

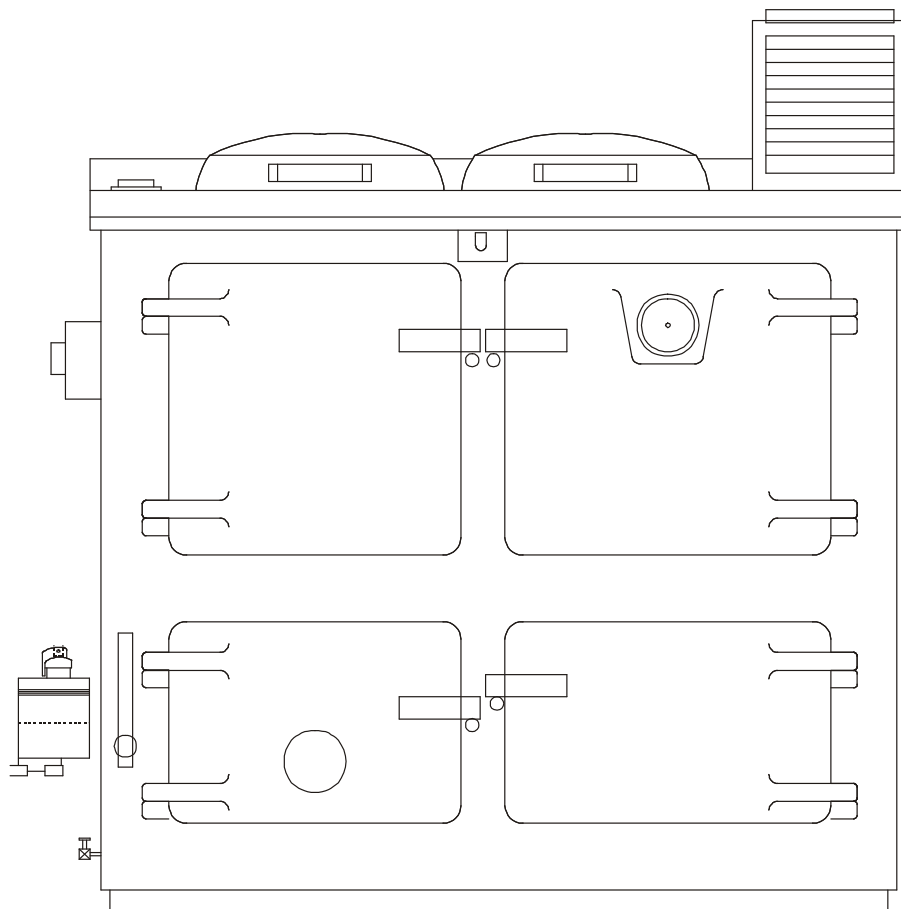


Vaporising Pot Conversions

Rayburn Supreme

USER INSTRUCTIONS

Issue 1



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1-1. HEALTH AND SAFETY

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

1-5. WARNINGS

1. This user hand book represents an integral and essential part of the product and as such must be kept by the user.
2. All the information contained in the hand book should be thoroughly read and understood prior to using or attempting to use the appliance to which it refers.
3. The appliance must only be used for the purpose for which it was designed.
- 4. Installation, maintenance, servicing and repairs must be carried out by professionally qualified personal and in compliance with the relevant standards in force on the subject and in accordance with the manufacturers instructions.**
5. Only approved original parts must be used for repairs.

6. Incorrect installation, use or inadequate maintenance can cause damage to people and property, in such cases the manufacturers shall not be held responsible.

7. Should the appliance be sold or transferred to another user, always ensure that this handbook accompanies it.

8. Never try to relight a hot appliance; wait until it has cooled down, hot oil vapour can be explosive.

9. Never try to light a flooded pot.

When attempting to light a stove make sure that the pot is not flooded with oil, by looking into the base of the burner.

If the pot is flooded, remove the excess oil as per instructions in the fault finding section.

