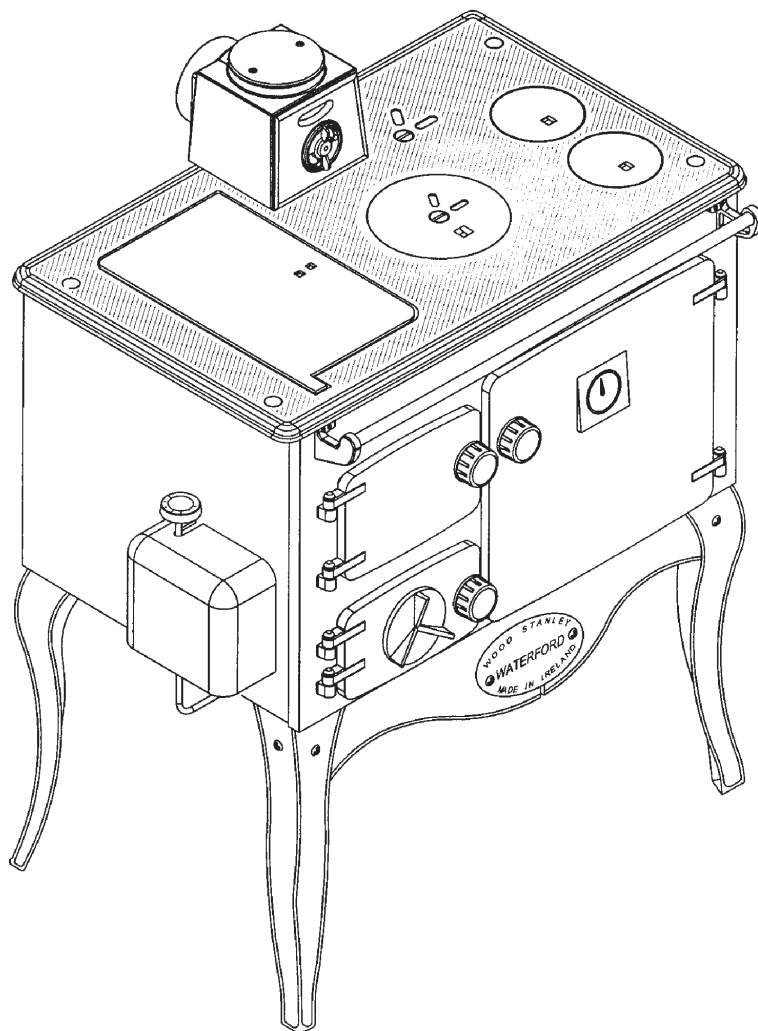


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# STANLEY

## ERRIGAL OIL FIRED COOKER DRY, DHW & HPB MODELS



***INSTALLATION & OPERATING INSTRUCTIONS***

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## INTRODUCTION

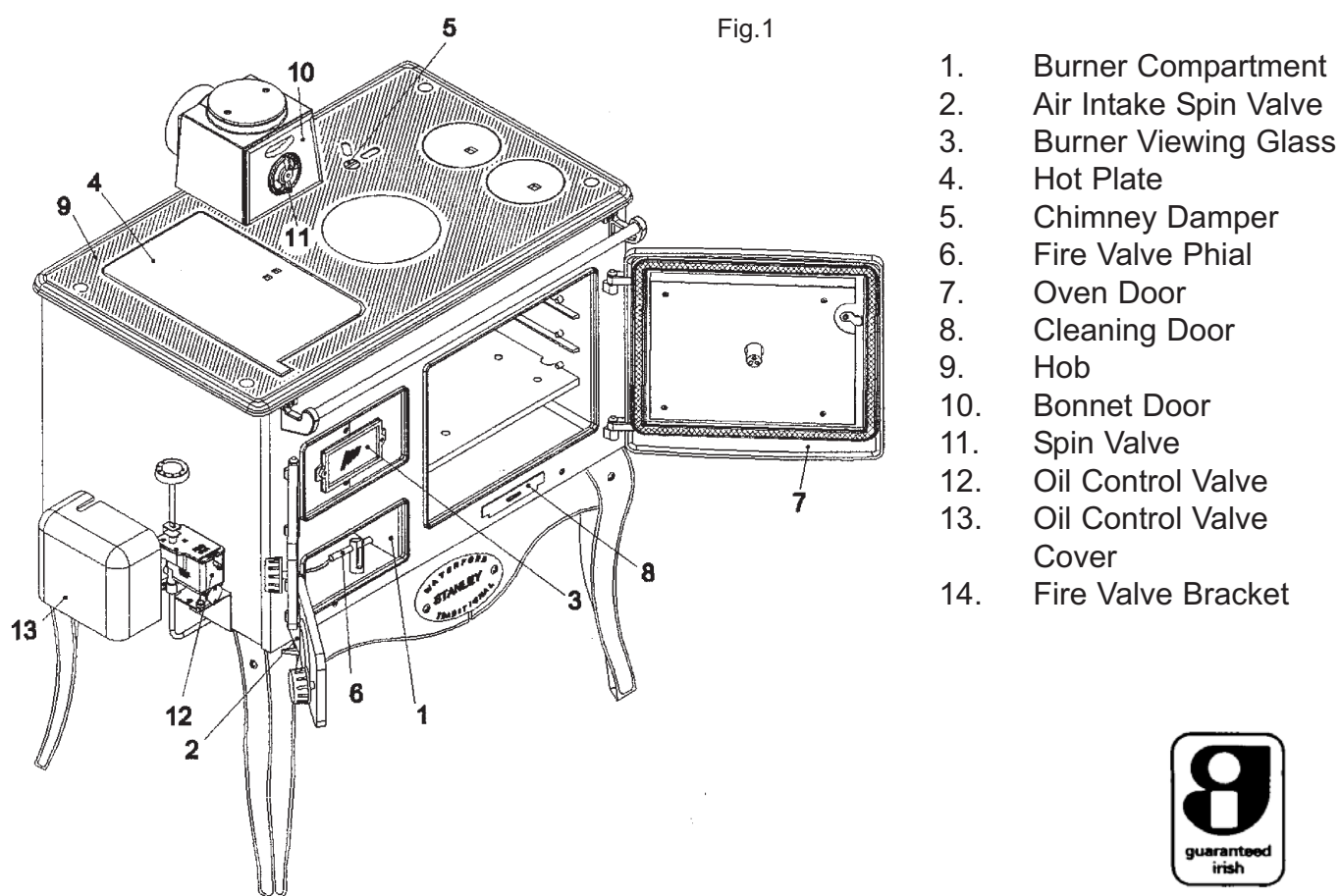
Congratulations on purchasing this fine Irish made Oil Fired cooker which is built to exacting standards and will give you every satisfaction in use.

This appliance is hot while in operation and retains its heat for a long period of time after use. Children, aged or infirm persons should be supervised at all times and should not be allowed to touch the hot working surfaces while in use or until the appliance has thoroughly cooled.

Please read the Operation & Installation Instructions provided before operating the cooker.

To ensure safety, satisfaction and reliable operation, this quality cooker should be installed and commissioned by a trained and competent person. The Domestic Hot Water facility involved must conform fully to good plumbing practice, established standards and OFTEC Recommendations.

The complete installation must be done in accordance with current Standards and Local Codes. It should be noted that the requirements and these publications may be superseded during the life of this manual.



### IMPORTANT - CONTROL OF SUBSTANCES HARMFUL TO HEALTH

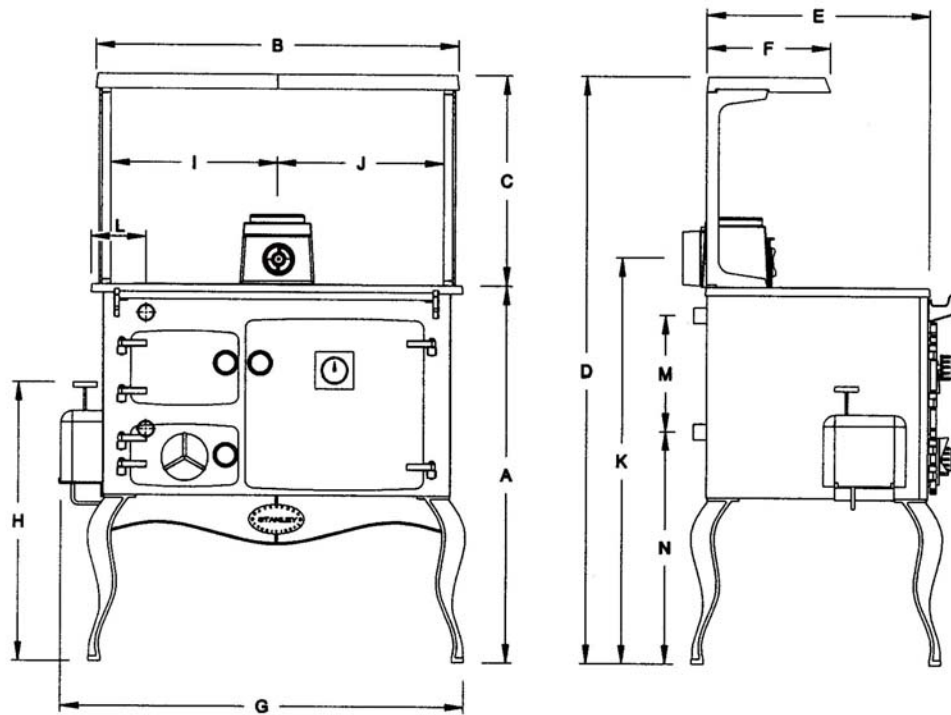
It is the users/installer responsibility to ensure that the necessary personal protective clothing is worn when handling materials that could be interpreted as injurious to health and safety.

When handling firebricks, fire cement or fuels use disposable gloves. Exercise caution, use disposable masks and gloves when handling glues and sealants. When working with kerosene oil, fibre glass or mineral wool. Avoid contact with skin, eyes, nose and throat, use disposable protection.

This cooker is designed for continuous or intermittent use. When cooker is in continuous use, it should be serviced at least every 6 months. If it is not used for extended periods, the service period may be extended.

## SPECIFICATION

Fig.2



**NOTE:** Dimensions stated below may be subject to a slight +/- variation.

DIMENSIONS	A	B	C	D	E	F	G	H	I	J	K	L	M	N
METRIC (millimetre)	880	905	508	1388	565	290	990	665	452	452	960	130	260	565
IMPERIAL (inches)	34 <sup>5</sup> / <sub>8</sub>	35 <sup>5</sup> / <sub>8</sub>	20	54 <sup>5</sup> / <sub>8</sub>	22 <sup>1</sup> / <sub>4</sub>	11 <sup>1</sup> / <sub>2</sub>	39	26 <sup>3</sup> / <sub>4</sub>	17 <sup>3</sup> / <sub>4</sub>	17 <sup>3</sup> / <sub>4</sub>	37 <sup>3</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>4</sub>	22 <sup>1</sup> / <sub>4</sub>

FEATURE	METRIC	IMPERIAL
HOT PLATE	911.25 cm <sup>2</sup>	144 in <sup>2</sup>
OVEN	400W x 330H x 400D	15 <sup>3</sup> / <sub>4</sub> W x 13H x 15 <sup>3</sup> / <sub>4</sub> D

## TECHNICAL DATA

FUEL:	Kerosene 28 sec. (Class C2)
CHIMNEY DRAUGHT:	0.02" - 0.06" wg. (0.50mm - 1.5mm)
FLUE DIAMETER:	5" (127mm)
EXIT FLUE GAS TEMPERATURE:	90°C - 200°C
BOILER CONSTRUCTION-WHERE APPLICABLE:	6mm & 4mm Mild Steel Plate (HPB) 3MM S/Steel Grade 304 2B (DHW)
TEST PRESSURE OF BOILER:	40 PSI (2.75 Bar)
OPERATING TEMPERATURE LIMIT:	96°C (205°F)
BOILER CAPACITY - WHERE APPLICABLE:	7.5 Litres (HPB) or 5.5 Litres (DHW)
COOKER WEIGHT:	232 Kgs (510 lbs)
SPACE HEATING:	3 kW's (10, 000) Btu's

## CONTINUOUS RUNNING HPB Cooker

Valve Setting	Oil Consumption 1/h	Burner Input kW (Btu/hr)	Oven Temperature °C	Heat Output to Water kW (Btu/hr)
6	1.14	13.38 (45,690)	225	5.86 (20,000)
5	0.98	11.51 (39,300)	210	4.54 (15,500)
4	0.83	9.74 (33,270)	190	4.10 (14,000)
3	0.67	7.86 (26,850)	145	3.37 (11,500)
2	0.52	6.10 (20,840)	125	1.82 (6,200)
1	0.36	4.23 (14,430)	100	1.49 (5,100)

All technical data are taken under laboratory conditions and may vary in use, flue draught conditions will effect performance

The following table gives approximate cooker heat up times on different settings. (These times are taken with the cooker running continuously on setting 1 when not in use).

