

WARNING

This information is a copy of an original archive,
therefore Aga-Rangemaster cannot be held
responsible for its continued accuracy or relevance

THE COALBROOKDALE OS1

Traditional

Installation and Servicing Instructions

Consumer Protection Act 1987

As manufacturers and suppliers of cooking and heating products, in compliance with Section 10 of the Consumer Protection Act 1987. We take every care to ensure, as far as is reasonably practicable, that these products are so designed and constructed as to meet the general safety requirement when properly used and installed. To this end, our products are thoroughly tested and examined before despatch.

IMPORTANT NOTICE: Any alteration that is not approved by Aga-Rayburn, could invalidate the approval of the appliance, the warranty and could also infringe the current issue of the statutory requirements.

Control of Substances – Health and Safety

Important:

This appliance may contain some of the materials that are indicated

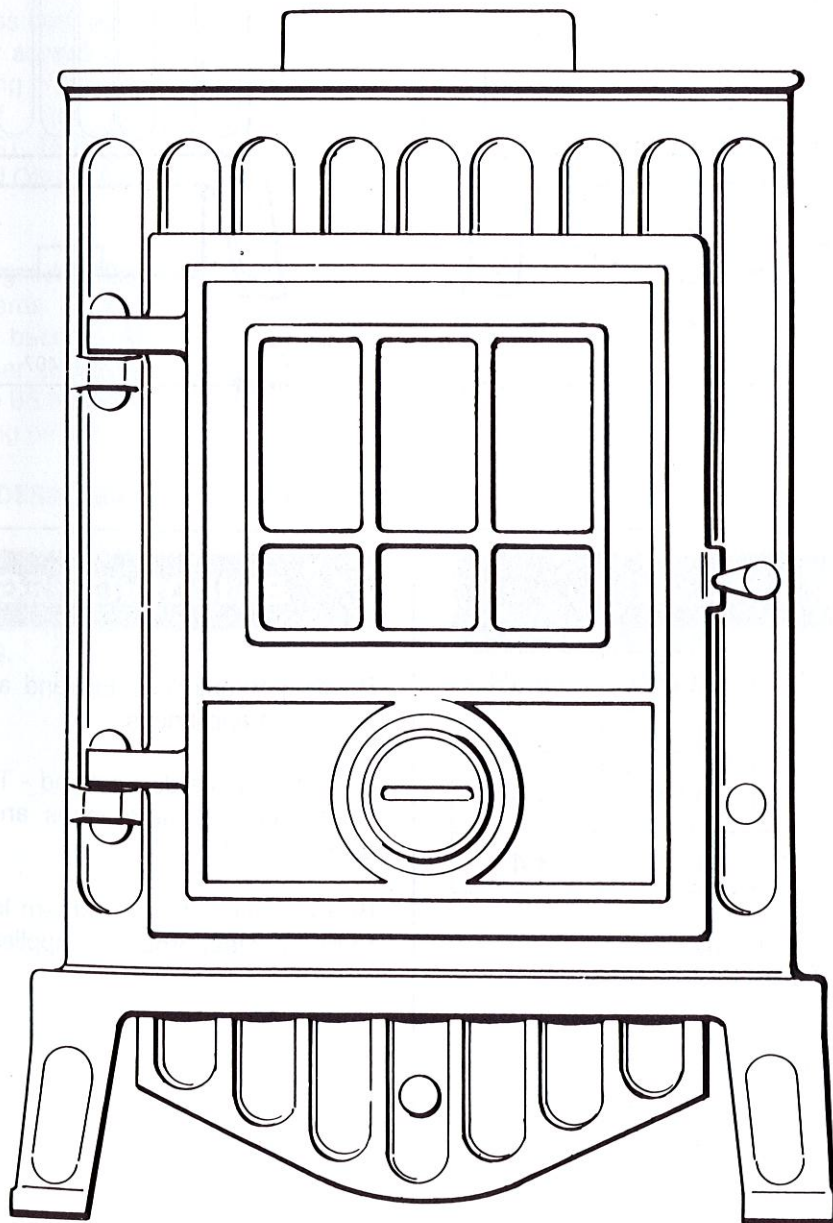
below. It is the Users/Installers responsibility to ensure that the necessary personal protective clothing is worn when handling, where applicable, the pertinent parts that contain any of the listed materials that could be interpreted as being injurious to health and safety, see below for information.

Firebricks, Fuel beds, Artificial Fuels – when handling use disposable gloves.

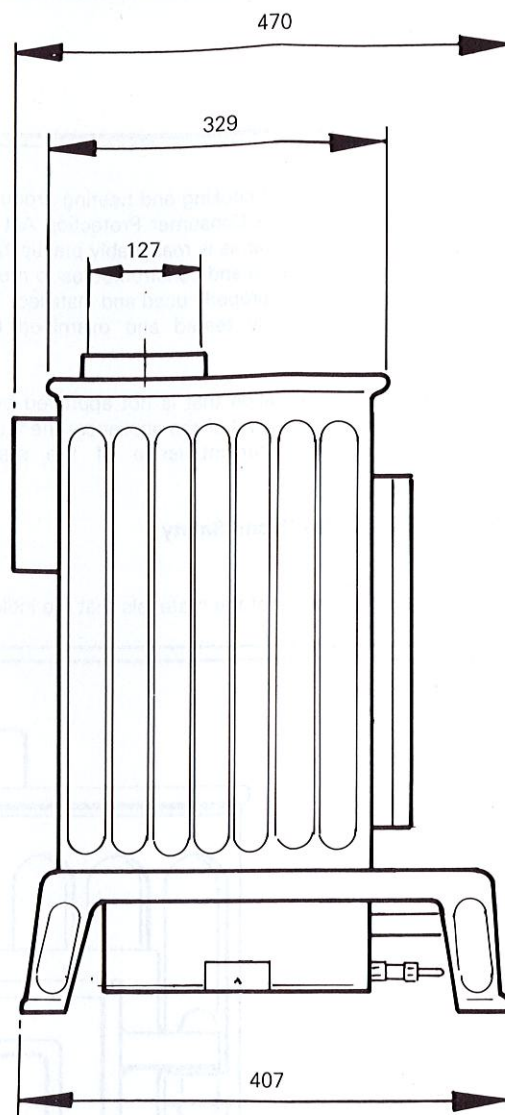
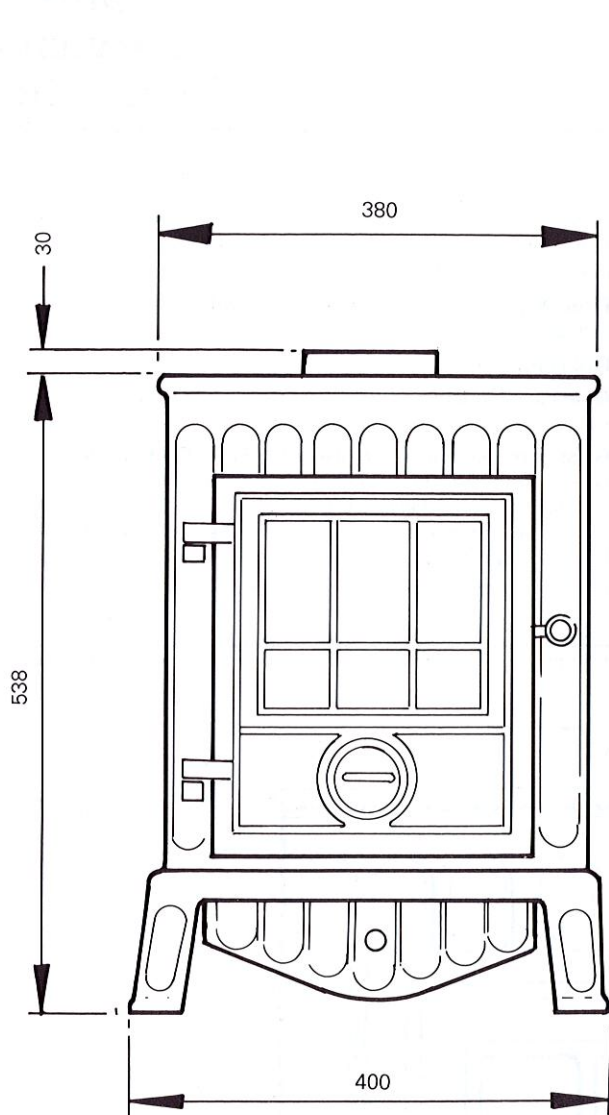
Fire cement – when handling use disposable gloves.

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, Kerosene Oil – may be harmful if inhaled, may be irritating to skin, eyes, nose and throat. When handling avoid inhaling and 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.



DESN 510580



DESN 510630

SPECIFICATIONS

	LOW	HIGH
FLOW RATE – cc/Min	4.5	8.5
INPUT – kW	2.76	5.22
OUTPUT – kW	1.55	3.4

FUEL Kerosene 28 seconds
to BS 2869 Part 2 Class C2

FLUE OUTLET Dia 127mm
Min Height - 4.6m
Min pull - 1.5mm H₂O
Max pull - 5.0mm H₂O

OIL INLET 8mm pipe (Min)

WEIGHT 69 Kg

BUILDING REGULATIONS

Building Regulations England and Wales - Part J. Heat producing appliances.

Building Standards Scotland - Technical Standard Part F. Heat producing appliances and storage of liquid and gaseous fuel.

Building Regulations Northern Ireland - Technical Booklet to Part L. Heat producing appliances.

