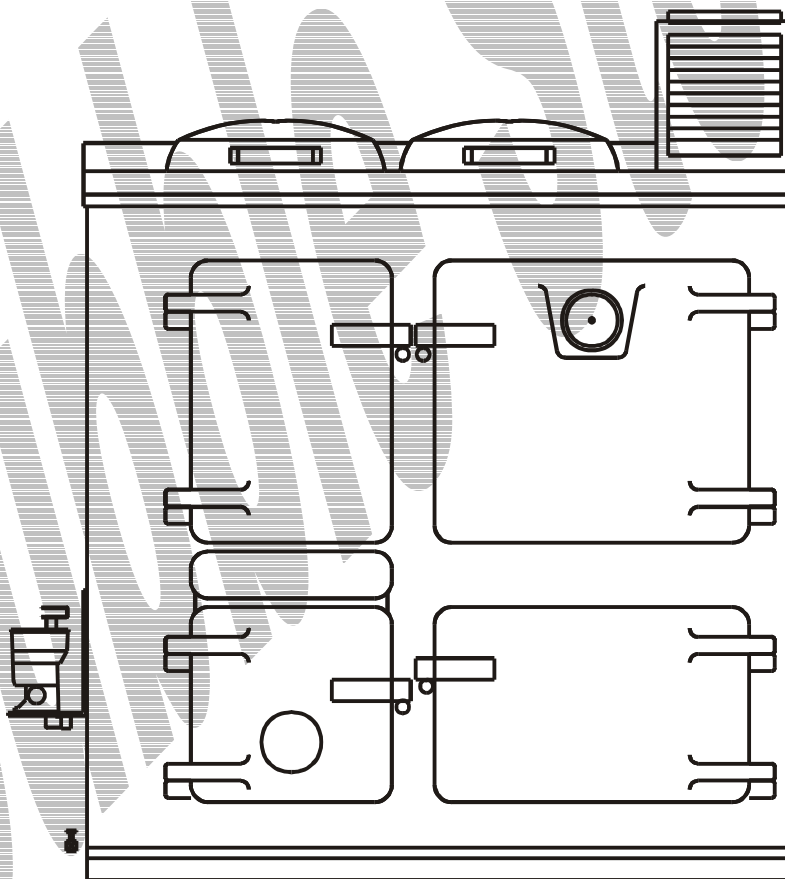




Mk 2 VAP. CONVERSION ©
Rayburn Royal 08-03-04
installation information ©



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1. HEALTH AND SAFETY.

CONTROL OF SUBSTANCES.

Take great care when handling materials such as insulation boards, glass fibre ropes, ceramic wool, artificial fuel, kerosene and diesel oil, they are all irritants and suitable protective clothing such as disposable gloves dust masks and protective goggles should be worn.

Wash off thoroughly after handling any of these materials.

Carefully dispose of redundant or surplus materials and always vac up after service or installation work.

2. APPLICABLE REGULATIONS.

The installation of oil fired BUBBLE © equipment must be carried out by a technically competent person, who is experienced in both solid fuel and oil fired installation.

The competent person must be capable of installing, commissioning and servicing to the current requirements of the relevant local building and other statutory regulations.

BUILDING REGULATIONS.

In England and Wales these are J 1-2-3 Provision for introduction of air supply and discharge of products of combustion. Provision for protection against fire and heat.

In Scotland Part F sec 3.

In Northern Ireland Part L. In Ireland Part J.

ELECTRICAL REGULATION.

British IEEE wiring regulations, latest edition.

Codes of practice which apply in the UK are -:

BS5410 OIL FIRED SPACE HEATERS.

Installation of oil fired space heating and hot water supply Part 1, boilers of rated output not exceeding 44kW

BS4543 CHIMNEY SPECIFICATIONS.

Specification for chimney for oil fired appliances. Part3.

BS5449 CENTRAL HEATING.

Central heating for domestic premises Part 1 Forced circulation hot water systems.

BS 5601 BS8303.

BS6461 Pts 1 & 2 1984.

BS7566 PARTS 1 TO 4.

OFTEC REGULATIONS.

Installers must have successfully completed OFTEC courses, OFT101 and OFT105.

Failure to comply with the relevant requirements listed above can be hazardous and could lead to prosecution under the law.

If you have any difficulties please phone our sales department on

PHONE 01302 742520. (3 lines.)

FAX 01302 750573

Email sales@oilstoves.co.uk

Web site www.oilstoves.co.uk

When you visit your customer, take a tick list and make sure you cover all the points raised in this document.

As manufacturers of this product, customer complaints are generally made to us.

We will assist customers wherever we can, to resolve any problems.

In general most problems are brought about by failure to observe one or in some cases many of the points raised in this document.

These installation instructions will form the basis of any faultfinding assistance which we will give directly to customers if installers are not willing to help.

3. HOW TO APPROACH THE JOB.

Vaporising pot burners must have a steady and continuous flue vacuum, make sure that you check the terminal position and ask questions about previous or prior chimney problems, if there is any doubt about the suitability, height or terminal position do not take the job on.

Make sure that the chimney is high enough to generate a steady reliable vacuum.

If you line the chimney make sure that you explain to the customer about the possibility of cross wind noise ducting down the liner.

Make sure that you explain how the conversion will work and how the converted appliance will differ in relation to being fuelled by solid fuel.

Make sure that you explain how the appliance will be controlled.

Make sure that you explain about the running costs.

Where new oil storage tanks are to be installed make sure that they comply with OFTEC rules and Building Regs

Make sure that the appliance hasn't been modified with the addition of a larger, none standard boiler.

Make sure that customers are aware that the appliance will need to be cleaned out and serviced in line with the schedule.

Here's the tick list check out

1 CUSTOMER.

Go through all the points raised in the first para and make sure that they understand all of them. When you arrange to go to visit the customer make sure that the appliance is running and if it has a hot water system make sure that it is working satisfactorily

2 CHIMNEY.

Performance (will it do the job) under all conditions.

