INSTALLATION INSTRUCTIONS

Boiler Direct Vent Kit Z-Flex DVO

Keep these instructions with the boiler at all times for future reference

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Be Aware of Hazard Definitions

Danger Denotes presence of a hazard which, if ignored, will result in severe personal injury, death or property damage

Warning Denotes presence of a hazard which, if ignored could result in severe personal injury, death or substantial property damage.

Caution Denotes the presence of a hazard, which if ignored, could result in minor personal injury or property damage

Notice Intended to bring attention to information, but not related to personal injury or property damage.

Danger This equipment must be installed, adjusted, serviced and started only by a qualified service agency – an individual or agency, licensed and experienced with all codes and ordinances, and who is responsible for the installation and adjustment of the equipment. The installation must comply with all local codes and ordinances and with the latest revision of the National Fire Protection Standard for Oil Burning Equipment, NFPA 31.

Read all instructions before proceeding. Follow all instructions completely. Failure to follow these instructions could result in equipment malfunction causing severe personal injury, death or substantial property damage.

Do not alter this vent kit or the boiler in any way. The manufacturer will not be liable for any damage resulting from changes made in the field to the boiler or its components or from improper installation. Failure to comply could result in severe personal injury, death, or substantial property damage.

Your oil fired boiler is designed to burn No. 1 and No. 2 heating oil only. Never use gasoline or a mixture of gasoline and oil.

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

The area around the boiler should be kept free and clear of combustible materials.

Never burn garbage or refuse in your boiler.

Never try to ignite oil by tossing burning papers or other material into your boiler.

Do not attempt to start the burner when excess oil has accumulated or the boiler is full of vapors.

Do not operate boiler if the heat exchanger is damaged.

Do not jumper, attempt to bypass or override any of the safety limit controls.

Do not use this boiler if any part has been under water. Immediately call a qualified service technician to inspect the boiler and replace any part of the boiler, control system or burner that has been under water.

All installations must conform to the requirements of the authority having jurisdiction. Such applicable requirements take precedence over the general instructions of this manual.

Where required by the authority having jurisdiction, the installation must conform to the American Society of Mechanical Engineers Safety Code for Controls and Safety Devices for Automatically Fired Boilers, ANSI/ASME CSD-1.

Notice Concealed Damage- If you discover damage to the burner, boiler or controls during unpacking, notify the carrier at once and file the appropriate claim. When calling or writing about the boiler please have the following information available: The boiler model number and serial number.

Installation Clearances

Warning Boilers in rooms shall be installed with the clearances from combustible materials not less than indicated below. Combustible materials are those made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that will ignite and burn, whether flame proofed or not, or whether plastered or not.

The boiler must not be installed on combustible flooring. The boiler is approved for installation on non combustible flooring only. The boiler must not be installed on carpeting or vinyl flooring

Minimum clearances to combustible construction are as follows:

TOP-24 IN.
FRONT-12 IN.
FLUE CONNECTOR DOUBLE WALL DIRECT VENT PIPING – 2”
REAR-2 IN.
SIDES-2 IN.

Consult NFPA-31 for construction techniques where the above minimum clearances cannot be obtained. Recommended clearances for servicing can be found in the boiler manual.

VENTING

Warning Failure to follow all instructions can result in flue gas spillage and carbon monoxide emissions, causing severe personal injury or death. All installations must meet the requirements of NFPA 31. Use only the listed venting system components supplied with the packaged boiler. All vent connections must be properly sealed with the high temperature sealant.

Caution External vent surfaces are hot. Surface discoloration of the building may occur due to improper burner or boiler adjustment. We will not accept any liability for such discoloration. Follow all instructions which are included with your specific direct vent kit.

