SOVEREIGN SELECT
OIL BURNING MODEL V.40

INSTALLATION INSTRUCTIONS

THE AUTHENTIC ORIGINAL SINCE 1854

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GENERAL

The installation of the cooker, the chimney, hearth and walls adjacent to the cooker must conform with local or national regulations currently in force. In the United Kingdom, the appropriate sections of the Building Regulations must be conformed to.

Important: For the burner to function correctly, a steady chimney draught of 0.06" w.g. to 0.10" w.g. is required. the draught should be assessed with a reliable manometer after running the burner at a high control setting for at least thirty minutes. A draught towards the higher limit is preferred.

A chimney draught lower than 0.06" will result in incorrect combustion with soot formation.

Where the draught exceeds 0.10", or is fluctuating, a stabiliser must be fitted.

Downdraught cannot be tolerated and arrangements must be made to overcome this condition where it occurs.

VENTILATION

A supply of fresh air is necessary for correct combustion and ventilation arrangements should be sufficient to supply this air together with air to allow an adequate number of air changes per hour in the room in which the cooker is installed. If the construction of the room is such that adventitious air is not available, then ventilation bricks, grids, etc., should be provided.

It should be noted that the cooker will emit a certain amount of convected heat and ventilation arrangements should allow for this.

Where an extract fan is provided to vent the room of cooking smells, steam, etc., arrangements must be made to avoid any possibility of reversing the flow in the chimney. Arrangements for ventilation must always comply with any local by-laws or Code of Practice relevant to the installation.

(See also under **Chimney and Flues**, Page 7)

CHIMNEY

A conventional chimney should not be less than 6" internal diameter. A continuous flexible metallic liner, suitable for oil, may be used to line an existing chimney.

A proprietary, prefabricated chimney should conform to BS.4343, the appropriate Building Regulations and ideally, be approved by the Agreement Board.

In all cases the chimney should conform to relevant Building Regulations.

The following General Points should be noted:–

1. The fabric of the chimney must be sound and the internal surface smooth and free from obstructions. Any air leaks and bad joints must be rectified.
2. The chimney should be capped to prevent ingress of rain.
3. The chimney must serve the cooker alone and not be shared with any other appliance.
4. External flues of asbestos or cast iron pipe must not be used. Excessive exposure will result in heat loss and poor performance.
5. Include means of sweeping.

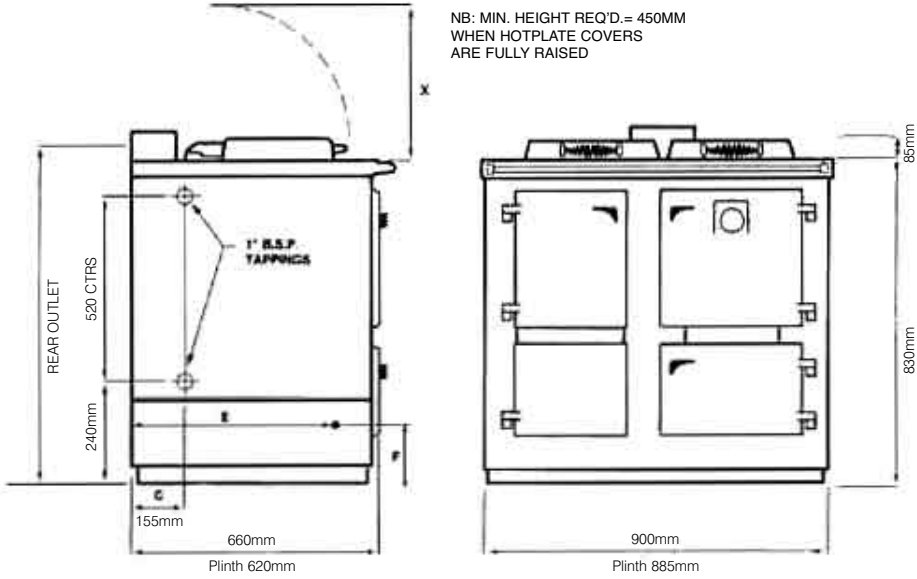

Fig 1.