#### TIME IN MINUTES

Setting	Max. Temp. (°C)	120°C	140°C	160°C	170°C	180°C	190°C	200°C	210°C	220°C
6	225	10	20	30	40	50	60	75	100	170
5	210	12	25	35	45	55	70	95	140	---
4	195	23	40	66	88	126	200	---	---	---
3	145	45	120	---	---	---	---	---	---	---
2	125	620	---	---	---	---	---	---	---	---
1	100	---	---	---	---	---	---	---	---	---

**NOTE:** These times may differ subject to draught conditions, oil rates, boiler output and usage.

#### DHW Cooker

VALVE SETTING	OIL CONSUMPTION (L/H)	BURNER INPUT kW (BTU/hr)	OVEN TEMP. (°C)	HEAT OUTPUTS TO WATER kW (BTU/hr)
6	1.02	9.98 (34,040)	230	3.57 (12,180)
5	0.87	8.51 (29,035)	220	3.21 (10,950)
4	0.73	7.14 (24,360)	208	2.89 (9,864)
3	0.58	5.67 (19,355)	179	2.42 (8,290)
2	0.44	4.30 (14,685)	59	0.88 (3,005)
1	0.29	2.84 ( 9,680)	46	0.70 (2,390)

#### Dry Cooker

VALVE SETTING	OIL CONSUMPTION (L/H)	BURNER INPUT kW (BTU/hr)	OVEN TEMP. (°C)
6	0.69	6.75 (23,035)	240
5	0.60	5.87 (20,030)	228
4	0.51	4.99 (17,025)	206
3	0.42	4.11 (14,020)	190
2	0.33	3.23 (11,015)	122
1	0.24	2.35 ( 8,010)	66

#### INSTALLATION

As manufacturers and suppliers of cooking and heating appliances, we take every possible care to ensure as reasonably practicable that these appliances are so designed and constructed as to meet the general Safety Requirements when properly used and installed.

#### THE INSTALLATION MUST COMPLY WITH THE FOLLOWING:

- \* B.S. 5410 Part 1 Oil Installations.
- \* The Building Regulations: Part J England, Wales.  
Part F Section III Scotland.  
Part L Northern Ireland.  
Part J Ireland.
- \* The Control of Pollution (Oil) Regulations.
- \* B.S. 5449 Forced Circulation Hot Water Central Heating System for Domestic Installation.
- \* Safety, Health and Welfare at Work Act for Ireland, England, Wales & Scotland.
- \* B.S. 7593: Treatment of Water in Domestic Hot Water Systems.
- \* B.S. 7074: Part 1 & 2 Hot Water Supply.
- \* B.S. 4814: Sealed Systems.

## LOCATION

When choosing a location for this appliance you must have the following:

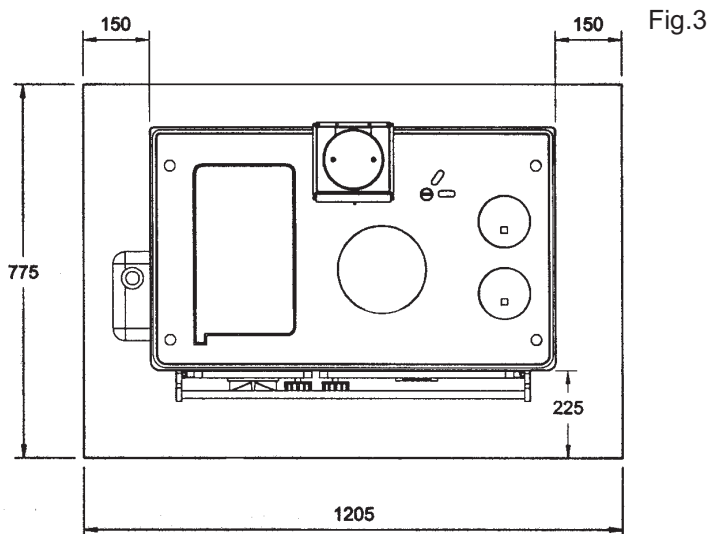
- A. Sufficient room for installation and servicing.
- B. Adequate clearance to combustibles (see Clearance to Combustibles Section).
- C. A satisfactory flue system (See Flues).
- D. Fixed fuel supply line and shut off valve (See Fuel Supply).
- E. Adequate air supply to support combustion (See Ventilation & Combustion Air Requirements).
- F. Solid floor or base of non-combustible material which is capable of supporting the total weight of the stove. (See Hearth Construction).

**Note:** When passing through walls or ceilings with the flue system:

- G. Always check for obstructions, for example electrical fittings, wiring, ducting, plumbing and fixed furnishings.

## HEARTH CONSTRUCTION

When a properly constructed hearth is not available we recommend that the cooker be placed on a slab of framed concrete of 75mm (3") deep or a slab of other insulating material. The hearth should be a minimum size of 1205mm (47") wide, 775mm (30 1/2") length with the cooker located as shown in fig.3



## FUEL SUPPLY / INSTALLATION

### OIL STORAGE TANKS

In order to enable sediment and water to be removed from steel tanks a drain valve must be fitted. Oil storage tanks made of steel and all connecting equipment (e.g. filling pipes, and vent pipes) should comply with B.S. 799 Part 5. Galvanised steel must not be used. Polyethylene (Plastic) tanks should comply with OFTEC standard OFS T100 and or equivalent. Oil should never be stored in translucent plastic containers.

An isolating valve should be fitted at the tank outlet, in an accessible position so that the oil supply to the appliance can be shut off if required. This isolating valve must be of a type suitable for use with oil. (see fig.4)

Oil storage tanks support must be carried out in accordance with the tank manufacture recommendations. Tanks should be located in the most unobstructive position possible having taken safety, filling, maintenance and the need, to provide a head of oil for the burner into consideration.

## FUELS

Use only 28 second viscosity kerosene fuel oil to B.S. 2869 Part 2 class C2 and or equivalent.

## FUEL SUPPLY LINE

The oil supply line from the oil storage tank to the appliance should be of an approved and suitable pipe with a minimum internal diameter of 8mm (5/16") and connected to the oil control valve.

Supply pipes are normally run in annealed copper tube complying to EN 1057. It can be obtained in coil or half hard form for use with bending machines. This pipe can also be obtained with protective plastic sheathing applied. Fittings for copper pipe should be compression of the flared manipulative type to B.S. 864: Part 2. Steel pipes complying with B.S. 1387: 1985, if used, must be protected from corrosion. Galvanised pipe and fittings must not be used.

Screwed joints must only be made with taper threads complying to B.S. 1740 : Part 1.

Jointing materials must be of types intended for use with oil fuel. Special petroleum - resisting compounds and PTFE tape are suitable. External pipes should preferably be run with a continuous rise towards the direction of flow, so that air can be vented off. It is important to avoid high points which could cause air locks.

Exposed lengths of oil supply pipe must be properly supported by purpose made clips securely fixed in place. Metal clips formed so as to hold the pipe on to a saddle are preferred. Consideration should be given to avoiding routes which expose the pipe to severe chilling which could cause freezing of the oil. Where pipes are buried, they must be protected from accidental damage. The use of joints underground should be avoided if at all possible. If joints have to be fitted in pipes laid below ground, access to them must be provided.



An oil filter (5 - 10 micron) and stop valve must be fitted to the fuel feed line and located near the supply tank and facilities should be provided to enable it to be serviced without draining down the oil supply system. (See fig.4).

At the point where the oil line enters the building, the oil line must be fitted with an approved remote acting fire valve which meets the requirements of B.S. 5410 : Part 1, fitted with the appropriate length of capillary. The temperature rating limit should be 90°C. The heat sensing phial of the fire valve should be passed through the base of the burner compartment and fitted through the fire valve bracket provided in the burner compartment (see Fig.5). It is absolutely essential that the fire valve is located externally and is as close as possible to the appliance. For existing installations where the oil supply is built into the structure internally, the remote acting fire valve should be fitted where the oil supply line is first exposed internally. This type of layout is not recommended for new installations.

**NOTE:** Ensure that the fire valve phial is not touching any point of the base casting.

These requirements are further explained within the following documents:

- \* BS 5410: Part : Code of practice for Oil Firing installations up to 45 kW output capacity for space heating and hot water supply purposes.
- \* OFTEC Technical Information Book Three: Installation Requirement for Oil Fired Boilers and Oil Storage Tanks.
- \* The Building Regulations Part J: England Wales, Part F - Section 4 Scotland and Part L Northern Ireland.

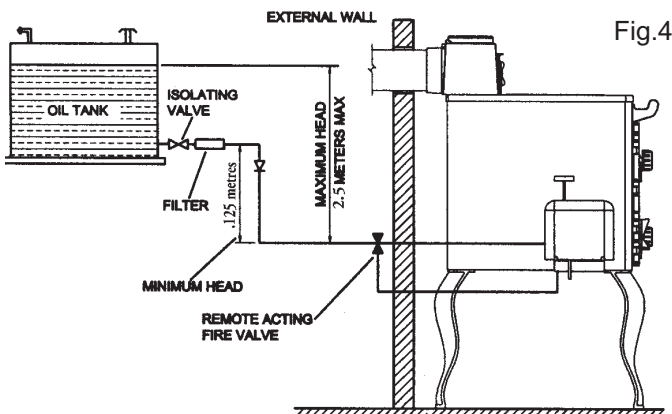
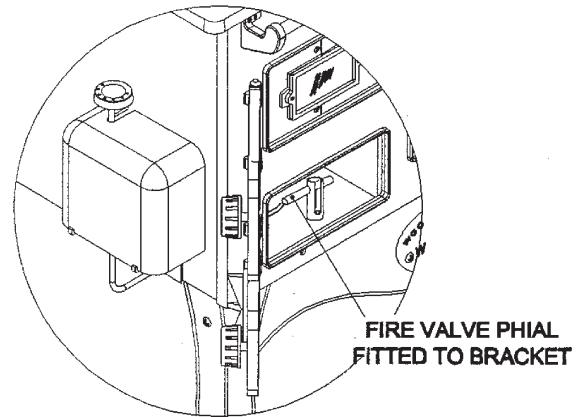


Fig.4

If there are other oil fired appliances connected to the oil storage tank especially appliances with oil pumps e.g. oil fired boilers or stoves, it is recommended that a separate oil supply line is taken from the oil tank to the cooker. The separate oil supply line to the cooker will avoid the possibility of the pumped appliance taking oil from the cooker burner. A suitable shut off valve should be fitted near the cooker and be accessible at all times.

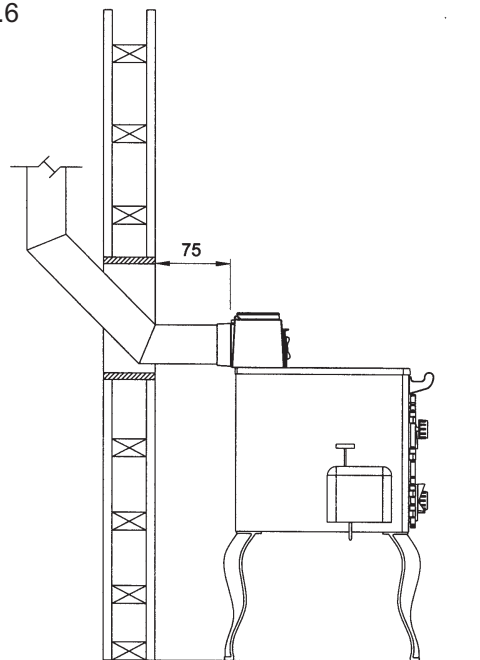
Fig.5



## CLEARANCES TO COMBUSTIBLES

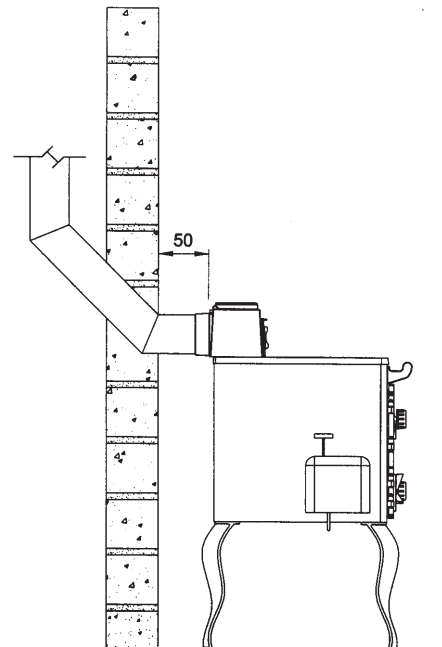
The minimum clearance to combustible materials should be maintained at least 75mm (3") from rear of cooker (see Fig. 6).