Excessive wear will occur to the catalysers and burner if the appliance is subjected to conditions of continuous or intermittent high flue vacuum.

3 EXISTING HEAT LOAD.

If the appliance has a boiler it was only originally designed to heat a hot water cylinder and a heat leak rad or towel rail, if the appliance has a large boiler conversion fitted you will not be able to fit one of the kits as standard.

4 OIL SUPPLY LINE AND TANK LOCATION.

Can you install the tank and line in compliance with all the latest regs.

5 ELECTRICAL.

If you need it is there a convenient supply.

6 VENTILATION.

4. INTRODUCTION.

The vaporising pot burner is designed to run continuously.

It is extremely simple and all that the user is required to do is operate the oil flow control knob to achieve the required oven or hot plate temperature.

Upon starting from cold, the burner should run until it gets the oven up to a working temperature, when this temperature is reached the oil flow is set at the required number to match the required oven temperature.

The burner fires vertically and the flame strikes the baffle which diverts the flue gasses on to critical internal components of the appliance.

The three factors, which affect the performance of the appliance, are -:

1. The fuel flow rate selected. (From 1 - 6)
2. The chimney vacuum.
3. The user.

It is not possible to use the oven independently from the water heating.

5. CHIMNEY PROBLEMS.

Before starting this installation you must make absolutely sure that the chimney does not have a history of down draughting either intermittent or permanent.

Before any work is carried out the installer must check the existing chimney vacuum whilst the appliance is running at a normal operating temperature.

It is most important that all or any existing chimney faults are established and corrected before the conversion work is carried out.

Hot and cold condition chimneys must have a vacuum of not less than .02" W.G. when COLD or more than .06" W.G. when HOT.

If there are any problems such as: -

Occasional down draught.

Excessive up draughts.

Fume leaks.

Regular blockages.

If you are unsure about the condition of the chimney, have it thoroughly cleaned and checked by a suitably qualified person.

If there is a history of excessive or intermittent updraughting it may be necessary to fit an additional automatic flue draught regulator to allow for extra control of these conditions.

This should be fitted as near as possible to the appliance generally in the open branch of a suitable tee.

Make sure that a suitably qualified person carries out any remedial chimney work.

The chimney should terminate 2 feet above the ridge of the main or highest roof, in compliance with relevant legislation and our instructions.

If the chimney is a part of a stack of more than one chimney, the terminal should not be lower than the other adjacent chimneys.

1. CHIMNEY LINING SIZES.

1. Use 5-inch dia linings designed for use with whatever fuel the appliance is to be fired with. (28second kerosene or 35 second diesel oil)

2. On exposed chimneys, which are built into end gables, it may be necessary to backfill with loose fill vermiculite to help prevent condensation and improve the stability of the flue draught.

2. ACCESS FOR CHIMNEY CLEANING.

Provision must be made to allow adequate and easy access into the chimney for cleaning purpose.

3. CHIMNEY TERMINATIONS.

Do not fit gas cowls; rain cowls will suffice, where there is no history of down draughting.

If there is any history of down draughting always fit a VEDETTE or similar ANTI DOWNDRAUGHT COWL.

4. FLUE PIPE.

The flue pipe used must not be less than 5" diameter and must comply to one of the following -:

Acid resistant vitreous enamelled flue pipe to BS 1344 Part 2.

Stainless steel to BS1449 Part 2.

Cast iron to BS41.

6. EXISTING HEATING SYSTEM.

If there is excess load (more than 10,000 B.T.U.s to water the burner will struggle to keep up with the demand.

It is most important that all or any existing heating system faults, (particularly on the plumbing side) be identified and rectified before conversion is carried out, it is the responsibility of the installer to assess this situation and make adequate recommendations to the customer.

Because this is an existing solid fuel system it should have been installed to BS5449 part one.

A double feed indirect hot water storage cylinder to BS1556 part one, should have been used and in order to prevent the build up of scale and corrosion a suitable inhibitor should have been used.

All pipe work in the primary circuit must be 28 mm diameter and the pipe work must be installed to provide a suitable heat leak source (10,000 BTU, s.) and adequate gravity circulation.

Do not convert to pressurised systems, only open vented are suitable.

Make sure that old boilers are not blocked or heavily calcified.

Original Rayburn boilers should be removed and inspected via the de sludging access panel on the rear of the boiler, if you intend to carry this work out make sure that you have a new sludge door access plate gasket available.

7. OIL FEED AND STORAGE.

NOTE

Installation of all oil feed pipe work and storage equipment should be in line with -:
OFTEC requirements book T3 July 1995 rev.7.95.

28 Second Commercial Kerosene to BS2869 Part 2: 1988 Class C2 or 35 second gas oil BS2869 class D is suitable for use with this burner system but different oil control valves will be needed and you will have to provide a suitable chimney liner to accommodate the selected fuel type.

Steel oil storage tanks to BS799 Part 5, if there is any doubt consult the manufacturer.

Plastic oil storage tanks with B.B.A. approval.

Minimum size storage tank should be 250 gals.

The burner can be supplied with oil via gravity or pumped oil feed system.

The burner must not be installed on a negative head oil supply system.

If a gravity system is used the base of the tank must not be less than half a metre or more than three metres above the burner.

A 100-micron filter must be fitted and the minimum fuel line diameter is 8 mm but this is dependant upon the length of run.

Two remote acting fire valves such as a Teddington KBB C 150 deg F with suitable length capillary must be fitted.

One at low level and one at high level.

The low-level phial bulb being mounted near to the appliance.

Both valve bodies must be fitted at the point where the fuel line enters the property.

(This is a statutory safety requirement of the building regs.)

There must also be a stop valve fitted by the side of the appliance in a conveniently accessible place.

8. ELECTRICAL REQUIREMENTS.

The converted cooker must be earthed.

