

Owner's Manual and Instructions

Premier Tent Heaters

ATTENTION ALL USERS

This heater has been tested and evaluated by C.S.A. International in accordance with the requirements of Standard ANSI Z83.7 CSA 2.14 and is listed and approved as a ductable direct gas-fired forced-air construction heater with application for the temporary heating of buildings under construction, alteration, or repair. Additionally, this heater has been application reviewed and approved by C.S.A. International for USA Tent Heating Applications with temporary human occupancy. If you are considering using this product for any application other than its intended use, then please contact your fuel gas supplier, or the L.B. White Co., Inc.

MODELS OUTPUT (Btuh) - 80,000

Certification by: 150-22665-B

WARNING

Fire and Explosion Hazard

- * Not for home or recreational vehicle use.
- * Installation of this heater in a home or recreational vehicle may result in a fire or explosion.
- * Fire or explosions can cause property damage or loss of life.

FOR YOUR SAFETY

If you smell gas:

1. Open windows.
2. Don't touch electrical switches.
3. Extinguish any open flame.
4. Immediately call your gas supplier.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING

Fire and Explosion Hazard

- * Keep solid combustibles a safe distance away from the heater.
- * Solid combustibles include wood, paper, or plastic products, building materials and dust.
- * Do not use the heater in spaces which contain or may contain volatile or airborne combustibles.
- * Volatile or airborne combustibles include gasoline, solvents, paint thinner, dust particles or unknown chemicals.
- * Failure to follow these instructions may result in a fire or explosion.
- * Fire or explosions can lead to property damage, personal injury or loss of life.

GENERAL HAZARD WARNING

- * Failure to comply with the precautions and instructions provided with this heater, can result in:
 - Death
 - Serious bodily injury or burns
 - Property damage or loss from fire or explosion
 - Asphyxiation due to lack of adequate air supply or carbon monoxide poisoning
 - Electrical shock
- * Read this Operator's Manual before installing or using this product.
- * Only properly-trained service people should repair this heater.

WARNING

- * Proper gas supply pressure must be provided to the inlet of the heater.
- * Refer to data plate for proper gas supply pressure.
- * Gas pressure in excess of the maximum inlet pressure specified at the heater inlet can cause fires or explosions.

- * Fires or explosions can lead to serious injury, death, or building damage.
- * Gas pressure below the minimum inlet pressure specified at the heater inlet may cause improper combustion.
- * Improper combustion can lead to asphyxiation or carbon monoxide poisoning and therefore serious injury or death.

Propane gas and natural gas have man-made odorants added specifically for detection of fuel gas leaks.

If a gas leak occurs, you should be able to smell the fuel gas. THAT'S YOUR SIGNAL TO GO INTO IMMEDIATE ACTION!

- * Do not take any action that could ignite the fuel gas. Do not operate any electrical switches. Do not pull any power supply or extension cords. Do not light matches or any other source of flame. Do not use your telephone.
- * Get everyone out of the building and away from the area immediately.
- * Close all propane gas tank or cylinder fuel supply valves.
- * Propane gas is heavier than air and may settle in low areas. When you have reason to suspect a propane leak, keep out of all low areas.
- * Use your neighbor's phone and call your fuel gas supplier and your fire department. Do not re-enter the building or area.
- * Stay out of the building and away from the area until declared safe by the firefighters and your fuel gas supplier.
- * FINALLY, let the fuel gas service person and the firefighters check for escaped gas. Have them air out the building and area before you return. Properly trained service people must repair the leak, check for further leakages, and then relight the appliance for you.
- * Some people cannot smell well. Some people cannot smell the odor of the man-made chemical added to propane or natural gas. You must determine if you can smell the odorant in these fuel gases.
- * Learn to recognize the odor of propane gas. Local propane gas dealers will be more than happy to give you a scratch and sniff pamphlet. Use it to become familiar with the fuel gas odor.
- * Smoking can decrease your ability to smell. Being around an odor for a period of time can affect your sensitivity to that particular odor.
- * The odorant in propane gas and natural gas is colorless and the intensity of its odor can fade under some circumstances.
- * Propane gas odor may differ in intensity at different levels. Since propane gas is heavier than air, there may be more odor at lower levels.
- * Always be sensitive to the slightest gas odor. If you continue to detect any gas odor, no matter how small, treat it as a serious leak. Immediately go into action as discussed previously.

ATTENTION -- CRITICAL POINTS TO REMEMBER!

