Site requirements

INTRODUCTION

The Rayburn is a floor standing cooker, fired by a gas burner. It is available with vertical flue outlet

IMPORTANT

The burner fitted to this appliance has been designed and constructed exclusively for use with the Rayburn 400 Series Cooker and MUST not be used on any other appliances.

REGULATIONS

In the interests of safety all gas appliances should be installed by competent persons in accordance with the regulations in force.

GAS SUPPLY

Installation Pipes

Pipework from the meter to the appliance must be of adequate size. It is recommended that a minimum of $\varnothing 22$ mm copper tubing is used within 1m of the appliance. A reduction to $\varnothing 15$ mm is permissible over the last metre of the appliance gas connection. Do not use pipes of a smaller size than the appliance gas connection. The complete installation must be tested for soundness and purged in accordance with the regulations in force.

FLUE SAFETY DEVICE

For safety purposes a flue safety device is fitted. This will only operate in adverse flue conditions. If the switch has operated, it should be pushed in, to reset and the pilot relit. If this problem persists it is necessary to determine and rectify the cause. If it is found necessary to reset more than once this may indicate a flue blockage.

LOCATION

The appliance is floor mounted and must be installed on a solid floor or base of incombustible material which is capable of supporting the total weight.

The location chosen for the appliance must permit the installation and the provision of a satisfactory flue and an adequate air supply. The location must also provide adequate space for servicing and for air circulation around the appliance. See "Installation of the Appliance".

The space in which the appliance is to be fitted must have the following minimum dimensions.

Between wall and LH side of appliance - 10mm

Between wall and RH side of appliance - 10mm

SHOULD THE WALL PROJECT BEYOND THE FRONT OF THE APPLIANCE, WHEN IT MUST BE INCREASED TO 50MM (SEE FIG. 1A).

Above the raised insulating cover handle - 60mm

In addition, adequate clearance must be available at the front of the appliance to enable it to be operated and serviced. Flue pipes and fittings must not be closer than 25mm to combustible materials and where passing through a combustible partition such as ceiling or roof, must be enclosed in a non-combustible sleeve providing an air space of at least 25mm.

Spaces around flue pipes passing through walls or floors should be sealed against the passage of smoke and flame.

Where the cooker is to stand in a recess or against a wall which is to be tiled, **in no circumstances should the tiles overlap the cooker top plate.**

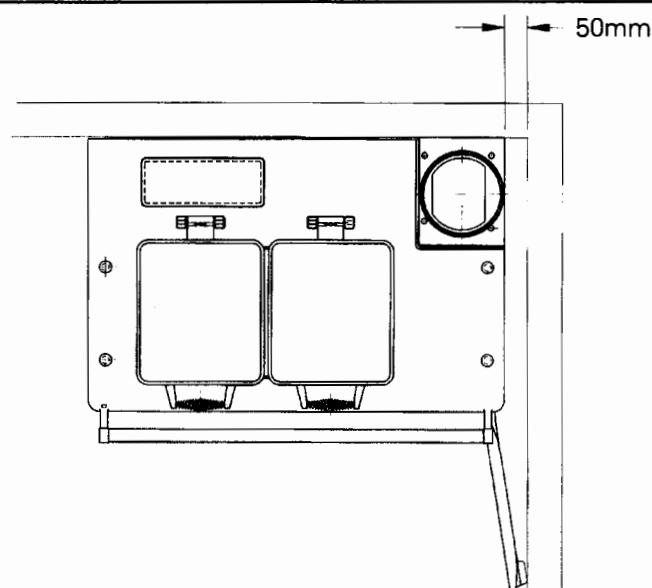
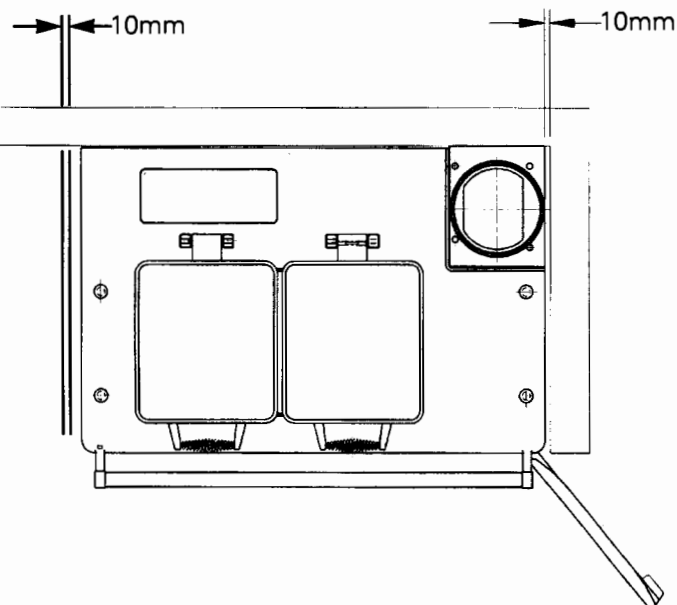


