# Bubble Stoves

# Electric ignition

# Fitting information 20-01-04

http://www.oilstoves.co.uk/

# Contents

## 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 this equipment must be carried out by a technically competent person.

### Electrical Regulation.

British IEEE wiring regulations, latest edition.

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 |

## 3. Introduction.

There are two types of ignition kits available for Bubble Stoves

### 3.1 Type 1 for B1 and B2 Appliances

A remote, push button, time delay switch, pre set to give an on time of about two and a half minutes. See fig 1 and 2

### 3.2 Type 2 for B2I and B3 Single Pot Appliances

An integral, manually operated push button switch fitted to the metal enclosure. See fig 16

### 3.3 Fig 1 Remote push timer

### 3.4 Fig 2 Time delay adjusting screw

### 3.5 An ignition transformer.

Fig 3

Specification
Primary 230 volts
Secondary 2.9 volts
Amps 2.5

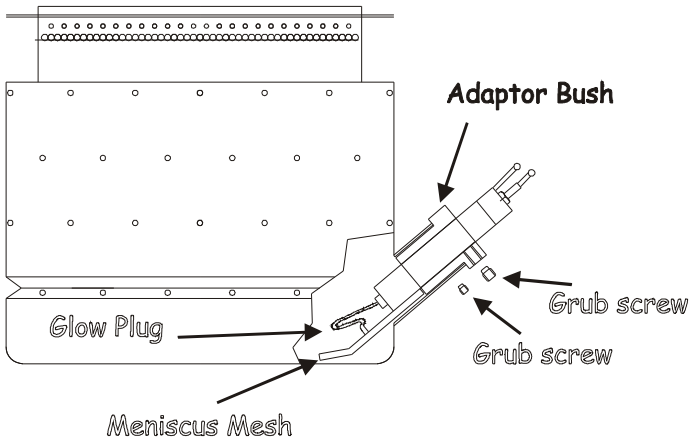
### 3.6 A glow type ignition plug

Attached to a steel adaptor bush.

Fig 4

The adaptor bush is secured to the ignition plug via a m4 grub screw and the whole assembly is then pushed down into the lighting port tube so that the tip only of the meniscus wire mesh touches the bottom of the pot.

### 3.7 Fig 5 Plug in Pot Arrangement




### 3.8 OPERATION Type 1

When the remote, push button timer is depressed, the transformer is energised via a switched live.

The output from the energised transformer causes the ignition coil on the ignition plug to glow.

Allow 20 seconds to elapse before turning the oil on to setting no 1 on the oil flow control knob.

*The 20 seconds allows the glow plug to pre heat the base of the pot allowing the oil to ignite faster.*

The meniscus mesh on the ignition plug draws oil up to the hot coil and ignition occurs.

The remote push button timer can be adjusted via the indicated slotted screw in the rear of the switch.

Out to decrease the time or in to increase the time See 3.4 fig 2.

Make sure that there is sufficient on time to allow the burner to ignite, normally about two and a half minutes is adequate.

### 3.9 Operation Type 2

When the integral button is depressed the transformer is energised via a switched live.

The output from the energised transformer causes the ignition coil on the ignition plug to glow.

Allow 20 seconds to elapse before turning the oil on to setting no 1 on the oil flow control knob.

*The 20 seconds allows the glow plug to pre heat the base of the pot allowing the oil to ignite much faster.*

The meniscus mesh on the ignition plug draws oil up to the hot coil and ignition occurs.

Keep the switch depressed until flame can be seen, this usually takes about 20 to 30 seconds.

## 5. Installation

Fitting of the electric ignition device requires the installer to make three considerations

### 5.1 Levelling

When levelling the stove make sure that the stove is set to allow the oil to flow slightly towards the glow plug.

This can be achieved by adjustment to the levelling bolts (B1 and B2 stoves).

### 5.2 Service Access

Allow adequate space around the stove for servicing or repairing any of the additional equipment fitted to the stove.

### 5.3 Wiring

When fitting electric ignition kits pay attention to the routing of the wiring from the transformer to the glow plug.

Make sure that the wiring is neatly fixed and is not placed close to the pot or it's immediate environs.

High temperature silicone insulators protect the copper conductors.

Wherever possible keep the conductors apart and do not allow the insulation material to fret or come into contact with sharp edges.

Always take care to make the future replacement and servicing of the plug as easy as possible.