INTRODUCTION

Always read instructions before installation or servicing.

The Coalbrookdale OS1 is a traditional cast iron stove designed to burn kerosene as a room heater with an open flue.

In the interest of safety and to comply with the law, the installation of this appliance **MUST** be fitted, in accordance with the relevant requirements of the current standards and building regulations (or local regulations), by a competent person (e.g. OFTEC Trained Installer) and commissioned by an Aga-Rayburn authorised commissioning engineer.

Failure to meet the relevant requirements can be hazardous and could lead to prosecution.

Due to newness, the stove may give off a slight smell for a short period after commissioning. This is quite normal and will disappear after a few hours operation. Open windows and doors if required.

The stove has one access door as part of its design. The glass fronted door is for access to the coals only. Apart from initial commissioning of the stove, or in the case of periodic cleaning of the glass **UNDER NO CIRCUMSTANCES MUST THE STOVE BE OPERATED WITH THIS DOOR OPEN OR IF THE GLASS IS CRACKED OR BROKEN.**

The stove has been designed similar to a solid fuel stove to relevant safety standards, but during use, many parts of the appliance can become **HOT** to touch. We recommend that the user should provide and secure a fireguard complying with BS 6539 when the room is used by elderly, infirm or young persons.

NOTE: THE STOVE IS DESIGNED FOR CONTINUOUS OPERATION. INTERMITTENT USE, ON A REGULAR BASIS, WILL CAUSE CARBON DEPOSIT AND EXCESSIVE SOOTING AND THEREFORE, WILL REQUIRE MORE FREQUENT SERVICING.

FLUE SYSTEM

See Building Regulations J/1/2/3 and BS 5410 Part 1

The stove is designed to operate with a class 2 flue, 127mm internal diameter. The flue should never be less than 127mm diameter.

Before installation of your stove you should check that the chimney is sound, free from obstruction and clean.

If a brick chimney is to be used it **MUST** be swept prior to installation.

For correct performance of the appliance the flue should be greater than 4.6m high with a minimum pull of 1.5mm H₂O and a maximum pull of 5mm H₂O.

For conditions above 5mm pull, an additional stabiliser should be installed in the flue (in the same room).

The flue should have provisions for inspection and cleaning with airtight seals.

It is important that any material used in the building of a flue meets the relevant standards:

Moisture and acid resistant liners BS 1181.

Imperforate clay flue pipes BS 65.

The flue pipe from the stove should be:

- Mild steel with a wall thickness of 3mm minimum.
- Stainless steel to BS 1449 Part 2.
- Cast iron to BS 41.
- Mild steel, acid resistant vitreous enamel lined to BS 1344 Part 2.

Whatever the choice of flue there must not be any horizontal runs and joints must be airtight.

CHIMNEY TERMINATION

All chimneys should terminate above roof level in accordance with the Building Regulations J 1/2/3 and statutory requirements as outlined in BS 6461 Part 1 and BS 7566 Parts 1 to 4.

An Anti Down Draught Cowl (that conforms to British Standards) **MUST** be fitted.

AIR SUPPLY

See Building Regulations J 1/2/3 section 4.

- Extractor fans (if existing) should be positioned as far away from the open flue as possible and should have a sufficient dedicated air supply. To undertake a test, the oil fired appliance should be set in operation and the doors and windows of the room containing it should be closed. The extract fan should then be run at its maximum setting. The Oil Fired heating appliance should be observed to operate satisfactorily both before and after the fan is switched on.
- It is preferable that the air supply for an extract fan should be located where it can serve the fan without the air stream passing close to the oil fired appliance.
- Oil fired appliances **MUST** not draw combustion air from a garage.

LOCATION

See Building Regulations J/1/2/3 (See Fig.2)

To obtain maximum heat input into the room it is an advantage not to install in a recess.

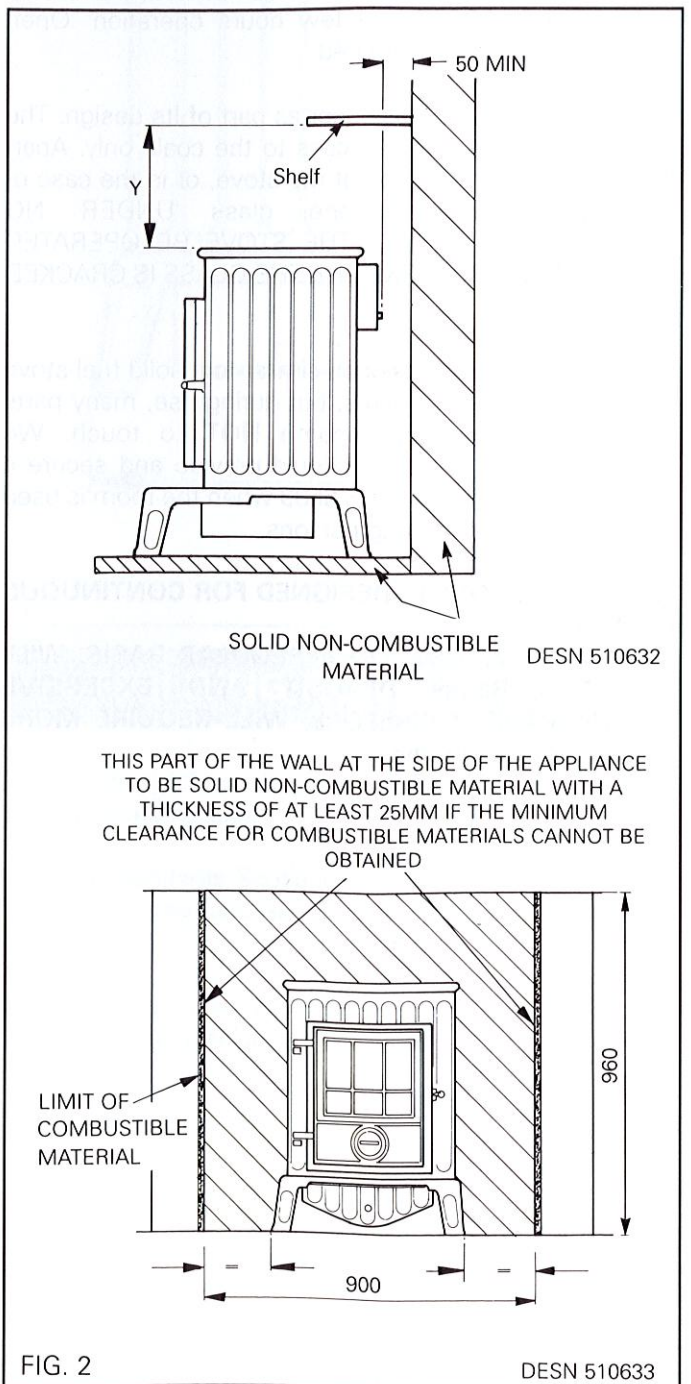
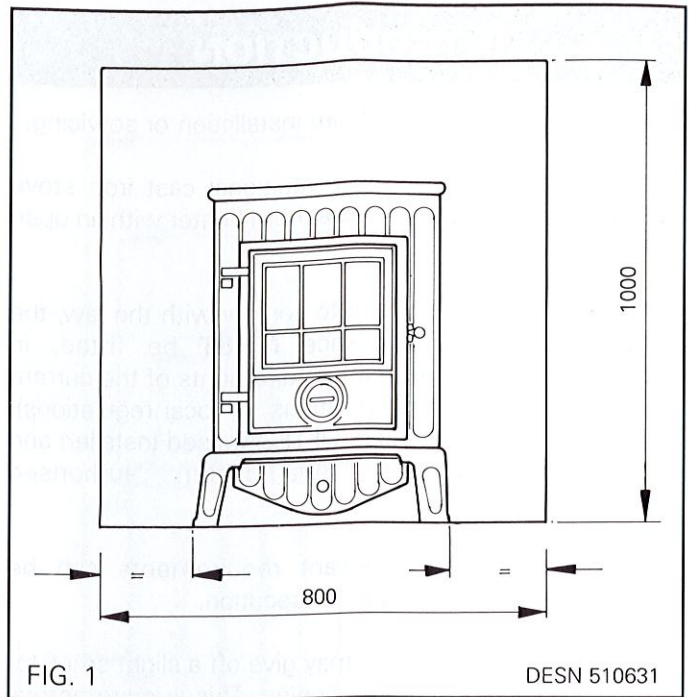
However if the appliance is to be fitted into a recess then the minimum dimension (shown in Fig.1) should allow the optimum output into the room. To ensure an adequate air circulation it is recommended that the recess should not be more than 300 deep.

The appliance must be on a hearth of solid non combustible material extending to at least 225mm in front of the stove and 150mm beyond each side of the stove (REFER TO BUILDING REGULATIONS SECTION 2).

The rear wall must be of non combustible material and there must be an air gap of at least 50mm. See fig.2.

Clearances for Shelves: A wooden shelf may be fitted above the stove. The underside of the combustible shelf above the top of the stove should be dimensioned accordingly.

Depth of shelf	Height to underside of shelf Y.
150mm	558mm
175mm	575mm
200mm	600mm
225mm	650mm
250mm	700mm
275mm	750mm
300mm	800mm



OIL PIPE LINE

See BS 5410 Part 1

1. Oil pipe, fittings, filter etc should comply to the standards.
2. The pipe line **MUST** be of suitable size (10mm diameter is usually sufficient) to ensure that maximum flow rate can be achieved (other appliances should be accounted for).
3. 5-10 micron oil filter **MUST** be fitted in the pipe line.
4. A manual operated valve positioned as close to the tank as possible.
5. A fire valve should be fitted as close as possible to the point where the pipe line enters the building.
6. It is advisable that a manual shut off valve to be fitted in the same room as the appliance.