Fig.6



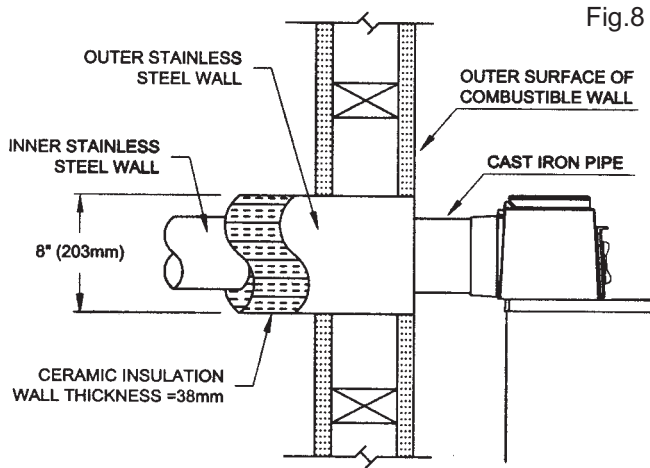
The minimum clearance to non-combustible materials should be maintained at least 50mm (2") from rear. (see Fig.7)

Fig.7



Never obstruct free air circulation from around or entering the cooker grills.

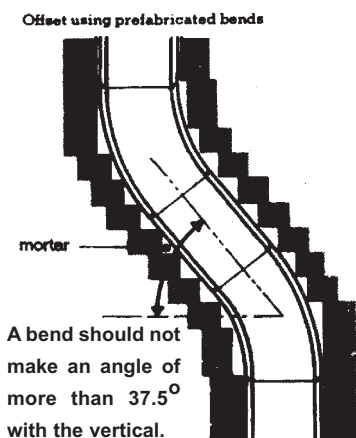
Where the flue passes through a combustible material a twin wall solid packed insulated chimney connector must be used and come flush with the outer surface material and run all the way to the masonry chimney or to the point of termination of the factory made chimney. (see Fig. 8).



## FLUE SYSTEM

Generally the most effective chimney is one that is straight, avoids offsets, and terminates with a straight sided pot. Horizontal runs more than 305mm (12") and 90° bends numbering more than 2 per installation should be avoided. Where the standard masonry chimney is not available, a proprietary type of 125mm (5") twin wall, fully insulated pipe may be used.

Flues should be vertical wherever possible and where a bend is necessary, it should not make an angle of more than 37.5° with the vertical.



## FLUE HEIGHT

The flue must be high enough 4.5mts (15ft minimum) measured vertically from the appliance outlet to the top of the flue terminal to allow flue gases to vent into the clear air, away from turbulence that

may be caused by roof structures, other chimney stacks etc. The venting terminal position should be in accordance with Building Regulations BS 5410: Part 1.

**NOTE: Never connect to a chimney or flue system serving another appliance.**

## FLUE CLEANING

The flue pipe must be fitted with a cleaning pipe. The flue must be inspected annually and cleaned when necessary.

## USE OF EXISTING FLUES AND CHIMNEYS

When connecting to an existing chimney it is necessary to line the flue using either 5" (125mm) rigid or flexible stainless steel flue liner.

An existing flue pipe or chimney that has proved to be satisfactory when used for solid fuel can normally be used for this appliance provided that its construction, condition and dimensions are acceptable. Flues that have proven to be unsatisfactory, particularly with regard to down draught, must not be considered for venting this appliance until they have been examined and any faults corrected. If there is any doubt about an existing chimney, a smoke test should be carried out.

Before connecting this appliance to a chimney or flue pipe which has previously been used with another fuel, the chimney or flue pipe must be thoroughly swept and/or lined accordingly.

All register plates, restrictor plates and dampers etc. which could obstruct the flue at a future date must be removed before connecting this appliance.

The combustion products from this appliance will have a descaling effect on hardened soot deposits left from burning solid fuels.

**ALTHOUGH THE CHIMNEY MAY HAVE BEEN CLEANED OF LOOSE SOOT PRIOR TO INSTALLATION, IT IS IMPERATIVE THAT THE CHIMNEY IS INSPECTED FOR SCALED SOOT PARTICLES AFTER THE FIRST MONTH OF OPERATION AND ANY LOOSE MATERIALS REMOVED TO AVOID BLOCKAGE.**



## FLUE LINERS

Chimney's lined with salt glazed earthenware pipes are acceptable if the pipes comply with EN 1457 and must be 125mm (5"). When lining an existing chimney, a liner approved to B.S. 4543, Parts 1, 2, & 3 should be used. The liner should be secured at the top and bottom by using a closure/clamping plate firmly sealed and secured, and an approved terminal used at the top.

It is essential that every flue system be inspected and tested by a competent person for its correct effectiveness, to ensure that the combustion products are completely discharged to the outside atmosphere.

## SEALING

This cooker and flue system operate under a negative pressure, it is essential that all flue joints are tightly sealed against flue gas leakage and tested accordingly.

## CONNECTIONS

This appliance may be connected either direct vertical or horizontal. **THE HORIZONTAL CONNECTION MUST NOT EXCEED 300MM IN LENGTH.**

**Blocked chimneys are dangerous. Keep chimneys and flueways clear.**

**Where an appliance spigot or flue pipe protrudes into the chimney, care should be taken to ensure that it does not block the chimney.**

## VENTILATION AND COMBUSTION AIR REQUIREMENTS

It is imperative that there is sufficient air supply to the burner of the cooker in order to support correct combustion.

The air supply to this appliance must comply with B.S. 5410 Part 1.

The minimum effective air requirement for this appliance is 50 cm<sup>2</sup>. When calculating combustion air requirements for this appliance use the following equation: 550mm<sup>2</sup> per each kW of maximum rated output above 5 kW. These requirements are illustrated in OFTEC Technical Book No.3 & B.S. 5410 Part 1.

If there is another appliance using air fitted in the same or adjacent room, it will be necessary to refer to B.S. 5410 Part 1 to calculate the additional air supply. All materials used in the manufacture of air vents should be such that the vent is dimensionally stable, corrosion resistant, and has no provision for closure. The effective free area of any vent should be ascertained before installation.

The effect of any grills should be allowed for when determining the effective free area of any vent.

Air vents direct to the outside of the building should be located so that any air current produced will not pass through normally occupied areas of the room.

An air vent outside the building should not be located less than the dimensions specified within the Building Regulations and B.S 5410 Part 1 from any part of any flue terminal. These air vents must also be satisfactorily fire proofed as per Building Regulations and BS 5410 Part 1.

Air vents in internal walls should not communicate with bedrooms, bedsits, toilets, bathrooms or rooms containing a shower.

Air vents traversing cavity walls should include a continuous duct across the cavity. The duct should be installed in such a manner as not to impair the weather resistance of the cavity.

Joints between air vents and outside walls should be sealed to prevent the ingress of moisture. Existing air vents should be of the correct size and unobstructed for the appliance in use. If there is an extraction fan fitted in the room or adjacent rooms where this appliance is fitted, additional air vents will be required to alleviate the possibility of spillage of products of combustion from the appliance/flue while the fan is in operation. (Refer to B.S. 5410 Part 1).

Where such an installation exists, a test for spillage should be made with the fan or fans and other appliances using air in operation at full rate, (i.e. extraction fans, tumble dryers) with all external doors and windows closed.

If spillage occurs following the above operation, an additional air vent of sufficient size to prevent this occurrence should be installed. If spillage continues then the appliance should be shut down and the flue system examined.

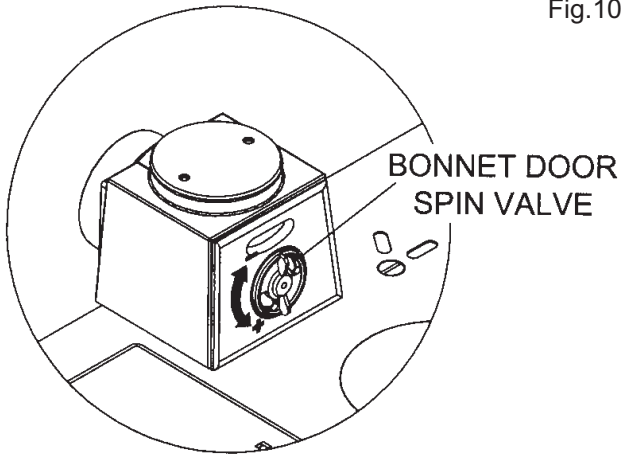
## DRAUGHT REQUIREMENTS

The Errigal Oil Cooker requires a steady draught of :

0.02" wg - 0.06" wg  
(0.5mm wg - 1.5mm wg)

When a draught of over 0.06"wg is recorded, the spin valve on the bonnet door can be opened (draught stabiliser) allowing the flue pull on the cooker to be reduced. (see Fig. 10)

Fig.10



## DOWN DRAUGHTS

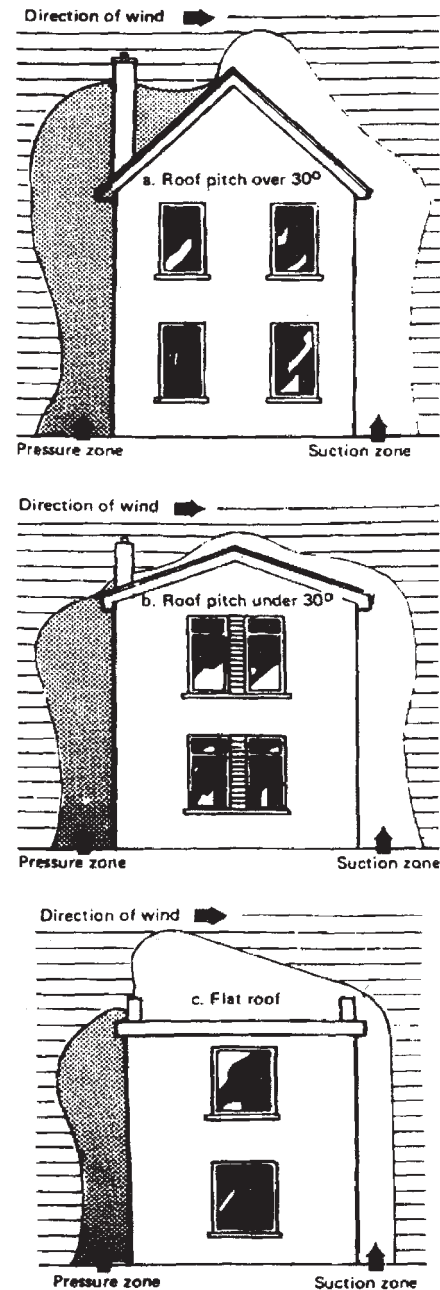
However well designed, constructed and positioned, the satisfactory performance of the flue can be adversely affected by down draught caused by nearby hills, adjacent tall buildings or trees. These can deflect wind to blow directly down the flue to create a zone of high pressure over the terminal. (See Fig.11).

A suitable anti-down draught terminal or cowl will usually effectively combat direct down draught but no cowl is likely to prevent down draught due to a high pressure zone.

Ensure that any cowl used will not restrict the flue exit, or cause excessive back pressure.

**IMPORTANT: THIS APPLIANCE SHOULD NOT BE CONNECTED TO A CHIMNEY THAT IS PRONE TO DOWN DRAUGHTING.**

Fig.11



## FACTORY-MADE INSULATED CHIMNEYS

Factory-made insulated chimneys should be constructed and tested to meet the relevant standards and recommendations given in:

- \* B.S. 7566 – Installation of factory-made chimneys conforming to B.S. 4543 for domestic appliances.
  - Part 1: Method of specifying installations design information.
  - Part 2: Specification for installation design.
  - Part 3: Specification for site installation.
  - Part 4: Recommendation for installation design and installation.