We provide two porcelain connectors (ITEM 7 ON PARTS LIST), which should be fitted near to the plug as illustrated in figs 12, 13 and 14

On B1 and B2 appliances, the transformer is housed in a metal enclosure, which is fitted on two stand offs, attached to the rear heat shield. (See Figs 10 and 14)

There is a three-pin plug wired up to heat resisting cable for the power in and the transformed power out is connected into the bottom of the transformer. See fig 15a)

For future service work, easy access to the three-pin plug is essential

Make sure that good tight connections are made on all the low voltage output, it may be necessary to scrape the varnish off the conductors.

## 6. Setting Up The Burner

The stove must be levelled up so as to allow oil to run slightly towards the spark plug.

## 7. Checks Before Lighting

1. Before attempting to light the stove it is important that the following points are checked.

2. Check that the plug is pushed fully into its guide tube and that the tip of the meniscus mesh is just touching the base of the pot.

## 8. First Lighting

Open the door.

Remove the coal kit.

Remove the catalysers

Cock the oil valve trip button by pressing it down
Turn the power on at the switch isolator and press the timer.
After 20 seconds turn the oil on at no 1 or its lowest setting and wait until it touches the meniscus mesh.
Ignition should occur between 10 and 20 seconds after oil touches the metal mesh.
After you are satisfied that ignition is occurring as it should, turn the stove off and let it cool down, replace the inners of the stove and ignite it on setting 1, let it warm up to full output and then turn the oil off, when the appliance has cooled down try another ignition just to make sure that ignition occurs correctly.

## 10. Servicing.

The plug should be removed and cleaned at regular intervals.

Maximum 6 monthly intervals.

Make sure that the mesh is not burned or distorted.

Make sure that oil runs slightly towards the plug mesh.

Make sure that the mesh is clean.

Check the insulated supply wiring to make sure that it is not short circuiting or overheating.

## 11. Figures.

Additional information follows in the form of illustrations.