OIL STORAGE & SUPPLY

See Fig.3.

For minimum and maximum heights of the oil storage tank.

The mild steel oil storage tank should be manufactured to BS 799 Part 5.

Plastic oil tanks are covered by OFTEC standard OFST100.

The minimum recommended oil tank size is 1400 litres. (300 Gallons)

Codes of practice governing installation are covered by BS 5410 Part 1.

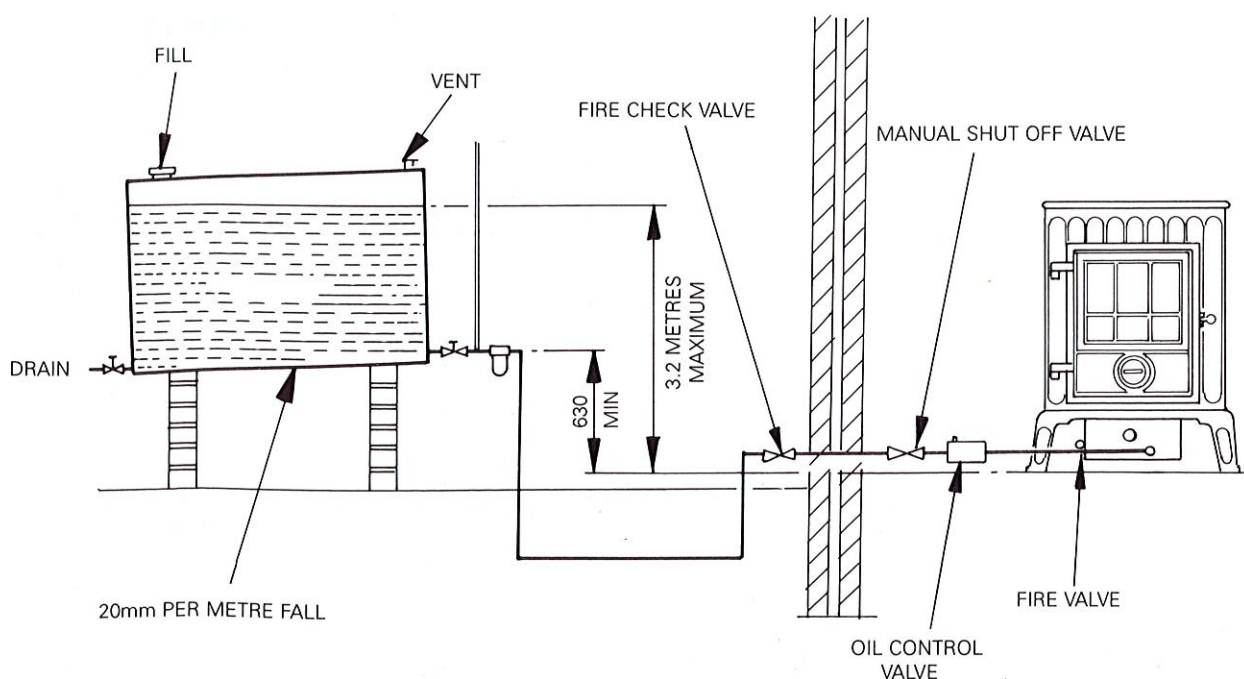


FIG. 3

DESN 510634'A'

INSTALLATION

See Figs. 5,6,7,8 & 9

1. Push the stabiliser firmly into the spigot at the back of the stove ensuring it is sitting squarely to the spigot shoulder. (Secure with the grub screw).

LOCATE AND SECURE
STABILIZER (1 SCREW)

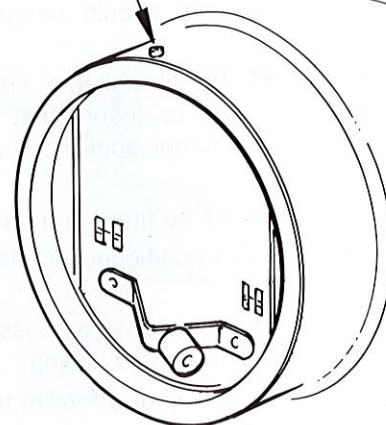


FIG. 5

DESN 510636

2. Position the stove on the hearth.
3. Carefully remove the insulation board.

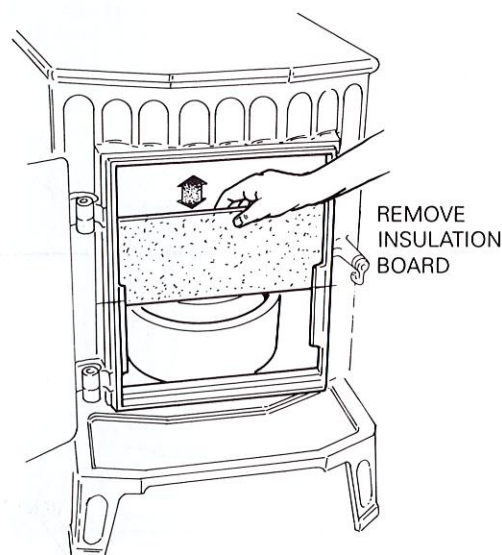


FIG. 6

DESN 510637

4. Ensure the burner is level in all directions using a level across the top of the pot. The pot should be no more than 2mm out of level. Slight adjustment can be made via the pot fixing nuts. If further leveling is required, shim under the feet with the metal pieces provided. Excessive out of level may require correction to the hearth before positioning the stove

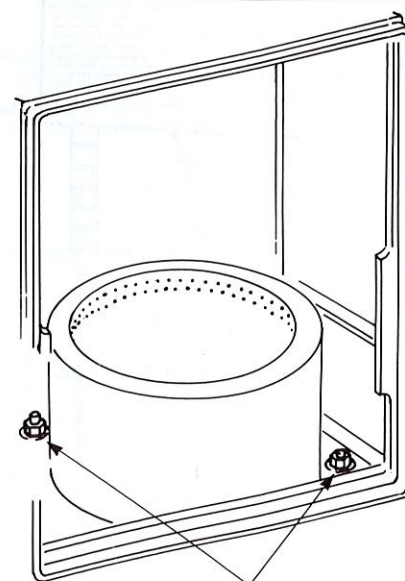
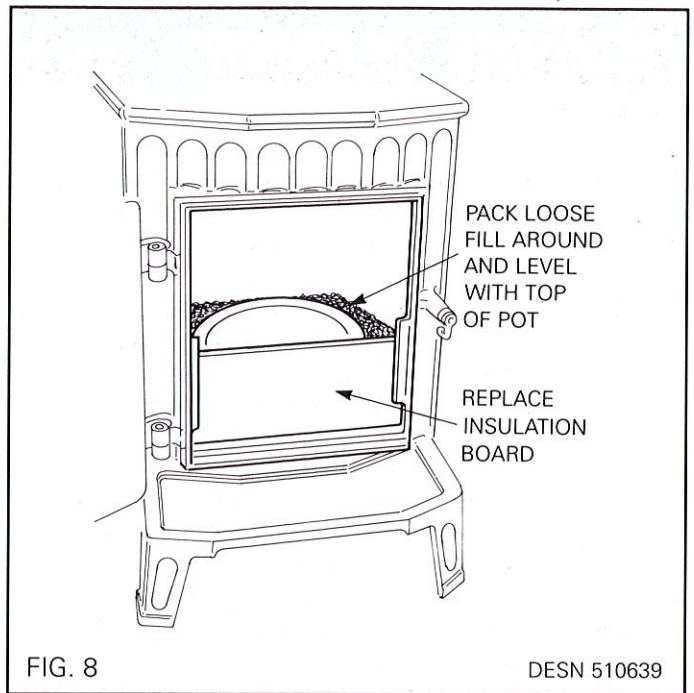


FIG. 7

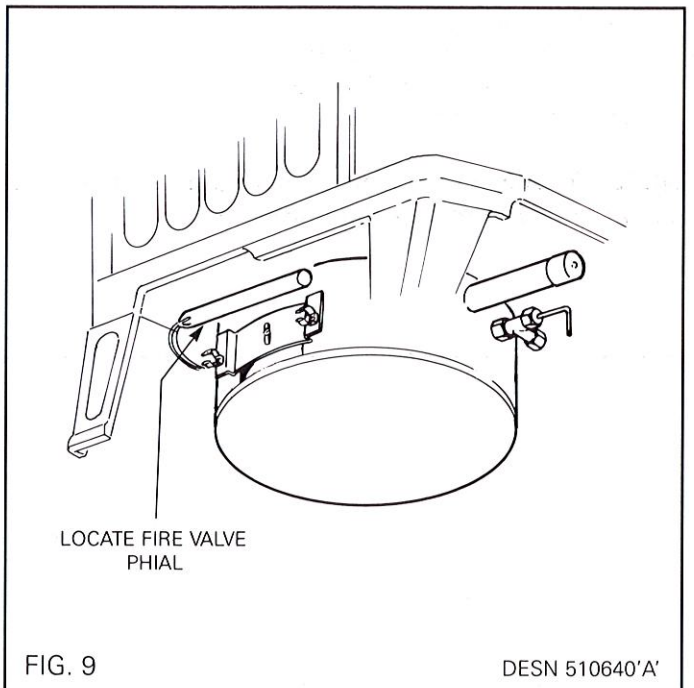
ADJUST POT LEVEL VIA
FIXING NUTS AS REQUIRED

DESN 510638

5. Carefully replace the Insulation Board. Pack the loose fill tightly around and level with the pot top ensuring all the loose fill is used. Be careful not to damage the insulation board. (Remove any loose fill that may have fallen into the pot).