FIG. 1A

AIR REQUIREMENTS

The appliance can only be installed in a room which meets the ventilation regulations in force. But, in any event the room must have a permanent vent with a minimum free air area, see below.

MODEL	MIN. AIR REQUIREMENT
400G	35 cm ²

IMPORTANT: THE LOUVRED AIR INTAKE AT THE BOTTOM FRONT OF THIS APPLIANCE MUST BE KEPT CLEAR OF ANY OBSTRUCTIONS.

FLUE SYSTEM

The following notes are intended to give general guidance. The flue serving the cooker must not be less than 125mm internal diameter.

A straight vertical section of cast iron flue pipe of a length not less than 600mm should be utilised immediately above the flue spigot before any bends are used.

In any event the minimum flue height must not be less than 3m.

Flue pipes and fittings should be constructed from one of the following materials:-

- (a) Cement
- (b) Aluminium or stainless steel
- (c) Cast iron or mild steel acid resistant vitreous enamel lined.

If a chimney is to be used, it preferably should be one that is composed of or lined with a non-porous acid resistant material.

A flue pipe constructed in cast iron, should form the initial connection to lined chimneys.

Where a chimney is to be used which is not composed of or lined with a non-porous acid resistant material it should be lined with a stainless steel flexible flue liner in accordance with the relevant standards.

Before connecting the appliance to or inserting the liner into a flue that has been previously used, the flue **MUST** be thoroughly swept clean of any soot and loose materials. If a baffle plate, etc. is fitted in the flue it must be removed before connecting the appliance to, or inserting a liner into the flue.

The flue should terminate in accordance with relevant recommendations.

Site requirements

ELECTRICAL SUPPLY

Wiring external to the appliance must be installed in accordance with current National Wiring Regulations and any local regulations which apply. The appliance is supplied for 230 Volt ~ 50Hz and a fuse rating of 3 amps. The method of connection to the mains supply should facilitate complete electrical isolation of the appliance, by the use of a fused double pole switch having a contact separation of at least 3mm serving only the appliance. The point of connection to the mains should be readily accessible and adjacent to the appliance. The installation should be protected by a 30mA Residual Current Circuit Breaker (RCCB).

The minimum requirement for the power cable is that it should be a 3 core PVC sheathed flexible cord (85°C min) at least 0.75mm² (24 x 0.2mm) to the relevant standard.

WARNING THIS APPLIANCE MUST BE EARTHED

In the event of an electrical fault after installation of the appliance, preliminary electrical system checks must be carried out i.e. earth continuity, short circuit, polarity and resistance to earth.

For wiring instructions see wiring diagrams.