- * Propane gas has a distinctive odor. Learn to recognize these odors.
- * If you have not been properly trained in repair and service of propane gas then do not attempt to perform service or repairs, or make any adjustments to the heater on the propane gas fuel system.
- * Even if you are not properly trained in the service and repair of the heater, ALWAYS be consciously aware of the odors of propane gas and natural gas.
- * A periodic sniff test around the heater or at the heater's joints; i.e. hose, connections, etc., is a good safety practice under any conditions. If you smell even a small amount of gas, CONTACT YOUR FUEL GAS SUPPLIER IMMEDIATELY. DO NOT WAIT!

WARNING

- * Do not use this heater for heating human living quarters.
- * Do not use in unventilated areas.
- * The flow of combustion and ventilation air must not be obstructed.
- * Proper ventilation air must be provided to support the combustion air requirements of the heater being used.
- * Lack of proper ventilation air will lead to improper combustion.

* Improper combustion can lead to carbon monoxide poisoning leading to serious injury or death. Symptoms of carbon monoxide poisoning can include headaches, dizziness and difficulty in breathing.

Asphyxiation Hazard

1. Do not attempt to repair, or service this heater or the gas supply line.
2. All installations and applications of L.B. White heaters must meet all relevant local, state and national codes. Included are L.P. gas, natural gas, electrical, and safety codes. Your local fuel gas supplier, a local licensed electrician, the local fire department or similar government agencies, or your insurance agent can help you determine code requirements.

Also refer to:

- NFPA 102, standard for assembly seating, tents and membrane structures.
- ANSI/NFPA 58, latest edition, Standard for Storage and Handling of Liquefied Petroleum Gas and/or
- ANSI Z223.1/NFPA 54, National Fuel Gas Code
- ANSI/NFPA 70, National Electrical Code.

3. We cannot anticipate every use which maybe made of our heaters. Check with the local fire safety authority if you have questions about applications.

4. Forced air heaters shall not be directed toward any propane gas container within 20 feet (6.10 meters).

Do not wash the heater. Use only compressed air, a soft brush or dry cloth to clean the interior of the heater and it's components.

5. For safety, this heater is equipped with manual reset high limit switches, an air-proving switch and a redundant gas control valve. Never operate the heater with any safety device that has been bypassed. Do not operate this heater unless all of these features are fully functioning.

6. Do not locate fuel gas containers or fuel supply hoses anywhere near the blower outlet of the heater.

7. Do not block air intakes or discharge outlets of the heater. Doing so may cause improper combustion or damage to heater components leading to property damage.

8. The hose assembly shall be visually inspected on a daily basis after heater relocation and when the heater is in use. If it is evident there is excessive abrasion or wear, or if the hose is cut, it must be replaced prior to the heater being put into operation. The hose assembly shall be protected from building materials, and contact with hot surfaces during use. The hose assembly shall be that specified by the manufacturer.

9. Check for gas leaks and proper function upon heater installation, when relocating, and after servicing. Refer to leak check instructions within installation section of this manual.

10. This heater should be inspected for proper operation by a qualified service person before each use and at least annually.

11. Always turn off the gas supply to the heater if the heater is not going to be used in the heating of the work space.

12. This heater is equipped with a three-prong (grounding) plug for your protection against shock hazard and must be plugged directly into a properly grounded three-prong receptacle. Failure to use a properly grounded receptacle can result in electrical shock, personal injury, or death.

13. If gas flow is interrupted and flame goes out, do not relight the heater until you are that all gas that may have accumulated has cleared away. In any event, do not relight the heater for at least 5 minutes.

14. Minimum propane gas supply cylinder size to be used shall be 100 pounds when using a cylinder supply system. The system must be arranged to provide vapor withdrawal from the operating cylinder.

15. When the heater is to be stored indoors, the connection between the propane gas supply cylinder(s) and the heater must be disconnected and the cylinder(s)

removed from the heater and stored in accordance with the Standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58.

16. Propane gas supply containers have left handed threads. Always use the appropriate wrench to make a connection to tighten or loosen the P.O.L. fitting at the cylinders' gas supply valve.

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.

3. This heater may be installed either indoors or outdoors. For outdoor installations, use only the following air distribution accessory part numbers:

-- Unit Diffuser Premier 80: 09389

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:

-- 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.

-- 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.

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.

Installation Instructions

GENERAL

WARNING

Fire and Explosion Hazard

1. Do not use open flame (matches, torches, candles, etc.) in checking for gas leaks.

2. 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.

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.

