

### IGNITION SEQUENCE

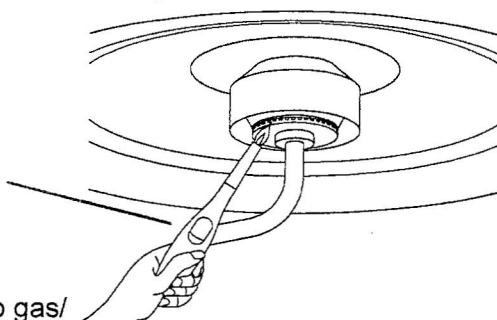
To avoid burning yourself or causing an explosion during the lighting of a brooder, please follow these instructions carefully. Ensure you wear gloves, eye protection and covering over your arms/body.

1) It is essential that you use a 'Long-Reach' hand-held **Igniter** device to light a brooder; **NOT** a match, cigarette lighter, or similar. Keep your face & body as far away from the burner as possible just in case there is gas already present which could ignite suddenly when a flame is near.

2) Make sure ALL gas taps/valves are switched 'OFF' before you light the **Igniter**.

3) Light the **Igniter**, and at arm's length move it towards the burner/pilot slowly. When you have established there is no gas/flame present, switch-on and/or depress the gas valve assembly to allow gas to come through to the burner/pilot (instructions for this are contained in the following pages specific for each gas valve type).

4) As soon as the burner/pilot is alight, remove the **Igniter** from the burner area and switch it off.



### FAULT FINDING – TROUBLE SHOOTING

#### Burner/pilot will not light:

- a) Gas may not be getting through. Ensure all taps (including those on tanks/supply) are on, tanks are NOT empty, hoses not squashed, etc, and establish gas is definitely reaching the heater hose.
- b) Air in pipes. On new installations or those not used for some time, there may be air in the pipes, which needs to be purged through.
- c) You may not have depressed the plunger/control knob in **far enough** during the start-up procedure.
- d) There could be a blockage/fault in the gas control, a damaged/blocked main or pilot (if fitted) jet, or even a blockage in the feed pipes (unlikely). For problems relating to gas jets see page 5.

#### Burner/pilot lights, but extinguishes when the flame-failure plunger / control knob, is released.

- e) Control Knob/Plunger was not depressed for long enough. Wait for 60 seconds, then repeat the lighting sequence, depressing the Knob/Plunger for at least 30 seconds.
- f) Gas pressure or flow-rate is too low. There may be a blockage somewhere in the system, the tanks/bottles may be nearly empty, there may be a fault with the Gas-Pressure-Regulators.
- g) The Thermocouple (flame sensor probe) may not be working, as it should. The tip must be kept within the flame at all times in order for the gas valve/control to remain open. It could be that something has moved/bent causing the tip to be 'outside-the-flame', or even the whole top section 'within' the flame. Adjust position so 'just the tip' remains engulfed in flame. The thermocouple carries an electric current to the valve so you must check that it is securely screwed into the valve to maintain a good electrical current/signal. **WARNING;** Do Not Over tighten, as you will break the internal parts of the valve. Finger tight, then just 'nip' it (max 1/8<sup>th</sup> turn) to gain good contact. Thermocouples are subjected to a lot of heat stress and can often fail. Always carry a spare and replace as soon as there are any signs of breakdown.
- h) The Control Valve may be faulty. {1} All Control Valves have an internal coil fed by the Thermocouple. This coil may have failed. {2} Thermostat temperature sensor (where fitted) may have failed. Neither of these parts is replaceable. {3} Dirt/debris may have found its way into the valve assembly, blocking a gas path. NO gas Control Valve is repairable. A New Control Valve may be required.

#### Main Burner Fails to light even though pilot is alight.

- i) Thermostat has been set too low. Increase setting.
- j) Thermostat temperature sensor is too near the burner. Swing it out/away into cooler air.
- k) Thermostat sensor has become faulty. NO Valve manufacturers will supply replacement sensors, so the complete valve will need to be replaced.

### FLAME FAILURE PROTECTION

All Maywick gas brooders incorporate a 'flame-failure-device', which interrupts the gas supply if the burner/pilot is extinguished. The flame heats the tip (hot junction) of the thermocouple, which then generates an electrical current, sufficient to hold open the magnetic coil located in the gas Control Valve. It can take up to 30 seconds for the current to energise the coil, which is why you depress the Control Knob/Plunger for 30 seconds. Should the heater suddenly go out (gas run out, sudden draft, etc), and/or the flame be removed from the Thermocouple tip, you would need to wait 60 seconds, and then go through the ignition process, specific to your particular Control Valve.