6. A remote acting fire valve such as a Teddington KBC 150°F **MUST** be fitted with the capillary of an appropriate length.
7. Clip the fire valve phial onto its bracket. Guide the capillary as unobtrusively as possible and connect the fire valve to the oil pipe as close as possible to the point of entry to the building. The arrow on the fire valve body indicates flow direction.



FITTING THE OIL CONTROL VALVE

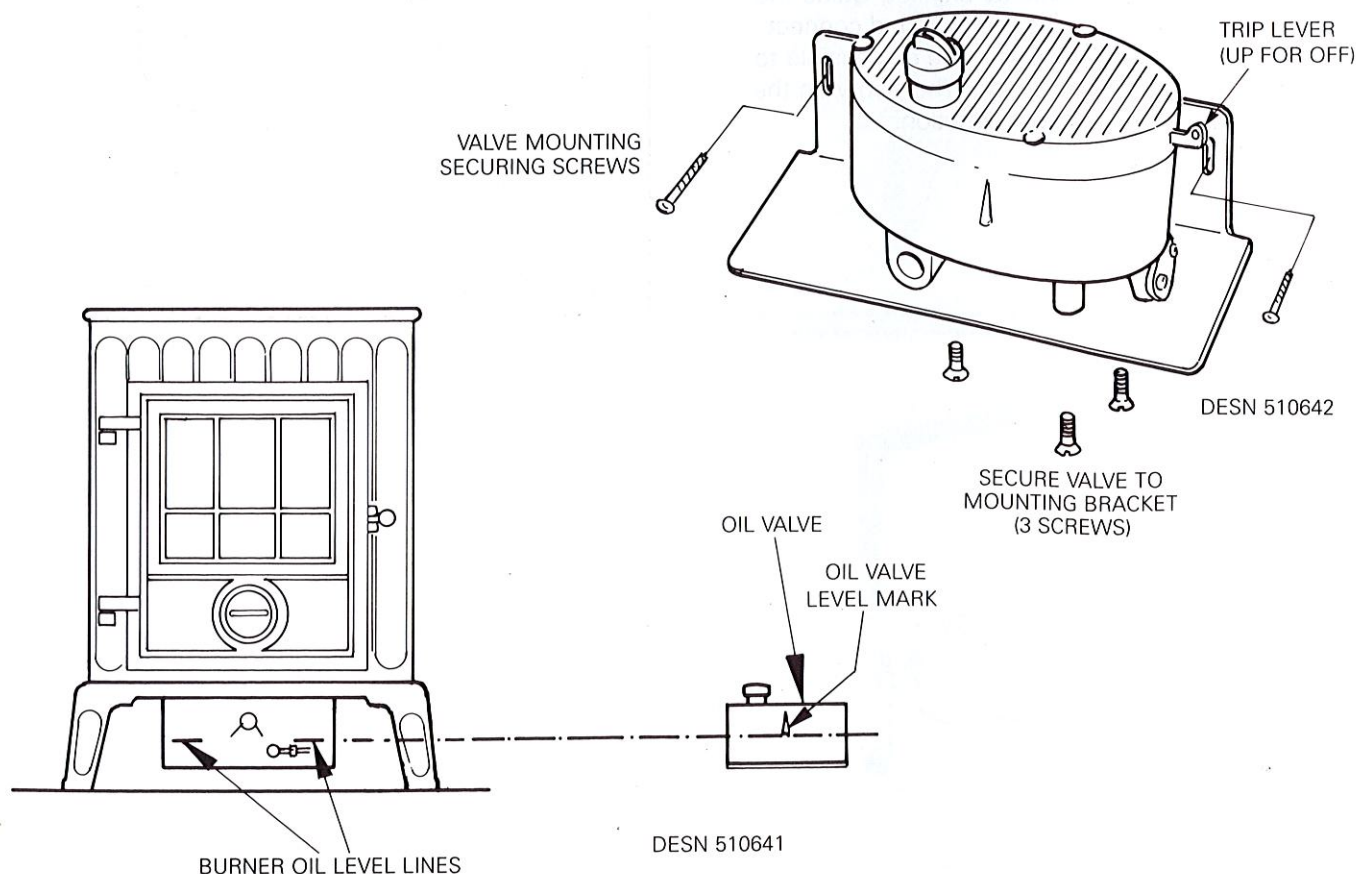
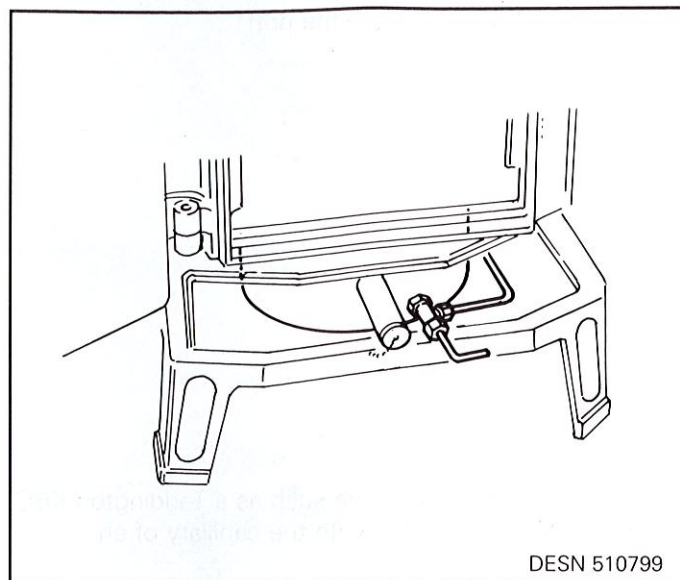
See Fig.10

The oil control valve shall not be fitted closer than 300mm or greater than 2 metres relative to the stove (on either the left or right hand side of the stove).

1. Mount the valve onto the support bracket, using the 3 off M8 x 20 countersunk screws provided.
2. Position the oil valve where required and align the oil level marked on the valve with the scribed line on the Burner Outer shell by using either:
 - a) a spirit level
 - or b) a transparent flexible tube filled with water.
3. Using the mounting bracket as a template, mark through the fixing holes onto the wall.
4. Remove bracket and drill the fixing holes.
5. Screw bracket with oil valve to mounting surface and level up in all directions.
6. Re-check control valve and burner oil levels are in the same plane.
7. Connect the control valve to the burner with 8mm steel pipe (see right). Then connect oil supply pipe and fire valve to the oil valve.

NOTE: To prevent air locks ensure pipework is on a constant rise from valve to burner.

8. Turn the knob on the valve to the off position and press the trip lever on the front of the valve - turn on the oil supply. Check for leaks, (Up to valve).
9. Turn on the oil supply to the burner turning the knob on the OCV to maximum. Allow the oil to run into the pot for 1 hour, check that the oil level is between 16mm and 12mm., the oil depth is to be measured around the edge of the inner pot.
10. Check for leaks.
11. Syphon oil from pot before ignition.



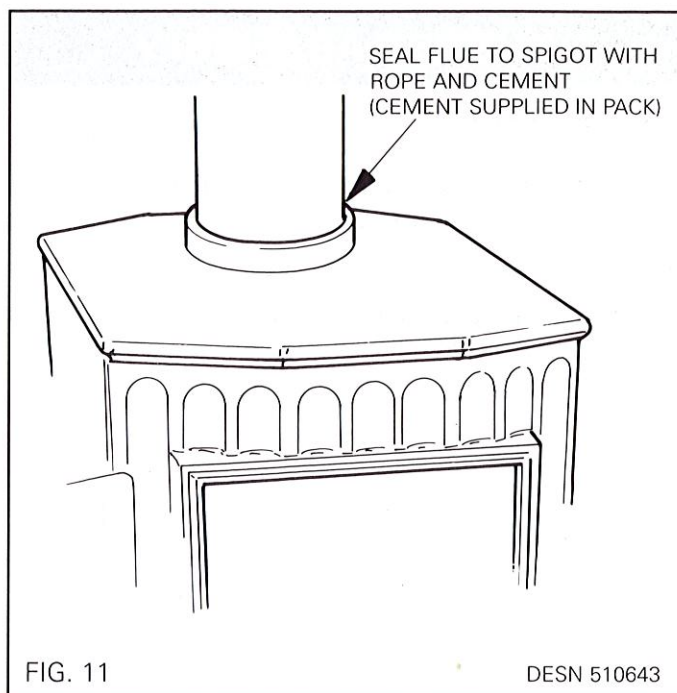
LOCATE OIL VALVE WHERE REQUIRED AND ALIGN THE OIL LEVEL MARKED ON THE OIL VALVE WITH THE SCRIBED LINE ON THE BURNER SHELL

FIG. 10

FLUE CONNECTION

See Fig.11

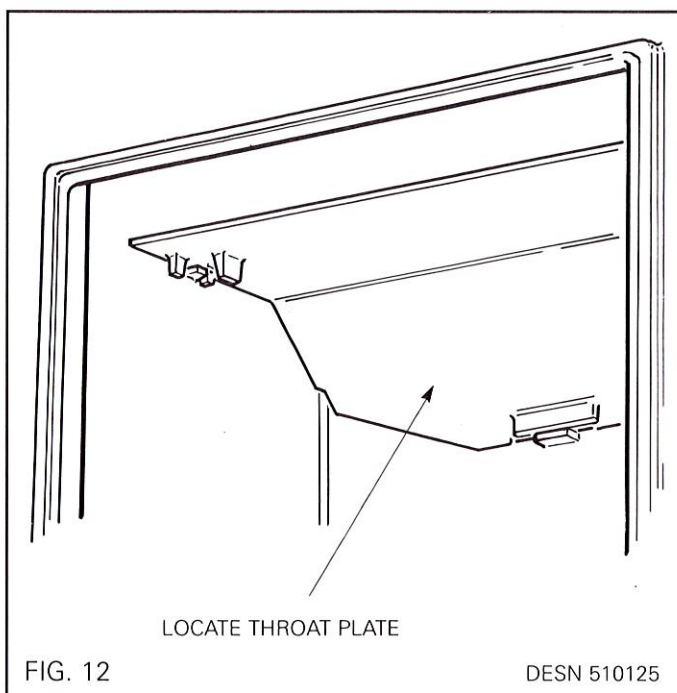
Connect the flue to the stove making sure that the connection is airtight, using the rope seal and cement supplied.