A neon-fused switch must service any supplies taken to the cooker with a 3-amp fuse fitted.

When the appliance is not in use the electrical supply must be isolated.

9. VENTILATION.

Air Supply To The Burner

It is most essential that a permanent free air supply be established, as the burner cannot function correctly without it.

Provision for an adequate FREE air supply in to the room where the appliance is fitted is required.

This will take the form of a purpose designed, NON hit or miss, air vent of 30.5 sq cm cross sectional area.

If an extractor fan is fitted in the same room as the appliance then provision for extra compensatory air must also be made.

(This is a statutory safety requirement of the building regs.)

10. REGULATIONS.

After CONVERSION, the completed system must comply with the current requirements of the relevant local building regulations,

In England and Wales these are J 1-2-3 Provision for introduction of air supply and discharge of products of combustion.

Provision for protection against fire and heat.

In Scotland Part F sec 3. In Northern Ireland Part L.

In Ireland Part J.

British IEEE wiring regulations, latest edition.

Codes of practice which apply in the UK are -:

BS5410, installation of oil fired space heating and hot water supply Part 1, boilers of rated output not exceeding 44KW

BS4543, Specification for chimney for oil fired appliances. Part3.

BS5449 central heating for domestic premises Part 1 Forced circulation hot water systems.

11. FITTING THE KIT.

Clean chimney, check and adjust the chimney vacuum (0.02" - 0.06" w.g.) and provide a cleaning access (min diameter 5" for linings.)

If applicable, check out the existing hot water system.

Install fuel tank and run a fuel line up to the firebox side of the appliance.

If necessary, modify the electrical supply.

Fit suitable ventilation into the appliance site.

Remove the hot plate.

REMOVING THE FIREBRICKS.

Remove the thick front firebrick beneath the fuel-loading door.

(This is a time consuming job, don't rush and take care not to apply too much pressure as the front casting of the appliance is only thin and can be easily broken.)

Remove the oven side bricks.

Remove the lower sham side brick and this will then allow access to the cast iron plate fitted over the riddling grate, which can now be removed.

Fig 1

Shows bricks and riddling grate removed but the cast iron grate carrier still in place



Fig 2

Shows the riddling grate and the grate carrier removed.



Remove the fuel-loading door and remove the cast iron protection plate attached to it.

(Note it may be necessary to drill the head off the old fastener and use stillsons on the stub to remove it.)

Clean the door inner surface and paint it with heat resistant matt black paint.

REMOVE THE ASH PAN.

SEAL THE RIDDLING LEVER.

Push the riddling lever fully in and apply fire cement to the mechanism to prevent any further movement.

VAC THE DEBRIS OUT.

Thoroughly vacuum out all the dust and debris. from the appliance, the ash pan area must be free from all traces of ash.

CHECK FIREBRICKS.

Check on the condition of the, sham (opposite oven) side firebricks and if necessary replace the upper one, a new lower one comes in the board kit supplied with the conversion.

CHECK THE HOT PLATE SEAL.

Make sure that the ceramic rope seal, on to which the hotplate sits, is in good condition and not over compressed, if it is not forming a good airtight seal with the closure plate, renew it.

REMOVE THE FLUE BOX DAMPER PLATE.

Remove the sliding damper in the flue box and seal the opening left by the sliding damper with fire cement.

LOCK THE AIR VALVE OPEN.

It is essential that as much cooling and combustion air as possible be allowed to circulate around the burner.

A permanent free air supply must be established, as the burner cannot function correctly without it.

To achieve this it is necessary to fully open the spin valve which is located in the ash pan access door and lock it permanently in this position by use of either a lock nut, or a (suitably positioned) drilled hole and split pin.

FITTING THE BOARDS AND POT.

NOTE ALL THE INTERNAL COMBUSTION CHAMBER PHOTOGRAPHS ARE TAKEN FROM THE BACK OF AN APPLIANCE EXCEPT THE FIRST ONE.

Before permanently fitting the boards, try a dummy run, to make sure everything fits before final permanent fitting and fire cementing.

Remember that the pot must be fitted in to the cooker through the fuel loading door and the descalling adaptor fitted later, when the pot is in position.

Fit the metal base closure plate diagonally as illustrated.

Fig 3





Fit it down on to the existing cast ledge and push it to the front of the appliance, centering it equally in the width of the combustion chamber.

Note, Make sure that the base closure plate is levelled so that oil will flow very slightly towards the base of the lighting port tube.

The top closure plate need to be fitted concentrically over the hole in the front and rear vermiculite boards.

To see what is required, lay the top closure plate down flat and position the two half boards concentrically on top of it. You will see that there is enough clearance for the pot fasteners to penetrate through the metal plate without touching the edge of the circular cut out.

Fit closure plate boards with the cut out to the front oven side.

It may be necessary to trim the boards to fit.

The back of the rear board may need to be chamfered slightly to fit up against the rear brick or boiler whichever is applicable.

Fig 6 Photograph taken from rear of appliance



TRIM BOARDS AS REQUIRED FOR NEAT FIT

FIG 6-1



FIG6-2



Fit top closure Plate making sure that it is concentric about the boards.

Fig 7



Fit the Pot and rotate the lighting port tube to the correct position

Fig 8



Note the pot comes with the descaling device pre fitted, remove it before fitting the pot, and refit it afterwards.

Lower the pot through the top plate and work it down through the boards and lower closure plate.

Whilst this is being done the lower plate and support boards will become disturbed. Make sure that everything is adjusted to fit back in its correct place.

The 4 holes in the top plate are to allow the two boards to be pushed up tight together at the centre joint and lock the board into position by using the 4 large self tappers and repair washers as illustrated below.

Use silicone sealant between the closure plate and the pot mounting flange to form an air tight gasket.



Make sure that the lighting port and oil inlet are in the correct orientated position.
Fig 8a shows pot orientation for a left hand oven appliance.



Fasten the pot to the closure plate with the M5 fasteners provided.

