

Technical Bulletin #1

SUMMARY OF SAFE PRACTICES

INSTALLATION

1. Hire a licensed contractor to install your Greenwood hydronic furnace.
2. Use caution when moving this furnace. Greenwood furnaces weigh between 2,500 and 4,000 pounds and serious injury can occur if you do not have the proper equipment and experienced manpower available.
3. Comply with local building codes and regulations when installing this furnace.
4. Observe minimum clearances to combustible surfaces.
5. Make sure to identify sources of make-up air in the room where the furnace is located. The Greenwood furnace, exhaust fans and other appliances all draw air from the room. Be certain there is an adequate source of fresh air to offset these demands or you may create negative pressure in the room and starve combustion in the furnace.
6. Connect the furnace to a properly installed and operating chimney and vent it to the outside.
7. Be sure your chimney is safely constructed and in good repair. Before installation, have the chimney inspected by a qualified inspector.
8. Use an approved masonry chimney or a UL 103 HT and ULC S629 Listed Residential Type and Building Heating Appliance Chimney.
9. Be sure to provide thermal spike protection for the furnace (see Wiring and Controls).
10. **DO NOT** connect the furnace to an aluminum Type B gas vent.
11. **DO NOT** vent the furnace to another room or inside a building.
12. **DO NOT** share a chimney flue with another appliance.
13. **DO NOT** operate the furnace with a draft of less than 0.05" WC (12.45 Pa) or more than 0.07" WC (17.44 Pa).
14. **DO NOT** install the furnace in a mobile home or trailer. Instead, install the furnace outside in a covered enclosure and pipe the hot water into the mobile home.

OPERATION

1. Use kindling, paper and smaller logs when cold-starting the furnace. Once the fire is going, carefully follow the procedures for adding large wood logs to the firebox.
2. **DO NOT** use chemicals, gasoline, lantern fuel, kerosene, charcoal lighter fluid or other flammable liquids to start or "freshen up" the fire.
3. **DO BURN** large unsplit wood. If the wood fits in the door, it will burn. Small pieces or finely split wood will burn hot and make it difficult to control cycling of the furnace.
4. **DO NOT BURN** coal or anything other than whole wood in this furnace.
5. Observe the following procedure for opening the firebox door when the furnace is in operation. *Failure to follow this procedure may cause smoke to backflow into the room.*
 - a. Check to see if the air intake damper on the rear of the furnace is open. Open the firebox door only when the damper is open; otherwise, smoke may back-draft into the room.
 - b. Unlatch and open the door just 1 to 2 inches; this allows the furnace to adjust to the new source of air.
 - c. After 10-15 seconds, carefully open the door the rest of the way.
6. **BE CAREFUL** when working around an open firebox door. The refractory insert in the firebox door and the steel surrounding the door opening are **very hot**. Wear protective clothing, leather hearth gloves and eye protection whenever you open the firebox door and stoke the fire.
7. Follow proper procedure when adding wood to the fire: Carefully pick up the log and place it squarely on the bottom frame of the firebox door opening. Then roll or push the log into the

- firebox using a poker or other suitable tool.
8. **DO NOT** jockey wood into the firebox that is longer than the width of the firebox door. The firebox door surfaces are extremely hot and you risk severe burns.
 9. **DO NOT** throw logs into the firebox. Though the refractory is very strong and durable, a thrown log may crack it. A thrown log may also stir up ash and cinders that can fly back into the room.
 10. **DO NOT** overfill the firebox. The level of wood in the firebox should not rise above the bottom lip of the door. Match the amount of wood loaded to the current demand for heat from the unit.
 11. Keep the firebox door closed except when tending the fire.
 12. **DO NOT** block open the air intake damper on the rear of the furnace. Doing so can lead to over-firing, which can damage the furnace and void your warranty.
 13. Keep the furnace area clear and free of combustible materials, gasoline, and other flammable vapors and liquids.
 14. **DO NOT LET ASHES ACCUMULATE AND BLOCK THE DRAFT HOLES IN THE LOWER REAR OF THE FIREBOX.** Dispose of ashes in a metal container with a tight-fitting lid. Do not place other materials in this container and store it on a noncombustible surface, well away from all combustible materials. When cinders have thoroughly cooled, bury the ashes or dispose of them in the garbage.
 15. **DO NOT** store wood within the appliance installation clearances or within the space required for fueling, ash removal, and other routine maintenance operations.
 16. **DO NOT** allow anyone who is under the influence of drugs or alcohol or is unfamiliar with the correct operation of the furnace to add fuel or otherwise use this furnace.
 17. **DO NOT** let children play around the furnace when it is operating. To avoid burns or other injury, alert all persons to the hazards of hot furnace surfaces.
 18. **DO NOT** over-fire the furnace by leaving the firebox door open or blocking open the air intake damper. If the furnace or stovepipe begins to glow or turn red, the furnace is over-firing. Over-firing will discolor the paint and can result in very dangerous operating conditions.

MAINTENANCE

1. Establish a daily routine for storage of fuel and care of the appliance. Check daily for creosote buildup. Be aware that the hotter the fire, the less creosote is deposited. If creosote is building up, it is a sign that the fire is not burning hot enough or the furnace is short-cycling due to insufficient demand for heat. Try using smaller loads of wood. If the unit continues to short-cycle, it may be a sign that the heating season is over. Have a clearly understood plan to handle a chimney fire.
2. Clean out the flue pipe, chimney, and draft inducer (if used) at the end of each heating season, or more often if necessary, to remove any accumulation of soot, creosote or ash.
3. **INSPECT CHIMNEY, FLUE PIPES, FLUE PIPE JOINTS, AND FLUE PIPE SEALS REGULARLY TO INSURE THAT SMOKE AND FLUE GASES ARE NOT DRAWN INTO, AND CIRCULATED BY, YOUR HOME'S AIR CIRCULATION SYSTEM.** If you observe rust or smoke escaping, replace the pipe immediately.
4. Exercise the safety relief valve at least once a year by simply lifting the handle and allowing water to escape. If during normal operation the valve leaks, lift the handle several times and remove debris on the seat. If that does not work, replace the valve.
5. **DO NOT** clean furnace surfaces when the unit is hot. Wait until the unit cools and then clean with soap and water.

NOTE: For more information on the safe use of your wood furnace, obtain a copy of the National Fire Protection Association (NFPA) publication, "Using Coal and Wood Furnaces Safely" NFPA No., HS-10-1978. The address of the NFPA is: Battery March Park, Quincy, MA 02269.