**Fig 10 B1** transformer box fitted

**Fig 11 B1 Stove**

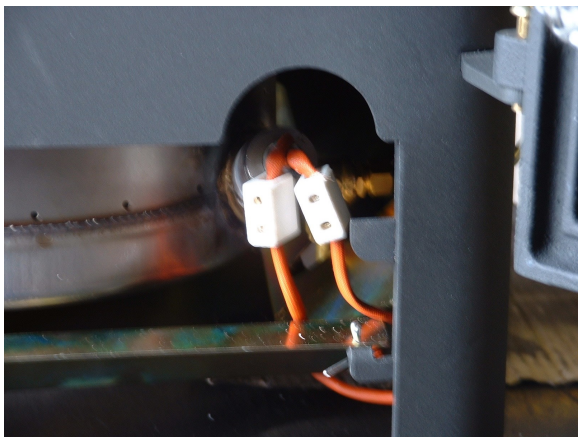


**Fig 12 B2 Stove**

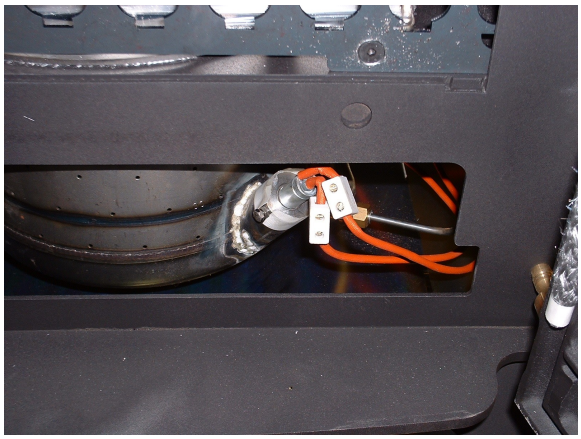


**Fig 13 B3** single pot stove

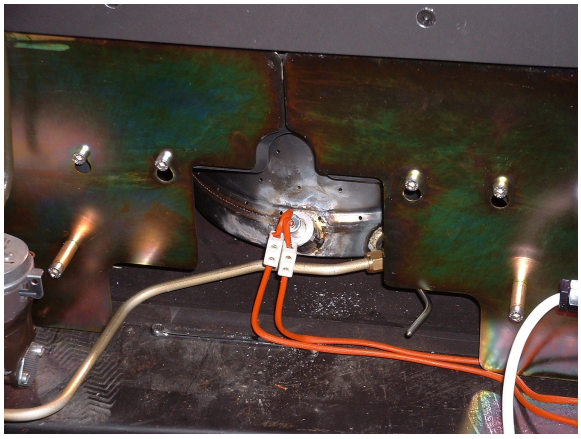


Fig 14 B1 rear mounted transformer box

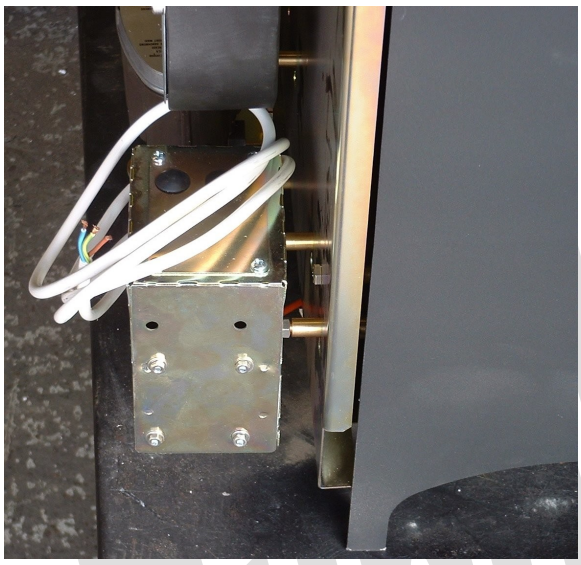


Fig 15 B3 single pot stove

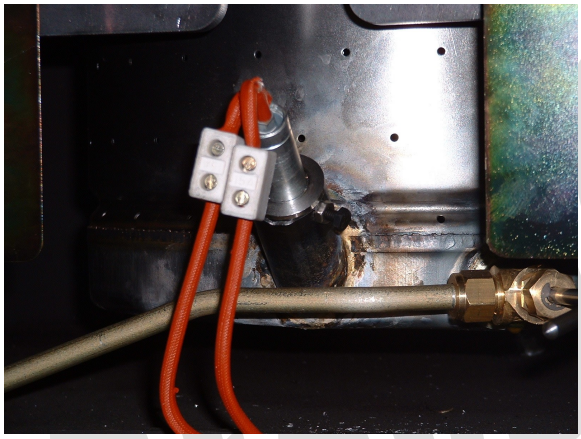
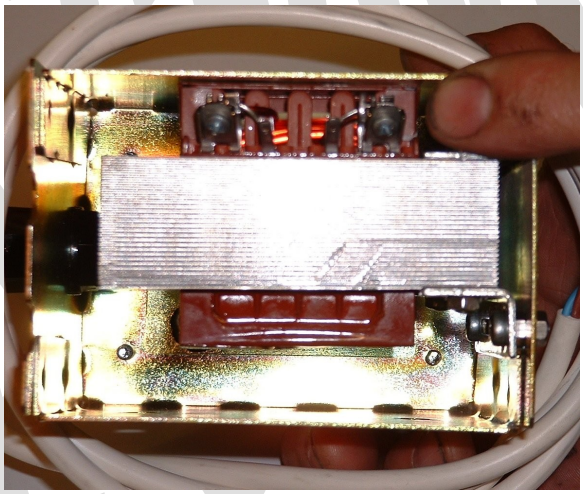