Fig 8b

Fit the Front Board and vertical sealing ropes as shown in Fig 8b and 8c.



Fig8c



Fit the Side Boards and the rear sealing rope as shown in Fig 9

Fig 9

Shows the front and two side boards and sealing rope fitted.



Fit the fuel-loading door masking plate and using it as a template mark out and cut a circle through both boards to accommodate the barometric damper and mounting plate as shown in Fig 12

Fig 11

Shows the damper fitted to the damper plate



Fig 12

Shows a left hand oven cooker with the damper plate and burner fitted. Carefully seal around the damper plate with a neat fillet of silicone.



WHEN YOU ARE HAPPY WITH THE DUMMY RUN PROCEED AND FIT EVERYTHING PERMANENTLY FIRE CEMENTING THE BOARDS IN PLACE AND FILLING ANY GAPS WITH FIRE CEMENT AS YOU GO.

Note

1. Take care not to get fire cement into any of the holes in the burner pot.
2. Make sure that the base closure plate is levelled so that oil will flow very slightly towards the base of the lighting port tube.

Fit the descaling device ready to accept the oil supply pipe work.

FIT THE OIL CONTROL VALVE.

After fitting the pot, it will then be possible to fit the oil control valve bracket to the oil level mark established as follows.

Measure the 20 mm from the bottom of the pot and make a mark on the side of the pot.

Fig 14



Measure from the floor to the 20mm mark on the pot and transfer this total dimension round to the OPPOSITE OVEN side of the appliance.

Fig 15



Mark out and fit the oil control valve bracket using the large dia self tapping screws provided, by lining the oil level notch on the side of the bracket with the transferred mark on the side panel.

Make sure that the valve is fitted about 150mm back from the front casting.

Fig 16 Left hand oven Royal



Using the two M8 setscrews, fit the oil control valve to the bracket and check that everything lines up.

Level the oil control valve in both directions and carefully pipe up to the burner pot, making sure that the pipe work is accurate so as not to transfer any lifting or twisting moments on to the oil control valve or pot, subsequently disturbing the now established levels,

To get the oil feed pipe work through the side of the appliance it will be necessary to mark out and drill through the inner and outer skins of the appliance, this is an awkward job requiring some patience.

When this is done pipe up from the oil valve in to the descaling device using the 8mm dia steel bundi tubing supplied with the kit.

FIT THE BAFFLE KIT.

Fig 18



The baffle kit is awkward to fit as the lower flat plate of the baffle has to be fitted diagonally across the firebox and then rotated down into its final position with the upper part fitting over the oven top casting and pushed under the hob secured by an M4 fastener, it may be necessary to trim both the back edge of the baffle to allow it to go under the hob and the baffle plate which fits down into the combustion chamber.

12. COMMISSIONING AND FINISHING OFF.

Commissioning takes the form of separate activities as detailed -:

1. Lighting and setting up the burner to give good combustion.
2. Setting up the appliance to perform as per the customer's requirements.
3. Showing the customer how to -:
 - 3a Operate the appliance controls.
 - 3b The fuel supply system,
 - 3c. All of the safety features, isolation devices, and resetting procedures.

BEFORE TEST FIRING THE BURNER.

Note

(When first lighting the burner, it will be necessary to remove the baffle, in order to see the flame, when the flame is set and running correctly, the baffle must be refitted.)

Remove the hot plate

Remove the Baffle plate

Remove the internals of the burner if they have been fitted already.

Vac out the base of the burner.

Remove the barometric damper and tape (gas tape) a piece of ceramic glass up to the damper opening in the front of the fuel loading door so that you can see the flame throughout the ignition and commissioning process.

TO TEST FIRE.

1. Turn on the oil supply to the oil valve.
2. Turn on the electrical supply.

We supply more than one type of oil control valve with conversions and normally we supply a separate specific booklet relative to the valve fitted.

Refer to this booklet for all information relative to the operation, servicing and adjustment of the particular valve used on this appliance.

Make sure that the valve is activated and turned on to allow oil to flow at its lowest setting.

Wait a few minutes until fuel starts to flow into the pot.

Look through the hot plate aperture and down in to the base of the pot to see if the oil is running into it.

Make sure that the oil is running towards the bottom of the lighting port tube and not away from it.

(The oil must gather in a small pool, at the bottom of the lighting port tube, no bigger than a small biscuit,)

When you can see the pool is formed turn the oil off, refit the burner inners

Circular flame ring

Tubular catalyser body

Refit the hot plate but not the baffle kit.

Remove the lighting port plug and impale a small piece of fire lighter onto the spike.

Remember that there is a skill involved when lighting oil burners, you must make sure that the pot stays alight during the lighting process and you must also carefully control the flow and build up of oil in the pot.

If there is a decent chimney vacuum, oxygen in air will be drawn into the pot to keep it alight, if there is no or very little chimney vacuum there is a possibility that the burner could rapidly go out by consumption of available oxygen in the pot and consequently extinguish itself.

If this occurs turn the oil off to the pot and start again after the pot has cooled down.

DO NOT ATTEMPT TO RE LIGHT A HOT BURNER.

Therefore the skill is -:

Make sure that there is a chimney vacuum.

Make sure that the right quantity of oil is in the right place.

Turn the oil on to the first position via the flow control knob and when oil can be seen to trickle into the pot turn it off so as not to allow an excessive build up.

Make sure that the oil is running towards the bottom of the lighting port tube.

It should gather in a small pool, at the bottom of the lighting port tubes, no bigger than a small biscuit.

When the oil has formed the small pool, turn the oil **off**.

Fit a small piece of firelighter on to the lighting port plug spike, light it and push it down into the oil at the bottom of the lighting port tubes making sure that it drops into the oil.

Look through the ceramic glass and watch for signs of flames.

You should be able to see small yellow flames in bottom of the pot.

When you are sure that the pot is alight, turn the fuel flow on again at the lowest setting for 30 seconds and then, turn it off again.