THROAT PLATE

See fig.12

Ensure the throat plate is correctly located inside the appliance and is supported on the three internal supporting lugs. See Fig.8.

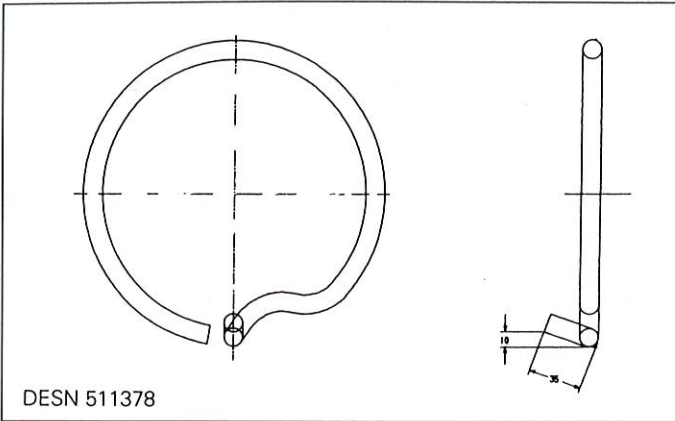


BURNER ASSEMBLY

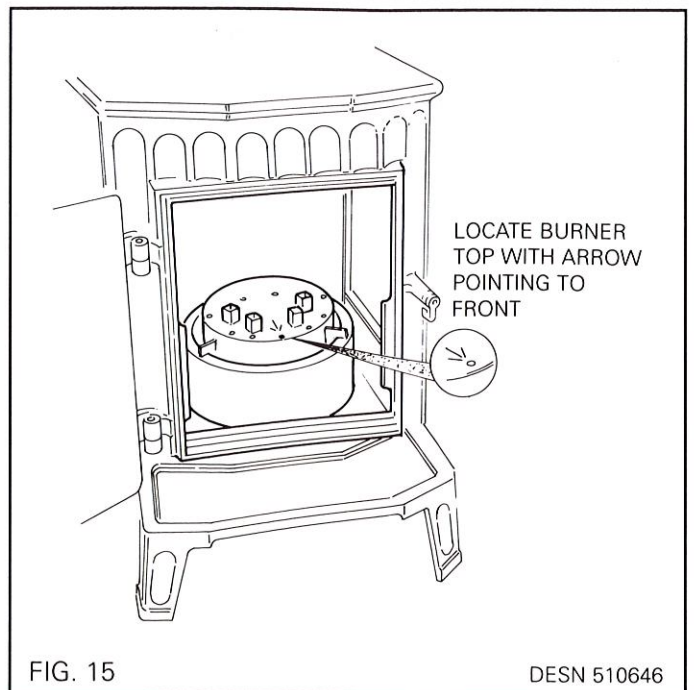
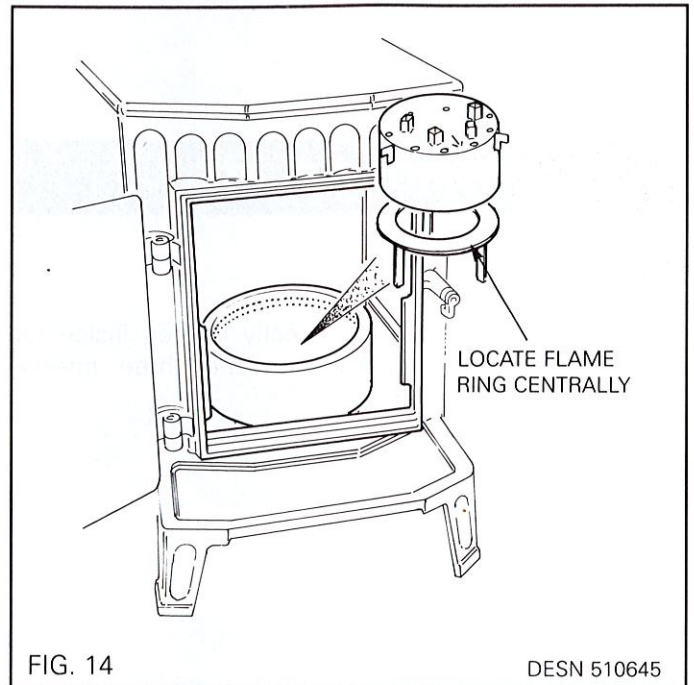
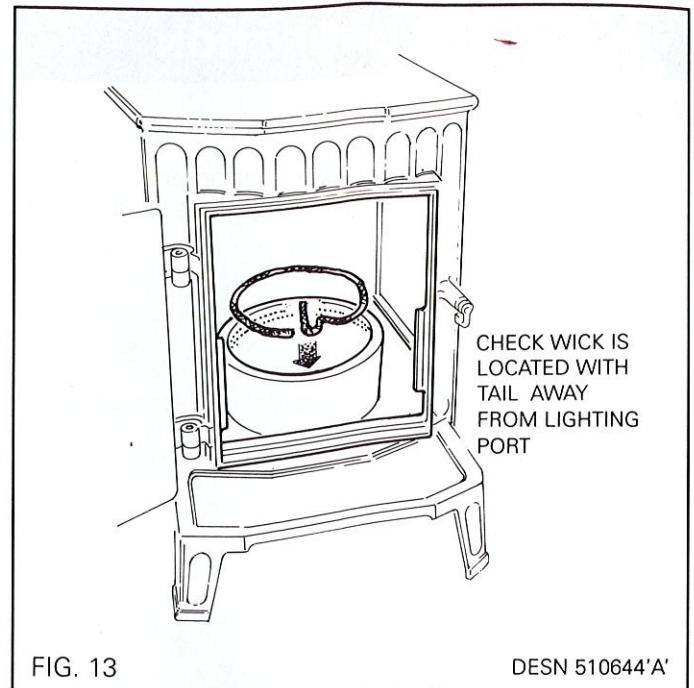
See Figs. 13,14 & 15

Check that the wick is around the circumference of the burner base with the tail upwards in line with the lighting port.

NOTE:- Angle the tail slightly away from the lighting port so as not to suffocate the lighting taper. (see below)



Position the flame ring centrally in the Pot Burner.



Position the burner top central on its supports (arrow pointing forward). ie: with the funnels towards the front and central to the appliance.

LAYING THE FUEL BED

See Figs. 16 & 17

Place 10 coals around the burner so that they form a ring around the burner top, the front and back 2 coals to be positioned vertical, ensure that the coals are spaced slightly apart so not to suffocate the burner.

Lay the remaining 4 coals inside the ring created ensuring that the holes in the burner top are not completely blocked. Do not smother the flames.

PLACE A LAYER OF
10 COALS AS SHOWN.

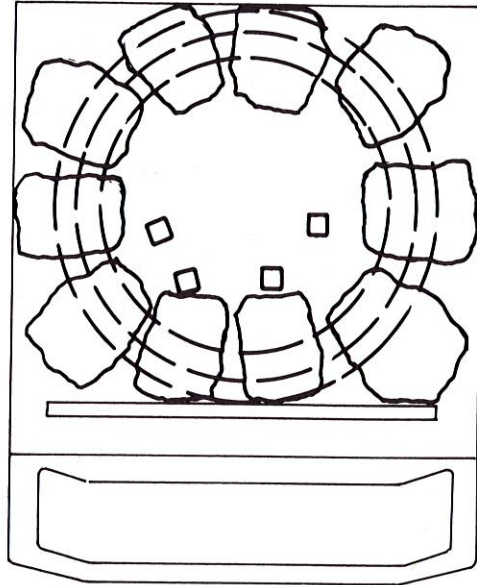
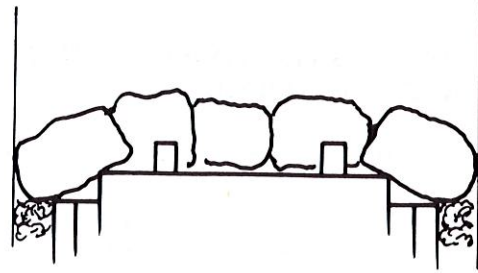