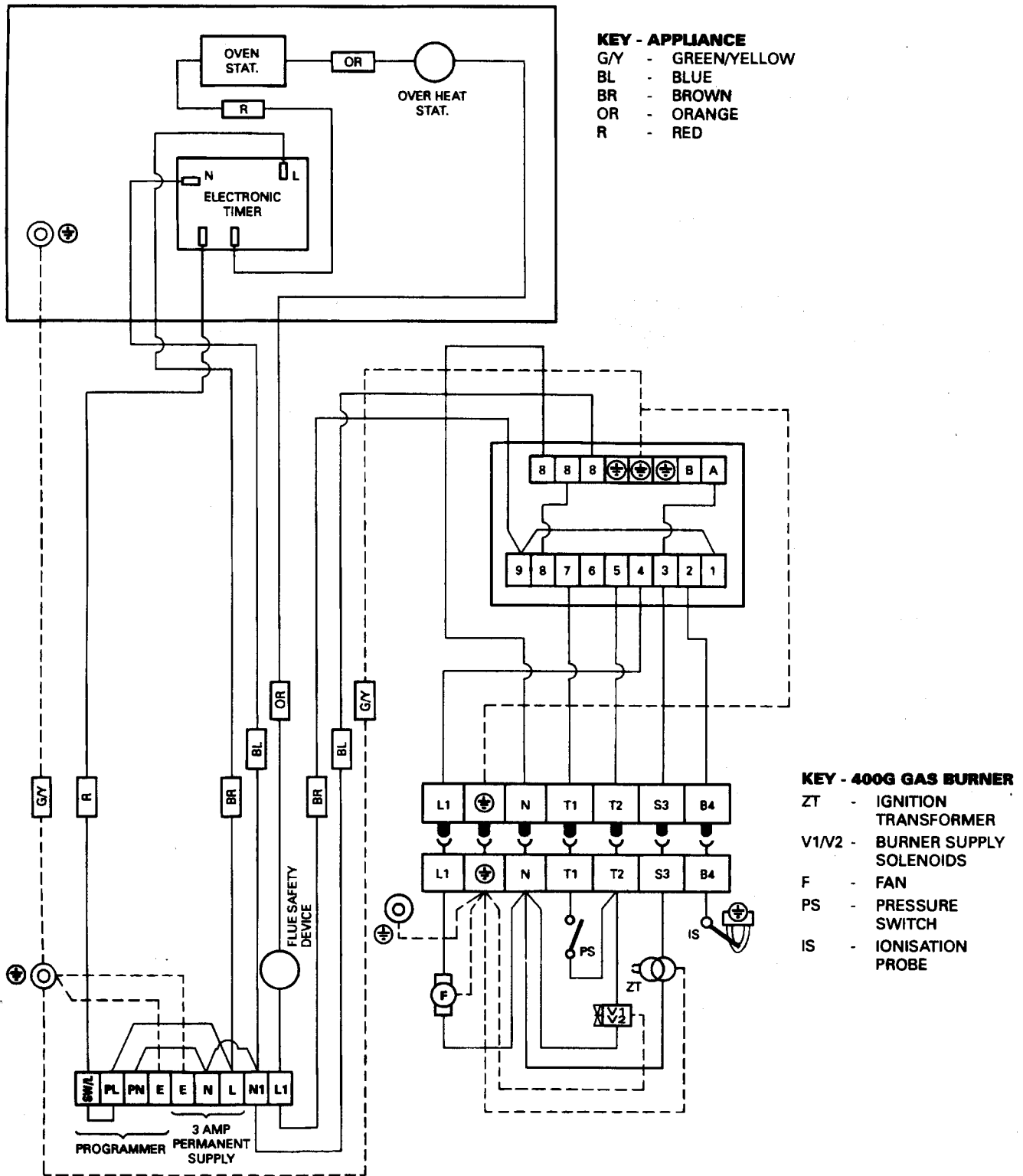


FIG. 1

Installation requirements

CLEARANCES

The appliance is floor mounted. The space in which the appliance is to be fitted must have the following minimum dimensions.

Between wall and LH side of appliance - 10mm

Between wall and RH side of appliance - 10mm

SHOULD THE WALL PROJECT BEYOND THE FRONT OF THE APPLIANCE, WHEN IT MUST BE INCREASED TO 50MM. SEE PAGE 4 - FIG. 1A.

Above the raised insulating cover handle - 60mm

In addition adequate clearance must be available at the front of the appliance to enable it to be operated and serviced.

PRELIMINARY INSTALLATION

The appliance is delivered in a fully assembled condition with the exception of the following items which are supplied separately packed and require assembly:-

The appliance rear distance bracket.

The cooker handrail.