## SUITABLE MATERIALS

- \* Mineral Fibre cement pipes conforming to B.S 7435.

- \* Insulated metal chimneys conforming to B.S.4543 (a galvanised finish is not suitable for exterior use).
- \* Clay flue linings conforming to B.S. EN 1457.
- \* Pre-cast concrete chimney blocks, incorporated into the building structure. It is particularly important that the correct connection block be provided at the base of the flue conforming to B.S. 3572.
- \* Cast iron or acid resistant vitreous enamel lined mild steel conforming to B.S. 41.
- \* Sheet metal conforming to B.S. 4076.

## HEATING

Care should be taken to ensure that the heating system is correctly installed and that it complies with all relevant codes of practice.

**Note:** We strongly advise the use of pipe lagging if the installation is likely to be exposed to situations where the temperature will dip to a level consistent with frost.

## SAFETY VALVE

A non-adjustable 3 bar safety valve must be fitted to the primary flow pipe adjacent to boiler connection ensuring that any discharge will not create a hazard to occupants or cause damage to electrical components or property.

The use of room thermostats, radiator thermostatic valves, domestic hot water controllers, etc, can greatly enhance a heating system and we recommend their use.

Only competent personnel should be employed to carry out your heating installation.

## PIPE FITTINGS

Materials used for installation work should be resistant, sound and should conform to the current editions of the following or their equivalent.

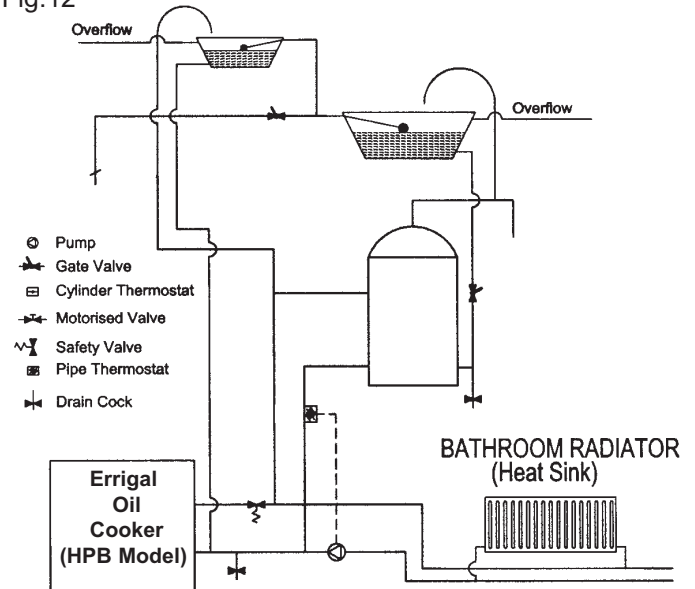
- 1.1 Ferrous Materials
  - BS 4127 Stainless steel tubes.
  - BS 1387 Steel tubes.
  - BS 1740 Steel pipe fittings.
  - BS 6956 Jointing Materials
- 1.2 Non-Ferrous Materials.
  - EN 29453 Soft Solder Alloys .
  - BS 864 Compression tube fittings.

BS 2871 & BS E.N. 1057 Copper and Copper Alloys.

## INDIRECT DOMESTIC CYLINDER

This cooker can only be connected to an in-direct domestic cylinder of 136 litres (30 gallons). See Fig. 12.

Fig.12



The HPB model produces up to 5.8 kW to water on maximum setting therefore it is necessary to fit a heat sink radiator. See output on page 3.

## DIRECT DOMESTIC CYLINDER (DHW MODEL ONLY)

A 113 litre (30 gallon) direct domestic cylinder can be connected to this cooker. (See Fig. 13)

Fig.13

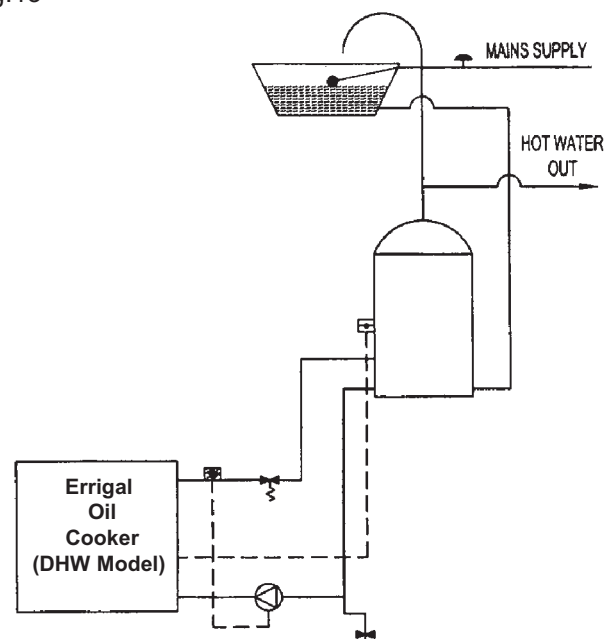
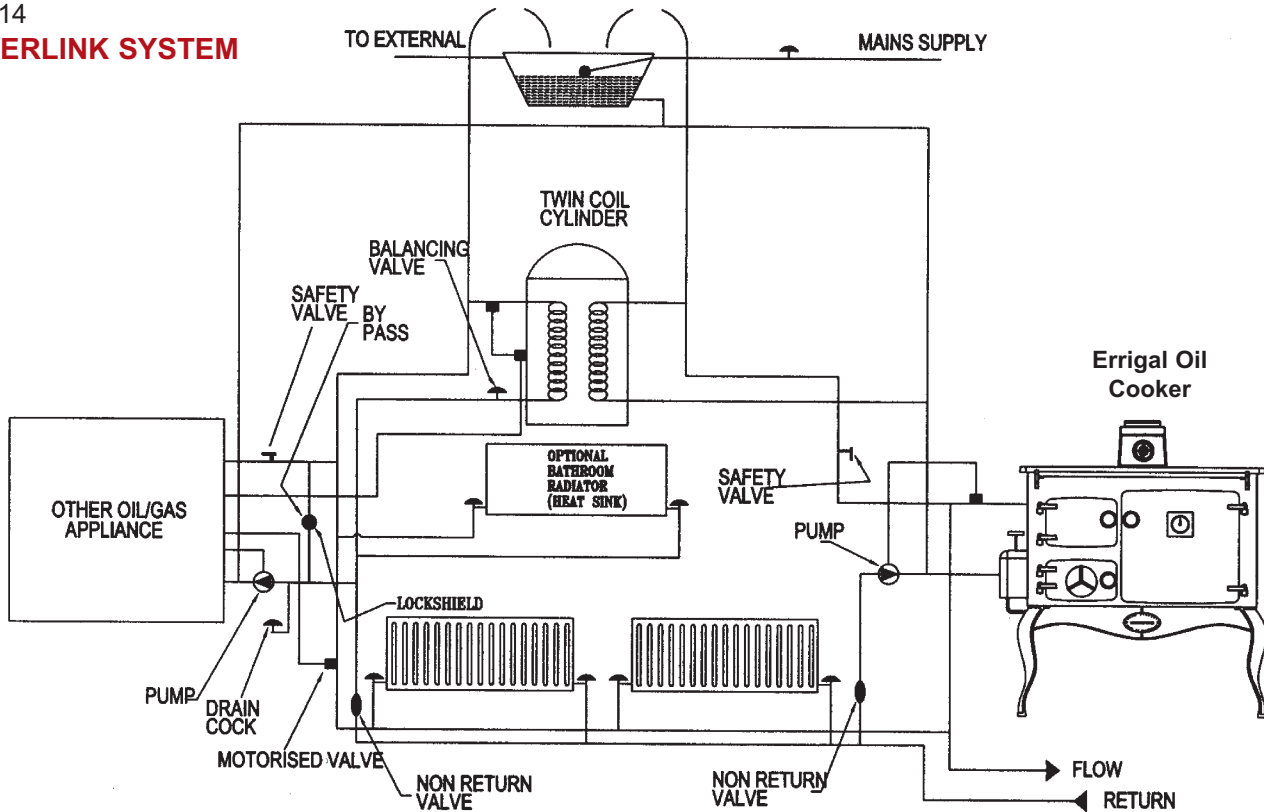


Fig.14

## INTERLINK SYSTEM



## GENERAL MAINTENANCE

It is important that the user is familiar with their heating system and that they ensure regular checks and maintenance are carried out, which can limit unnecessary breakdowns.

We recommend that you evaluate the overall insulation in your house, i.e. attic, external walls, window and external doors.

Insulation and draught proofing can greatly reduce running costs while equally enhancing living conditions.

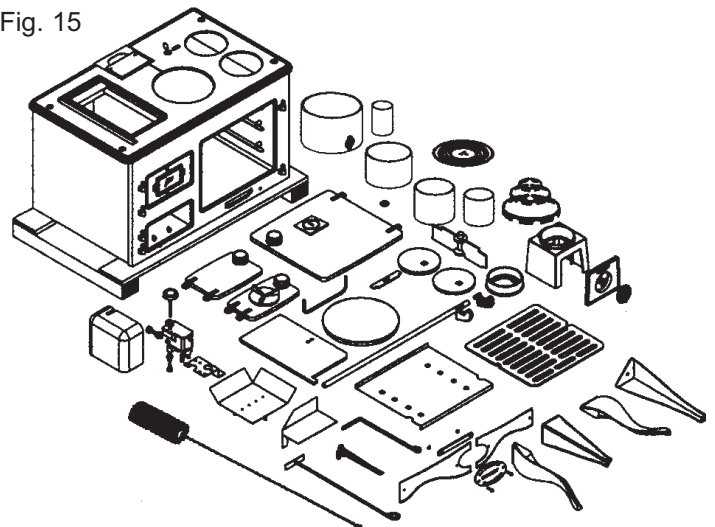
## DRAINING

Key operated drain taps conforming to B.S. 2879, should be provided in an accessible position in all low parts of the system. However, it should be noted that there may be short sections, e.g. when passing under doorways that may not be possible to drain.

## PRE-INSTALLATION ASSEMBLY

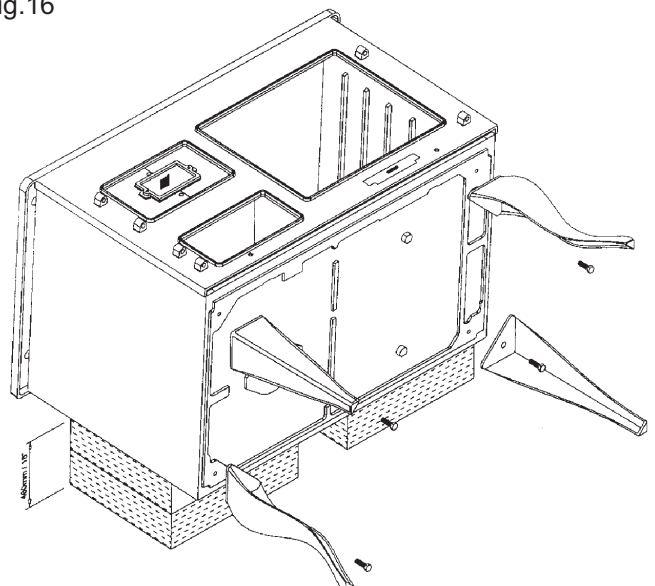
1. Remove packing strip from the top of cooker. Remove all loose components supplied from the top of the cooker and the oven. Remove all doors. (See Fig.15)

Fig. 15



## FITTING OF LEGS

Fig.16





2. Place cement blocks or other strong supports about 458mm (13") high behind the cooker. Space the supports behind it and lay the cooker on its back. (See Fig.16)
3. Fit the four legs to the four base corners using the hexagon-head bolts and washers.

**Note:** Ensure that each of the front legs has a screw hole in the front.

4. Join the two sections of the front skirting together by screwing the name-plate with its back fixing strip into position between the two sections and secure the two sections tightly to the name-plate.
5. Fit the complete skirting under the front of the range inside the front legs using a screw and nut to secure it to each leg. (See Fig.17)
6. Lift cooker off the supports. Stand it upright without putting any strain on the legs.