1-8. VENTILATION

For correct operation of the appliance there must be an adequate supply of uninterrupted fresh air.

Where purpose made ventilation has been provided make sure that it is not blocked or obstructed.

If no purpose made ventilation has been provided make sure that your installer informs you of the reason.

2. HOW IT WORKS

The converted appliance generates heat from burning oil mixed with air in a vapourising pot located in the bottom of the appliance.

The Oil Flow

Once ignited and up to running temperature, oil vapour goes into the pot at a steady and controlled rate via a gravity flow, metered by the OIL CONTROL VALVE.

The oil flow can be controlled from minimum to maximum or any setting in between determined by where you set the oil flow control knob.

The Air Flow

Air is sucked into the pot by the natural action of the negative pressure in the chimney and to allow the chimney to work correctly it is essential that you have adequate ventilation into the room where the stove is situated.

The Fuel Air Ratio

The amount of oil which can be successfully burned is directly proportional to the amount of air that the chimney can draw into the pot and so to achieve adequate combustion there must be a balanced and appropriate flow of both oil and air.

The air side of the equation can vary wildly with the changing performance of the chimney and so to part compensate for this, the appliance has a built in swinging barometric damper or combustion air restrictor.

Both of these devices are designed to control conditions of excess chimney vacuum.

The flow of oil into the pot can be adjusted via the knob on top of the oil control valve.

With the increased flow of oil extra heat is generated which in turn stimulates the chimney to work harder and consequently draw more air into the pot to maintain an adequate fuel air ratio.

4. CONTROLS LIST

OIL CONTROL VALVE DETAILS

1. The output of the appliance is regulated by the amount of oil allowed to go into it and this function is controlled by the:

OIL CONTROL VALVE (O.C.V.)

The valve is situated on the left hand side of the appliance and information about the valve is provided in the separate booklet.

THE LARGER of the knobs controls the flow of oil into the pot and can be rotated to adjust the flow of oil from minimum to maximum or any setting in between, determined by where you set it.

FULLY CLOCKWISE TURNS THE APPLIANCE OFF, FULLY ANTICLOCKWISE IS FULL OUTPUT,

(The installer will have pre set the maximum and minimum settings up during the commissioning stage.)

The small lever on the side of the valve is used to turn the oil on and off. Press for on and Lift up for off.

4- 10. DESCALING CONTROL

NOTE WELL

The descaling lever must not be touched whilst the burner is running; it gets very hot and if touched, will cause burning.

The descaling device is situated at the point where the oil feed pipe goes into the vaporising pot.

It consists of a brass tee piece with a bent metal lever protruding out from its center.

The lever is used for descaling carbon build up from the inside of the oil inlet connection.

Rotate the lever occasionally to remove any carbon build up at the point of oil entry into the pot.

The descaling device has a gland packing nut which must be tightened occasionally to stop oil fume leak.

The sealing bush inside the descaling device will need to be replaced every year depending upon the use frequency.

5-0 RUNNING THE APPLIANCE

Before attempting to light the burner you must familiarise yourself with all aspects of the specific oil control valve detailed within the booklet.

The appliance will be controlled via the existing thermostat.

When attempting to light a burner these are the rules, which must be followed.

1. Always make sure that the pot is not flooded with oil by looking down into the base of the pot.
2. Never try to light the burner if it is flooded with oil.
3. **Do not light the burner and leave it unattended until it is settled down and stabilized into blue flame combustion on low fire.**

(This will take approximately 10 to 15 minutes.)

Lighting the burner

2. Manual Lighting Through the Lighting Port

1. Make sure that the oil safety cut off knob is lifted (tripped off) via an audible click.
2. Check that the isolation valve is turned on.
3. Press the oil safety cut off knob down to trip the oil on via an audible click.
4. Open the ashpit door.
5. Remove the lighting port plug by pulling it out of its tubular socket.

