

Crown Heat King 500 Users Manual



February 2004

Operational Theory



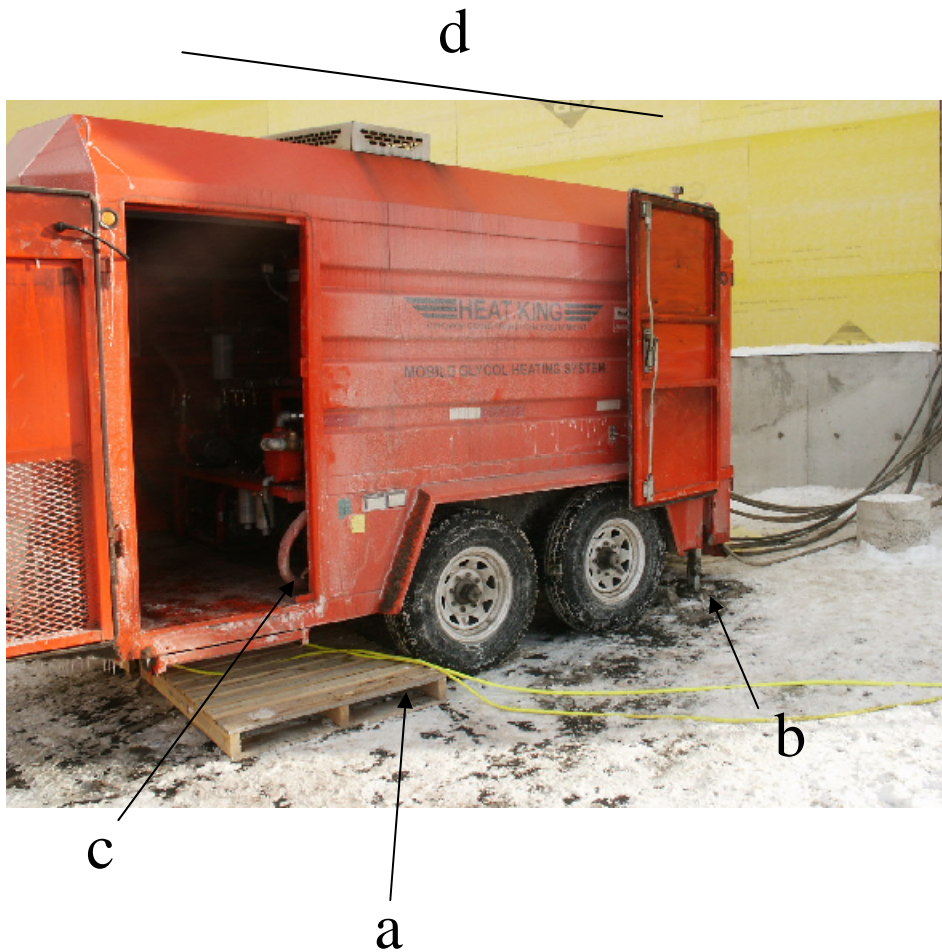
c

b

d

- Propylene glycol (environmentally friendly) is pumped from the reservoir(a) through the heated coils(b) and returned to the reservoir – this is called the **heater loop**
- Water from the reservoir is then pumped(c) to the field hoses(d) and also returned to the reservoir – this is called the **field loop**

Positioning Unit



- Block wheels to prevent movement (a)
- Level with all 3 jacks (b)(pull pin if large adjustment is required)
- Jack handles located inside man door (c)
- Position larger supports under rear feet if unit is sitting on frozen ground
- Unit should be almost level, with a slight slope to the rear of the unit (d)

Initial Set Up

a



- Connect 2 dedicated 120Volt x15 amp circuits to unit
- NEVER exceed 10 guage x 100' cords supplied (unit will not run properly on low voltage)
- Run cords thru small hole in wall of heater under panel and make connections inside heater
- Open 2 large ball valves at rear of unit (a)
- Open 3 ball valves inside heater –1 on each pump and 3rd from bottom of reservoir just before pump (b)



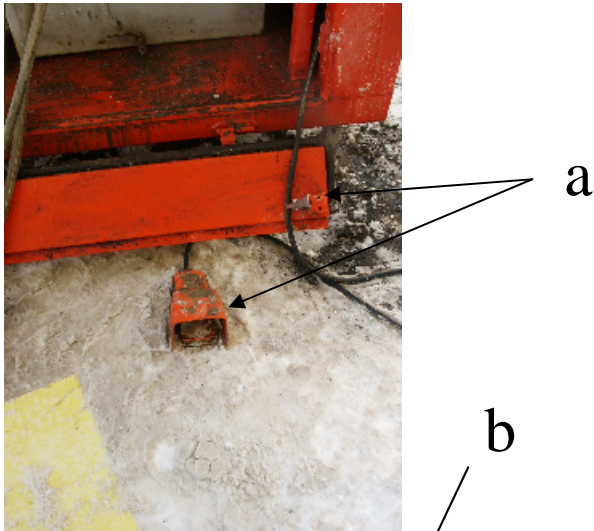
b

Activation



- Turn on the main power switches to circuit 1 & 2 (a)
- Turn the lower switch to heater loop and the circulation pump indicator will come on (b)
- There will be a delay, the left burner, then the right will fire and the indicator lights will come on (c)
- Turn the other switch to hose reel, and the bottom switch to hose reel direction “out” (d)

Feeding Out Hose



- Open the lower door and place the foot pedal on ground (a)
- Plug the loose male hose end in to the quick coupler, starting on the right (b)
- Be sure to feed under the square bar (c)
- There are 8 hoses, each 700' long connected together on the reel
- As you lay out the hose and come to a connection, disconnect, attach the female end to the male manifold on the right. The male plug from the next hose will be placed directly beside the first
- Always work right to left
- Never connect 2 hoses together and always use all of the hose to speed performance

Hose Layout



- Be sure to scrape away as much ice & snow as possible. Failure to do so will dramatically slow the thaw
- Ensure all debris is removed
- A layer of poly (ideally under the hoses, but over is ok) will trap moisture and speed performance
- Set up for a novice user is 4 hours for 3 people
- Try to back the machine up as close as possible to the area to be thawed, and avoid having the hoses having to make bends around corners or through man doors if possible
- Straight long runs are the easiest and fastest to do

Hose Layout



- Spacing the hoses 18” apart will allow for ~8000ft² of coverage. Never exceed 24”
- Placing the hoses closer together than 18” and crossing hoses perpendicular to others will increase speed and ensure an even thaw
- Run straight lines as much as possible. Have one person stand on the hose while the other pulls the line straight
- You must cover the hoses with insulated tarps –the more the better –no exception

Additional Information



b



- Each machine is equipped with a **FULL** operators manual (a), gas cap key (b) and hose mending kits (c) located inside
- Fuel capacity is 704 litres. Refueling should be scheduled every 48 hours – only use **#2 Furnace Oil**
- **Stephenson's can arrange for the fuel if requested**
- The burners will cycle off when the supply temperature reaches 180 degrees and back on at 170 degrees. As the thaw progresses a couple of days, it is common for the burners to cycle off
- An ideal situation is when the supply and return differential is ~40 degrees. After 24 hours, you can expect to see the supply at ~140-150 degrees

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