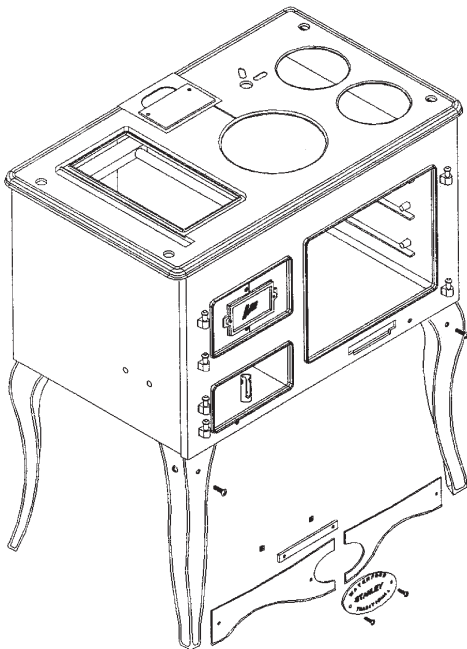
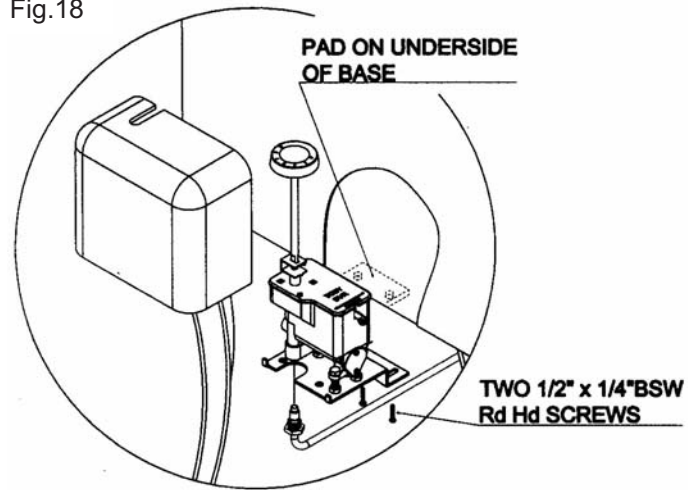


Fig.17

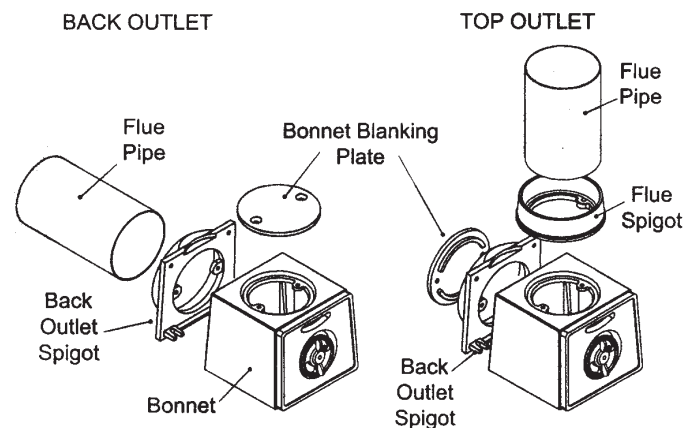
7. Bolt the float valve bracket to the underside of the base using the two  $\frac{1}{2}$ " x  $\frac{1}{4}$ " round head screws provided. (See Fig.18).
8. Connect the formed fuel line to the control valve outlet and the elbow connection in the burner compartment, running the fuel line through the slot provided in the burner compartment base. Seal both connections using a suitable jointing compound.
9. **FIT THE REMOTE ACTING FIRE VALVE PHIAL THROUGH THE SAME SLOT AS THE FORMED FUEL LINE. ENSURE THAT THE FIRE VALVE PHIAL IS FITTED THROUGH THE FIRE VALVE CLIP SO THAT NO PART OF THE PHIAL TOUCHES THE BASE.**

Fig.18



10. Move the cooker into position for installation, taking care not to damage the legs. Ensure that all the requirements in section 5 have been met.
11. Place the oblong hotplate, simmering plate and the two round cleaning cups in position.
12. Place the bonnet in position and fit the bonnet door with flue damper to the front of it. Seal the bonnet when in place, with cement. Depending on the flue configuration required, top or back, the blanking plate is fitted to the top or back of the bonnet. (See Fig.19)

Fig.19



13. Screw the towel rail brackets to the top front of the cooker and fix the towel rail in position between the brackets. Tighten up the screws.
14. Hang the fire door and the ashpit door on their hinges.
15. Place the oven shelves in position with the cast iron shelf below the sheet steel shelf.
16. Place the cleaning door in position beneath the oven door.
17. Connect the fuel line to the control valve inlet.
18. Check all joints on fuel line for leaks before completion of installation.
19. Connect and seal the flue to the bonnet.



## COMMISSIONING

### Burner Set-up

1. Using a spirit level, check that the control valve is level in all directions. Adjust the locking nuts on the valve legs if levelling is necessary. (See Fig.20).

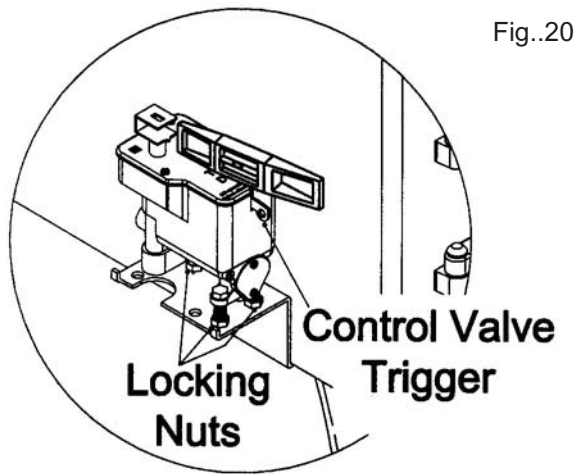


Fig..20

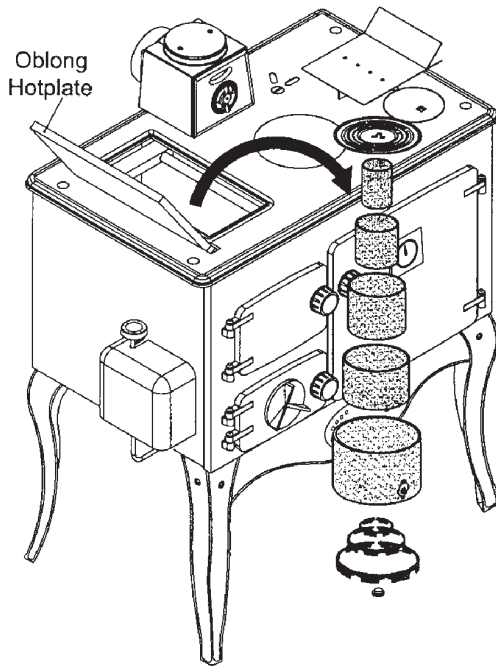
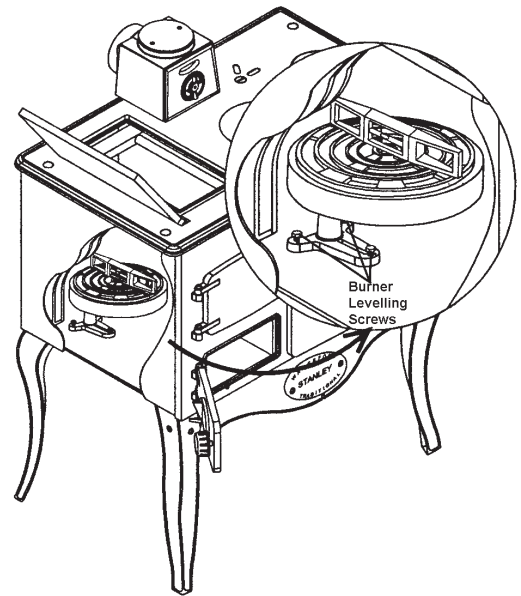


Fig.21

2. Check that the burner is level in all directions. If levelling is necessary remove the fire valve phial from the fire valve bracket and place it to one side of burner compartment. Loosen the 1/4" bolt, holding down the burner stand. The level is adjusted by adjusting the three M8 bolts on the base of the burner stand (See Fig. 22). Re-tighten the 1/4" bolt when finished adjusting the M8 bolts.

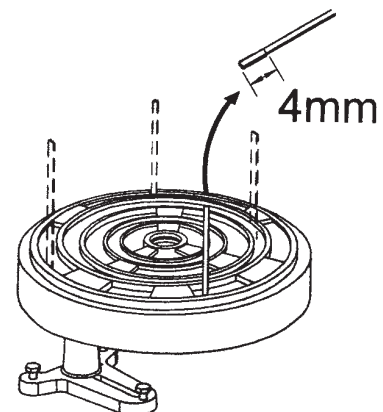
Fig.22



3. Push the control valve trigger up to set the valve (See Fig.20). Turn the control knob to 6 for 10 minutes to commence filling the burner. If oil does not flow to the central reservoir after 5 minutes, it may be necessary to bleed the oil line at the elbow connector in the burner compartment.
4. Check the oil in the burner rings. The oil level should be 4mm. (See Fig. 23). If the level is greater than required, the control valve should be lowered. The control valve bracket can be moved up and down by loosening the M4 lock nuts. If the level is less than required, the control valve should be raised until the oil level is correct. Each time an adjustment is made, the oil in the central reservoir and burner rings should be soaked up with absorbent paper and the filling process repeated.

**Note:** Do not check oil depth adjacent to fuel ports.

Fig.23



5. After any adjustments to the control valve, check that it is level in all directions.
6. Once the oil depth and burner level are set, the burner can be re-assembled. Refer to Burner Assembly section.
7. Attach the control spindle to the control valve using the M8 lock nut, and place the oil control valve cover in place over the valve.

8. Turn the control valve to 6 and after 10 minutes, light the stove through the lighting port as shown in Fig.25.

**WARNING: OPEN DIRECT FLUE DAMPER WHEN LIGHTING. SEE FIG.24.**

**Note:** Ensure that the lighting port is closed after the stove is lit.

**ALWAYS OPEN THE DIRECT FLUE DAMPER BEFORE LIGHTING THE COOKER. NEVER RE-LIGHT THE COOKER UNTIL IT IS COMPLETELY COOLED DOWN. (SEE FIG. 24)**

Fig.24

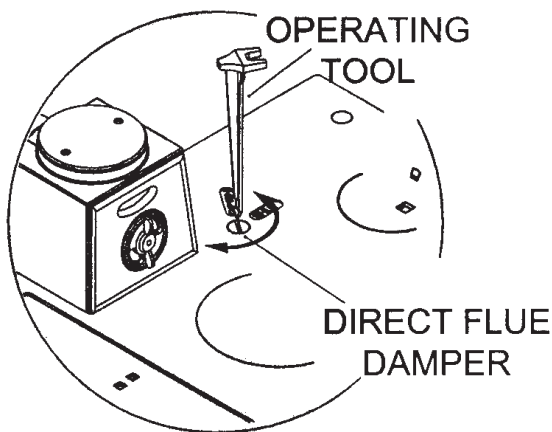
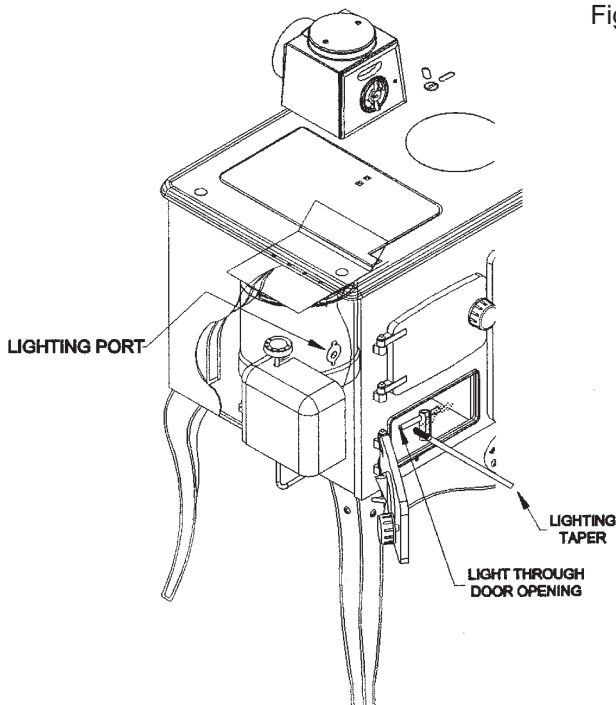
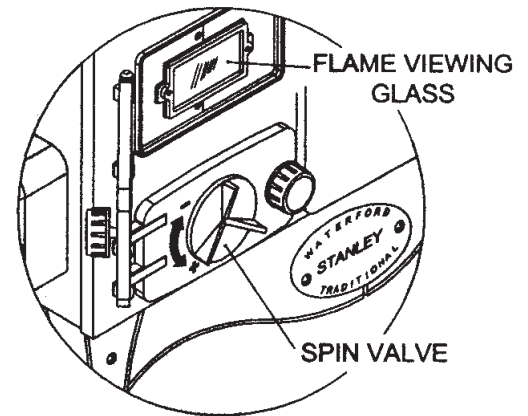


Fig.25



9. Adjust the spin valve opening until a blue flame with yellow tip is obtained around the outer shell. (See Fig. 26). The spin valve should be set for an opening of approximately 6mm. (This may vary slightly depending on flue draught performance).
10. Check that the Bacharach smoke number is <2.