6. Turn the oil on to the first position via the flow control knob and leave it turned on for about a minute. This should allow enough oil to flow into the pot to form a small pool about the size of a biscuit.

7. THEN TURN THE OIL OFF.

8. Cut a small piece of firelighter and stab it onto the spike.

9. Light it and push it into the lighting port tube, let the firelighter drop off the spike into the bottom of the pot.

10. Replace the lighting port plug back into the tube.

12. Wait for approx 1 minute until the pool of oil is alight and then **turn the oil on** to minimum setting no 1 ON THE OIL VALVE CONTROL KNOB.

13. Watch the appliance for a few minutes until it settles down into blue flame combustion.

14. Allow the burner to run for a further 20 minutes before turning the appliance up to the higher settings.

15. **If at any time during the ignition process large amounts of flame can be seen, turn the oil off immediately and wait until they die down before putting the oil on again.**

Excess Flames During Ignition

If at any time during the ignition process large amounts of flame can be seen, turn the oil off immediately and wait until they die down before turning the oil on again.

When the burner has been running for ten to fifteen minutes move the oil flow control knob round to position 3 and leave for another ten minutes after which the burner can be run up to full output.

Correct Low Fire Running

When the burner is running correctly on position 1 (LOW FIRE) the lower catalyser will be glowing dull red.

Keep an eye on the low fire and if a dirty yellow flame can be seen, call your service engineer to re adjust the oil flow or service the burner.

Correct High Fire Running

On full output, after approximately ten minutes, the burner should be running in blue flame combustion, it can be adjusted from mini to maxi via the oil flow

control knob, take care to move it by one increment at a time allowing a few minutes between each increment.

NEVER TRY TO RELIGHT A HOT BURNER, MAKE SURE THAT THE BURNER IS COMPLETELY COOLED DOWN BEFORE RE LIGHTING.

Burner Pot

Occasionally scrape away any hard carbon deposits from the bottom of the burner pot and remove debris with a vacuum cleaner.

7-0 EXTINGUISHING

Shutting the burner off is a very simple manoeuvre.

Turn the oil flow control knob FULLY in a clockwise direction until you feel it stop in its off position.

After a few minutes, the flame will die down and eventually extinguish itself.

DO NOT TOUCH THE STOVE UNTIL IT HAS COMPLETELY COOLED DOWN.

NEVER TRY TO RE LIGHT A HOT BURNER, MAKE SURE THAT THE BURNER IS COMPLETELY COOLED DOWN BEFORE RE LIGHTING.

8-0 FUEL SUPPLY INFORMATION

Your Fuel is stored in an oil tank, which should incorporate the following features.

Fuel Gauge

A fuel gauge, which can be in the form of a numbered circular dial or a site glass into which oil is fed so as to indicate the amount of oil in the tank.

Isolation Valve

A manually operated isolation valve on the tank, usually a gate valve.

Fuel Filter

A fuel filter to filter out any small particles of dirt or contamination, which may get into the oil or tank.

Safety Shut off Valve

An automatically operated safety valve designed to shut off the oil supply should a fire occur near to the stove.

Isolation Valve

A manually operated isolation valve near to the stove to allow you or the service man to turn the oil off should the need arise.

If you allow the stove to run the oil tank dry it will obviously go out.

Before filling the fuel tank you must make sure that the oil valve is tripped to it's off position, otherwise the pot will flood.

Flooded Pot

If the pot floods do not attempt to light the stove until the excess oil has been removed from it.

10-0 ROUTINE MAINTENANCE

Routine maintenance generally takes the form of good house keeping where cleanliness is the order of the day.

If you don't understand some of the following notes it would be advisable to employ the services of a qualified engineer to carry out the work for you on a regular basis.

There are components in the stove which will need replacing from time to time and depending upon which model of stove you have purchased these are -:

- 2-1. Upper catalyser. (Burner component)
- 2-2. Lower catalyser. (Burner component)
- 2-3. Flame ring. (Burner component)
- 2-4. Burner pot. (Burner component)
- 2-5. Descaling device packings. (Burner component)

There are components in the oil supply line which need to be kept in good condition and serviced regularly, depending upon the frequency of use.

