



Premier Ductable Heaters

TS080	80,000 Btuh / 23.4 kW
TS170	170,000 Btuh / 49.8 kW
CS080	80,000 Btuh / 23.4 kW
CS170	170,000 Btuh / 49.8 kW

LP Vapor Withdrawal or Natural Gas
Dual Fuel

View this manual online at www.lbwhite.com

Attention

This heater has been tested and evaluated by the CSA Group 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 the CSA Group for U.S. and Canadian Tent Heating Applications with temporary human occupancy. CHECK WITH YOUR LOCAL FIRE SAFETY AUTHORITY, YOUR LOCAL FUEL GAS SUPPLIER, OR THE L.B. WHITE COMPANY IF YOU HAVE QUESTIONS REGARDING APPLICATIONS.

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Congratulations!

You have purchased the finest circulating heater available. Your new L.B. White heater incorporates the benefits from the most experienced manufacturer of heating products using state-of-the-art technology.

We, at L.B. White, thank you for your confidence in our products and welcome any suggestions or comments you may have... contact us at 1-800-345-7200, or email us at customerservice@lbwhite.com.

**SEE ASSEMBLY
INSTRUCTIONS
INSIDE**

**Please refer to important
elevation information on
inside cover.**



SCAN THIS

with your smartphone or visit <http://goo.gl/nvneR> to view maintenance videos for L.B. White heaters.*

* Requires an app like QR Droid for Android or for iPhone

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Attention - Critical Points to Remember!

- Propane gas and natural gas have a distinctive odor. Learn to recognize these odors. (Reference "Fuel Gas Odor" and "Odor Fading" sections above.
 - If you have not been properly trained in repair and service of propane gas and natural gas fueled heaters, then do not attempt to light the heater, perform service or repairs, or make any adjustments to the heater on a propane gas or natural gas fuel system.
 - Even if you are not properly trained in the service and repair of radiant heaters, 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!
1. Do not attempt to install, repair, or service this heater or the gas supply line unless you have continuing expert training and knowledge of gas heaters.

QUALIFICATIONS FOR SERVICING AND INSTALLATION:

- a. To be a qualified gas heater service person, you must have been trained in gas-fired heater servicing, repair and also have sufficient experience to allow you to troubleshoot, replace defective parts, and test heaters in order to get them into a continuing safe and normal operation condition. You must completely familiarize yourself with each model heater by reading and complying with the safety instructions, labels, owner's manual, etc. that are provided with each heater.
- b. To be a qualified gas installation person, you must have sufficient training and experience to handle all aspects of installing, repairing, and altering gas lines, including selecting and installing the proper equipment, and selecting proper pipe size to be used. This must be done in accordance with all local, state and national codes as well as the manufacturer's requirements.

- c. In the Commonwealth of Massachusetts, this product must be installed by a gas fitter licensed in the Commonwealth of Massachusetts.

WARNING **ELECTRICAL GROUNDING** **INSTRUCTIONS**

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

2. All installations or applications of L. B. White Co., Inc.'s heaters shall meet the requirements of local, state and national L.P. gas and natural gas, electrical and safety codes. Your gas supplier, local licensed electrician, local fire department and government agencies can help you determine these requirements. In the absence of local codes, comply with the following:
 - a. Installations in the U.S.A.:
 - 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.
 - b. Installations in Canada:
 - CAN1-B149.1 or CAN1-B149.2 Installation Codes
 - CSA C22.1 Part 1 Standard Canadian Electrical Code.
 - CSA C22.2 No.3, Electrical Features of Fuel Burning Equipment.
3. We cannot anticipate every use which maybe made of our heaters. Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these. 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.
5. 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.

6. 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.
7. Do not direct the heater toward any propane gas supply container or gas hose within 20 ft. (6m) of the heaters hot air discharge.
8. 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.
9. 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 both during use and while in storage. The replacement hose assembly shall be that specified by the manufacturer. See parts list.
10. 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.
11. This heater should be inspected for proper operation by a qualified service person before each use and at least annually.
12. 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.
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 cylinder size to be used:
170,000 btuh heaters: (1) 100 lb./45 kg or (2) 40 lb./18 kg. : 80,000 btuh heaters: 40 lb./18 kg
Multiple cylinder installations require a manifold to ensure continuous supply of gas. 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 or Standard CSA B149.1 Natural Gas and Propane Installation Code as appropriate.
16. Propane gas supply containers have left handed threads. Use the manual hand wheel supplied with the regulator to make a connection of the regulator's P.O.L. fitting into the cylinders' gas supply valve.
17. Use pipe joint compound that is resistant to propane and natural gas.
18. For either indoor or outdoor installation. Adequate ventilation shall be provided in accordance with OSHA 29 CFR 1926.154, Safety Requirements for Temporary and Portable Space Heating Devices and Equipment, ANSI A10.10, National Fuel Gas Code, ANSI Z223.1/NFPA54, Liquefied Petroleum Gas Code, NFPA 58 or the Natural Gas and Propane Installation Code, CAN B149.1, as appropriate.

