

## L. B. White Tent Heater Operational Instructions

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### **Start-Up Instructions**

1. Open propane gas valve SLOWLY- If the propane cylinder valve is opened to quickly- it will cause safety valve to lock. See Troubleshooting below
2. TURN on the power switch on the heater
3. TURN the thermostat temp UP so it calls for heat.

- The light is flashing indicating power.+ IF NO LIGHT – YOU HAVE NO POWER
- The Fan motor starts.
- Ignition control begins ignition trial sequence. You can hear the snapping of the igniter.
- Igniter sparks.
- Gas control valve opens.
- Ignition occurs. +IF NO IGNITION – It is not getting Propane fuel.
- Igniter continues to spark until flame occurs.
- Room warms to desired temperature.
- Thermostat reaches temperature.
- Heater shuts down.
- Process starts again when temperature falls & thermostat calls for heat. The thermostat will cycle the heater on or off based upon temperature setting.

#### IGNITION FAILURE SEQUENCE:

- There are three ignition trials. Each trial takes 10 seconds.
- If burner flame is not maintained at the end of the third trial, the heater goes into safety lockout
- Gas valve closes. – Ignition spark shuts off. – Fan motor stops.

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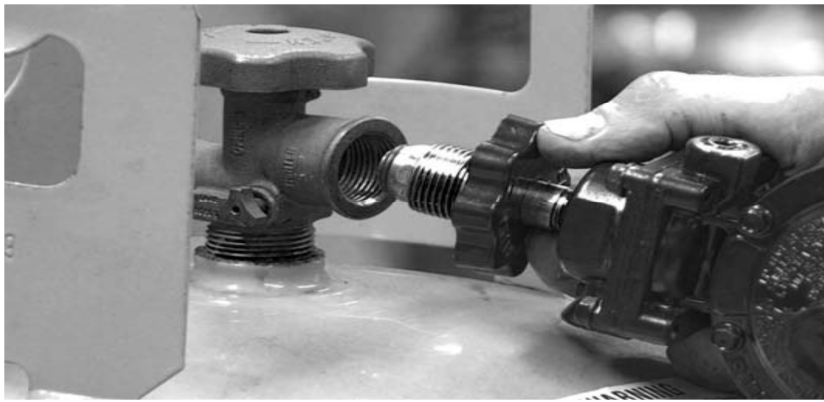
### **Shut-Down Instructions**

1. Close the gas supply valve located on the propane gas supply container.
2. Allow the heater to burn off any fuel gas remaining in the gas supply line.
3. For heaters so equipped, set the thermostat to "Off" or "No Heat".
4. Position selector switch to "Off."
5. Disconnect the heater from its gas and electrical supplies.

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### **Troubleshooting Information**

- RETRY IGNITION / RESET:
  - Turn the thermostat Down to 40 and then Up to 100, Heater will restart & call for heat.
  - Position selector power switch to OFF and then back to on. Unplug heater and plug it back in.
- NOT ENOUGH POWER. – unplug and try another outlet ON ANOTHER CIRCUIT
- BAD THERMASTAT- unplug thermostat & Plug extension cord directly into heater cord.
- NO HEAT:
  - Propane tank is empty
  - Propane cylinder valve was opened to quickly-causing safety valve to lock. Close the valve on the propane tank & disconnect the propane valve & reconnected to Reset valve so fuel will flow into regulator. – Open propane cylinder valve slowly.



## Heater Specifications

SPECIFICATIONS	Model			
	TS080		TS170	
Fuel Type	Propane Gas	Natural Gas	Propane Gas	Natural Gas
Maximum Input (BTUH)	80,000		170,000	
Ventilation Air Required to Support Combustion	450 CFM		1,200 CFM	
Burner Manifold Pressure	10 in. W.C.	4 in. W.C.	10 in. W.C.	4 in. W.C.
Inlet Gas Supply Pressure Acceptable at the Inlet of the Heater for Purpose of Input Adjustment	<b>MAX.</b> 13.5 in. W.C.			
	<b>MIN.</b> 11 in. W.C.	7 in. W.C.	11 in. W.C.	7 in. W.C.
Fuel Consumption Per Hour	3.70 lbs.	80 cu. ft.	7.87 lbs.	170 cu. ft.
Motor Characteristics	Ball Bearing			
	1/8 H.P. 1,100 RPM		1/3 H.P. 1,100 RPM	
Electrical Supply (Volts/Hz/Phase)	115/60/1			
Amp Draw	<b>STARTING</b> 5.0		7.3	
	<b>CONTINUOUS OPERATION</b> 1.5		5.0	
Dimensions (Inches) L x W x H	29-1/2 x 13-1/2 x 20		30-3/4 x 18-1/4 x 28-1/4	
Minimum Safe Distances From Nearest Combustible Materials	<b>TOP</b>		1 ft.	
	<b>SIDES</b>		1 ft.	
	<b>BACK</b>		1 ft.	
	<b>BLOWER OUTLET</b>		6 ft.	
	<b>GAS SUPPLY</b>		Propane Gas - 6 ft., 1.83 m Natural Gas - N/A	
Net Weight	67		126	
Shipping Weight	74		134	
Minimum Ambient Temperature in Which Heater May Be Used	- 20°F			

# Installation Instructions

## GENERAL



### WARNING

#### Fire and Explosion Hazard

Can cause property damage, severe injury or death

1. To avoid dangerous accumulation of fuel gas, turn off gas supply at the heater service valve before starting installation, and perform gas leak test after completion of installation.
2. Do not force the gas control knob. Use only your hand to turn the gas control knob. Never use any tools. If the knob will not operate by normal hand pressure the gas control valve should be replaced by a qualified service technician. Force or attempted repair may result in fire or explosion.

