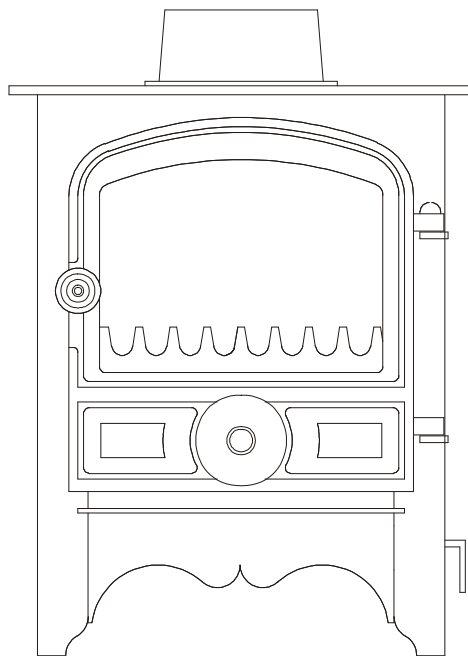




BUBBLE 1 OIL STOVE USER INSTRUCTIONS

11-02-03



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1. INTRODUCTION

The stove is a room heater which burns kerosene in a controlled manner utilising an lined ordinary chimney to discharge the products of combustion.

This stove is designed to run with a coal fired effect kit which will partially create the effect of a coal fired stove.

It must be clearly understood that coal effect will only be available when the stove is running at maximum or near maximum performance which is 5Kw OR 18,000 B.T.U,s PER HOUR.

To prevent the risk of injury through burning it is strongly recommend that a fireguard complying with BS6539 is fitted.

The stove must not be operated with the glass front door opened or cracked, or without the front apron fitted.

The door glass may require light cleaning occasionally depending upon the continuous running time of the stove.

Oil stoves are a relatively new phenomina in the UK and as such there are a few things which you need to know.

1. There are components in the stove which will need replacing from time to time and these are -:

Upper catalyser (Burner component)

Lower catalyser (Burner component)

Flame ring (Burner component)

Descaling device packings.

(Burner component)

Door glass.

Door glass seals.

Door seals.

2. There are components in the oil supply line which need to be kept in good condition and serviced annually

2. HOW IT WORKS

YOUR stove generates heat from burning oil mixed with air in a vapourising pot located in the bottom of the stove.

THE OIL FLOW

Once ignited, oil 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 we

must have 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, designed to spill air into the chimney should the vacuum suddenly increase.

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.

3. TYPES OF STOVE

There are three types of stove.

DRY STOVES

Stoves with out water heating used for space heating only.

SMALL BOILER STOVES

Stoves which will heat space with a little water heating

LARGE BOILER STOVES

Stoves which will heat space with more water heating.

4. CONTROLS LIST

TYPES OF VALVE

There are two types of valve which can be fitted to this appliance.

The appropriate copy of the relative valve info is supplied with the appliance literature.

TOBY VALVE

If your appliance has a Toby DVR valve fitted the main difference is how the oil trip lever works.

On Toby valves it is lift for on and thereafter it will not need to be touched.

OCI VALVES

On OCI valves it is lift for off.

WHAT DOES THE VALVE DO

The performance of the stove is regulated by the amount of oil and air allowed to go into it.

The oil function is controlled by the -:
OIL CONTROL VALVE (O.C.V.)
situated at the rear of the stove.

There are two control knobs mounted on extension shafts.

THE SMALLER of them is a safety fuel cut off button. PULL FOR OFF & PUSH FOR ON and is designed to rapidly cut off the fuel supply into the oil control valve, consequently stopping the stove.

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,

(Your installer will have set these settings up for you during the commissioning stage.)

THE DESCALING LEVER

On the lower right hand side of the stove is the descaling device lever.

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

This lever should be rotated occasionally to clean away any carbon build up.

NOTE WELL

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

5. LIGHTING AND ADJUSTING

When attempting to light the stove 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 stove if it is flooded with oil.

4. Do not light the stove and leave it unattended until it is settled down and stabilized into blue flame combustion on low fire.

(This will take approximately 10 minutes.)

THREE WAYS TO LIGHT THE STOVE

1. Through the lighting port.
2. Through the front door, directly into the base of the pot.
3. Via Electric ignition kit.
(Optional extra)

LIGHTING INTO THE BASE OF THE POT

On the first light up you may find the first option easier, as you can see the oil trickle in to the pot more easily.

You must use a heatproof glove when putting the catalysers back into the pot and it is important to replace them quickly whilst the flame is small.

1. Make sure that the oil is turned off.
2. Open the front door.
3. Carefully remove the coal kit,
 4. Remove the upper catalyser and ring,
 5. Remove the lower catalyser,
 6. Turn the oil on and allow a small pool of oil to flow into the pot about the size of a small biscuit, **then turn the oil off**
 7. Light a small piece of firelighter and drop it into the oil, replace the catalysers and coal kit, and close the door.
 8. Wait for approx 1 minute until the pool of oil is alight and then **turn the oil on** to minimum setting no 1.
 9. Watch the appliance for a few minutes and you will see the

flame establish and settle down into blue flame combustion.

10. Allow the burner to run for a further 10 minutes before turning the appliance up to the higher settings.
11. **If at any time during the ignition process large amounts of flame can be seen, turn the oil off immediately and wait until the flames die down before putting the oil on again at minimum setting.**

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 front 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 allow a small pool of oil to flow into the pot about the size of a small biscuit.
7. **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 and close the cover.
11. Close the front door.
12. Wait for approx 1 minute until the pool of oil is alight and then **turn the oil on** to minimum setting no 1.
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 10 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.