The company policy is one of continual development. Sizes are approximate and variations may occur during manufacture.

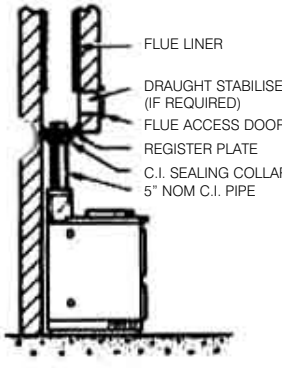

Fig. 3-RECESS WITH FLUE CAVITY

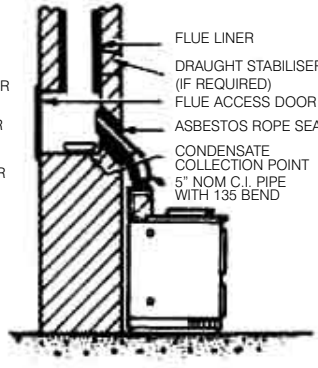

Fig. 4-PLAIN WALL USING TOP CONNECTION

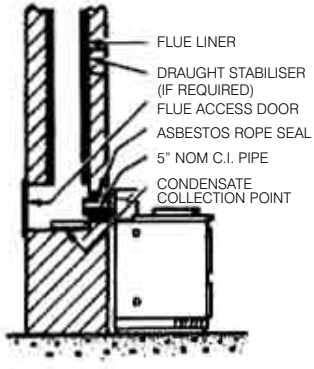

Fig. 5-PLAIN WALL USING REAR CONNECTION

FLUE

The flue outlet is set for top connection and is suitable for a 5" cast iron smoke pipe to B.S. 41. For rear connection simply reverse the top half of the flue outlet (2 screws).

(See **Chimney and Flues**. Page 7)

HEARTH

The cooker weighs 250 Kg. approx. The hearth must be solid, level, of incombustible material and constructed in accordance with any Building Regulations which apply to the particular site.

HOT WATER SYSTEM

1. The maximum output obtainable from the boiler is 40,000 Btu/h and is sufficient for up to 220 sq. ft. of radiator surface (including piping). (160 Btu/sq.ft).
2. An indirect system is essential for the domestic hot water supply, irrespective of whether the local water is hard or soft.
3. The boiler tappings are 1" BSP and cookers are supplied for left-hand connection.
4. The central heating circuit may be gravity circulation, but a pumped system is preferred. To allow heat from the boiler to be absorbed, should there be a pump stoppage on an accelerated circuit, the primary domestic supply must be gravity operated.
5. Installation as a central heating system alone, i.e. without a domestic supply, is not recommended as the boiler will produce heat when the cooker is in use irrespective of central heating demand, and some primary absorption must be provided.
6. Whichever system is chosen the layout must follow established heating engineering practice. To avoid trapping air in the boiler a 1" BSP connection must be used on the primary flow tapping, and any reduction in pipe size thereafter being made on a vertical rising pipe. The cooker must be level when fitted and the flow pipe must rise from the boiler. A drain cock must be fitted on the lowest point of the return pipe and a vent to atmosphere at the highest point of each circuit.
7. The cylinder and pipework should be lagged to avoid heat losses.
8. The static head must not exceed 60 feet of water.
9. A 35-40 gallon Indirect Cylinder is preferred incorporating a 2.500 Btu Heat-Leak Radiator.

OIL SUPPLY

The cooker is supplied for use on Commercial Kerosene, 28 secs to B.S. 2869: 1983 Class C2 or 35 sec Heating Oil (Diesel). See Data Plate. Connection for R¼ (¼" B.S.P. Taper) is at the front left hand. Incoming oil supply should not be less than 8mm copper. Lower L.H. side panel is removed for access to the compression fitting.