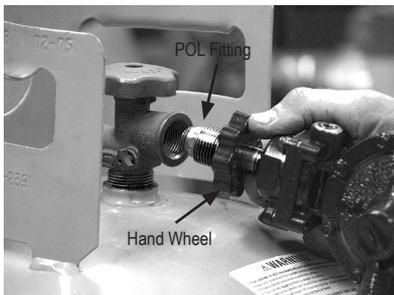
Connecting the Regulator to the Gas Supply

- Only use the L.B. White regulator supplied with the heater.
- Use pipe joint compound that is resistant to propane and natural gas at all threaded connections
- The heater must be regulated at all times for proper operation.
- Leak check all regulator connections after connecting to the gas supply.

Standard Premier Propane Gas Heaters (Models TS080/170)

1. Remove the cap from the POL fitting on the regulator. (Do not discard the cap)
2. Insert the POL stem into the cylinder valve. Push the spring loaded hand wheel up against the threaded nut. Turning counter clockwise, thread the POL nut into into the container valve using the hand wheel. Firmly tighten. See Fig. 12.

FIG. 12



3. Slowly open the cylinder valve. This will prevent lock-up of the excess flow valve built within POL stem.
4. When storing or transporting the heater, use the protective cap to ensure the POL fitting is protected from damage and water entry.

Standard Premier Natural Gas Heaters (Models TS080/170)

- Use the regulator shipped with the natural gas heater if the supply pressure to the heater is above the maximum inlet pressure of 13.5 In.W.C./3.36 kPA, as stated on the heater's data plate and in this owner's manual.
- The natural gas regulator supplied with the heater requires a minimum 2 PSIG inlet pressure.
- Connect the natural gas regulator (part # 09795) to the natural gas supply line, using the proper connections.

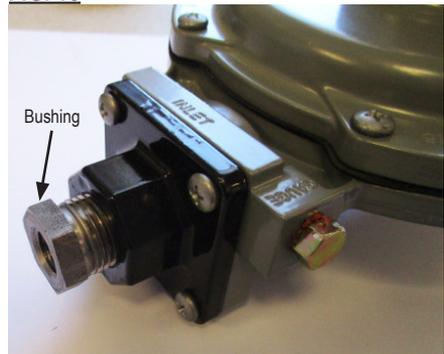
Dual Fuel Premier Heaters (Models CS080/CS170)

- The regulator provided with dual fuel heaters is suitable for both propane or natural gas
- Only use the L.B. White regulator supplied with the heater.
- Use pipe joint compound that is resistant to propane and natural gas at all threaded connections
- The heater must be regulated at all times for proper operation.
- Leak check all regulator connections after connecting to the gas supply.

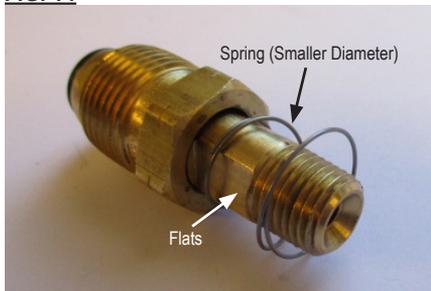
When using propane gas as the fuel:

1. Thread the bushing into the regulator inlet. Tighten securely. See Fig. 13.

FIG. 13



- Remove the plastic cap from the POL fitting. (POL fitting is located in hardware bag. Do not discard the cap)
- Slide the spring over the POL stem. Smaller diameter end of spring is toward brass nut of POL. See Fig. 14. Slide the open side of the hand wheel over the POL stem. Thread the assembly into the 1/4 in. inlet of the bushing installed in the regulator. Tighten securely using a wrench at the flats of the POL stem See Figs. 14 and 15.

FIG. 14**FIG. 15**

- Insert the POL stem into the cylinder valve. Push the spring loaded hand wheel up against the threaded nut. Turning counter clockwise, thread the POL nut into the container valve using the hand wheel. Firmly tighten. See Fig. 16.

