Gas Heater operation instructions

Start up procedures

Gas locker.
Comprises of two gas bottles connected to a valve regulator , this regulator is designed to continue running when the leading bottle runs out the secondary bottle will take over..fig/1

COMAP

TYPE COMPACT

CHANGEOVER VALVE
OPERATING INSTRUCTIONS
FOR USE WITH PROPANE

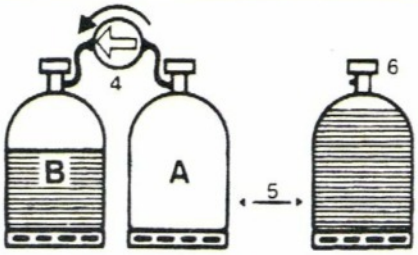


- Having connected up the cylinders, make sure the connections are tight and that there are no gas leaks by testing with soapy water, check that the indicator is pointing either to the left or to the right and then.

- OPEN both cylinder valves and on doing this you will find that the indicator will turn white. The arrow is now pointing to the cylinder that is in service.
In this case cylinder " A "

3 – When the service cylinder " A " is empty, the indicator will turn red and gas will be drawn from the reserve cylinder " B ". Do not change the indicator arrow at this stage as any residual gas in cylinder " A " will continue to be used.
Order a replacement cylinder.





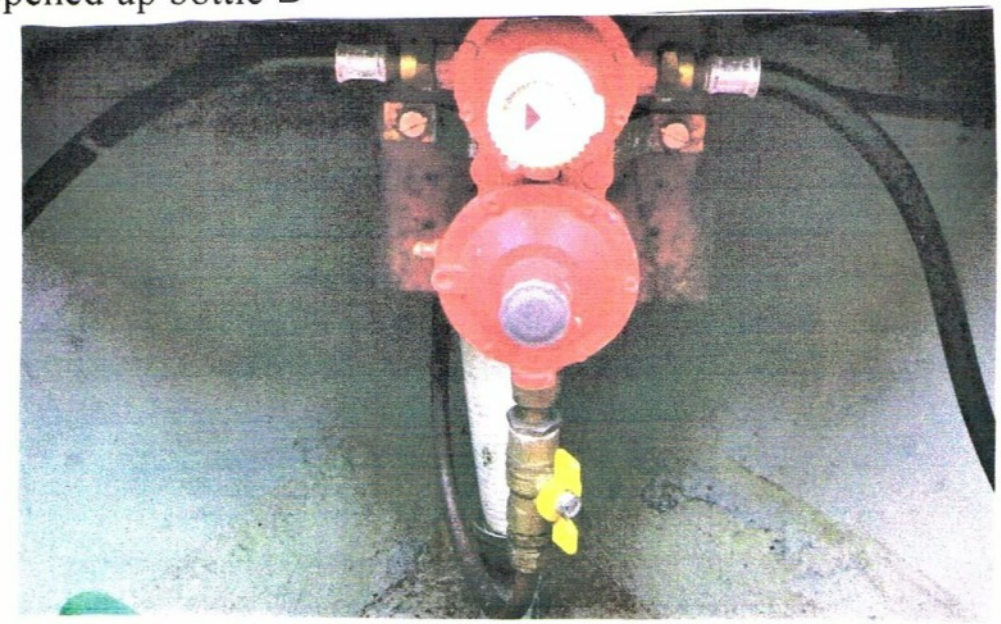
4 – Before the replacement cylinder is fitted turn off cylinder " A ", and turn the indicator arrow to reserve cylinder " B ". The indicator will now turn white, this shows that the cylinder to which the indicator is pointing is now the service cylinder.

5 – The empty cylinder " A " can now be removed and a new reserve cylinder installed.

6 – Having installed the new reserve cylinder don't forget to turn on the cylinder valve, checking at the same time that there are no gas leaks by means of soapy water.