INSTALLATION OF STORAGE TANK

The installation should only be undertaken by an approved oil appliance installer, and conform with modern installation practice. The storage capacity of the tank should be 250 gallons minimum, but preferably in excess of 500 gallons to enable deliveries to be taken at preferential rates. The installer or fuel supplier will normally decide the layout of the tank or installation, but the following general information is given for guidance only (see Fig. 5).

1. The tank should be of welded steel, protected on the outside only and fitted with the following:

   (a) Fill Pipe of 2" nominal bore terminating in a 2" BSP thread hose coupling connection, complete with non-ferrous screw-on cap and keep chain.

   (b) Vent Pipe of at least equal diameter to the fill pipe and terminating in a return bend and open mesh balloon.

   (c) Isolating Valve on the tank outlet sited slightly above the bottom of the tank to prevent drawing of sediment or water.

   (d) Drain Valve, consisting of a ¾" or 1" BSP gate valve, plugged to prevent accidental opening, fitted to the baseplate of the tank.

   (e) Contents Gauge of a reliable, simple type.

2. The tank should be installed so that there is 18" minimum to 10 ft. maximum head of oil above the outlet of the cooker control valve.

   The distance from the tank to the cooker will determine the size of oil line but for distances up to 30 ft. ⅜" o.d. tubing will be sufficient. High loops in which air can accumulate and sharp bends should be avoided.

3. The supply line must include a primary filter (120 meshes per linear inch minimum) with a shut-off valve for servicing.

4. A fire valve to BS.799 must be incorporated.

BUILDING IN THE COOKER

SPACE REQUIREMENTS

When the rear or side walls are of combustible material, space between wall and cooker should conform to regulations.

Note: Allow at least 150mm clear space between the left hand end of the cooker and any adjacent unit or wall to enable the lower left hand panel to be removed for maintenance. An extension top, to form a continuous working surface, or a removable infill panel can be fitted provided the space formed is freely ventilated. The air inlets in the lower left hand end must not be obstructed in any way.

PROCEDURE FOR ASSEMBLY

Unpack the cooker completely and check for any damage. Lift off the three doors and store carefully to avoid damage.

Remove loose components from ovens, towel rail, etc.

Remove hotplate – a screwed lifting handle is provided, screw into the tapped hole in the hotplate and lift up two or three inches so that the hotplate can be lifted out. **CAUTION** – The hotplate is heavy and if dropped on the hob will cause damage to the enamel.

Remove the burner rings.
(See **Operating Instructions**).

Cover the hob with paper or cardboard and lower the hotplate covers to their closed position.

Remove the splashplate by unscrewing the two knurled screws.

Check the flue box is correctly assembled dependant on choice of top or rear outlet. Position the flue box assembly over the flue outlet and seal all round with a fillet of cement.

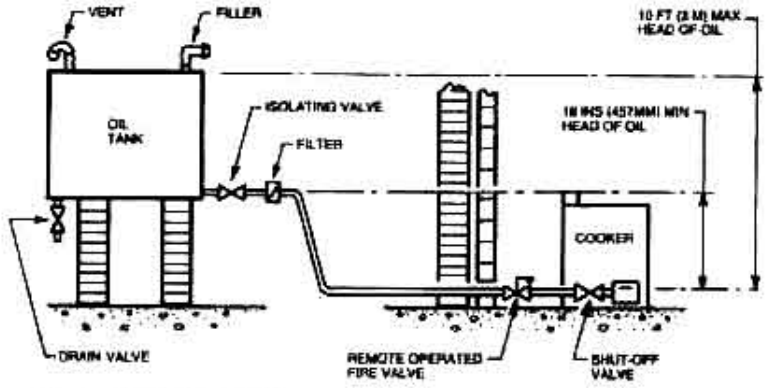

Fig. 5 – OIL INSTALLATION

For rear flue connection an infill casting is provided to seal the space between the platerack castings. For top outlets this infill is discarded.