Vent Location

1. The preferred location of venting system is on the opposite wall of the known prevailing winds.

2. The exit terminal of the system must conform to the following guidelines. See Figure 1.
   a. The vent terminal shall not be less than 3 feet above any forced air inlet to the house.
   b. The vent terminal shall not be less than 4 feet below, 4 feet horizontally, or 1 foot above any door, window or gravity inlet into the building.
   c. The vent terminal shall be installed at least 1 foot above the finished grade. The vent must be maintained to keep the location 1 foot above any solid surface including snow, ice and landscape materials. **The vent shall not be installed in a window well or any other natural or fabricated depression.**
   d. The vent terminal shall not be less than 2 feet from an adjacent building.
   e. The vent terminal shall not be less than 7 feet above grade when located adjacent to public walkways.
   f. The vent terminal shall not be located so that flue gasses are directed to jeopardize people or overheat combustible structures, materials or enter buildings.
   g. All joints in the vent system must be sealed with Permatex high temperature sealer or equivalent to prevent the leakage of products of combustion into the building.

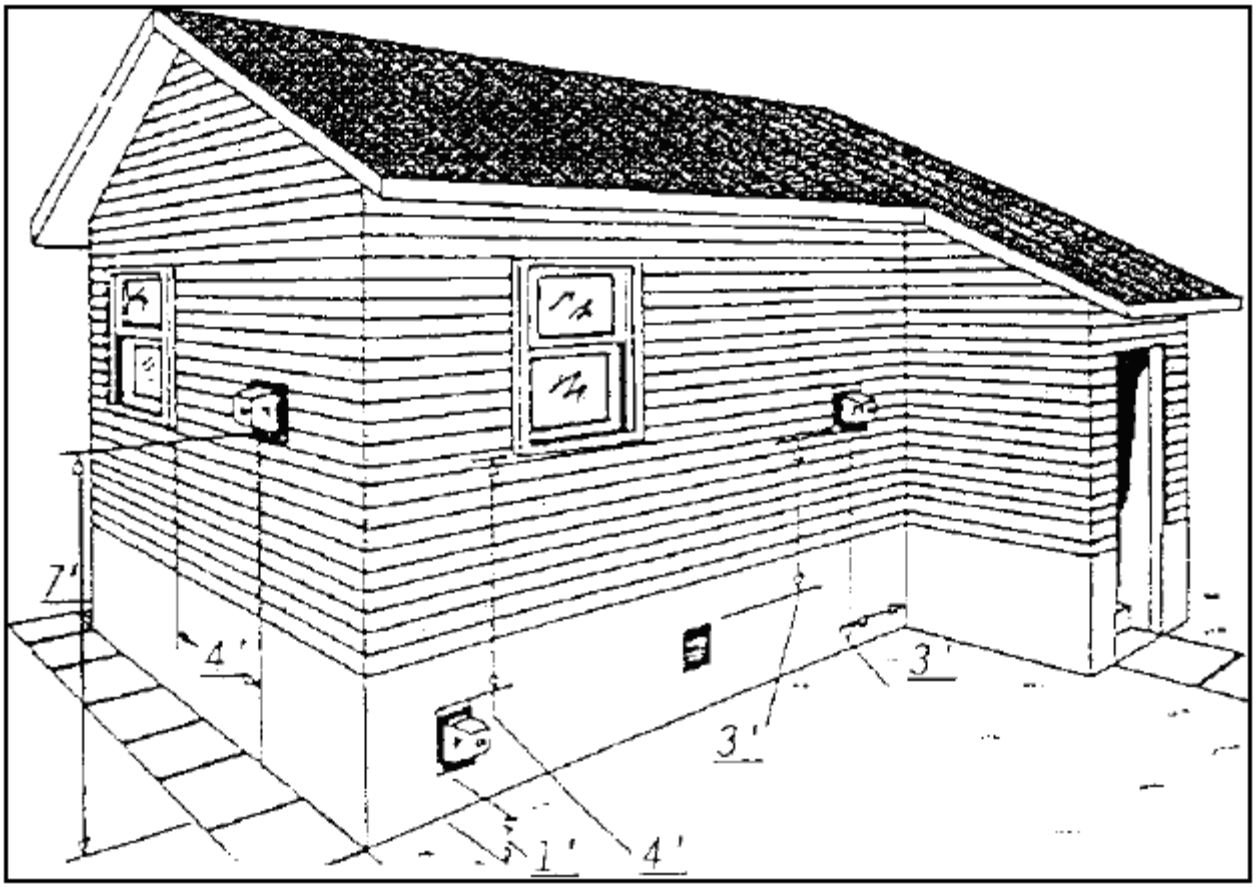


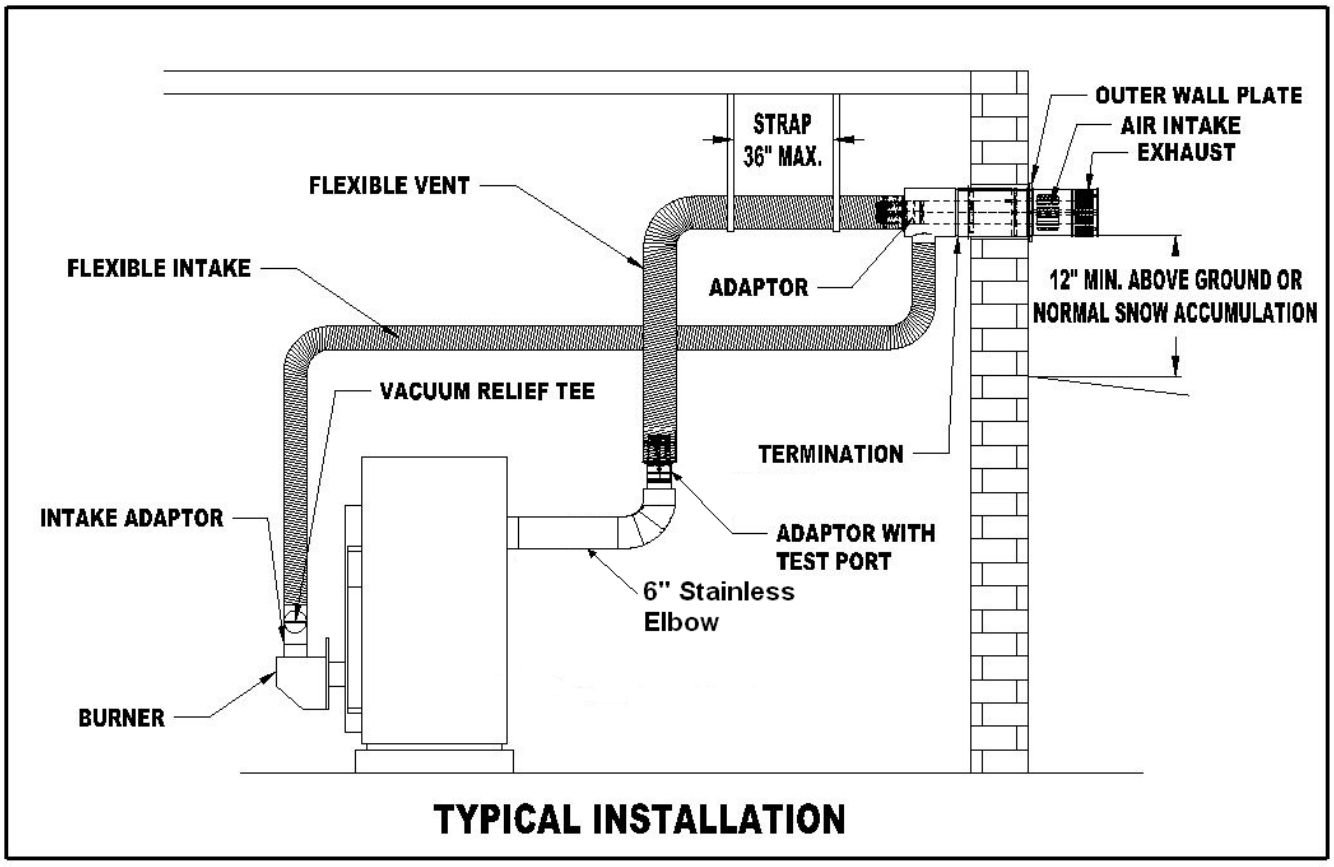
Figure 1

Vent Kit Components

(1) Z-Flex DVO 4” Concentric Termination
(1) 10’ or 15’ length of 4” double wall insulated flexible stainless vent piping 12” minimum bend radius
(1) 6” Stainless elbow
(1) Stainless appliance adapter 6” to 4” flex with test port
(1) Vent Adaptor 4” to 4”flex
(1) 4” Flexible air intake piping to match vent length.
(2) 4” Air intake piping clamps
(1) 4” 90 Deg. galvanized elbow,
(1) Field Controls VRV-4, 4” Vacuum Relief Valve
(1) Tube of high temperature sealant