Allow another 30 seconds to elapse and when you are sure that the pot is alight turn the oil **on** to the pot and let the flame establish on low fire.

When the pot is running on low fire gradually turn the oil flow up to setting 3 and let the chimney warm up.

When the pot is running on setting 3 and the chimney has warmed up check the chimney vacuum and make sure that it is between .02" W.G. minimum and .06"W.G. maximum

When you are happy with the flame picture check the high and low fire running.

LOW FIRE ADJUSTMENT.

When the burner has been running for five minutes on position 1 LOW FIRE the lower catalyser will be glowing dull red, with blue flame hovering above the catalyser, if this is not the case adjust the low fire screw accordingly.

HIGH FIRE ADJUSTMENT.

When you are happy with the low fire running turn the burner slowly and progressively up to full fire, this should produce a conical wispy blue flame with just the odd touch of yellow. If there is excessive yellow reduce the high fire accordingly.

When you are happy with the flame picture on high and low fire you must then check the action of the APPLIANCE TEMPERATURE CONTROL mechanism if it is fitted.

When you are happy that everything is in order, turn the burner off and let it cool down.

SHUTTING DOWN.

Turn the oil flow control knob fully clockwise until it is in the "0" position

Raise the safety lever of the regulator to cut off the oil flow. (valve dependant, check with the separate)

Turn the power off to the appliance.

Rebuild the appliance refitting the damper and baffle and explain to the customer how it all works.

CONTROLS.

See the specific sheet supplied with the equipment for valve type details.

13. SPECIFICATIONS.

Oil Control Valve

Oil Flow Rate 4cc - 13cc (Vacuum Dependant)

Burner Gross Output 2 - 7 kW (Vacuum Dependant)

Heat output 1.6 - 5 kW (Vacuum Dependant)

Flue Gas Flow .0025 m/s.

14. FAULT FINDING.

1. RACING.

1. Audible vibrations generated by the flame caused by too much oil in the pot.
2. Turn off the oil flow until the burner has settled down to a steady burn rate and then turn the fuel on again but don't let the flame go out otherwise the burner **MUST** be allowed to cool down fully before a re-ignition is attempted.

2. FLUE VACUUM.

1. The pot type burner is extremely sensitive to flue vacuum variations.
Excessive wear will occur to the catalysers and burner if the appliance is subjected to conditions of continuous or intermittent high flue vacuum.
2. Good combustion will not be possible unless our instructions on chimneys and flue vacuum are followed.
3. If the burner does not burn with a blue flame, recheck the chimney vacuum and oil flow rate.
4. If the burners do not run well check that the seals in the appliance are good and that there is no ingress of air into the appliance flue ways.
5. Check that the swinging dampers are not jammed open.
6. Check that the correct fuel oil is being used.
7. Check the levels of the oil valve to pot,

3. BURNER RUNS SOOTY.

If the problem has just started it may be

- a. The fuel,
- b. An unusual wind condition,
- c. Damper jammed or stuck open, causing a loss of flue vacuum.
- d. Obstruction in the chimney causing a loss of vacuum.
- e. Burner to closure plate seal U.S.
- f. Door not sealing.
- g. Damaged door glass.
- h. Burner carboned up.
- j. Carbon deposits in the oil inlet pipe.

(Remove the feed pipe between the pot and the oil valve and clean it out.)

- k. Excessive fuel flow on high fire
 - L. Inadequate fuel flow on low fire.
 - m. Inadequate air for blue flame combustion.
2. Check that the chimney is correctly lined and backfilled with vermiculite, particularly important on exposed gable end chimneys.
 3. Check that the fuel is the correct type and quality.
 4. Check that the flow rates are correct.
 - 4a. Check the flue vacuum and all these potential problems, before carrying out any adjustments to the flow rates.
 5. Where burners are run at high fuel flow rates on low chimney vacuums, long unsatisfactory yellow flame combustion and bad sooting will occur.
 6. To rectify this problem reduce the high fire flow rate screw on the Oil Control Valve until blue flame combustion occurs.
 7. Never switch from low settings to high settings, a longer burner life will be achieved if the regulator is moved only by one number at a time leaving approx one minute between each setting change.

4. BURNER DOES NOT LIGHT EASILY.

1. Check the level of the bottom of the pot and make sure that the oil flows very slightly towards the lighting port.
2. Check the chimney vacuum cold.

(.02" Min)

3. Check that all the seals in the appliance are sound.
4. Check that the swinging dampers are not jammed open.
5. Check that oil is flowing freely into the pots.

5. OIL WILL NOT ENTER THE POT.

1. Check that the safety cut out lever has not been accidentally shut off.
 - 1a. Check that the isolation valves have not been turned off.
 - 1b. Check that the fire valve has not tripped off.
 - 1c. Check that there is oil in the main tank

2. If it is not possible to reset the safety cut out lever phone us for advice.

In case of failure of the first float the second one catches the excess oil and trips the safety cut out lever, making it impossible to reset.

(OCI VALVES ONLY)

3. Simulated failure can occur if a full oil control valve is disturbed causing the secondary float chamber to flood.

If flooding occurs, check out the cause before de-flooding the safety float chamber.

To de-flood it, remove the top aluminium cover plate and depress the secondary float down into the chamber to remove excess oil by displacement.

After excess oil is removed it will be possible to re cock the valve.

4. Disconnect the outlet from the valve and check for oil flow.
5. Disconnect the inlet to the descaling device and check for oil flow.
6. Remove the descaling spindle and check for obstructions

7. OPERATING FLOW RATES.

Flow rates are shown in cc per minute.

Min	max
4cc	13cc

To achieve optimum burner performance at these flow rates you will need to have matching flue vacuums as stated.

If the chimney does not generate enough vacuum the flow rate will have to be adjusted so that the burner maintains equilibrium, i.e. blue flame combustion.

This will result in lower output from the appliance.