1. Read all safety precautions and follow L. B. White recommendations when installing this heater. If during the installation or relocating of heater, you suspect that a part is damaged or defective, call a qualified service agency for repair or replacement.
2. Make sure the heater is level and properly positioned before use. Observe and obey all minimum safe distances of the heater to the nearest combustible materials. Safe distances are given on the heater dataplate and on page 4 of this manual.
3. This heater may be installed either indoors or outdoors. For outdoor installations, use only the following air distribution accessory part numbers:
  - 12 in. x 12 ft. Duct  
Black: 08978  
White: 20685
  - Unit Diffuser  
Premier 80: 09389  
Premier 170: 09396
  - End Diffuser: 21177

Do not use any other ductwork or field fabricated duct, tarps, stove pipe, etc. on this heater.

4. The heater's gas pressure regulator (with pressure relief valve) must be protected from adverse weather conditions (rain, ice, snow) as well as from building materials (tar, concrete, plaster, etc.) which can affect safe operation and could result in property damage or injury.
5. Heaters used in the vicinity of combustible tarpaulins, canvas, plastics, wind barriers, or similar coverings shall be located at least 10 feet from the coverings. The coverings shall be securely fastened to prevent

ignition or upsetting of the heater due to wind action on the covering or other material.

6. Insure that all accessories that ship within the heater have been removed from inside the heater and installed.
7. Check all connections for gas leaks using approved gas leak detectors. Gas leak testing is performed as follows:



### WARNING

#### Fire and Explosion Hazard

- Do not use open flame (matches, torches, candles, etc.) in checking for gas leaks.
- Use only approved leak detectors.
- Failure to follow this warning can lead to fires or explosions.
- Fires or explosions can lead to property damage, personal injury or loss of life.

- Check all pipe connections, hose connections, fittings and adapters upstream of the gas control with approved gas leak detectors.
- In the event a gas leak is detected, check the components involved for cleanliness and proper application of pipe compound before further tightening.
- Furthermore tighten the gas connections as necessary to stop the leak.
- After all connections are checked and any leaks are stopped, turn on the main burner.
- Stand clear while the main burner ignites to prevent injury caused from hidden leaks that could cause flashback.
- With the main burner in operation, check all connections, hose connections, fittings and joints as well as the gas control valve inlet and outlet connections with approved gas leak detectors.
- If a leak is detected, check the components involved for cleanliness in the thread areas and proper application of pipe compound before further tightening.
- Tighten the gas connection as necessary to stop the leak.
- If necessary, replace the parts or components involved if the leak cannot be stopped.
- Ensure all gas leaks have been identified and repaired before proceeding.

8. A qualified service agency must check for proper operating gas pressure upon installation of the heater.
9. Light according to instructions on heater or within owner's manual.
10. Make sure the heater has the proper gas regulator for the application. A regulator must be connected to the gas supply so that gas pressure at the inlet to the gas valve is regulated within the range specified on the dataplate at all times. Contact your gas supplier, or the L.B. White Co., Inc. if you have any questions.
11. This heater is configured for use for propane gas vapor withdrawal only. Do not use the heater in an propane gas liquid withdrawal system or application. If you are in doubt, contact the L.B. White Co., Inc.
12. The heater must be installed so as not to interfere with or obstruct normal exits, emergency exits, doors and walkways.
13. Railing, fencing or suitable substitute materials must be used to keep the heating equipment from any people using and visiting the structure.
14. The unit shall be located so that rain, ice, or snow drainage from the structure does not affect equipment operation. If the unit is mounted outside, it must be mounted above any pooled or standing water. If the unit is to be located on the ground, a surrounding trench is recommended to drain any rain, ice or snow away from the unit.
15. The ground and surrounding terrain must be cleared of any combustible vegetation and other combustible materials when the heater is mounted outside.
16. Eventually, like all electrical/mechanical devices, the thermostat can fail. Thermostat failure may result in an underheating condition. The thermostat should be tested to make sure it turns the heater on and off within a temperature differential of  $\pm 3^{\circ}\text{F}$ .
17. Take time to understand how to operate and maintain the heater by using this Owner's Manual. Make sure you know how to shut off the gas supply to the building and also to the individual heater. Contact your fuel gas supplier if you have any questions.
18. Any defects found in performing any of the service or maintenance procedures must be eliminated and defective parts replaced immediately. The heater must be retested by properly qualified service personnel before placing the heater back into use.

### **PROPANE GAS SUPPLY SIZING**

The vaporization of propane is affected by several factors: the surface area of the container, the liquid level of propane, temperature surrounding the container, and the relative humidity. All of these factors are specific to a site. Therefore, a degree of experience and judgement is required to select the proper propane supply.

Although experience is the best guide, the following recommendations can be used as a starting point. The table is based on experience in northern climates where cold weather and high humidity are prevalent in the winter. If more or less favorable conditions prevail at a specific site, adjustments can be made on the basis of experience.

#### Recommended Propane Gas Supply

Average Temp °F		50	40	30	20	10	0	-10
Number of 100lb. Gas Cylinders to Use Per Heater	<b>TS080</b>	1	1	2	2	2	2	2
	<b>TS170</b>	2	2	3	3	3	3	3

\* Cylinders must be manifolded together to allow simultaneous vapor withdrawal from all cylinders.