ELECTRIC IGNITION

If your stove is fitted with an electric ignition kit:

1. Make sure that the oil safety cut off lever is lifted (tripped off) via an audible click.
2. Check that the oil isolation valve is turned on.
3. Press the oil safety cut off lever down to trip the oil on via an audible click.
4. Press the push button ignition

5. After 20 seconds and then turn the oil on to minimum flow..

6. After 2 to 3 minutes the burner should come into blue flame ignition.

7. Watch the appliance for a few more minutes to make sure that it is settled down into blue flame combustion.

8. Allow the burner to run for a further 10 minutes before turning the appliance up to the higher settings.

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 putting 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 it will be safe to run the burner 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 back your service man to re adjust the oil flow.

CORRECT HIGH FIRE RUNNING

On full output, after approximately ten minutes, the coals should begin to

glow red and there should be wispy blue flames licking through them.

To get the maximum effect the stove will need to be left for half an hour or so, if there are a lot of yellow flames call back your service man to re adjust the oil flow, a few yellow flames are acceptable.

Excess oil flow, poor flue vacuum, bad coal positioning or bad lighting technique can all contribute to rapid sooting of the glass and coals.

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

6. GLASS AND STOVE CLEANING

DOOR GLASS

The door glass will require light cleaning occasionally

The frequency of cleaning will depend upon how the stove is used.

Where stoves are ignited each day then the glass may soot up as the lighting process may generate a little soot until the stove has settled down into blue flame combustion.

Where stoves are running continuously then the glass will need cleaning less frequently but when cleaning is required you will need to let the stove go out and completely cool down

Use a soft cloth and slightly damp it with vinegar or a proprietary stove glass cleaner

After cleaning wipe it dry.

STOVE EXTERIOR

To clean the stove externally

Let it go out and simply brush away any dust with a very soft brush.

To clean the stove internally, use a soft brush to remove any dust or combustion debris into a vacuum cleaner hose.

BURNER POT

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

7. 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. FUEL SUPPLY INFORMATION

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

FUEL GAUGE

1. 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

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

FUEL FILTER

3. 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

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

ISOLATION VALVE

5. 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 its 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.

9. THE COAL KIT

The coals are located on the coal support bars, which are designed to glow red in the flame, passing on the incandescence into the coals.

The whole system is designed so that it can be removed in its entirety without the need to disturb the coals making routine cleaning and servicing very easy.

TO REMOVE THE COAL KIT

To remove it turn the stove off and when it is cooled down, open the door and carefully lift it out, using the front fret to lift with.

COAL KIT MAINTENANCE

The coal support bars and coals may need replacing from time to time and they are available from your supplier as a service item.

TAKE CARE

Take care not to drop any coals into the pot.

10. ROUTINE MAINTENANCE

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.

2. The door glass may require light cleaning occasionally depending upon the continuous running time of the stove

Lightly clean the inside of the door glass using dry cloth.

Do not attempt to clean the glass whilst it is hot or warm. This will cause the glass to craze or crack.

EVERY 8 WEEKS

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

1. Open front door.
2. Remove coal kit.
3. Remove upper catalyser and upper ring.
4. Remove the lower catalyser.
5. Scrape the bottom of the pot clean and remove all carbon build up.
6. Reassemble in the reverse order.

ONCE PER YEAR

Have your service man replace or clean all the filters in the oil supply line.

EVERY 4 YEARS

Have your service man clean the filter in the Oil Control Valve.

AS REQUIRED

Keep the Coals, Coal kit, and burner inners in good condition, replace as necessary.

11. FAULT FINDING

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 off the oil flow and open the front door slightly to take the pull off the fire and hold it slightly open until the burner has settled down to a steady burn rate, when this has occurred, turn the fuel on again and close the door, but don't let the flame go out otherwise the burner **MUST** be allowed to cool down fully before a re ignition is attempted.

FLUE VACUUM OR CHIMNEY PULL

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

Good combustion will not be possible unless the chimney is working correctly.

If the burner does not run well check -:

1. The seals in the stove are good and that there is no ingress of air into the appliance flue ways.
2. The correct fuel oil is being used.
3. The chimney is free FROM blockages and pulling as normal.
4. That the pot doesn't need cleaning.

A longer burner life will be achieved if the regulator is moved only by one number at a time leaving approx two minutes between each setting change.

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.

OIL TRIP WILL NOT RESET

- Water temperature safety stat shut down.
- Secondary float chamber in oil control valve flooded. (Call serviceman)

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.

OIL WILL NOT FLOW INTO THE POT

- Oil tank empty
- 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.

BURNER RUNS SOOTY OR WITH DIRTY FLAMES

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.
- Check out door seal.
- Check out chimney vacuum
- Check for downdraft.
- Check out prevailing wind conditions
- Check for correct grade of fuel.
- Check out oil flow rate.
- Check for chimney blockage or partial blockage
- Burner air inlet holes have become blocked due to lack of service.
- Oil control valve is faulty. (Unlikely)

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.

12. RUNNING COSTS

Running costs are based on oil at 20pence per litre and are shown in pence per hour.

If your oil costs more or less than 20 pence, work out the difference as a percentage and apply it to the 20 pence for a corrected figure.

	Minimum firing	Maximum firing
Bubble 1	5 Pence per hour	16 Pence per hour