FIG. 16

DESN 510647

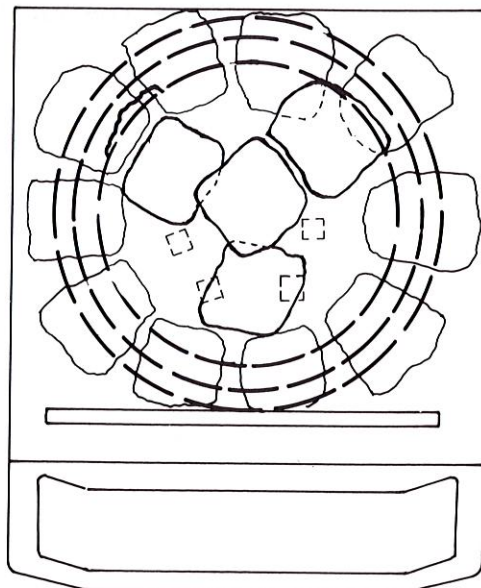
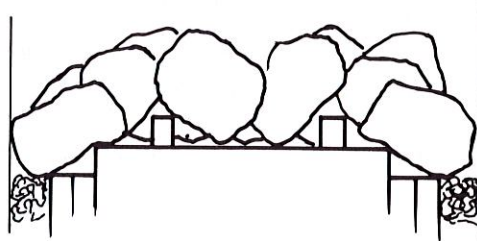


FIG. 17

DESN 510648'A'

PLACE THE REMAINING
4 COALS AS SHOWN.

TO LIGHT THE STOVE

See Figs. 18,19 & 20

NOTE DURING THIS PROCEDURE, DO NOT LEAVE THE APPLIANCE UNATTENDED.

1. OPEN THE STOVE DOOR VERY SLIGHTLY ABOUT 50mm.
2. Remove the plastic plug from the lighting port.
3. To turn on the oil to the Oil Control Valve:
 - a. Push down the trip lever on the front.
 - b. Turn on grey knob on the top to No.6 POSITION (H).
4. Do not allow the wick to become saturated, therefore delay for only a few seconds before lighting the wick.
5. Push a lighted taper into the lighting port and light the wick in the burner.
6. When the wick is alight, turn the knob to No.1 position (L).
7. When the flames establish themselves above the coals, replace the plug in the lighting port.
8. If the flames disappear below the coals, remove the plug and allow the flames to re-establish above the coals. NEVER LEAVE THE PLUG IN IF FLAMES ARE NOT VISIBLE ABOVE THE COALS.
9. Close the stove door, making sure the flames are maintained - if not, open and close the door until the flames settle above the coals - ensure the door is tightly secured.
10. Replace the front cover plate.
11. Allow the burner to warm up and burn off excess oil.
12. Open the door and quickly wipe the glass to remove any soot. Close the door.
13. Now set the Control Knob to the desired setting.
14. The Appliance can now be controlled on the Oil Valve.

WARNING:- SHOULD THE APPLIANCE GO OUT OR BE LET OUT DO **NOT** LIGHT A HOT APPLIANCE. ALLOW THE BURNER TO COOL DOWN. MAKE SURE THAT THE LIGHTING PROCEDURE IS FOLLOWED WHEN RE-LIGHTING.

UNDER NO CIRCUMSTANCES MUST AN ATTEMPT BE MADE TO LIGHT THE STOVE THROUGH THE DOOR

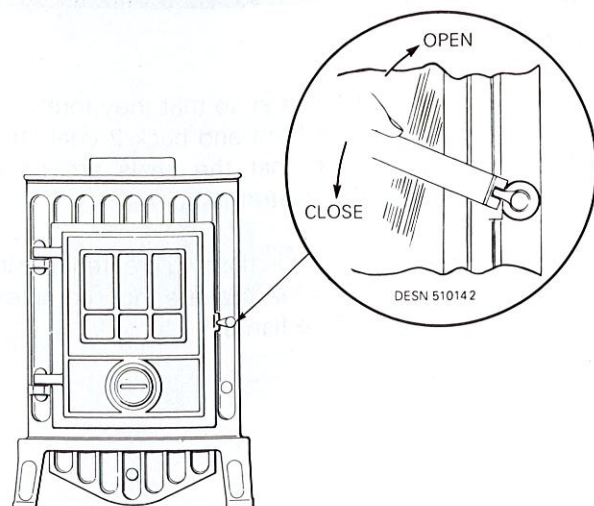


FIG. 18

DESN 510649

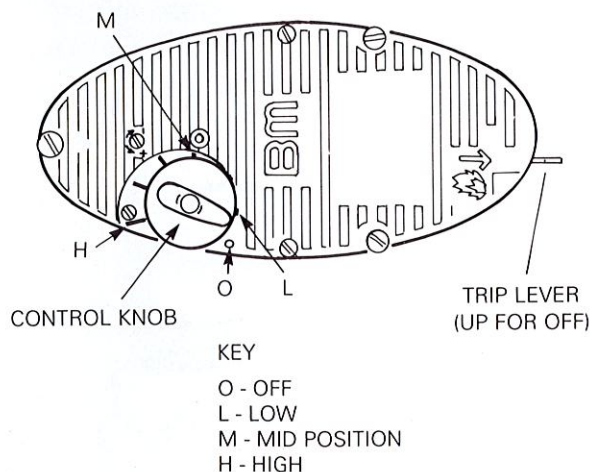


FIG. 19

DESN 510650

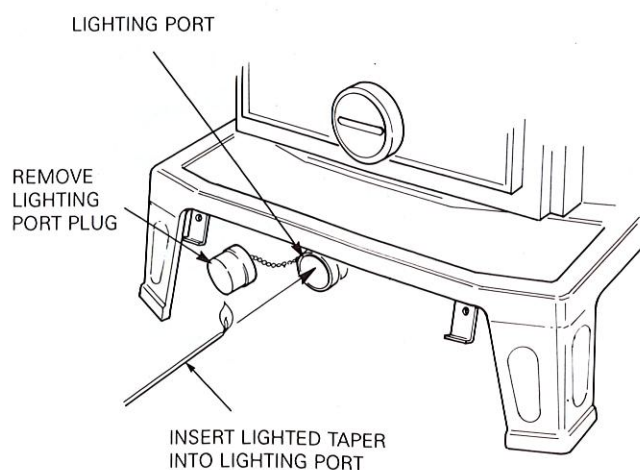


FIG. 20

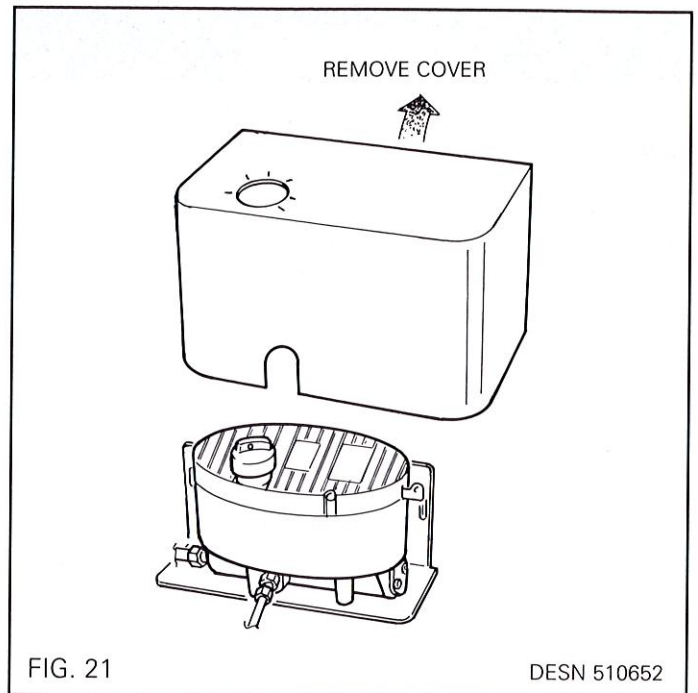
DESN 510651'A'

TO TURN THE STOVE OFF

See Fig.21

Remove the cover from the control valve (if fitted).

To extinguish the appliance, turn the oil off, by turning the knob, on the control valve to O and pushing the trip lever up on the control valve.



COMMISSIONING

See Fig.22

Fault finding and corrective action:-

Should there be localised long sooty flames this is probably due to the coal positions. To correct, remove or adjust the offending coals until the flames appear clear.

NOTE: BEFORE OPENING THE DOOR - ENSURE THE KNOB POSITION IS AT NO.1 AND THE LOW FIRE IS IN A STABILISED CONDITION.