Fig.26

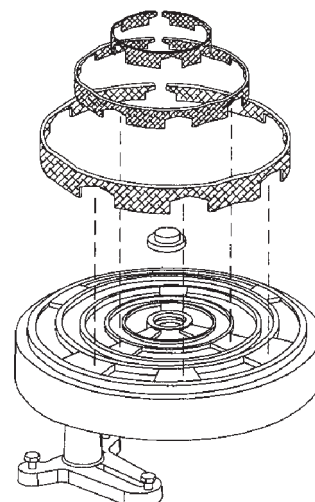


## BURNER ASSEMBLY

With the burner level and the correct depth of oil in the burner rings, the following tips should be followed for assembling the burner.

1. Replace the wicks in the burner rings. Ensure that the cut-outs in the wicks line up with the fuel ports between the central reservoir, and the burner rings. (See Fig.27)
2. Replace the cast iron centre well cap, grinding it into position to ensure it sits down properly.
3. Fit the outer shell, ensuring that it sits firmly on the burner base and that it does not interfere with the outer wick. The outer shell is fitted such that the lighting port is offset to the right of the burner. (See Fig. 28).
4. Fit the remaining burner shells ensuring that the seams are staggered as shown in Fig.28. Ensure that all the shells sit firmly on the burner base and that they do not interfere with the wicks.

Fig.27



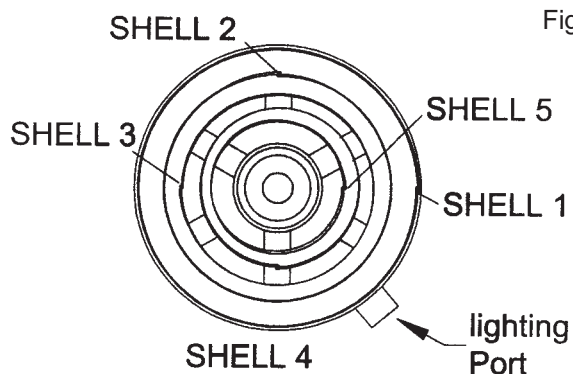


Fig.28

## STAGGER SEAMS OF SHELLS

5. Fit the burner baffle and the burner lid on top of the shells. (See Fig.29).

**Note:** The angle on the DHW/Dry baffle is directed towards the oven. See Fig. 29.

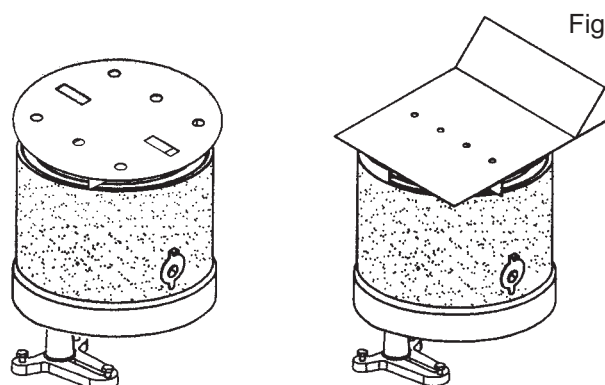


Fig.29

6. Place the air distribution baffle in the burner compartment ensuring that it sits on top of the carbon leg assembly fuel line. Ensure that it is kept to the left side of the burner compartment so that the lighting port can be accessed.

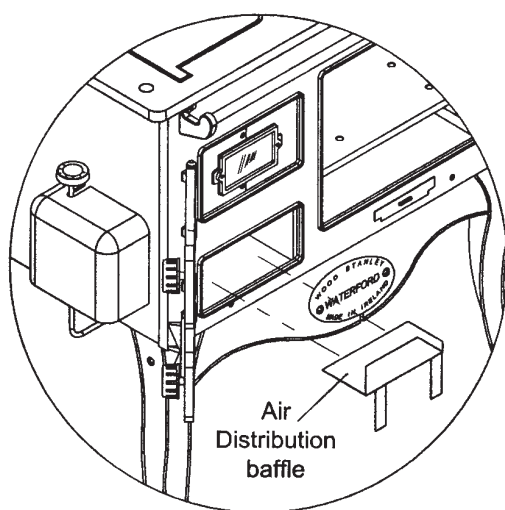


Fig.30

## FLAME PATTERN

The flame pattern should consist of a blue flame with a yellow tip around the burner baffle.

When the stove has reached a stable condition (on setting 6), the burner shells should glow red.

If the flame is yellow/orange in colour, there is not sufficient air supply to the burner and the spin valve on the ashpit door should be adjusted.

If after adjusting the spin valve, there is still a yellow/orange flame, consult the Fault Finding Section of this manual.

## COOKER OPERATION

### Lighting the Cooker

**ALWAYS OPEN THE DIRECT FLUE DAMPER BEFORE LIGHTING THE COOKER. NEVER RE-LIGHT THE COOKER UNTIL IT IS COMPLETELY COOLED DOWN. (SEE FIG. 24)**

1. Turn the control valve to setting 6 (anti-clock wise) and allow 10 minutes for the burner to fill.
2. Light the burner by putting a lighted paper or taper through the lighting port (See Fig.25).
3. When the cooker is up to temperature, i.e. when the burner shells are red, close the direct flue damper and turn the control valve (clockwise) to the desired setting.

**Note:** It is advisable that the control valve is set for setting 1 or 2 when the cooker is not being used in order to reduce the heat-up time when cooker operation is required. Running the cooker at 1 or 2 will keep the flue system warm and help maintain flue buoyancy.

**NOTE: NEVER OPERATE THE COOKER ON SETTING 1 WITH THE DIRECT DAMPER CLOSED.**

### TURNING THE COOKER OFF

When the control valve is turned to 0, the oil feed to the burner is cut off and the cooker goes out.

**NOTE: TO AVOID VIOLENT IGNITION DO NOT RESTART UNTIL COOKER HAS COMPLETELY COOLED DOWN.**

## SERVICING

To ensure continued efficient and safe operation of the appliance, it is recommended that it is checked and serviced by an Authorised Stanley Service Engineer. This stove should be serviced at least every 6 months. However if the stove is not used for long periods of time, the service period may be extended.

The cooker must be cold before servicing. Allow 3-4 hours for the cooker to cool.

Flexible oil lines should be inspected at each and every service visit. There are varying types of line with guarantee periods between 1 and 5 years. It is important in the interest of safety that flexible lines are changed at regular intervals. Inspect for date code stamp and if the line is out of its guarantee period or shows signs of being kinked or damaged, replace immediately.

1. Open the oblong hotplate and remove the burner shells, wicks, centre well cap, baffle and burner lid from the fire box.
2. Open the ashpit door and place the fire valve phial to one side of the burner compartment, so that the burner base can be accessed. Remove the air distribution baffle.
3. Disconnect the oil line from the burner and remove the burner from the firebox by undoing the M8 bolt on the side of the burner support frame (See Fig.31).

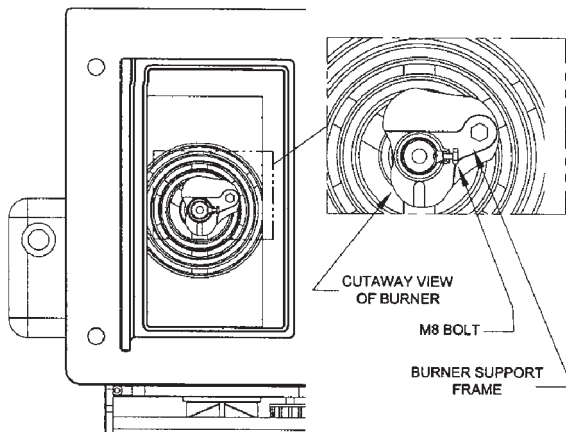
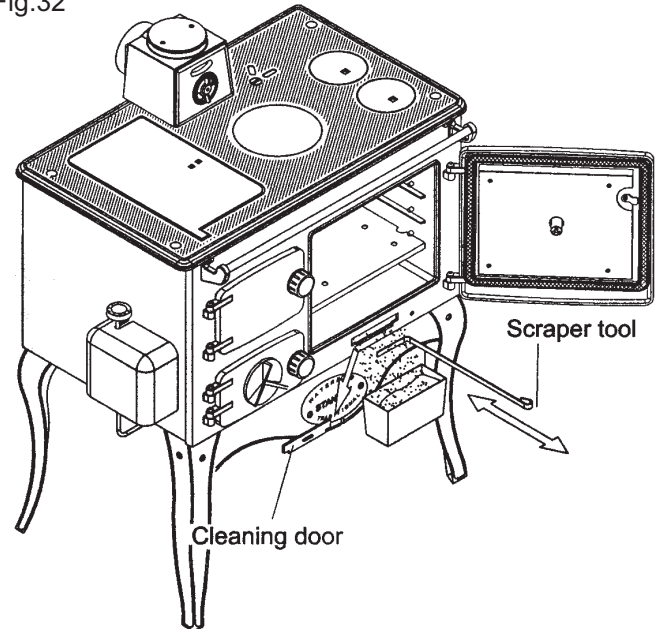


Fig.31

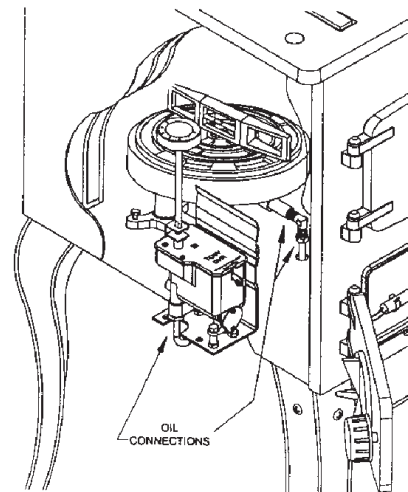
4. Remove any dirt from the burner rings and ensure that the ports between the rings are clear.
5. Remove the simmering plate and cleaning cups and brush any soot deposits into the firebox. Vacuum any dirt from the firebox base and if necessary, clean the viewing glass.
6. Remove the base cleaning door and rake the deposits, from underneath the oven through the cooker front into a container using the scraper tool. (See Fig.32).

Fig.32



7. Open the bonnet door and check for any soot deposits in the flue. If there is evidence of substantial soot build-up, the flue may need to be cleaned.
8. Replace the burner in the firebox and reconnect the oil line to the burner.
9. Check that the burner and oil control valve are level in all directions. Check all oil connections to ensure that there are no leaks. (See Fig.33).

Fig.33



10. Turn the control valve to 6 to fill the burner. Check that the correct level of oil is present. (See Commissioning Section.)
11. Fit new wicks in the burner rings, ensuring that the cut-outs in the wicks line up with the fuel ports between the burner rings. (The wicks should be replaced every time the cooker is serviced).
12. Fit the burner assembly as described in the Burner Assembly Section.
13. Reposition the fire valve phial. Close the ashpit door.
14. Light the stove and check the flame pattern (See Commissioning Section).



## CONTROL VALVE RATING

The control valve must be rated by the Commissioning Agent on site to give the required fuel input for the cooker.

When the flame pattern is unsatisfactory, the air supply to the burner and flue passages should be thoroughly investigated before investigating the oil feed rate to the burner.

Check the oil feed rate as follows:

**Note:** Great care should be taken to ensure the accuracy of the flow rate, as it greatly affects the cooker performance.

Apparatus Required: Collection Vessel  
Stopwatch  
Graduated Cylinder (capable of measuring 150ml and graduated to the nearest ml)  
Small flat screwdriver.