8. OIL SMELLS.

Carry out a visual check on all joints for obvious leaks.

Check that the descaling lever packing gland nut is adjusted.

15. SERVICING.

NEVER TRY TO RELIGHT A HOT BURNER, WAIT UNTIL IT HAS COOLED DOWN.

Full Servicing should be carried out at six monthly intervals.

The pot should be cleaned out every 8 weeks.

Service engineers should request a copy of the servicing schedule from our sales desk.

Schedules will also be available from our web site <http://www.oilstoves.co.uk>

16. PACKING LIST MAJOR ASSEMBLIES.

VAP BOARD KIT.

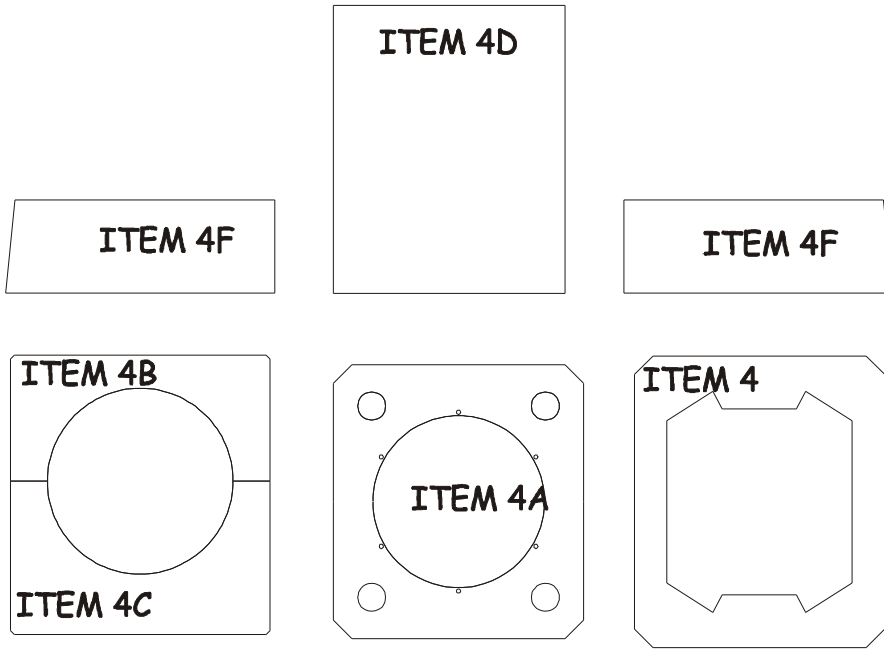
Item No	Description	PART NUMBER	Qty	Check
1	Baffle	87-07-100	1	
2	Plate Kit	87-15-220	1	
3	Pot Assembly Complete	87-08-100D	1	
4	Oil Control Valve Assembly Complete	87-08-100H	1	
6	Oven Stat Assembly			
7	Board Kit Complete	87-05-100A	1	
8	Sundries Pack	87-16-220	1	

17. PACKING LIST SUB ASSEMBLIES.

Item No	Description	PART NUMBER	Qty	Check
1	Burner Pot With M5 Fasteners	78-01-170	1	
1a	Catalyser Body	78-01-173	1	
1b	Burner ring	78-01-176	1	
1c	Descaling Attachment	78-01-100	1	

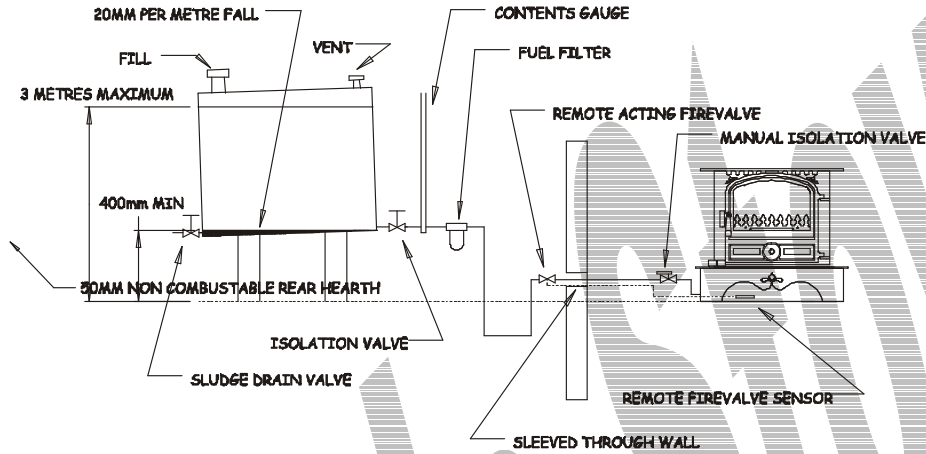
3	Oil Control Valve		1
3a	8mm x 8mm straight compression	77-01-717	2
3a1	8mm Dia bundi tube x 500mm length.	87-01-220/3G	1
3b	Self Tapping screws	77-02-151	2
3c	Oil Control Valve Support Bracket	87-01-501/16	1
3d	M8 Setscrews	77-02-028	2
3e	Repair Washer	77-02-111	2
4	Lower Closure plate	87-01-220/4	1
4a	Upper closure plate	87-01-220/4A	1
4b	Front half base board	87-19-100/4B	1
4c	Back half base board	87-19-100/4C	1
4d	Front Insulation Board	87-19-100/4C	1
4e	20 mm dia rope for front and base board sealing 1 metre long to cut as required.	77-01-922	1
4f	Lower oven and opposite oven side boards	87-19-100/4F	2
5	Barometric Damper mounting plate	87-18-100A	1
5a	Barometric damper	78-01-200	1
6	Baffle	87-07-100	1
8	Fire Valve	77-07-004/C	1
9	User instructions		1
9a	Installer instructions		1