Appliance rear distance bracket: if the rear wall is of combustible material, there must be an air gap of 25mm between the wall and the rear of the cooker. Fit the rear distance brackets as shown in Fig. 2. Whenever possible it is recommended that the skirting board is removed for the width of the appliance to enable the rear edge of the appliance top plate to make contact with the vertical wall and avoid a rear gap. (Combustible wall excepted).

Where the cooker is to stand in a recess or against a wall which is to be tiled, **IN NO CIRCUMSTANCES SHOULD THE TILES OVERLAP THE TOP PLATE.**

The handrail brackets are held on the front edges of the cooker top-plate casting. Remove the travel nuts and replace with the handrail brackets ensuring the fibre protecting washers are in position. Insert the handrail with fitted end caps into the brackets, positioning them correctly, and tighten the locating bolts (Fig. 3).

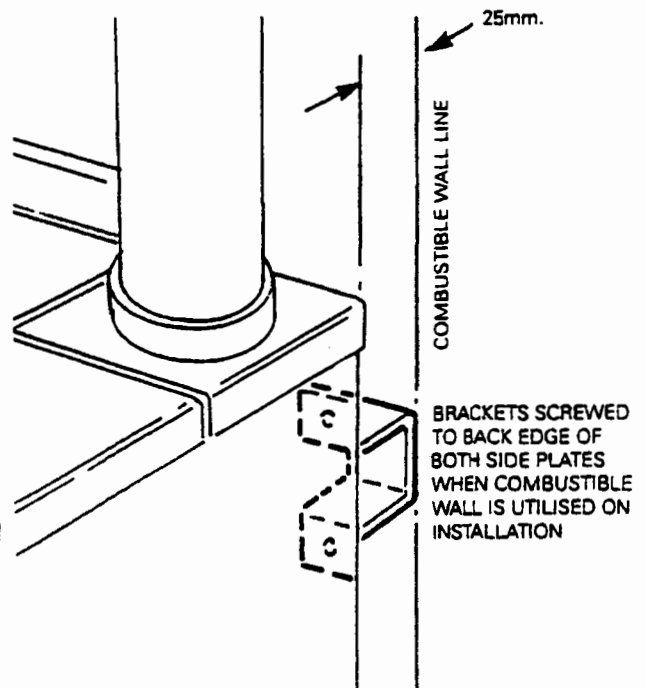


FIG. 2

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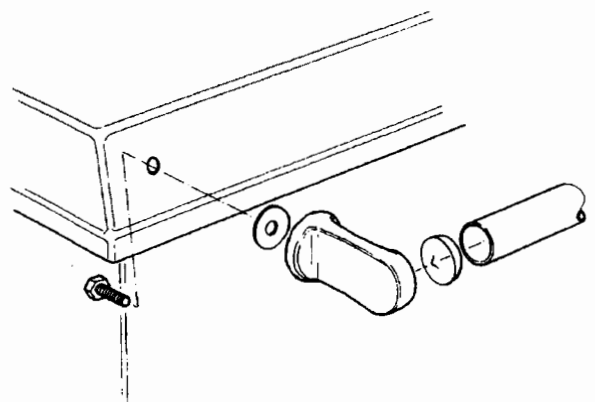


FIG. 3

DESN 510454 'A'

SITE LOCATION

1. Check that the hearth is level, then remove the appliance from its transit wooden pallet, and position it with its back against the wall and in its intended position for flue connection.
2. Locate and fit flue pipe into socket of flue pipe adaptor, seal joint with fire cement.
3. Connect and terminate the flue system in accordance with the regulations in force.

Commissioning Instructions

BURNER ACCESS

- SEE FIG. 4

1. Open the burner access door.
2. Remove (5) inner panel securing screws and remove panel.
3. Remove the (3) plinth securing screws and remove plinth.