1. Disconnect the oil feed at the exit from the control valve. (See Fig.34)
2. Place the collection vessel beneath the control valve to catch the oil. Turn the control valve to 6 and start the stopwatch when the first drop of oil falls into the vessel.

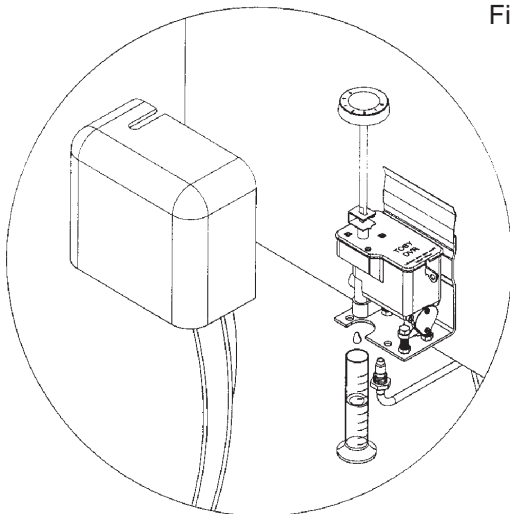
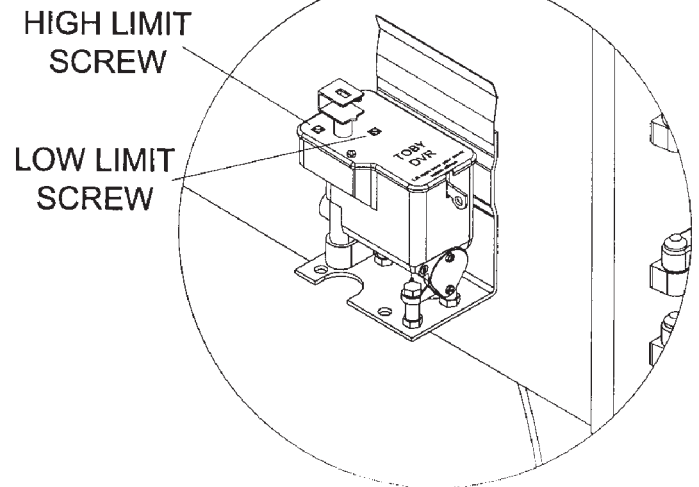


Fig.34

3. Measure the oil flow for 5 minutes. (consult table below for current rate).
4. Turn the control valve to 1 and repeat the above procedure.
5. If either of the above rates is not correct, the control valve can be adjusted. The high rate screw is located above the control knob with the low rate located below the control knob. (See Fig.35) The screws are very sensitive and the measurement procedure should be carried out after each adjustment. The rates are increased by turning the screws anti clock-wise and decreased by turning the screws clock-wise.

Setting	Flow Rate		
	HPB	DHW	DRY
1	6cc/min	5cc/min	4cc/min
6	19cc/min	17cc/min	11.5cc/min

Fig.35



**Note:** The flow rate should not exceed 20 cc/min as this will overheat the cooker and the control equipment for the cooker.

When the required rates are obtained, the oil line should be reconnected ensuring that there are no leaks and that the level of the control valve has not been affected.

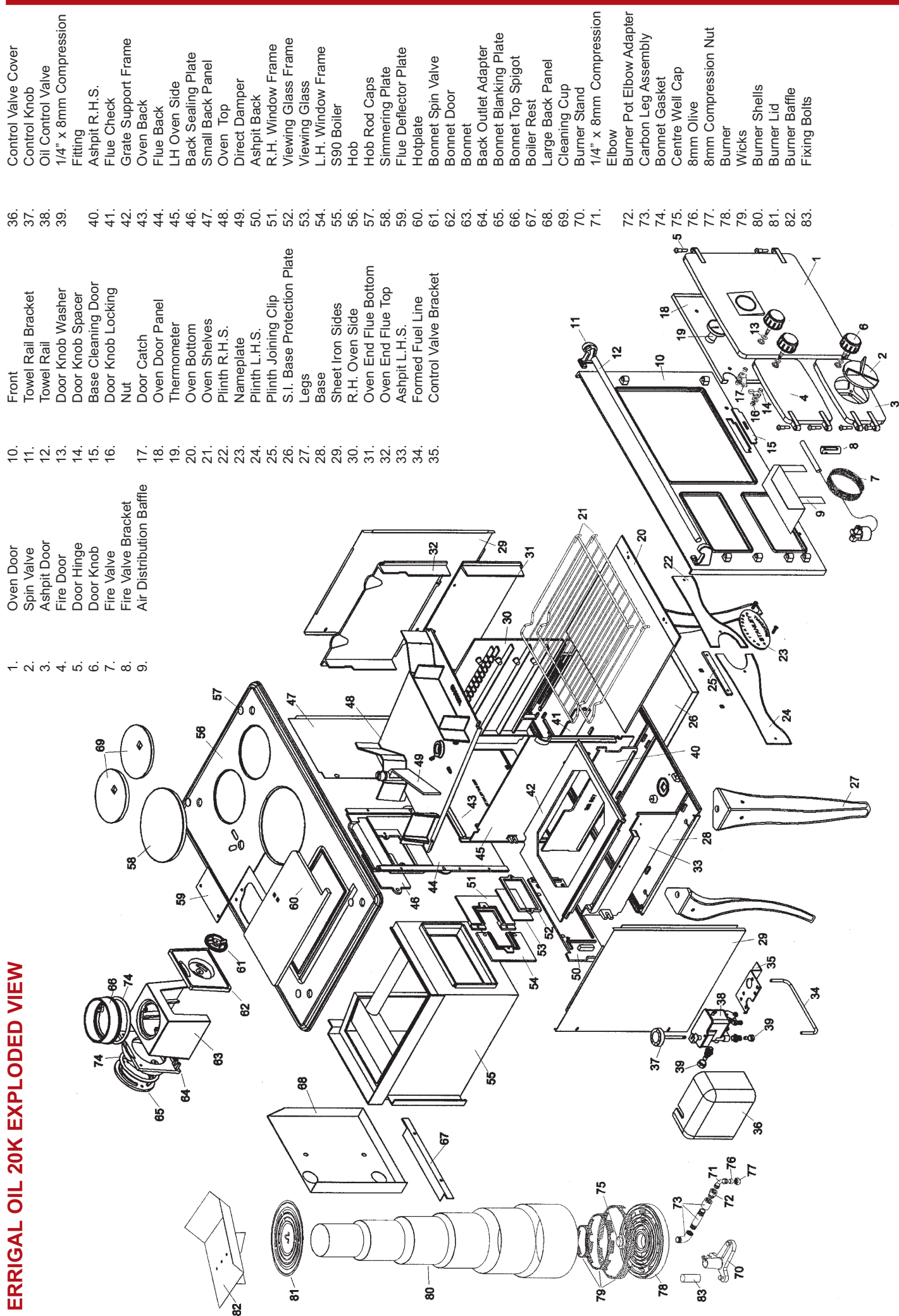
## VITREOUS ENAMEL CLEANING

**General cleaning must be carried out when the stove is cool.**

If this stove is finished in a high gloss vitreous enamel, to keep the enamel in the best condition observe the following tips:

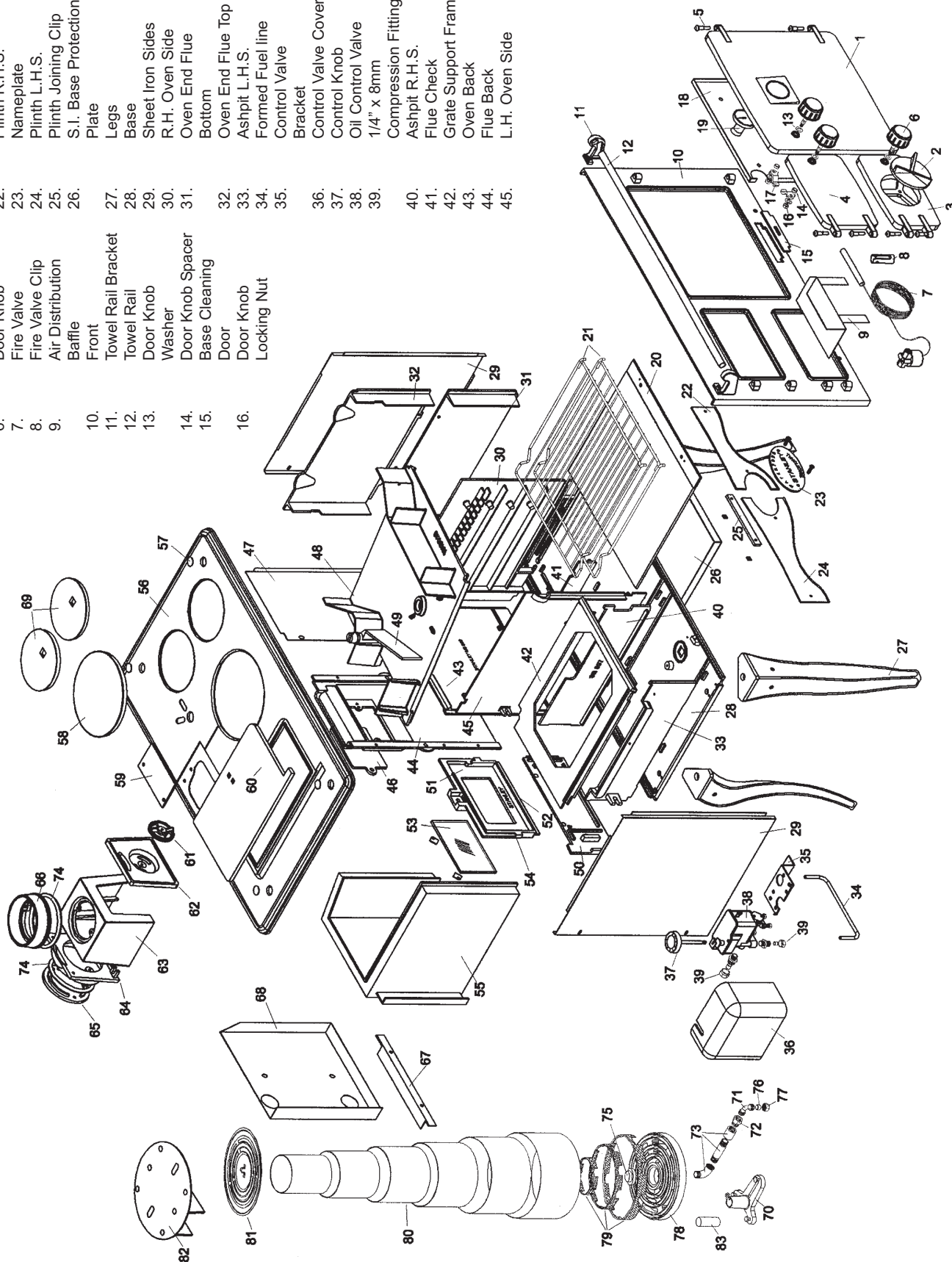
1. Wipe over daily with a soapy damp cloth, followed by a polish with a clean dry duster.
2. For stubborn deposits a soap impregnated pad can be carefully used on the vitreous enamel.
3. **DO NOT USE ABRASIVE PADS OR OVEN CLEANSERS CONTAINING CITRIC ACID ON ENAMELLED SURFACES. ENSURE THAT THE CLEANSER MANUFACTURERS INSTRUCTIONS ARE ADHERED TO.**