FIG. 16

- Slowly open the cylinder valve. This will prevent lock-up of the excess flow valve built within POL stem.
- When storing or transporting the heater, use the protective cap to ensure the POL fitting is protected from damage and water entry.

When using natural gas as the fuel:

- The regulator supplied with the dual fuel heater is required for use with natural gas if the natural gas supply pressure to the heater is above the maximum inlet pressure of 13.5 in.W.C./3.36 kPA, as stated on the heater's data plate and in this owner's manual.
- The regulator requires a minimum natural gas supply pressure of 2 PSIG.
- Remove the POL fitting assembly with hand-wheel from the regulator inlet.
- Connect the regulator to the natural gas supply line using the proper connections.

Start-Up Instructions

1. Connect the electrical cord to an approved electrical outlet.

A selector switch located on the back of the heater allows operation in either heating or ventilation (no heat) modes. See Fig. 17.

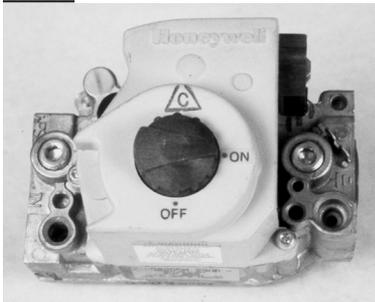
FIG. 17



A. Heat Mode Operation

- a. Open all manual fuel supply valves. Check for gas leaks using an approved leak detector. The gas control valve in the heater has a manual shut-off feature incorporated into the valve assembly. Ensure the indicator on the valve is positioned to ON. See Fig 18.

FIG. 18



- b. Push the selector switch to heat.  See. Fig. 17.

- c. Set the thermostat above room temperature
 - The fan motor will start
 - Igniter will spark
 - Ignition occurs

- d. The thermostat cycles the heater on and off based on set point.

(It is normal for air to be trapped in the 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.)

When the switch is set to heat, four status lights (see Fig.17) will be activated in sequence as specific circuits are checked by the ignition control. If the heater does not light, and a status light is off, refer to the troubleshooting label on the inside of the heater's burner end access door or the troubleshooting of the manual.

B. Vent Mode Operation

- Push the selector switch to off, **O**, then to vent 
- Only the fan motor will operate. The igniter will not spark, nor will ignition occur.

The ventilation feature is used when air circulation is required. The heater will not cycle on its thermostat setting.

C. Off O

1. Position the switch to midpoint O.
2. **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

For normal shut-down, set the thermostat below room temperature. When servicing or performing maintenance, follow steps 1 - 5.

1. Close the fuel supply valve.
2. Allow the heater to burn off any fuel gas remaining in the gas supply line.
3. Set the thermostat to "Off" or "No Heat".
4. Position selector switch to O (off).
5. Disconnect the heater from its gas and electrical supplies.

Gas Selector Valve Dual Fuel (DF) Heaters Only

This heater is shipped from the factory with the fuel selector valve in the propane gas (LP) position. Ensure the fuel selector valve's handle is properly positioned for the fuel being used.

1. This feature allows the heater to operate on either propane or natural gas without changing out the burner orifice. The gas selector valve is located between the gas control valve and the burner. Gas selection is made by sliding the locking sleeve (if provided) up and repositioning the valve's handle. **THIS IS NOT A MANUAL GAS SHUT OFF VALVE.**
2. Refer to Figs. 19 and 20. The valve handle must be properly positioned for the specific gas being used (Premier 170 DF shown). Same handle positions for Premier 80 DF).

FIG. 19

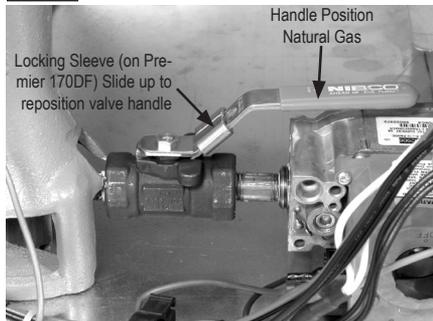


FIG. 20



3. The handle must be fully set at 90 degrees to gas flow (propane gas) or parallel to gas flow (natural gas) for proper operation. Also refer to the decal located on the heater's base, adjacent to the selector valve.

Do not operate the heater with the selector valve handle set between either position, otherwise improper operation will occur.

4. Premier 170 DF: The valve's handle can be locked to prevent improper positioning. Use the hole provided. See Fig. 21.

FIG. 21

