

MAINTENANCE INSTRUCTIONS

The burner has been designed for use with fuel oil having a maximum viscosity of 35 seconds Redwood No. 1 at 100°F (Gas Oil -Light Oil).

A - STARTING THE BURNER

- A/1. Check that there is oil in the fuel tank.
- A/2. Open the valve in the suction line.
- A/3. Open the flue damper, if fitted.
- A/4. Set the room thermostat and the boiler thermostat (contact type or immersion type) to the required temperatures. Check that any timeclock (s) are set at the correct time and are switched "on".
- A/5. Turn on the main switch.

B - SHUTTING DOWN

- B/1. Switch off the main switch.
- B/2. Close the valve in the suction line.

C - ROUTINE MAINTENANCE

- C/1. The internal heating surfaces and combustion chamber of your boiler should be cleaned at least once annually.
- C/2. While the boiler is being serviced and the fuel tank is being filled, turn off the electricity supply to the burner at the main switch.
- C/3. Clean the photo-cell (1), attainable after removing the control-box.
- C/4. Clean the electrodes (4) with a rag soaked in gas oil. Verify the setting of the electrode-tips: the distance electrode-tip/nozzle must be as in figure 5.

D - FAULT-FINDING

- D/1. Immediately the burner stops for any abnormal reason, the red lamp (2) on the burner casing will light, unless there has been a failure in the electric power supply to the burner, due to the burning out of either a fuse or the red lamp.
- D/2. When the red lamp is shining, the controls of the burner are at "lock-out", and can remain so without any danger. The burner can only be restarted manually by pressing the re-set button (2) in which the red lamp is incorporated.
- D/3. Having waited for at least 5 minutes with the burner at "lock-out", the user should firmly press the re-set button (2) and then pay careful attention to what happens. He should try to single out which of the faults listed below is present.
- D/4. **The burner starts, flame is established within the boiler and the burner does not return to "lock-out"**: Obviously the cause of failure was only temporary, such as a sudden change in voltage, and no further action is required.
- D/5. **The burner starts, flame is established within the boiler, but the burner returns to "lock-out"**:
 - polish the front surface of the photocell (1) with a dry cloth;
 - make sure that the boiler tubes or flue ways are not blocked by soot, and arrange for them to be cleaned, should this be the case;
 - repeat the action shown at D/3.
- D/6. **The burner starts, but no flame is established within the boiler, and the burner returns to "lock-out"**: Make sure that atomized oil is being delivered by the nozzle (6).
 - Should no fuel be sprayed out: - turn off the main switch;
 - take off the locking nut (3), move the burner backwards on its hinge (5) away from the frontplate, if there is no hinge remove the burner from the boiler and, after the maintenance operations, remount it onto the boiler in the way illustrated on figure 1. - undo the way illustrated on figure 1) - undo the nozzle (6) from its holder, using a nozzle spanner (size 16 box-spanner); - unscrew the nozzle filter (8); - take out the inner part (7) of the nozzle; - carefully wash all parts of the nozzle with Gas Oil; - **never use anything metallic for cleaning the nozzle, as it could be damaged**; - put the burner back into position and tighten the flange nut (3); - turn on the main switch;
 - repeat the action shown at D/3.
- D/7. Should oil be delivered correctly by the nozzle, make sure that the fault is not caused by deposits built up on the ignition electrodes, in which case: - turn off the main switch; - take off the locking nut (3), move the burner backwards on its hinge away from the frontplate, if there is no hinge (5) remove the burner from the boiler and, after the maintenance operations, remount it onto the boiler in

维护指南

本型号燃烧器设计使用燃油的最大燃油粘度：雷氏 1 号，在 100°F 或 37.8℃ 下流过雷氏粘度计所需时间是 35 秒（汽油 - 轻油）。

A - 启动燃烧器

- A/1. 检查确信燃油箱有油；
- A/2. 开启进油管路上的阀门；
- A/3. 如有安装烟道挡板，请开启；
- A/4. 设定室温和锅炉的恒温器（接触式或浸入式）达到给定值。检查定时器是否设定到给定值并能通电动作；
- A/5. 合上主电源开关。