18. BOARDS AND CLOSURE PLATES



19. ILLUSTRATIONS.

FIG 19 OIL FEED DETAILS.
STOVE POSITIONED LOWER THAN OIL TANK



STOVE POSITIONED HIGHER THAN OIL TANK

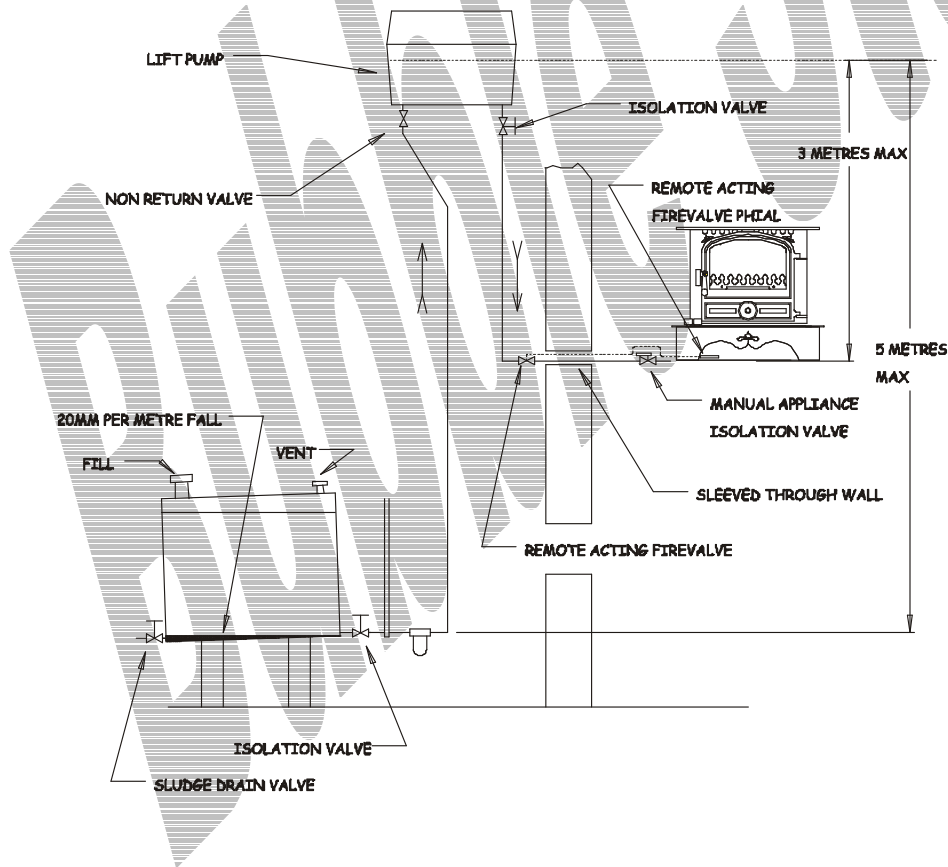


FIG 20 COOKER SECTION.

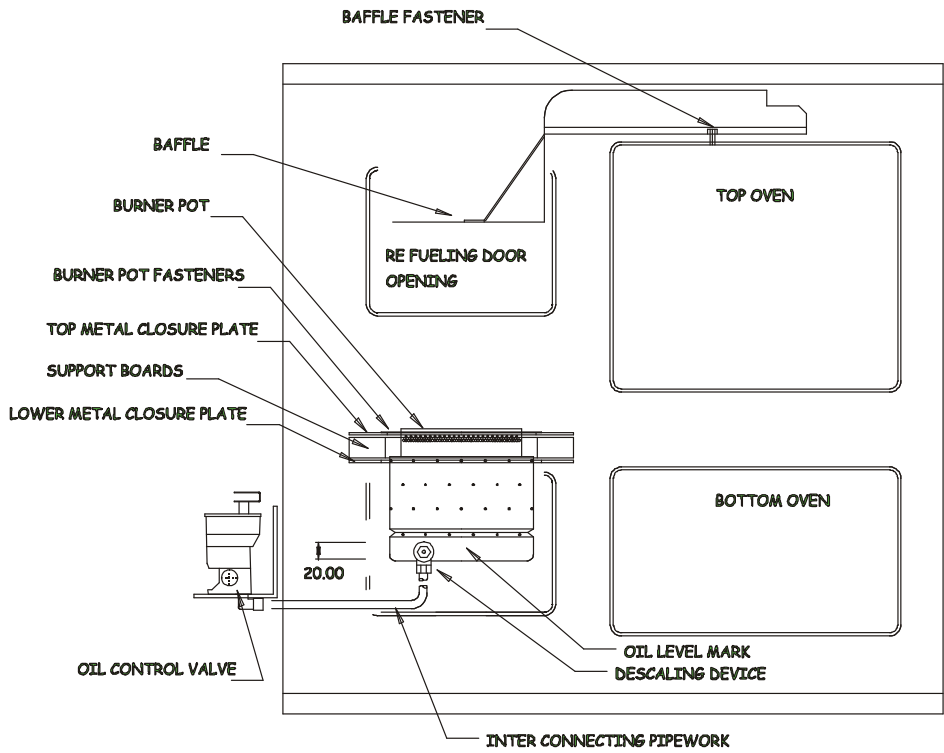
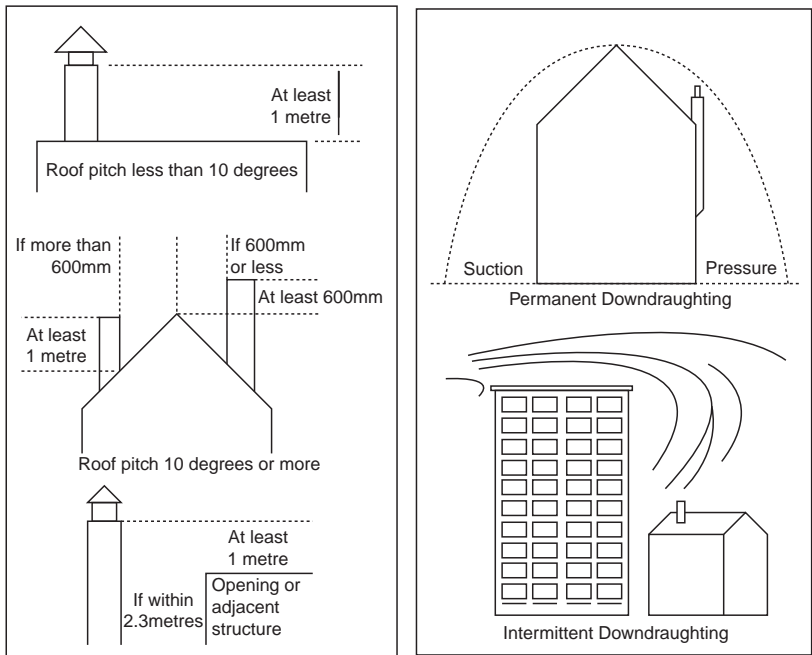