Before carrying out any of the following procedures, make sure that the stove is turned off and fully cooled down

Every 4 Weeks

1. Operate the descaling lever by turning it completely two or three times.

(Rotate the lever to remove any excess carbon build up and vac out the debris. From the bottom of the pot immediately around the oil inlet port)

Every 8 Weeks

Clean the burner completely by removing all the inner components as follows,

Remove the hot plate

Remove the baffle system.

Remove upper catalyser and upper ring.

Remove the lower catalyser.

Scrape the bottom of the pot clean and remove all carbon build up.

Reassemble in the reverse order.

If you notice any unusual oil smells or leaks do not attempt to light the stove, call the service engineer.

Every 24 weeks

Tighten up the gland nut on the descaling device to eliminate possible oil vapour smells.

After each Heating Season

Have your service engineer

1. Replace or clean all the filters in the oil supply line.
2. Carry out a full service on the appliance.
3. Inspect the burner for signs of damage or wear.

Every 2 Years

Have your service engineer clean out the filter and check the function of all the safety equipment associated with the stove, oil supply and plumbing system.

Remove and clean out the oil supply pipe from the valve to the pot.

As Required

Keep the burner inners in good condition, replace as necessary.

11-0 FAULT FINDING

1. Racing

Audible vibrations generated by excessive flames during the lighting process caused by allowing too much oil to build up in the pot or excessive chimney draught.

Turn the oil off and wait for the flames to die down.

When the burner has settled down to a steady burn rate, turn the fuel on again at setting 1.

If the condition persists shut the stove off and call a service engineer.

2. Flue Vacuum or Chimney Pull

The pot type burner is extremely sensitive to flue vacuum variations or chimney pull.

There are five possibilities.

1. Normal chimney conditions.
2. Downdraughting where air is blown down the chimney.
3. Vortexing where one side of the house is under a negative pressure and when an window or door is opened on the negative pressure side air is sucked down the chimney and out through the door or opening.
4. Low vacuum conditions.
5. Intermittant or continuous high vacuum conditions.

Good combustion will only be possible if the appliance is run in conditions of normal chimney vacuum as stated in our installation manual.

It is the responsibility of the installing engineer to access whether or not the chimney is capable of performing as per our specified instructions in the installer booklet.

(Between .02" and .06" W.G. stove dependant, under all conditions.)

In **low chimney vacuum conditions** the burner will run sooty and produce a carbonising flame.

In **high chimney vacuum conditions** the burner will produce a small steely blue oxidizing flame and the appliance will not produce much heat output.

Do not attempt to light or run the appliance in any abnormal chimney conditions.

If you suspect that either of these abnormal conditions are prevalent, turn the appliance off and call your service engineer to carry out appropriate tests.

4. WATER CONTAMINATED FUEL

Because of changing temperatures, condensation droplets can build up on the inside of the fuel tank.

These droplets along with other sources of water contamination can cause a serious problem if not attended to.

Always keep an eye out for water in the oil.

Make sure that you or your service engineer check the filter bowl regularly.

4. Burner Shuts Down and Stove Goes Out

Oil tank empty

Oil in tank at low level.

Water temperature safety stat shut down. (Optional equipment)

Secondary float chamber in oil control valve flooded

Safety trip button accidentally caught and tripped off.

Fire valve tripped off.

Damaged oil feed pipe.

Height of oil control valve has been disturbed.

5. Oil Trip will not Reset

Water temperature safety stat shut down.

Secondary float chamber in oil control valve flooded. (Call serviceman)

6. Burner Will Not Come to High Fire

Water temperature has reached the required setting and is under the control of the thermostat.(Optional equipment)

Oil in storage tank is low or about to run out.

Height of oil control valve has been disturbed.