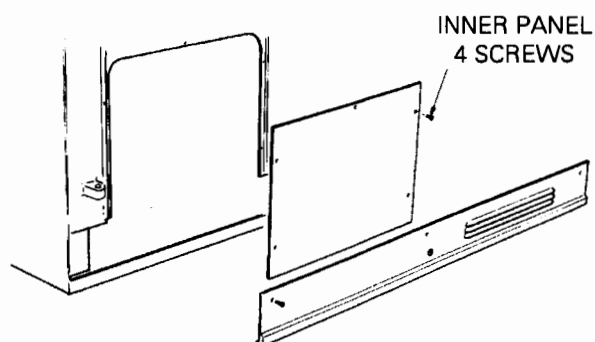


FIG. 4

DESN 511424

ELECTRICAL CONNECTION

- SEE FIG. 5

1. Make electrical connections to terminal strip as wiring diagram (See Fig. 6)

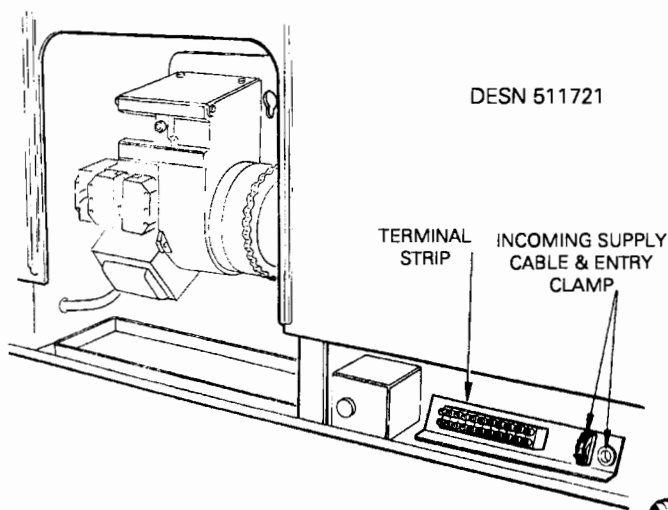


FIG. 5

TERMINAL STRIP CONNECTIONS

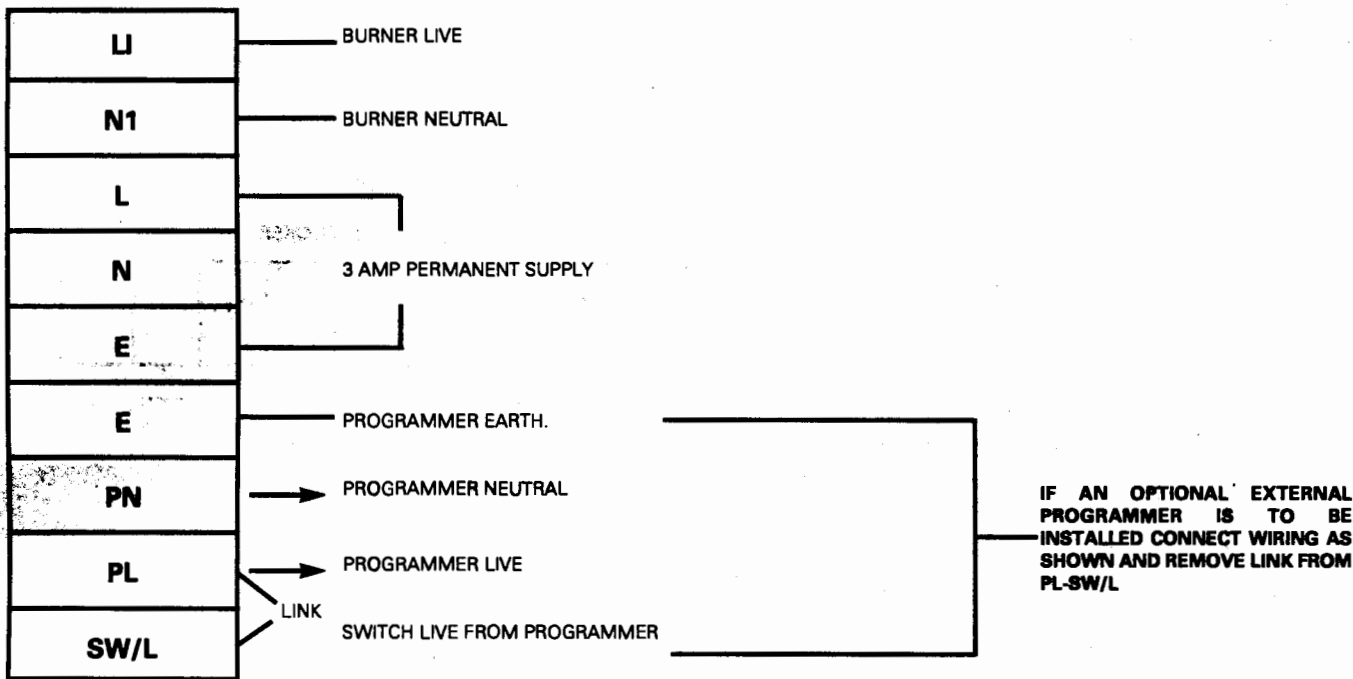


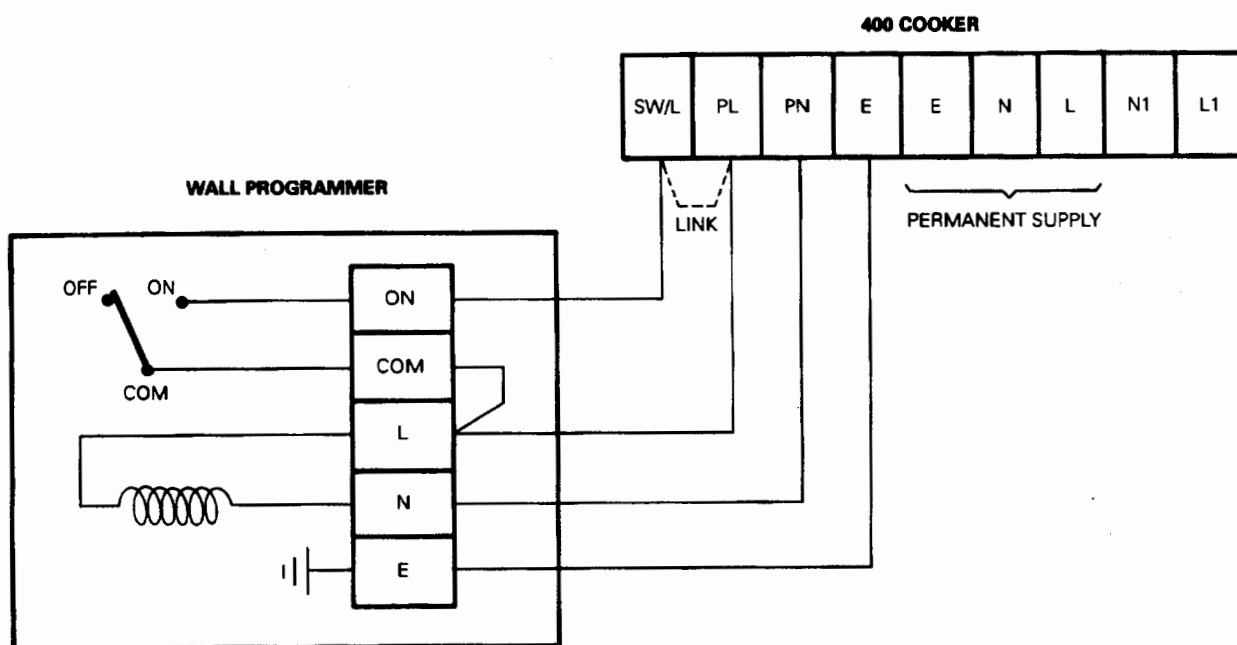
FIG. 6

Commissioning Instructions

USING A SINGLE CHANNEL OPTIONAL PROGRAMMER IN CONJUNCTION WITH THE RAYBURN 400 COOKER ONLY:

1. Always use the same isolating switch for both the cooker and programmer. Ideally: use the supply connections on the appliance.
2. Before carrying out any maintenance work on either the programmer or the cooker ensure the supply is isolated.

PROGRAMMER WIRING



NOTE: LINK BETWEEN PL & SW/L IS REMOVED WHEN A WALL PROGRAMMER IS USED

FIG. 7'

ALL WIRING TO THE IEE REGULATION BY A QUALIFIED ENGINEER

USERS INSTRUCTIONS FOR PROGRAMMER AND TIMER COMBINATION

1. The "Time of Day" alarm and 'Minute Minder' functions can all be used without effecting the external programmer timings.
2. When using Auto Cook Function on the internal timer ensure the external wall programmer is in the continuous 'ON' mode.
3. When using the external wall programmer: ensure it is set correctly i.e. timed. The internal cooker timer should be in Manual Mode.
4. Please read in conjunction with the instructions supplied with your external programmer.