FIG 21 CHIMNEY TERMINAL DETAILS.



19. OPTIONAL EXTRAS.

THE OVEN STAT.

The oven stat is wired in series with the water stat (if it is fitted) and mounted in a plastic enclosure fitted to the top, opposite oven, side panel.

The installer has to drill a 5mm dia hole in the top front corner of the appropriate panel to allow the phial and capillary to be fed across the fuel loading door opening and into the oven via the top front corner.

The capillary can be hidden behind the damper mounting plate as shown in fig 12.

The phial is held in place by the small stainless steel bracket provided

The oven stat has a sensing bulb and a small diameter capillary tube which should be carefully unwound and neatly fitted, making sure that the capillary tube and bulb cannot be bent, trapped or damaged.

Remember damage to the tube or bulb will prevent the thermostat from functioning.

Obviously the bulb is fitted in a support bracket at the front of the oven as illustrated below.

Note the photo is of a Rayburn Supreme.

Fig 22



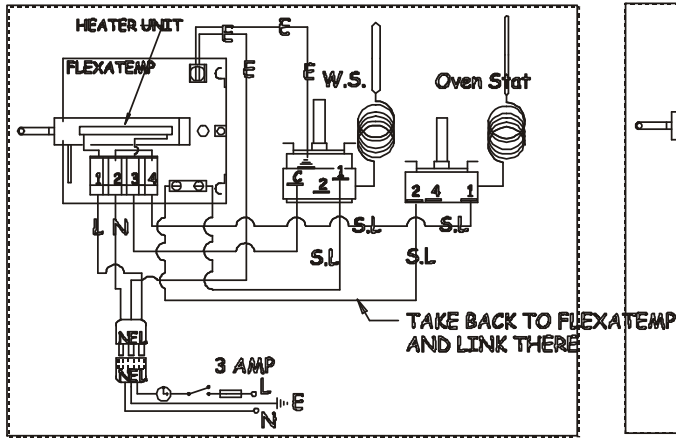
The capillary runs across the front of the appliance through a guide tube located across the front of the refuelling door.

Care must be taken when fitting the guide tube which is positioned so as to allow the subsequent, convenient replacement of the stat should it ever fail.

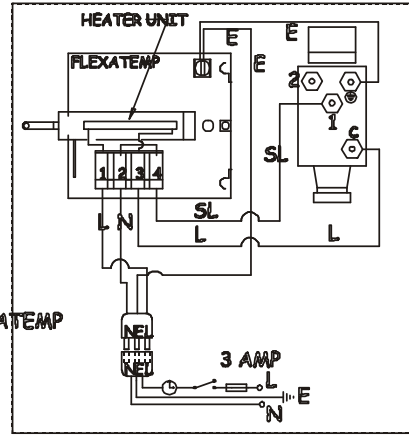
The bundi guide tube is fitted into a trough, which the installer has to cut into the primary front board above the cut out for the swinging barometric damper.

When the damper and plate (fig 12) are fitted it should cover the bundi conduit tube.

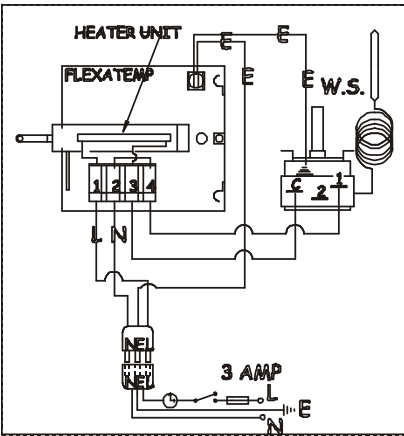
1. FLEXATEMP - WATER AND OVEN STATS



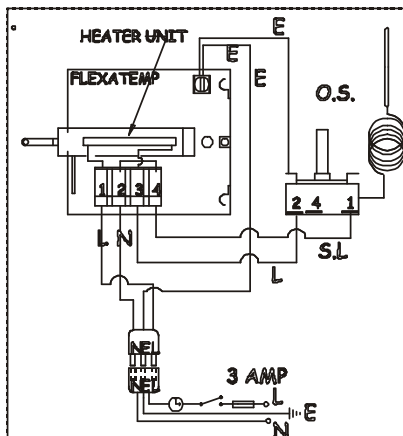
2. FLEXATEMP - CLIP ON PIPE STAT.



3. FLEXATEMP - WATER STAT.



4. FLEXATEMP - OVEN STAT



L = 230V LIVE CONDUCTOR
 S.L = 240V SWITCHED LIVE CONDUCTOR
 N = NEUTRAL CONDUCTOR
 E = EARTH CONDUCTOR
 O.S. = OVEN STAT.
 W.S. = WATER STAT.

20 AMMENDMENTS LIST

08-03-04 Notes on Bundi Tube and Sealing Ropes added.

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Only approved personnel, WHO HAVE BEEN SUITABLY TRAINED, may carry out maintenance on this product.