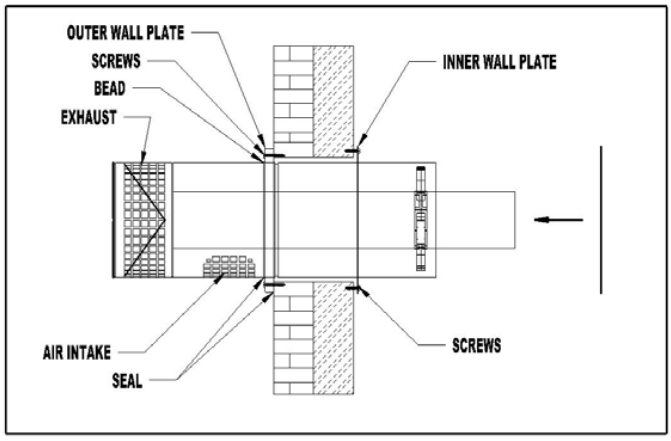
Vent Installation

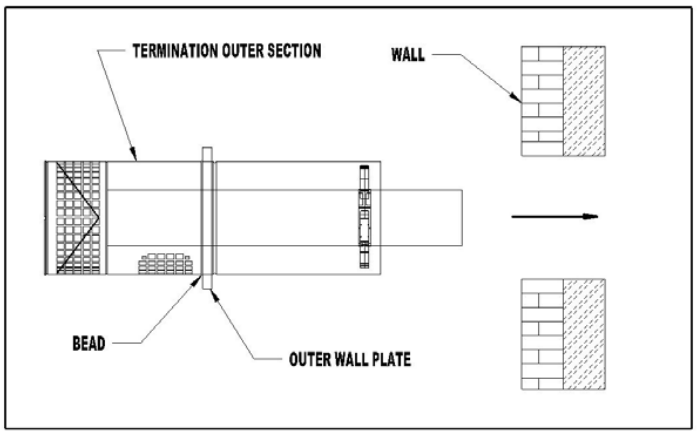
1. Vent Pipe bend radius is 12” minimum
2. Support vent pipe with metal strapping every 36”
3. Maximum wall thickness is 14”. Call Z-Flex for recommendations on thicker walls
4. System is not designed for common venting. Use for single boiler only.
5. Appliance adaptor test port is included for combustion test for proper burner adjustment.



