

# Sandyford

# Cooker Burner Details

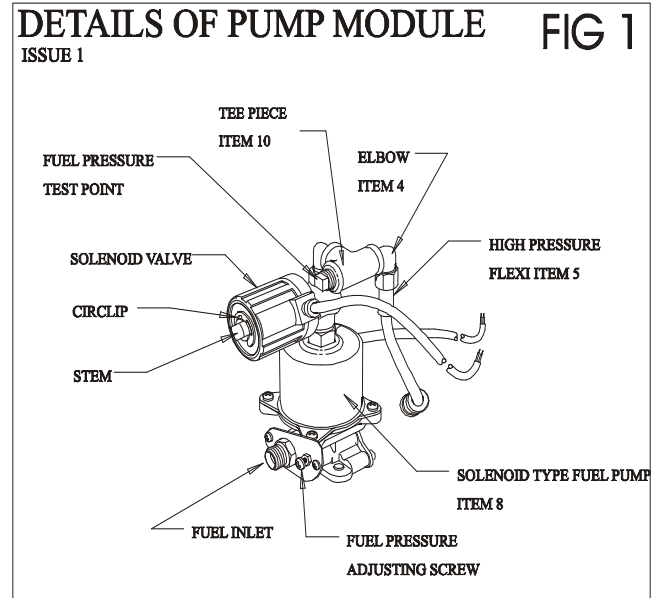
## 1. Introduction

1. The cooker burner used on the Cottage cooker is a 230volt a.c. automatic pressure jet burner. The burner in its basic set up will operate on positive head installations only.
2. The burner comprises of four basic modules as follows –:  
Pump module fig1.  
Fan Assembly fig 2.  
Head Assembly fig 3.  
Control module fig 4.
3. Air is supplied from the fan to the head via a flexible aluminium hose. At the fan end, the hose is attached via adhesive coated heat shrink sheath, at the head end; the hose is secured in place via a jubilee clip.
4. All the modules can be easily and quickly replaced via the plug and socket arrangement on each supply cable.
5. Fuel is supplied from the pump to the head via a high-pressure stainless braided flexible hose.

## 2. Burner Adjustments

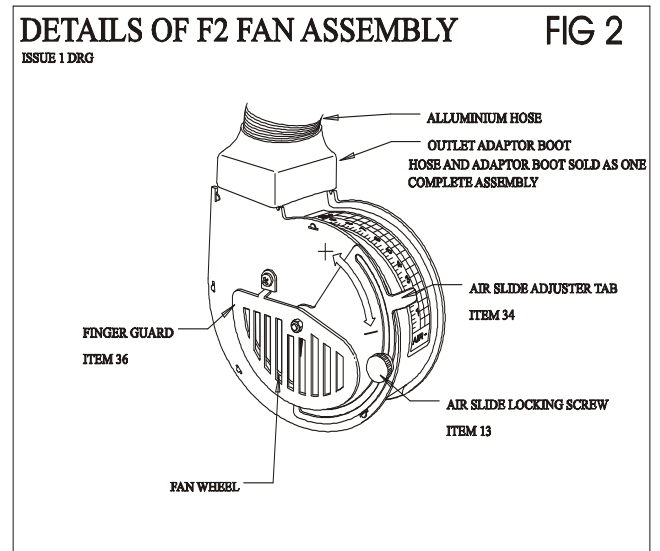
### 2-1 FUEL

1. The cooker leaves the factory with the burner pump pressure set at 9 bar and combustion air set to provide optimum burner performance.
2. The fuel pump is vented via a small butterfly lever on the lower left hand side of the pump.
3. The oil pressure can be adjusted via the small setscrew to the right of the oil inlet on the pump module.  
Clockwise to increase the pressure.  
Anti-clockwise to decrease the pressure. See fig 1
4. The fuel pump delivery pressure test point is detailed in fig 1.



### 2-2 AIR

1. The air can be adjusted via the air slide adjuster tab (item 34), which is locked in place via the air slide locking screw (item 15) fig 2.



### 2-3 COMBUSTION HEAD

1. The combustion head is detailed in fig 3.
2. All the main components are mounted on the end cap.

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3. To remove the end cap (item 20 fig 3) undo the locking screw (item 13 fig 3)

3. Twist the cap anti-clockwise and pull it out from the flame tube (item 22 fig 3)

4. The nozzle holder can be adjusted in or out as required, it is locked in place via the clamping screw item 26 fig 3.

5. The electrodes can be adjusted in a similar manner but take great care not to over tighten the locking screw as excess pressure will crack the electrode insulation.