BURNER CONTROL BOX OPERATION

When the thermostat is calling for heat, 230V is supplied to terminal 1 & 8 the burner control box and the air pressure switch checked to ensure that it is in the 'no air' position.

Providing this check is satisfactory, after a short delay, the burner fan will run (supplied from terminal 4).

The combustion air supplied by the fan will be detected by the air pressure switch.

If this is also found to be satisfactory, after a 20 second delay of the fan pre-purging, the ignition device is energised (supplied from terminal 3), at the same time the twin gas valve solenoids are energised (supplied from terminal 5).

Providing the start gas flame is established within 5 seconds and detected by the flame detection probe (connected to terminal 2) the burner will run.

The gas valves are a two stage design and although both solenoid open at the same time a soft start facility initially operates following which the gas will run at full rate.

ELECTRICAL CHECK

SEE FIG. 7

Checks to ensure electrical safety should be carried out by a competent person.

Check gas cock is in the on position.

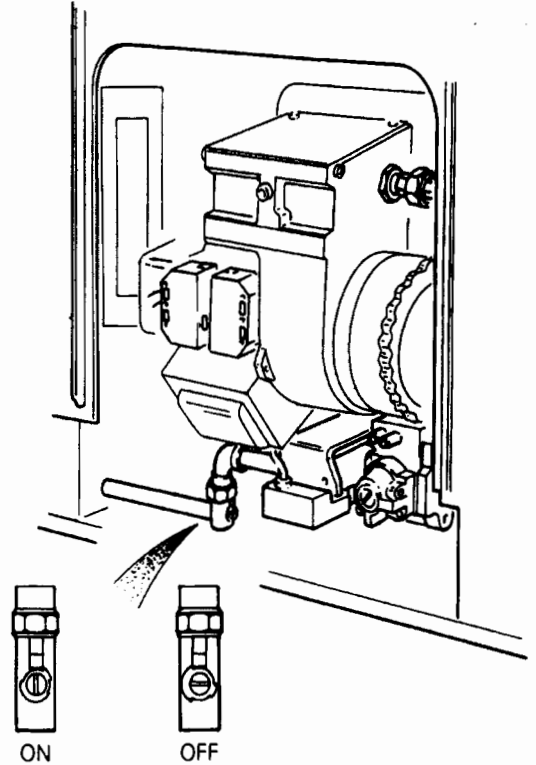
Switch on the Electricity

Set the time clock as stated in the Users Instructions.

Turn the thermostat to maximum. The burner should run on pre-purge for 20 seconds, the burner should then ignite.

Until all the air from the gas burner is purged out the burner may go to lock-out.

This will be shown by the burner stopping and the illumination of the signal light in the reset button of the control box. In this event, **wait at least one minute**, then press the re-set button to restart.



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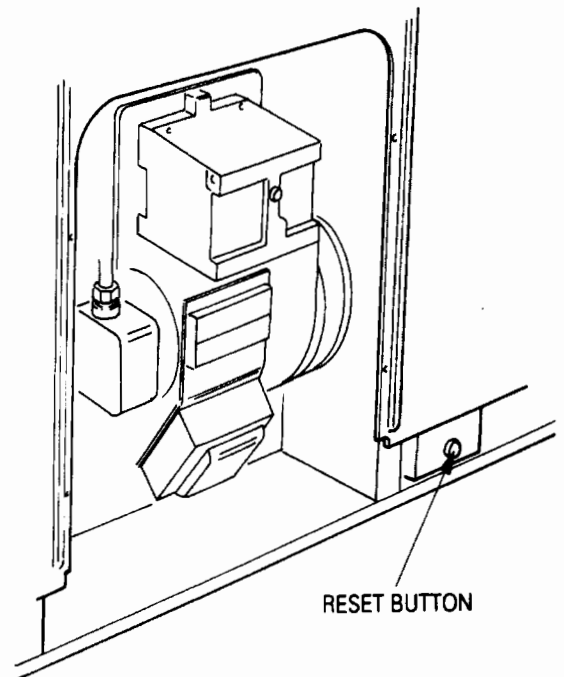


FIG. 7

DESN 511470

Commissioning Instructions

SET COMBUSTION AIR

- SEE FIG. 8 & 9

The air control of the burner is factory pre-set, however small adjustments may be necessary to suit the site conditions.