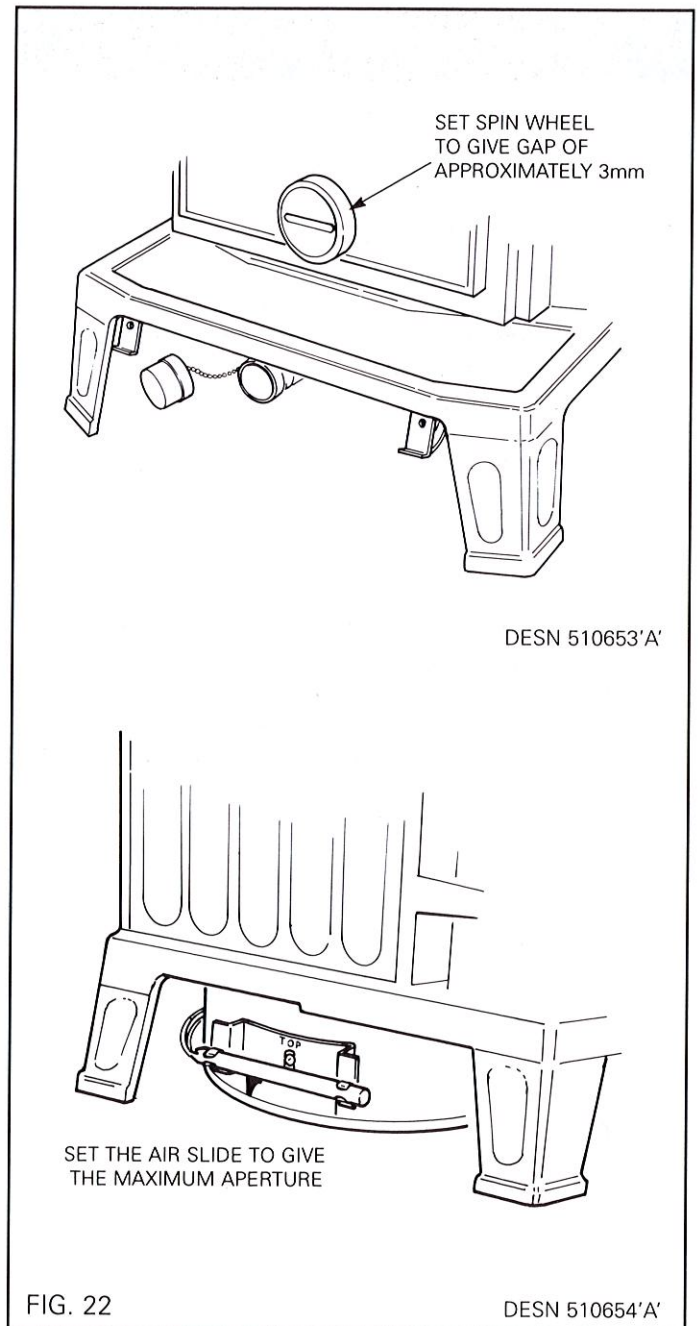
Set the spin wheel to give an annular gap of approximately 3mm. Adjust the gap to give the required flame. The spin wheel should then be locked into position via the lock nut.

Set the Air Inlet slide to give the maximum aperture.

This may need alteration when the appliance and flue gets hot. ie:

- Should the draught be High on High setting, the flames will appear too blue - reduce the Air Inlet.
- Similarly, on low fire, if the glow on the coals is very low - again reduce the Air Inlet.
- If the flame is pulled down into the pot - the draught is too high.
This condition can cause carbonising inside the pot.
- Very long sooty flames on high valve setting and prominent flame effect on low valve setting, is indicative of low pull on the flue.
In this case, wait for the stove and flue to get hot, if the symptom persists, check that the setting of the DRAUGHT STABILISER is at maximum. If yes, and the Air Inlet is fully 'open' - remove the flap to uncover the opening for greater air inlet. If it still persists check oil flow rate.
- For best effect the flames should impinge on the coals.
- To check flue pull, insert pipe into spinwheel aperture and seal gap between spinwheel and door. (Minimum pull 1mm w.g. maximum pull 2mm w.g.).

NOTE: ALWAYS CHECK THAT THE PHIAL OF THE FIRE VALVE IS CLIPPED INTO PLACE AFTER ADJUSTMENTS TO THE AIR INLET



SERVICING

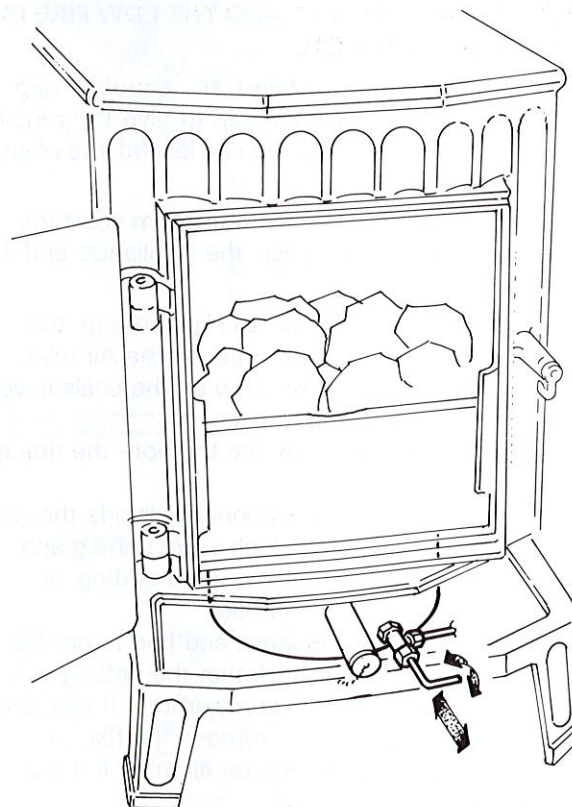
The appliance is designed to operate **continuously** on a **low to high** basis.

Generally servicing is required every 6 months unless during the summer months the appliance is not used, then the servicing period could extend to 9-12 months.

ONE HOUR SERVICE

Ensure the burner has been turned off and allowed to cool. It would be beneficial to ask the customer to turn the burner off prior to the service visit.

1. Inspect the inside of the door and glass, brush and wipe with a cloth as required.
2. Vacuum the coals to remove any soot.
3. Internal stove sides, back and throat plate, brush and vacuum to remove soot.
4. Check the flue for sooting.
5. Stabiliser, vacuum or wipe with a cloth.
6. Remove the burner top and flame ring and clean with wire wool.
7. Inside of the pot, wire wool and vacuum.
8. Wick, rub gently between fingers to remove any carbon.
9. Clean oil inlet with Auger (See Fig. 23) and ensure the lighting port is clean.
10. Check each level of air holes in the pot are clear - remove any blockage as necessary.
11. Check control valve flow rates (normal practice) and filter.
12. Check air inlet in outer pot is clear.



PUSH IN AND ROTATE AUGER AS REQUIRED
TO REMOVE CARBON DEPOSITS

FIG. 23

DESN 510655

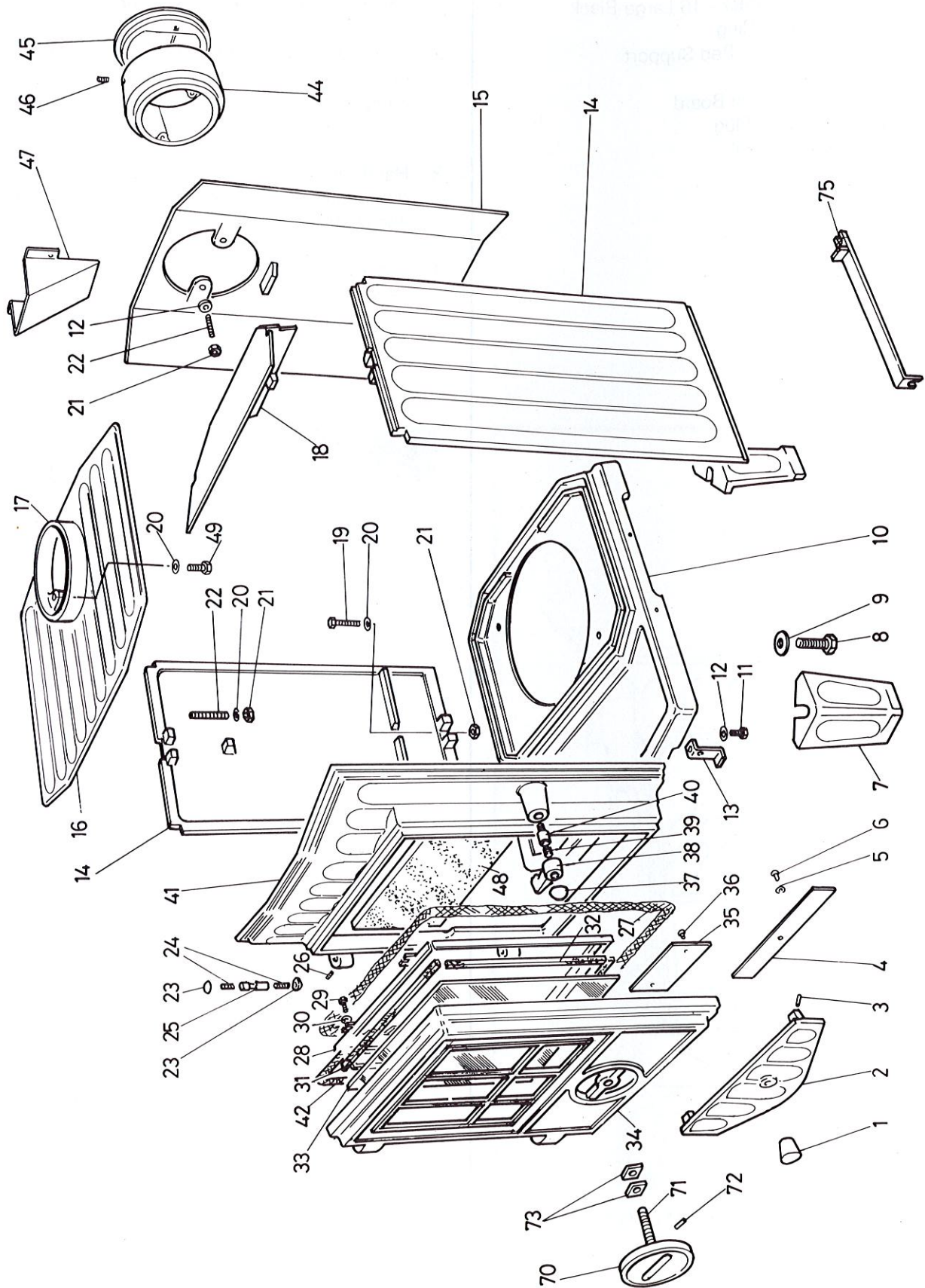
SHORT LIST OF SPARE PARTS

PART NO.	PART DESCRIPTION
HO4M 408012	Wick
HO1M 408036	Coals Pack - 16 Large Black
HO4M 408008	Flame Ring
HO4M 408007	Top Fuel Bed Support
HO4M 408006	Pot
HO4M 408014	Insulation Board
HO4M 408010	Plastic Plug
JSMT 408013	Loose Fill

INSTRUCT THE USER

1. It must be emphasised that the stove is designed for **continuous** operation. Intermittent use will cause difficulty in re-lighting and therefore reduce considerably the period between servicing.
2. Advise the user that for continued efficient and safe operation of the appliance, it is important that adequate servicing is carried out at regular 6 monthly intervals
3. Hand the operating instructions to the user and demonstrate the correct operation of the appliance and system controls
4. Leave the Installation/Serviceing Instructions with the user.