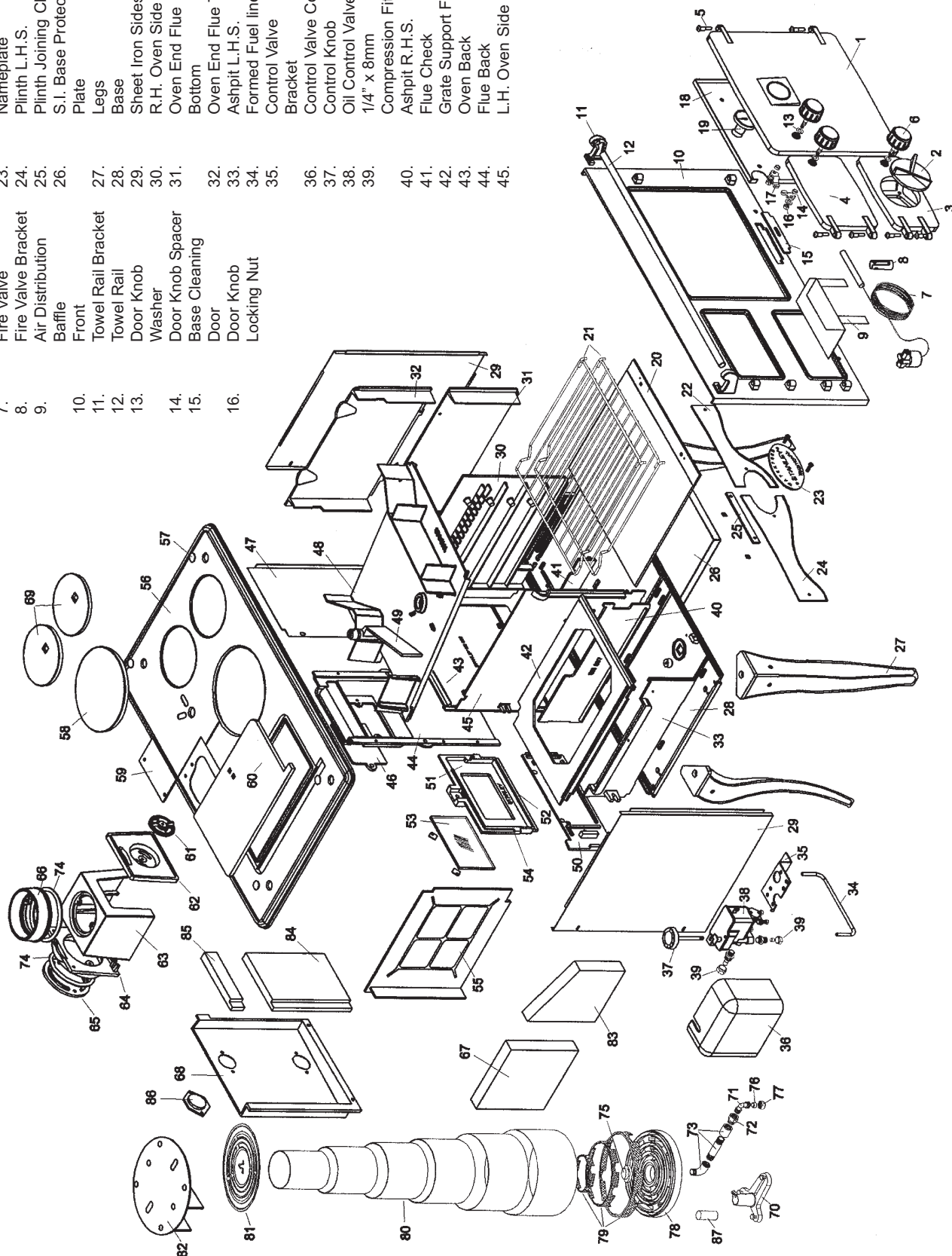
# ERRIGAL OIL DHW EXPLODED VIEW

1. Oven Door
2. Spin Valve
3. Ashpit Door
4. Fire Door
5. Door Hinge
6. Door Knob
7. Fire Valve
8. Fire Valve Clip
9. Air Distribution
10. Baffle
11. Front
12. Towel Rail Bracket
13. Towel Rail
14. Door Knob
15. Washer
16. Door Knob Spacer
17. Base Cleaning
18. Door
19. Door Knob
20. Locking Nut
21. Oven Door
22. Spin Valve
23. Ashpit Door
24. Thermometer
25. Oven Bottom
26. Oven Shelves
27. Plinth R.H.S.
28. Nameplate
29. Plinth L.H.S.
30. Plinth Joining Clip
31. S.I. Base Protection
32. Plate
33. Legs
34. Base
35. Sheet Iron Sides
36. R.H. Oven Side
37. Oven End Flue
38. Bottom
39. Oven End Flue Top
40. Ashpit L.H.S.
41. Formed Fuel line
42. Control Valve
43. Bracket
44. Control Valve Cover
45. Control Knob
46. Oil Control Valve
47. 1/4" x 8mm
48. Compression Fitting
49. Ashpit R.H.S.
50. Flue Check
51. Grate Support Frame
52. Oven Back
53. L.H. Oven Side
54. Back Sealing Plate
55. Small Back Panel
56. Oven Top
57. Direct Damper
58. Ashpit Back
59. R.H. Window Frame
60. Viewing Glass Frame
61. Viewing Glass
62. L.H. Window Frame
63. Superette Boiler
64. Hob
65. Hob Rod Caps
66. Simmering Plate
67. Flue Deflector Plate
68. Hotplate
69. Bonnet Spin Valve
70. Bonnet Door
71. Bonnet
72. Back Outlet Adapter
73. Bonnet Blanking
74. Plate
75. Bonnet Top Spigot
76. Boiler Rest
77. Large Back Panel
78. Cleaning Cup
79. Burner Stand
80. 1/4" x 8mm
81. Compression Elbow
82. Burner Pot Elbow
83. Adapter
84. Carlton Leg Assembly
85. Bonnet Gasket
86. Center Wall Cap
87. 8mm Olive
88. 8mm Compression
89. Nut
90. Burner
91. Wicks
92. Burner Shells
93. Burner Lid
94. Burner Baffle
95. Burner Support Rod



1. Oven Door
2. Spin Valve
3. Ashpit Door
4. Fire Door
5. Door Hinge
6. Door Knob
7. Fire Valve
8. Fire Valve Bracket
9. Air Distribution
10. Baffle
11. Front
12. Towel Rail Bracket
13. Towel Rail
14. Door Knob
15. Washer
16. Door Knob Spacer
17. Base Cleaning
18. Door
19. Door Knob
20. Locking Nut
21. Back Sealing Plate
22. Small Back Panel
23. Oven Top
24. Direct Damper
25. Ashpit Back
26. R.H. Window Frame
27. Viewing Glass Frame
28. Viewing Glass
29. L.H. Window Frame
30. Sham Cheek
31. Hob
32. Hob Rod Caps
33. Simmering Plate
34. Flue Deflector Plate
35. Hotplate
36. Bonnet Spin Valve
37. Bonnet Door
38. Bonnet
39. Back Outlet Adapter
40. Bonnet Blanking Plate
41. Bonnet Top Spigot
42. RHS Back Fire Brick (S90 No.2)
43. Back Panel
44. Cleaning Cup
45. Burner Stand
46. 1/4" x 8mm
47. Compression Elbow
48. Burner Pot Elbow
49. Adapter
50. Carton Leg Assembly
51. Bonnet Gasket
52. Center Wall Cap
53. 8mm Olive
54. 8mm Compression Nut
55. Burner
56. Wicks
57. Burner Shells
58. Burner Lid
59. Burner Baffle
60. RHS Front Fire Brick (S90 No.3)
61. Back Bottom Brick
62. Back Top Brick
63. Boiler Tapping
64. Blanking Plates
65. Burner Support Rod

66. Door Catch
67. Oven Door Panel
68. Thermometer
69. Oven Bottom
70. Oven Shelves
71. Plinth R.H.S.
72. Nameplate
73. Plinth L.H.S.
74. Plinth Joining Clip
75. S.I. Base Protection Plate
76. Legs
77. Base
78. Sheet Iron Sides
79. R.H. Oven Side
80. Oven End Flue
81. Bottom
82. Oven End Flue Top
83. Ashpit L.H.S.
84. Formed Fuel line
85. Control Valve
86. Bracket
87. Control Valve Cover
88. Control Knob
89. Oil Control Valve
90. 1/4" x 8mm
91. Compression Fitting
92. Ashpit R.H.S.
93. Flue Check
94. Grate Support Frame
95. Oven Back
96. Flue Back
97. L.H. Oven Side



## FAULT FINDING

If the stove exhibits any of the following conditions, call your Commissioning Engineer.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>REMEDY</b>
Stove will not light or goes out when lighting	No Oil in the Tank Fire Valves off Control valve trigger down (off) Oil feed line filter blocked Fuel Line Air Locked Carbon Leg Blocked Incorrect Depth of Oil in Burner Base Down Draught in Flue	Fill Tank Reset valves, check for cause of over temperature Reset trigger Free Oil filter Bleed Fuel Line Clean Carbon Leg Assembly (Stove needs service) Increase oil level to 4mm Fit Anti-Down Draught Cowl
Flames burning under burner	Incorrect Chimney Draught Down Draught in Flue Oil level too high in burner base Oil Rate too high	Check joint seals, increase chimney height, adjust flue bonnet spin valve. Fit Anti-Down Draught Cowl Decrease oil level to 4mm Lower control valve fuel input rate
Dirty or Unstable Flame, Viewing Glass sooting up	Incorrect Chimney Draught Incorrect Fuel Input Rate Incorrect Spin Valve Setting Shells or Vapour Chamber Lid not seated properly Lighting Port Open Wrong Grade of Oil Used Wicks incorrectly Positioned	Check joint seals, increase Chimney height, adjust flue bonnet spin valve. Check Fuel Input Rate, adjust if necessary Adjust Spin Valve Setting Ensure all shells are seated on Burner base and that their seams are staggered. Close Lighting Port Only Use Kerosene 28 sec C2 Ensure that the cut-outs in the wicks are properly aligned and that the shells don't interfere with the wicks
Oil Smell Apparent	Incorrect Chimney Draught Down Draught in Flue Incorrect Fuel Input Rate Fuel Leaks	Check joint seals, increase chimney height, adjust the bonnet spin valve. Fit Anti-Down Draught Cowl Check fuel input rate, adjust if necessary Check all fuel pipe connections, and reseal if necessary.
Cooker Overheating	Incorrect Fuel Input Rate	Decrease Fuel Input Rate



## INSTALLATION CHECK LIST

### Flue System

Tick ☒

1. Minimum Flue Height of 4.6 metres (15 feet). ☐
2. If connecting to an existing chimney, the chimney should be lined using either a flexible or rigid 125mm (5") diameter suitable for oil-fired appliances that terminates in excess of 0.6 metres from the nearest point of the roof, measured vertically and in excess of 2.3 metres measured horizontally. ☐
3. If using an external flue, the appliance should be connected to a 125mm (5") diameter rigid insulated flue pipe, suitable for an oil-fired appliance, that terminates in excess of 0.6 metres from the nearest point on the roof, measured vertically and in excess of 2.3 metres measured horizontally. ☐
4. Any Horizontal flue sections should not exceed 300mm (12"). ☐
5. The chimney serving this appliance should not serve any other appliance. ☐
6. Connection of the flue should only be made through the bonnet on top of the cooker. ☐
7. A suitable flue terminal, such as an OH cowl, should be fitted at the flue termination point. ☐
8. If using an internal flue or chimney, closure-clamping plates should be used to seal the top & bottom of the chimney. ☐
9. Access should be provided to the chimney serving the appliance to allow for cleaning. ☐
10. If the flue passes through a combustible wall, a twin wall insulated connector must be used and come flush to the external surface of the wall. ☐
11. The flue should be capable of producing a continuous draught of 0.06" w.g. during normal operation. ☐

### Location

1. Clearance to combustible materials must be adhered to as described in the Clearance to Combustibles Section. ☐
2. The cooker should be installed as to allow adequate air circulation around the cooker and to allow access for installation & servicing. ☐
3. The cooker must be installed on a non-combustible insulated floor protector that covers the area under the cooker and extends 6" from the side and back and 9" from the front of the cooker. ☐

### Plumbing (Boiler Models Only)

1. Appliance must be connected to a gravity circuit supplying a 113 litre (30 gallon) cylinder using 1" ID flow & return piping. ☐
2. The length of pipes from the cylinder to the stove should not exceed 7.8 metres (25 feet). ☐
3. A three bar safety valve must be fitted to the primary flow pipe adjacent to the boiler connection on the stove. ☐
4. The HPB model must be connected to a central heating circuit with a pipe stat, fitted on the feed pipe to the cylinder, controlling a pump fitted on the return pipe from the central heating circuit. ☐

### Ventilation & Combustion Air Requirements

1. The room in which the appliance is located should have an air vent of adequate size to support correct combustion when all other air-using appliances are operating at full capacity (see Ventilation & Combustion Air Requirement Section for specific details). ☐

### Oil Supply

1. The oil supply tank should be fitted with an isolating valve and filter and should be positioned as to give a minimum head of oil of 125mm (see Fuel Supply Line section). ☐
2. The stove should be connected to a supply line with a minimum internal diameter of 8mm and must be fitted with a remote acting fire valve. ☐
3. Where other oil fired appliances are connected to the same oil supply tank, a separate oil supply line should be taken from the tank to the stove. ☐



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