IMPORTANT: Ensure that the bottom louvred plinth is in place during combustion setting procedures and the outer door is closed.

Turn burner on.

After 15 minutes lift up the R.H. insulating cover and remove the counter sunk screw and insert the sensing end of a portable indicator to check the CO₂ (Carbon Dioxide) level. Adjust the burner air intake until the CO₂ / CO are as specified.

CO	93 ppm (MAX)
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CO ₂ %	9.2 - 9.5
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Replace the countersunk headed screw on completion ensuring that it will not interfere with any pots and pans placed on the hotplate.

When satisfied with combustion check refit burner door inner panel.

Refit outer burner door.

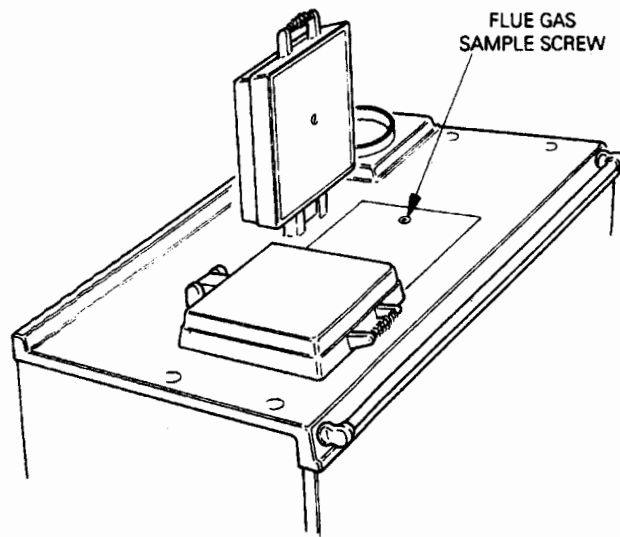


FIG. 8

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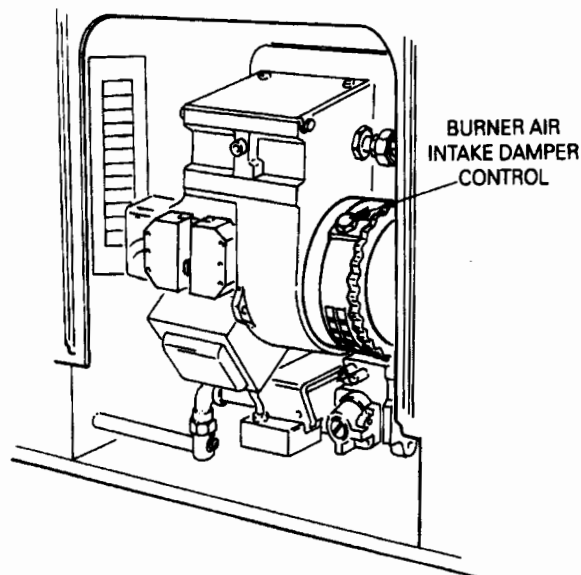


FIG. 9

DESN 511473 A

ANCILLARY CONTROLS CHECK

Before leaving the site, check that the operation of cooker timer and thermostat are capable of controlling the burner correctly. Check the operation of burner control box.

In the event of a flame failure the control box should cut off the gas supply by closing the solenoid valve. The reset button will then be illuminated.

WAIT 1 MINUTE BEFORE RESETTNG THE CONTROL BOX.

INSTRUCT THE USER

1. Advise the User that, for continued efficient and safe operation of the appliance, it is important that adequate servicing is carried out at regular 12 monthly intervals.
2. Hand the Operating Instructions to the User and demonstrate the correct operation of the appliance and system controls.
3. Leave the Installation and Servicing Instructions with the User.