PROPANE GAS SUPPLY SIZING

Recommended Propane Gas Supply

Average Temp °F 50 40 30 20 10 0 -10

Number of 100lb. TS080 1 1 2 2 2 2 2

Gas Cylinders to

Use Per Heater TS170 2 2 3 3 3 3 3

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

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.

THERMOSTAT ASSEMBLY

1. The remote thermostat has a series tap plug at the end of the cord.
2. Connect male plug on heater into female side of series tap plug on thermostat.
3. Plug male side of series tap plug into grounded, heavy-duty, electrical extension cord. Plug extension cord into approved electrical outlet.

UNIT DIFFUSER ASSEMBLY

1. Insert the tabs of the diffuser into the vertical slots at the blower outlet. Push down on diffuser to secure into place.
2. Tent side wall material may be layed within channel of the diffuser to give a finished look to the installation.

ATTENTION

- * Only use the regulator supplied with the heater.
- * The heater must be regulated at all times for proper operation.

CONNECTING REGULATOR TO PROPANE GAS CYLINDER

1. Ensure the cylinder valve is turned completely closed.
 2. At the inlet end of the regulator is a male nut and stem assembly called a POL. Pull the cap from the POL but do not discard it. Insert POL stem into the valve on the cylinder. Thread the nut counterclockwise into the tank valve. Tighten securely with a wrench.
 3. Slowly open the cylinder valve by turning counterclockwise. This will prevent lock-up of the excess flow valve built within POL stem.
 5. Check all connections with approved leak detector.
- Do NOT use flame to check for leaks. A fire or explosion may result.
6. When storing or transporting the heater, ensure the POL cap is pushed back onto the POL fitting. This will protect the fitting from nicks or other damage and prevent the entry of moisture.

Start-Up Instructions

1. Connect electrical cord to an approved electrical outlet.
2. Set thermostat to desired room temperature.

3. This heater has a rocker selector switch located on the back of the heater near the burner end access panel. This switch allows you to either heat or ventilate (no heat).

A. Heating

a. Open all manual fuel supply valves. Check for gas leaks using an approved leak detector. The gas control valve on the heater has a manual shut-off feature incorporated into the valve assembly. Ensure the indicator on the valve is positioned to ON.

b. When the selector switch is positioned to heat, a red light within the switch will be on. The fan motor will start, the igniter will spark and ignition will occur. The thermostat will cycle the heater on or off based upon temperature setting.

B. Ventilation

When the selector switch is positioned to vent, the red light will NOT be on. The fan motor will start, but the igniter will not spark, nor will ignition occur. This feature is used typically when heat is not needed, but air circulation is required. The heater will not cycle on its thermostat setting. To discontinue the ventilation feature, position the switch to off or heat.

C. Off - Position the switch to midpoint.

ATTENTION

* It is normal for air to be trapped in gas hose on new installations. The heater may attempt more than one trial for ignition before air is finally purged from line and ignition takes place.

4. The direct spark ignition (DSI) control module is self diagnostic. It works in conjunction with a light emitting diode (L.E.D.) built into the selector switch. The light will flash a specific flash pattern depending on a problem that occurs. Match the flash pattern given by light to the troubleshooting label applied to inside of burner cap access panel of the heater. The troubleshooting label identifies the causes of the problem as it relates to specific flash pattern and remedies to correct the problem. See also "Troubleshooting Data" within this Owner's Manual.

5. Do not exceed input rating stamped on nameplate or manufacturer's recommended burner orifice pressure for size orifice(s) used. Make certain that the primary air supply to main burner is open and free of dust, dirt and debris for complete, proper combustion.

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.

1. The area surrounding the heater shall be kept clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

2. Have your gas supplier check all gas piping annually for leaks or restrictions in gas lines.

3. Regulators must be periodically inspected to make sure the regulator vents are not blocked. Debris, insects, insect nests, snow, or ice on a regulator can block vents and cause excess pressure at the heater.

4. Regulators can wear out and function improperly. Have your gas supplier check the date codes on all regulators installed and check delivery pressures to the heater to make sure that the regulator is reliable.

5. Check all wiring, associated terminals, and electrical components within the heater for corrosion, frayed or cut insulation, tight connections, etc. Repair or replace as necessary.

6. Review all heater markings (i.e. wiring diagram, warnings, start-up, shut-down, troubleshooting, etc.) at the time of maintenance for legibility. Make sure none are cut, torn, or otherwise damaged. Any damaged markings must be replaced immediately by contacting the L.B. White Co., Inc. Data plates, startup and shut-down instructions and warnings are available at no cost.