7. Oil Will Not Flow Into the Pot

Is the secondary float chamber in oil control valve flooded ? (O.C.I.valves only.) **(Service Engineer Required)**

Has the safety trip button been accidentally caught and tripped off ?(O.C.I.valves only.)

Has the oil feed pipe been damaged ? **(Service Engineer Required)**

Has the height of oil control valve has been disturbed ?**(Service Engineer Required)**

Is there oil in the fuel tank?

Has the fire valve tripped ?

Has the isolation valve been accidentally turned off ?

Is the oil turned on at the oil flow control knob on the valve ?

Is the oil feed pipe from the valve to the pot blocked ? (Unlikely) **(Service Engineer Required)**

8. Burner Runs Sooty or with Dirty Flames

Comments made on this subject assume that the appliance has been running normally for some time.

If the burner starts to run sooty and the chimney is operating under normal conditions, this indicates that the fuel air ratio is disturbed and the burner is running fuel rich.

There are two main possibilities when fault finding, either too much fuel or not enough air.

Air is leaking into the combustion chamber.

Check out seal of pot to closure plate. **(Service Engineer Required)**

Check out chimney vacuum. **(Service Engineer Required)**

Check for downdraft. (Air being blown or sucked down the chimney) **(Service Engineer Required)**

Check out prevailing wind conditions.

Check for correct grade of fuel. **(Service Engineer Required)**

Check out oil flow rate. **(Service Engineer Required)**

Check for chimney blockage or partial blockage. **(Service Engineer Required)**

Burner air inlet holes have become blocked due to lack of service. **(Service Engineer Required)**

Oil control valve is faulty. (Unlikely) **(Service Engineer Required)**

Never switch from low settings straight up to high settings, a longer burner life will be achieved if the

oil flow control knob is moved only by one number at a time leaving approx. two minutes between each setting change.

9. Oil Smells

Generally slight oil leaks in the appliance may only be noticed when the appliance is turned off, as the oil vapour will normally be drawn into the appliance and vented off through the chimney.

Do not attempt to light the appliance if there is any trace of oil smell near or around the appliance.

If the appliance is running and there is an oil smell, turn the appliance off and investigate or call a service engineer.

The descaling device has adjustable packing, which may need to be tightened up after first undoing the lock nut

If this does not work then you will need to replace the gland packing, which is available as a service item from your supplier.

Visual check on all joints for obvious leaks.

6-4. BURNER DOES NOT LIGHT EASILY

Read the instructions in the lighting section of this publication.

6-9. DEFLOODING A FLOODED POT

If the appliance is blown out by severe down draughting oil will run into the pot to a depth of approx 15mm and then stop. If this has occurred do not attempt to light the pot until it has been de flooded.

To carry out this procedure you will need:

A small, leak proof plastic bag.

b. A small sponge.

A larger plastic bag for disposal of the residue.

A pair of disposable plastic gloves.

Put a small plastic bag into the stove and sponge from the pot into the bag, when the excess oil has been removed put the plastic bag and sponge into another plastic bag and dispose of it.

6-10. OIL LEAKS

If the stove has blown out or become flooded, oil should not leak from the pot, if it has, check the descaling device gland nut.

13-0 WARRANTY

1. Fill in the warranty form and returned it to us, the information recorded on the warranty form helps us to deal with any problems you may encounter.

2. Where we do not hold returned warranty forms replacement parts would only be issued when we are sure that the appliance has not been damaged by improper use or installation.

3. The warranty covers PARTS ONLY for a period of ONE YEAR and is conditional upon all the requirements of our installation instructions being fully adhered to.

4. LABOUR, TRAVELING OR CONSEQUENTIAL LOSS OR DAMAGE IS NOT COVERED.

We will attend to any legitimate warranty claims (which must be made in writing) but we will make a charge for travelling and labour at cost.

4-1 Glass is not covered under the warranty.

5. ARRANGE FOR SERVICE visits with a service engineer.

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