5a. The electrodes should be set up approx 1.5 mm above the face of the nozzle, the gap should be set at 4mm.

**5b. Do not allow the spark to discharge on to the face of the nozzle or the edge of the diffuser.**

5d. The spark should form a good horseshoe shape blowing into the path of the fuel spray.

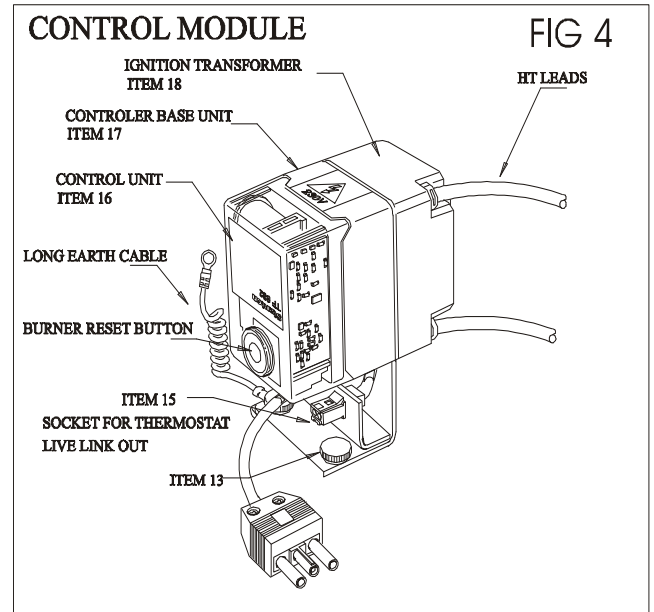
**5e. Do not allow the fuel spray to touch the nozzle or the diffuser.**

6. The nozzle fits into a conventional nozzle holder, which again can be accessed when the end cap is removed from the flame tube.

6a. The nozzle should be set back about 8mm from the face of the air diffuser.

7. The photocell item 28 fits into a conventional flange mounted on the outer base of the end cap.

8. The flame tube (item 22 fig 3) is mounted up to the appliance via two fasteners and the head gasket (item 21 fig 3) forms the seal.

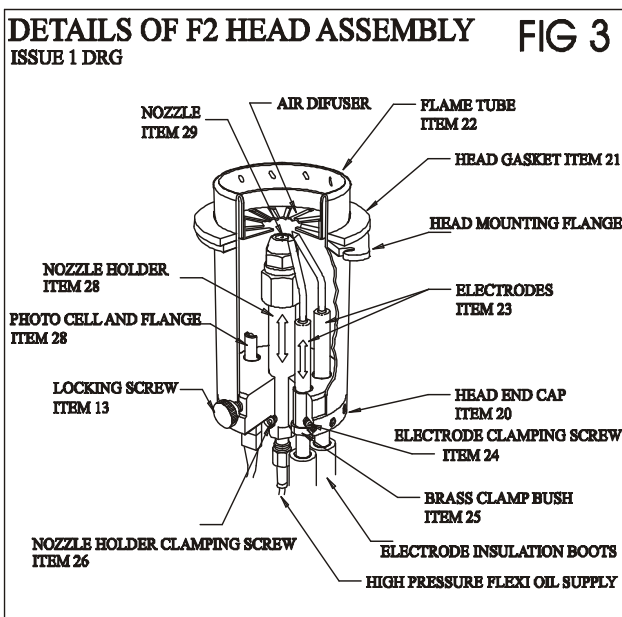


### 3. FLUE GAS ANALYSIS

1. The burner should be set up as follows:-

CO2	10%.
Soot	zero to one.
Co	less than 50ppm
O2	6 – 7%

Nozzle	Danfoss .4 U.S galls x 60S
Controller	Satronic 832.3
Photocell	Satronic MZ 7705
Pump	Taisan MP45SLR-S
Solenoid	Brahma E7L 1/8 x 1/8 1809100



### 2-4 THE CONTROL MODULE FIG 4

1. The control module comprises a control unit, a control unit base and an ignition transformer.

### 4. SERVICE AND MAINTAINANCE

1. Generally servicing should take place once per year but under conditions of heavy usage, servicing could be required at shorter frequencies.

2. As part of long-term preventative maintenance we recommend that:-

*The nozzle is replaced every year*

*The fan motor is replaced every second year*

*The fuel pump is replaced every five years.*

3. We advise service engineers to ensure that they carry a fan motor, a set of electrodes and a fuel pump.

All the other components should be readily available from local heating stockists, see parts list for details.