(A) Leave this card fixed to the changeover valve.
(B) In case of difficulty, turn off both cylinders and contact your supplier.

fig/2 shows the regulator in its operating position with the yellow valve in it open position,but the indicator is showing that there is no gas in the line and has opened up bottle B



OPERATION

Before use: Pay particular attention to the exhaust outlet and combustion air inlets to check that neither have been blocked or damaged.

a) Check the gas supply is turned on and that the battery voltage is correct. Minimum operating voltage is 10v and max. operating voltage is 15v (for 12v heaters) when measured at the heater.

b) Rotate the thermostat temperature dial fully anti-clockwise and put the 3 position knob to the flame position.

c) Rotate the temperature dial until the fan starts. There will be a pre-purge pause of approx 20 seconds to allow any un-burnt gas to leave the flue. A green LED will illuminate after successful flame ignition.

d) If there is air in the line it may take a few attempts for the gas to ignite. See page 7 for gas lockout resetting. If ignition is not satisfactory the red LED will flash, refer to the trouble shooting guide page 7

e) Find the desired temperature setting by adjusting the dial on the thermostat. The heater will then cycle on and off to maintain that temperature.

f) When the set temperature is reached the green light will go out and the heater will start its post purge cycle.

g) If the 3 position knob is in the fan position the green LED will illuminate and the fan will blow cold air continuously.

Sequence of operation:

Switch on
↓
Heater motor starts
↓
20 second pre-purge to clear gases from heat exchanger
↓
Gas valve opens
↓
Spark generator operates
↓
Motor speeds up to normal operating speed
↓
Heater switches off when thermostat temperature reached
↓
Post Purge – fan runs on its own for 3 minutes
↓
Temperature drops
↓
Cycle repeated

MAINTENANCE

The installation must be inspected and tested annually by a registered person (see item a) on page 2) and any servicing and cleaning identified carried out. Servicing and removal of the main cover must only be performed by an approved fitter or the manufacturer.

The heater should not be left for long periods without use. It is advisable to run the unit for short periods throughout the summer.

The exhaust and inlet pipes should be inspected periodically for damage and any build-up of dirt around the ends. Clean or replace as necessary.

FAULT FINDING

The Heatsource HS2000 is equipped with an electronic diagnostic system which will detect fault conditions ranging from poor gas or electricity supply to internal heater malfunctions. In the event of a failure the yellow light on the thermostat or timer control will flash a certain amount of times, pause, and repeat until switched off. Count the amount of flashes and refer to the table below.

Manual Overheat Cut-Out. The HS2000 incorporates an overheat cut-out which has to be re-set manually. If the heater reaches an unusually high temperature during operation the cut-out will disengage the gas solenoid valve, cutting off the gas supply to the burner. The operation of this cut-out could be caused by either a restricted hot air outlet or air inlet, or the heater being switched off by a battery isolating switch depriving it of its purge cycle. To find the cut-out, remove the electronics cover on the heater and look for it positioned above the PCB with 2 yellow wires attached to it. Press the small red button between the terminals, the fault code is 7 flashes.

FAULT FINDING TABLE

Number of flashes	Fault	Remedy
2	Flame failure	Check gas supply making sure there is gas in the bottle and no blockage in the gas line. Ensure propane is used at temperatures below +5℃. Clear lockout as described below.
3	Low/ high voltage	Minimum operating voltage is 10v and max operating voltage is 15v (for 12v heaters) when measured at the heater. Check battery voltage. If above 10v, check connections between heater and battery. Check alternator or external battery charging. Clear lockout as described below.
5	Combustion air fault	Check combustion air flue and exhaust flue for blockages. Possible blockage in combustion air inlet/outlet duct. Inspect duct for blockage/damage. Inspect inlet pipe on the heater (closest to the back) for signs of damage.
7	Overheat fault	Hot air temperature is too high. Check the air ducts and vents are not blocked or restricted. We recommend you wait at least 5 to 10 minutes to allow the heater to cool before clearing lockout as described below. Check ducting for blockages.
6,9,10	Other faults	Attempt to clear lockout as shown below. If this fails, contact Propex
No flashing	PCB not powered up	Check the supply to the heater as above. Otherwise contact Propex

Gas Lockouts

Gas lockouts must be cleared by moving the left-hand knob from gas on (flame) position to off position then back to the on position. The complete sequence of switch movements must be completed within 2.5 seconds for a lockout to be successfully cleared. If there is air in the gas line, e.g. after a gas bottle change, the space heater may require several attempts before it lights.