



OIL FIRED PRESSURE JET CONVERSIONS ©

## COMMON INFORMATION

REGULATIONS AND SERVICES 15-05-04

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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 appropriate OFTEC courses, OFT101 and OFT105 for vap products.

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](mailto:sales@oilstoves.co.uk)

Web site [www.oilstoves.co.uk](http://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 fault-finding assistance, which we will give directly to customers if installers are not willing to help resolve post installation problems.

### **3. HOW TO APPROACH THE JOB.**

Here's the tick list check out all the following points and make sure that the customer understands them.

#### **CUSTOMER.**

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.

Although pressure jet burners can be much more economical to run than vaporising burners but they can be noisy, especially in large voluminous kitchens with hard tile floors, make sure that you explain this potential problem to the customer.

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 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 serviced in line with the service schedule.

#### **CHIMNEY.**

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

Make sure that you check the chimney terminal position and ask questions about previous or prior chimney problems such as occasional down-draught or excessive up-draught, check for signs of soot stains on or around the appliance, 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 terminal noise ducting down the liner.

#### **HOT WATER.**

On Rayburn Regent and Royals, if the appliance has a boiler it was only originally designed to heat a hot water cylinder and a heat leak radiator 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.**

Note.

Solid Fuel stoves should always produce good quantities of hot water because the fire runs continuously and at high temperatures.

This is not the case with converted pressure jet appliances, it is therefore important to make sure that the hot water side of the system is adequate and the customer understands the implications of the on - off burner system on hot water production.

Take care with indirect systems, which have been running for a long time on solid fuel systems.

Because water temperature control is not all it should be, many of the cylinders and boilers have been exposed to excessive and continuous high temperature calcification.

This can result in major post conversion heat exchange problems and consequent lack of hot water.

If the primary pipe work does not look adequate, modify it.

**On most PJ conversions, it is not possible to use the oven independently from the water heating.**

**The baffle system supplied with the conversion will allow a limited degree of adjustment between heat to the appliance and heat to water.**

#### **OIL SUPPLY LINE AND TANK LOCATION.**

Can you install the oil tank and oil line in compliance with all the latest regulations?

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

#### **ELECTRICAL.**

If you need it, is there a convenient supply?

#### **VENTILATION.**

See following notes Sec 8.

#### **4. 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.

## **5. EXISTING HEATING SYSTEM.**

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.

## **6. 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.

## **7. 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.

## **8. 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, WITH CROSS SECTIONAL AREA CALCULATED AT 5 sq cm PER Kw of oil input rate.

If an extractor fan is fitted in the same room as the appliance or if there is an open fire in an adjoining room then extra compensatory air must also be made available for both these extra requirements.

Minimum extra requirement for extractor fans is 55 sq cm and it is preferred if the extra air supply can be positioned in such a way as it can supply air to the extractor fan without the air stream passing the appliance to be converted.

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

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