SPARE PARTS

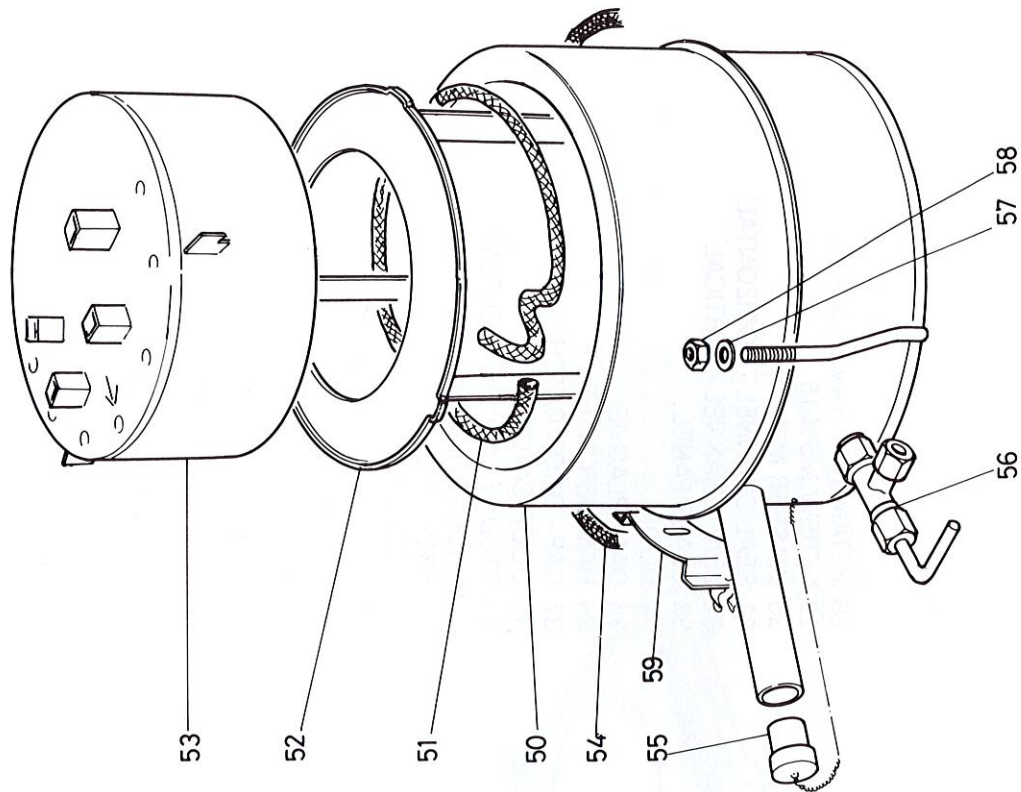


DESN 510658 A'

SPARE PARTS LIST COALBROOKDALE OS1

1	KNOB	28	RETAINING FRAME - DOOR
2	COVER PLATE	29	SCREW M5 X 15
3	ROLL PIN	30	WASHER M5
4	LIGHTING INSTRUCTIONS	31	SEAL CHANNEL - HORIZONTAL
5	WASHER M6	32	SEAL CHANNEL - VERTICAL
6	SCREW M6 X 16	33	GLASS PANEL
7	LEG	34	DOOR
8	SCREW M8 X 25	35	DATA PLAQUE
9	WASHER M8	36	HAMMER RIVET
10	BASE PLATE	37	CAP - DOOR CATCH
11	SCREW M6 X 10	38	DOOR CATCH
12	WASHER M6 X 12	39	STUD - SHOULDER - SCREW
13	SUPPORT BRACKET	40	SHOULDER SCREW
14	SIDE PLATE	41	FRONT PLATE
15	BACK PLATE	42	ROPE SEAL
16	TOP PLATE	44	HOLDER - STABILISER
17	COLLAR - FLUE	45	STABILISER
18	THROAT RESTRICTOR PLATE	46	GRUB SCREW M5 X 6
19	SCREW M6 X 35	47	DEFLECTOR FLUE
20	WASHER	48	FRONT INSULATION BOARD
21	NUT M6	49	SCREW M6 X 20
22	ALLTHREAD M6 X 30	70	SPIN WHEEL
23	HINGE CAP	71	ALLTHREAD M8 X 38
24	STUD - HINGE PIN	72	ROLL PIN
25	HINGE PIN	73	NUT M8 X SQ
26	GRUB SCREW M5 X 8	75	DOOR LATCH TOOL
27	ROPE SEAL		

SPARE PARTS

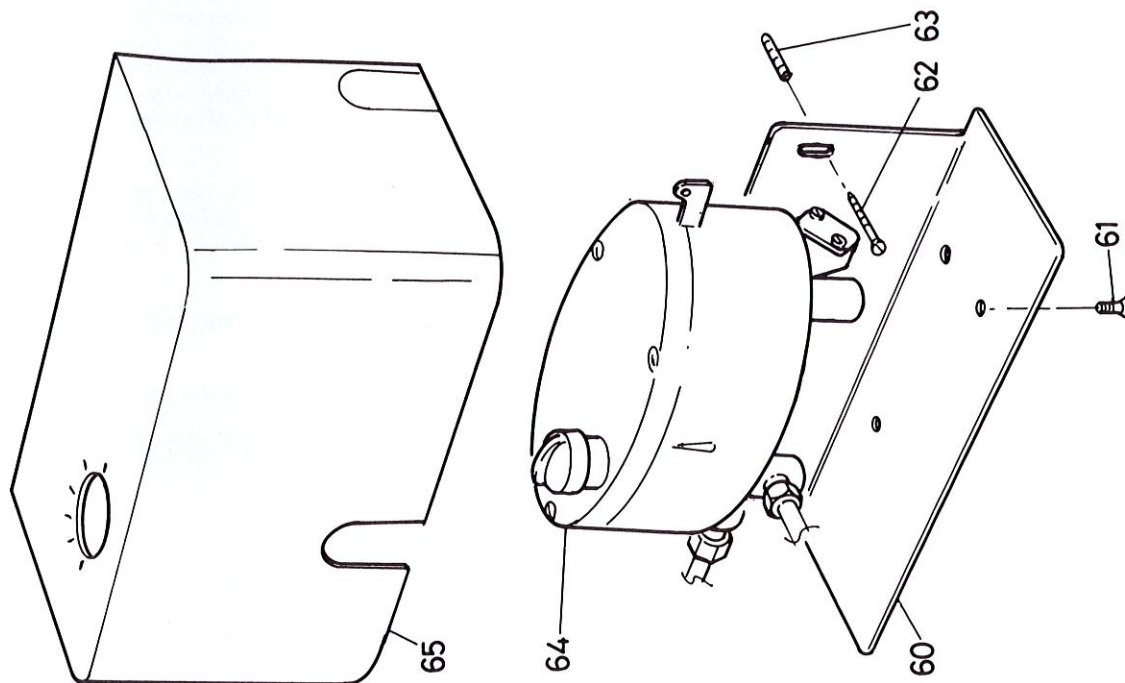


SPARE PARTS LIST COALBROOKDALE OS1 - BURNER

- 50. BURNER POT ASSEMBLY
- 51. WICK
- 52. FLAME RING
- 53. TOP FUEL BED SUPPORT
- 54. GASKET - POT
- 55. PLUG - LIGHTING PORT
- 56. INLET FITTING ASSEMBLY
- 57. WASHER M8
- 58. NUT M8

DESN 510659 'B'

SPARE PARTS



SPARE PARTS LIST COALBROOKDALE OS1 - OIL VALVE

- 60. BRACKET ASSEMBLY - OCV
- 61. SCREW - M8 X 20 CSK
- 62. SCREW - WOOD NO 12 X 38
- 63. RAWPLUG - NO 12
- 64. OIL CONTROL VALVE
- 65. COVER ASSEMBLY - OCV

DESN 510660



With Aga-Rayburn'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.

COALBROOKDALE

Manufactured by

Aga-Rayburn

PO Box 30 Ketley Telford Shropshire TF1 4DD
Telephone (01952) 642000 Fax (01952) 641961



Aga-Rayburn A member of the Glynwed International plc group of companies