B - 关闭燃烧器

- B/1. 关闭主电源开关；
- B/2. 关闭吸入管路上的阀门。

C - 日常维护

- C/1. 锅炉的内部加热部件和燃烧室至少需要每年清洁一次；
- C/2. 在维护锅炉或油箱加油时，务必关闭燃烧器的主电源开关；
- C/3. 卸掉控制器后，才能清洁光敏传感器（1）；
- C/4. 需用汽油浸泡过的抹布清洁高压电极（4），校正极尖：高压电极极尖与喷嘴之间的距离（见图 5）。

D - 常见故障分析

- D/1. 如果燃烧器非正常原因立即停止，在燃烧器主体上的红灯（2）将发亮；一旦燃烧器保险丝过载或红灯亮，燃烧器会自动切断电源供给。
- D/2. 如果红灯闪亮，燃烧器处于“锁定”状态，这样保证安全性，燃烧器如果要重启，必须手动按嵌入红灯处的“复位”按钮（2）；
- D/3. 如果燃烧器处于“锁定”状态，操作者必须要等 5 分钟后，然后用力按“复位”按钮（2），并密切注意所发生的变化，操作人员根据下面所列的一些故障原因来辨别；
- D/4. 燃烧器启动时，锅炉炉膛内有火焰燃烧，燃烧器没有回到“锁定”状态：很明显这种问题是暂时失效，例如暂时电压变化过大，这不需要进一步维护；
- D/5. 燃烧器启动时，锅炉炉膛内有火焰燃烧，但是燃烧器又回到“锁定”状态：
 - 用干布清洁光敏传感器（1）前部；
 - 检查炉膛或烟道是否被灰堵住，如有要清洁；
 - 重新重复上述 D/3 的动作。
- D/6. 燃烧器启动时，锅炉炉膛内无火焰燃烧，燃烧器回到“锁定”状态：检查喷嘴（6）的喷油雾化情况。
 - 无燃油喷出
 - 关闭主控制开关；
 - 旋开锁紧螺母（3）；
 - 使燃烧器在铰链（5）上向后移开，远离炉膛，如果没有铰链，直接移离锅炉前台。等维护完成后，按照图 1 中的所示安装；
 - 按图 1 所示进行操作；
 - 用 16 开口扳手把燃油嘴（6）从燃油嘴基座上松开；
 - 旋开喷嘴滤芯（8）；
 - 取出燃油嘴内部部件（7）；
 - 认真用汽油清洗油嘴所有部件；
 - 严禁用任何金属物清洁燃油嘴，防止损坏部件；
 - 再把燃烧器安装回原位，锁紧法兰（3）；
 - 开启主电源开关；
 - 重新重复上述 D/3 的动作。
- D/7. 喷嘴雾化正常，确认燃烧器的高压电极点火处有无积物，如有则需要：
 - 旋开锁紧螺母（3）；
 - 使燃烧器在铰链（5）上向后移开，远离炉膛，如果没有铰链，直接移离锅炉。等维护完成后，按照图 1 中的所示安装；
 - 松开燃烧筒，这样能接触到高压电极（4）；
 - 用汽油浸泡过的抹布清洁高压电极，尽量不要改变高压电极按 C/4 所说的设定位置；

the way illustrated on figure1 - remove the blast tube for access to the electrodes (4); - clean them with a rag soaked in Gas Oil trying not to alter their setting or reset them as said at C/4; -restore the burner's original firing position. - turn on the main switch; - repeat the action shown at D/3.

D/8. **The burner does not start:** - make sure that there has not been a power failure; - check that no fuse has blown; - check that neither the room thermostat nor the boiler thermostat have reached their preset operating temperature.

If the burner still will not operate, call in the installer or the maintenance firm with whom you have a contract.

MAINTENANCE

Your burner should be serviced, cleaned and properly adjusted at least once a year by an experienced Maintenance firm. When the burner is just installed it is advisable to make arrangements for maintenance either with your Heating Engineer or through your Oil Company.

FIRE

Do not use water. Use an extinguisher or sand.

FLOODING

Turn off the main switch or the security switch.