Note: Carefully clean off all excess cement. Any restriction to the flue will create serious problems or at least cause the cooker to function inefficiently.

Three schematic diagrams of installation methods are shown in figures 2, 3 and 4, but modifications may be made to suit site requirements. In all cases, however, the important principle that no air must enter the chimney except through the inlets provided on the cooker, must be adhered to.

Move the cooker into position, connect to water. Remove lower left hand panel and connect oil supply.

Check the cooker is level by means of a spirit level on bottom of burner pot.

Connect the flue pipe with good quality fire cement make sure of an air tight seal between the flue box and flue pipe and flue. Any soot door, register plate etc must also be sealed to form an air tight joint.

Where a draught stabiliser is fitted then this must be in the same room as the cooker.

Check direct damper slides in and out freely and replace burner rings. (See **Operating Instructions**).

Replace the hotplate and check it is correctly positioned and level.

Should hotplate rock slightly, this must be corrected by bedding into the soft seal with a wooden mallet.

Remove anti-rust compound from hotplate top surface with clean rag and white spirits.

Make sure the hotplate covers lift easily and stay in the upright position, remove the plastic covering from the underside of the hotplate covers.

Fit towel rail as follows: Attach one towel rail bracket to the hob using one screw, leaving the bracket just slack; the graphited gasket goes between bracket and hob. Repeat for right-hand bracket. Slip towel rail over square projections and tighten the fixing screws from the back of the hob using a 7/" BSW spanner.

Replace the three doors, shelves, roasting tin, wire brush, decarbonising tool, kindler, scraper tool and hotplate lifting tool.

LIGHTING FOR THE FIRST TIME

1. Read the operating instructions.
2. Remove hotplate and burner rings, check boiler chamber and burner for any extraneous material and wipe away any signs of dampness.
3. Open all valves on the oil line from the storage tank, turn oil control valve to setting 6, move the valve safeguard levers down and wait for fuel to arrive in the burner. This may take some time as the oil control, etc., must first fill with oil.
4. When oil arrives, turn the control knob to 'OFF' and check supply lines for any leakage.
5. Replace the burner components and hotplate and light the burner as instructed.

CHIMNEYS AND FLUES

DEFINITIONS

Flue: A passage for carrying the products of combustion from an appliance to the external air.

Chimney: Includes any part of the structure of a building forming any part of a flue, other than a flue pipe.

Flue Pipe: A pipe forming a flue, does not include a pipe built as a lining into a chimney.

FUNCTION

The function of a chimney and flue pipe is two-fold:

a) To carry away the products of combustion

b) To assist in the supply of combustion air to the burner.

Draught: Draught is necessary for both these functions. The hot combustion gases in the chimney are less dense and lighter than the colder air outside and draught is created by this colder air pushing the lighter flue gases upwards.

Draught is expressed as a difference in the pressure of the hot flue gases and that of the colder surrounding air. The difference is very small and is measured for practical purposes, as fractions of an inch or mm water gauge.

Ventilation: Providing adequate air for combustion and ventilation of the appliance is very important for safe and efficient operation. If the flow of air for combustion is inadequate then the flue system will fail and hazardous conditions may arise.

When replacement windows and doors have been installed as refurbishment work in a building, ventilation to a room is very much reduced. It is therefore essential to provide the correct amount of free air to appliances.

Other points worth noting are that it is not permitted to fit 'Fly Screens' over vents or airbricks due to the possibility of the screen clogging up and reducing the air flow, nor is it permissible to use a 'Hit and Miss' vent that can be closed down stopping free air supply. If an 'Extractor' fan is fitted in the same room as the appliance extra ventilation may be needed and this also applies to powerful 'Tumble dryers' and Cooker hoods.

Note: After initial firing, a smoke number between 0-1 should be sought after. Also a simple draught reading should be obtained and recorded on the Commissioning/ Guarantee card.