



OIL FIRED VAPORISING POT CONVERSIONS

COMMON INFORMATION

REGULATIONS AND SERVICES 15-05-04

Health and Safety.

Applicable Regulations.

How To Approach The Job.

Chimney Problems.

Existing Heating System.

Oil Feed And Storage.

Electrical Requirements.

Ventilation.

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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.

Vap conversions are constantly running.

Make sure that you explain about the running costs.

Where new oil storage tanks are to be installed make sure that the fitting and location comply with OFTEC rules and Building Regs.

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

Before you take the job on, check out the internal condition of the firebox, oven side and water jacket to make sure that the appliance is in good enough condition to convert.

Here's the tick list check out-:

3-1 CUSTOMER.

Go through all the points raised in the first paragraph and make sure that they understand all of them.

3-2 CHIMNEY.

Make sure that the chimney is adequate and capable of pulling a steady draught of .02" min to .06" max under all conditions.

3-3 EXISTING HEAT LOAD.

The converted vaporising M.F. will produce about 20,000 BTU's. to water on maximum setting, make sure that it isn't over loaded.

3-4 OIL SUPPLY LINE AND TANK LOCATION.

Make sure that the fitting and location comply with OFTEC rules and Building Regs.

3-5 ELECTRICAL.

(Nearest Supply)

3-6 APPLIANCE.

Is it in good enough condition to convert?

4. HOW IT WORKS

The vaporising pot burner is designed to run continuously.

There are three levels of control and they will vary depending upon the appliance being converted.

4-1 CONTROL LEVEL 1

This level is used on appliances, which are used, for cooking only or cooking and a small boiler for hot water only.

The user controls the performance of the appliance by manually operating the flow of oil.

4-2 CONTROL LEVEL 2

As per level 1 with the addition of a flexatemp electric head to modulate the output of the burner between its maximum and minimum settings.

The Flexatemp electric head can be activated via a hot water sensing stat or a separate oven temperature sensing stat.

4-3 CONTROL LEVEL 3

As per level 2 but with the oven and hot water stats linked together.

The Flexatemp electric head can be activated via a hot water sensing stat and an oven temperature sensing stat.

Principal of operation.

Upon starting from cold, the burner should run until it gets either the oven or hot water up to the temperature.

Control thereafter will be as per level 1,2 or3 as detailed above.

Care will be required in setting up the correct heat balance for the appliance, here is a list of items which may require adjustment to achieve the correct set up.

4-4 The fuel flow rate selected.

4-5 The chimney vacuum

4-6 The amount of oven side casting either insulated or not.

4-7 The baffle system.

4-8 The appliance controls (thermostat and cook - heat lever)

Appliances to be converted must be installed correctly, if they are not, the conversion will not improve the situation.

On most appliances, 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 draughts.

Excessive up draughts.

Fume leaks or Regular blockages or 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 extra automatic flue draught regulator to allow for additional 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 work.

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

1. CHIMNEY LINING SIZES.

1. Use 5-inch dia linings

On exposed chimneys built into end gables; backfill with loose fill vermiculite to help prevent condensation and improve the flue draught stability.

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 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 20,000 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 installed.

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.) through adequate gravity circulation.

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

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

Original Rayburn boilers can be removed and inspected via the de sludging access panel on the rear of the boiler

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.

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.

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

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

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