- 1 Photo-cell
- 2 Lock-out lamp and re-set button
- 3 Locking-nut
- 4 Electrodes
- 5 Hinge
- 6 Nozzle
- 7 Inner part of nozzle
- 8 Nozzle filter

- 重新安装至原来燃烧器喷火的位置；
- 开启主电源开关；
- 重新重复上述 D/3 的动作。

D/8. 燃烧器不能启动：

- 确认供给燃烧器的电源没有问题；
- 检查线路的保险丝没有熔断；
- 检查确认房间或锅炉恒温器没有达到预设的操作温度。

如果燃烧器还不能运转，请致电燃烧器的安装者或者你所签合同的维护公司。

维护

客户的燃烧器至少每年必须让有经验的维护公司进行服务、清洁和校正。到燃烧器刚安装好后，需要你的热能工程师和供油公司一起讨论制订维护计划。

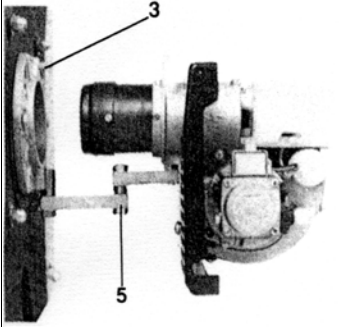
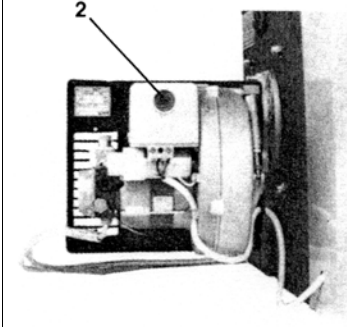
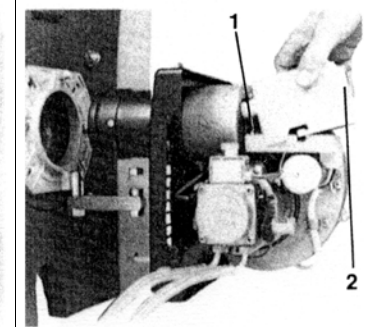
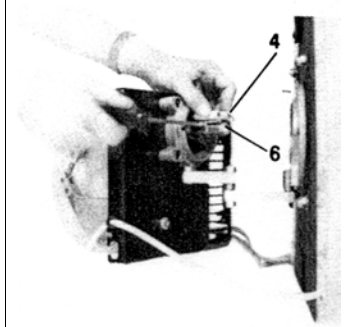
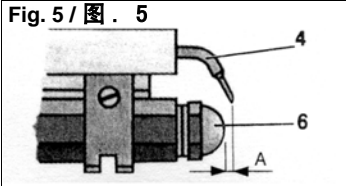
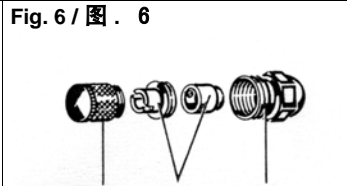
着火

如遇着火，不能用水灭火，应用灭火器或沙子。

进水

如遇进水，关闭主电源开关或安全开关。

- 1 光敏传感器
- 2 锁定指示灯和复位按钮
- 3 锁紧螺母
- 4 高压电极
- 5 铰链
- 6 喷油嘴
- 7 燃油嘴内部部件
- 8 喷油嘴滤芯

<p>Fig. 1 / 图 . 1</p> 	<p>Fig. 2 / 图 . 2</p> 	<p>Fig. 3 / 图 . 3</p> 	<p>Fig. 4 / 图 . 4</p> 			
<p>Fig. 5 / 图 . 5</p>  <table border="1" data-bbox="75 2027 422 2125"><tr><td>5 Kg/h : A=2÷2,5 mm</td></tr><tr><td>10 Kg/h : A=4÷5,5 mm</td></tr><tr><td>20 Kg/h : A=6÷7,5 mm</td></tr></table>	5 Kg/h : A=2÷2,5 mm	10 Kg/h : A=4÷5,5 mm	20 Kg/h : A=6÷7,5 mm	<p>Fig. 6 / 图 . 6</p> 	<p>D9660</p>	
5 Kg/h : A=2÷2,5 mm						
10 Kg/h : A=4÷5,5 mm						
20 Kg/h : A=6÷7,5 mm						

