



SAVE THESE INSTRUCTIONS: Installing Contractors, leave these instructions with the customer as it contains important information regarding annual inspection requirements, maintenance check lists, and shut down procedures. Affix instructions close or adjacent to the appliance.

Residential • Gas fired • Hot Water Boilers

MODELS CHS-85 through CHS-399

User's Information Manual

CHS HIGH EFFICIENCY FIRE TUBE CONDENSING GAS BOILER

User Responsibilities:

This appliance must be installed and serviced by a qualified installer or service technician. This appliance must be serviced and inspected annually when operating in normal residential applications. Other applications (e.g. commercial or other more strenuous conditions) may require more frequent service and inspection. As the User of this equipment, you are responsible for ensuring maintenance is performed at the required intervals. It is also the User's responsibility to ensure Vent and Combustion Air-inlet terminations are kept clear of obstructions.

Installer Responsibilities:

As the installing technician, it is your responsibility to ensure the installation is performed in accordance with the Installation and Operation Instructions as well as any applicable local or National installation codes. It is also your responsibility to inform the User/Owner of their obligation with respect to the above description under "User Responsibilities". Failure to follow this warning could result in fire, serious injury, or death.

IN THE STATE OF MASSACHUSETTS ONLY

If the bottom of the vent and air intake terminal is installed below four feet above grade, the carbon monoxide detector located in the boiler room shall:

- (a) Be powered by the same electrical circuit as the appliance such that only one service switch services both the appliance and the carbon monoxide detector;
- (b) Have battery back-up power;
- (c) Meet ANSI/UL 2034 Standard and comply with NFPA 720 (latest edition); and
- (d) Be approved and listed by a nationally recognized testing laboratory that is recognized under 527 CMR.

NOTICE

Blocked Vent - This unit is provided with an automatic system that will not allow the unit to operate if the vent is blocked. If you suspect a blocked vent, follow these instructions:

1. Inspect the inlet and outlet venting outside your house and free any obstructions that may be there.
2. Contact a qualified service technician for assistance if unit still not operating.

! WARNING

Carbon Monoxide Detector - For each floor level containing bedrooms(s), a carbon monoxide detector and alarm shall be placed in the living area outside the bedrooms as well as in the room that houses the appliance. Detectors and alarms shall comply with NFPA 720 (latest edition). Failure to comply with requirements for detectors and alarms may result in serious injury, or death.

! WARNING

Service Requirements - Failure to have the appliance properly serviced and inspected on a regular basis may result in property damage, serious injury or death.

! WARNING

Obstruction Hazards - Failure to keep the Vent and Combustion Air-inlet clear of ice, snow, and other debris may result in property damage, serious injury, or death.

CONTACT FOR SERVICE AND ASSISTANCE

Heating Contractor: _____ Phone _____

Boiler Model # _____ Boiler Serial _____ Installation Date _____

Lighting / Shutting Down the Appliance



Read Before Proceeding - If you do not follow these instructions exactly, a fire or explosion may result causing property damage, serious injury or death.

FOR YOUR SAFETY, READ BEFORE OPERATING

- A) This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B) BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
WHAT TO DO IF YOU SMELL GAS:
 - Do not try to light any appliance.
 - Do not touch any electric switch.
 - Do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- C) Use only your hand to turn the gas "shutoff" valve. Never use tools. If the handle will not turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D) Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above very carefully.
2. Set the thermostat to lowest setting. Turn off all electric power to the appliance.
3. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
4. Turn the manual gas valve to the OFF position. Remove front access panel.
5. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to the next step.
6. Turn the manual gas valve ON. Wait an additional five (5) minutes smelling for gas.
7. Replace the front access panel.
8. Set thermostat to highest setting. Turn on all electric power to the appliance.
9. Ignition sequence is automatic. Combustion will occur after a brief fan purge.
10. If ignition does not occur, follow the instructions "To Turn Off Gas To Appliance" and call your service technician or gas supplier.

TO TURN OFF GAS TO THE APPLIANCE

1. STOP! Read the safety information above very carefully.
2. Turn off all electric power to the appliance.
3. Turn the manual gas valve to the OFF position.

User Inspection

User inspections do not eliminate the need for an annual inspection by a qualified service technician. Routine visual inspections allow the user to spot potential problems that may affect unit operation or occupant safety.

Periodic Inspection Checklist (recommended monthly)

- 1. Remove the front access cover. Check inside the unit for leakage from plumbing, venting or condensate.
- 2. Plumbing - Check outside the unit for leaky joints, water stains, or pooling fluid on the floor.
- 3. Venting - Inspect all indoor exhaust vent and combustion air-inlet pipes and examine them for cracks or misaligned joints. Water dripping from unsealed vent pipe connections is an indication that flue gases are escaping. Check vent terminations and make sure they are free of debris and obstructions.
- 4. Condensate - The condensate trap and drain should have clear fluid in it. Check that the condensate is not backing up onto the floor or spilling into the bottom of the appliance cabinet.
- 5. Contact a service technician immediately if there is any sign of leakage, either inside or outside the unit.



Should overheating occur or the gas supply fail to shut off, close the Manual Gas Shutoff valve to the appliance. Failure to follow instructions could result in explosion causing property damage, serious injury or death.



Do not use this appliance if any part has been underwater. Immediately contact a qualified service technician to inspect the unit and replace any damaged components. Failure to follow instructions could result in explosion causing property damage, serious injury or death.

Service Technician Inspection

This unit must be inspected at the beginning of every heating season by a qualified service technician.

Annual Inspection Checklist

- 1. Lighting is smooth and consistent, and the combustion fan is noise & vibration free.
- 2. The condensate drain freely flows, and is cleaned of sediment.
- 3. Relief Valve and air vents are not weeping.
- 4. Low water cut off is tested and flushed (if applicable).
- 5. Examine all venting for evidence of leaks. Ensure vent screens are cleaned and clear of debris.
- 6. Check the burner plate for signs of leaking.
- 7. The combustion chamber must be inspected and if necessary cleaned (Refer to Annual Maintenance and Inspection section in the appliance Installation and Operating Instructions).
- 8. Listen for water flow noises indicating a drop in appliance water flow rate. The hydronic system may require flushing to eliminate hard water scale.



Crystalline Silica – Carefully read the warnings and handling instructions in the Installation and Operating Instruction for Refractory Ceramic Fibres before commencing any service work in the combustion chamber.



Replace any gaskets or insulation discs that show any signs of damage. Do not re-use. Failure to follow these instructions may result in fire, property damage or death.



Allowing the appliance to operate with a dirty combustion chamber will adversely affect its operation and void the warranty. Failure to clean the heat exchanger on a frequency that matches the need of the application may result in fire, property damage, or death.



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