Fig 15a Low voltage output terminals



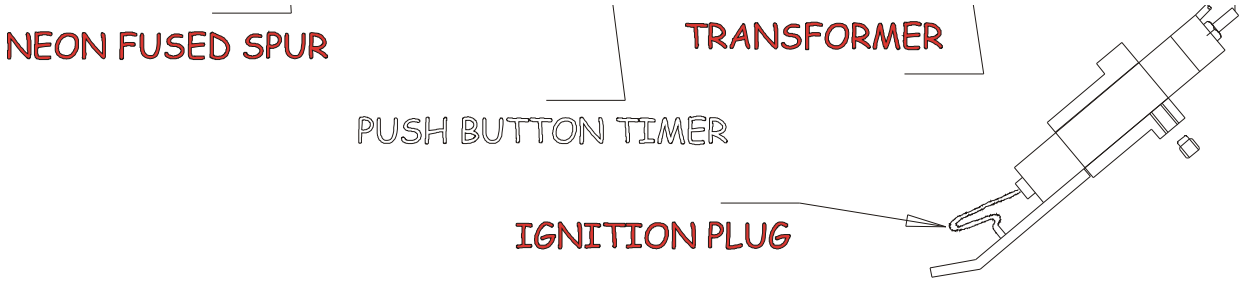
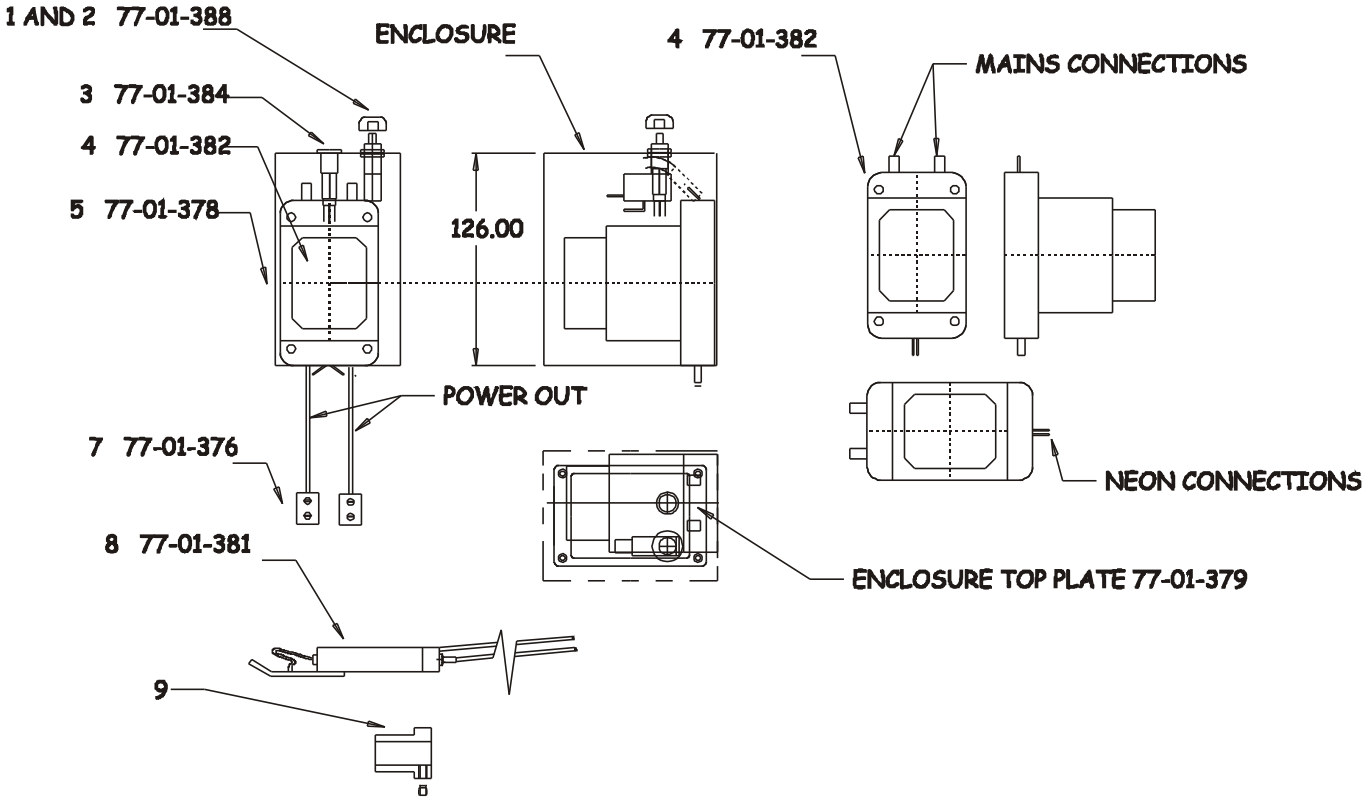



**Fig 16 Type 1 Transformer Enclosure And Contents**

Ignition kits for B1 and B2 appliances have remote time delay switches




## 13. Parts list

| Item No | Description | PART NUMBER | Qty | Check |
|---|---|---|---|---|
| 1/2 | PUSH BUTTON SWITCH | 77-01-511 | 1 | |
| 3 | NEON | 77-01-384 | 1 | |
| 4 | TRANSFORMER | 77-01-382 | 1 | |
| 5 | METAL ENCLOSURE | 77-01-378 | 1 | |

| | | | |
|---|---|---|---|
| 7. | PORCELAIN CONNECTORS | 77-01-376 | 4 |
| 8. | GLOW PLUG | 77-01-381 | 1 |
| 9 | ADAPTOR BUSH | STOVE DEPENDANT | 1 |
| 10 | REMOTE TIME DELAY SWITCH | 77-01-511 | 1 |
| 11 | BACK BOX FOR REMOTE TIME DELAY SWITCH | ELEC 010 | 1 |
| 12 | THREE PIN MAINS PLUG | 77-01-083 | 1 |



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