Termination Installation

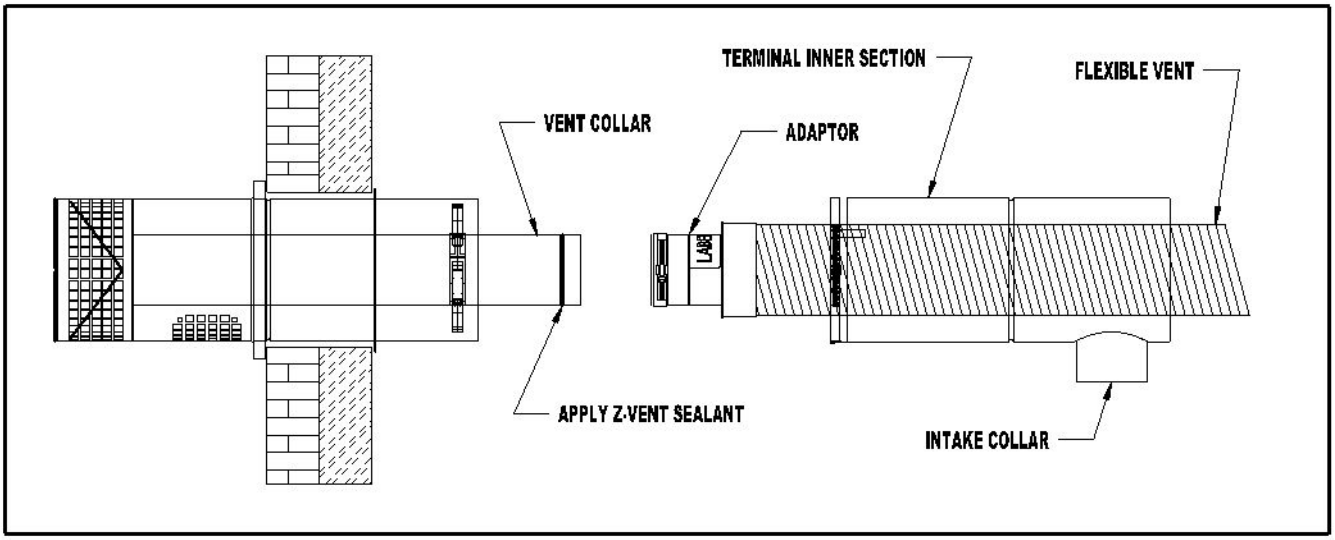
1. Determine proper location for termination.
2. Cut an 8-1/2” hole through the wall.
3. Pull apart the inner and outer termination sections
4. From outside the building, insert the outer section through the wall until it rests against the wall. Position the outer section so that the air intake is on the bottom. Secure to outer wall using four screws. Seal with a weather proof sealant around the edge to avoid water from entering.
5. From the inside, slide the inner wall plate over the outer section and secure it to the wall with four screws.

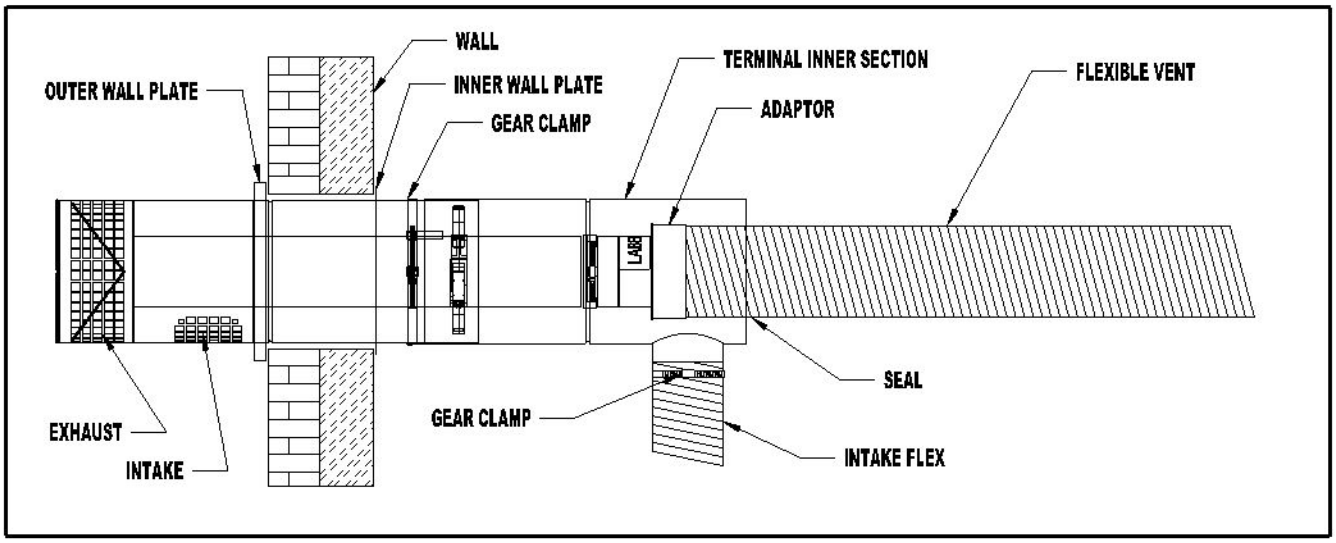




Termination Connection

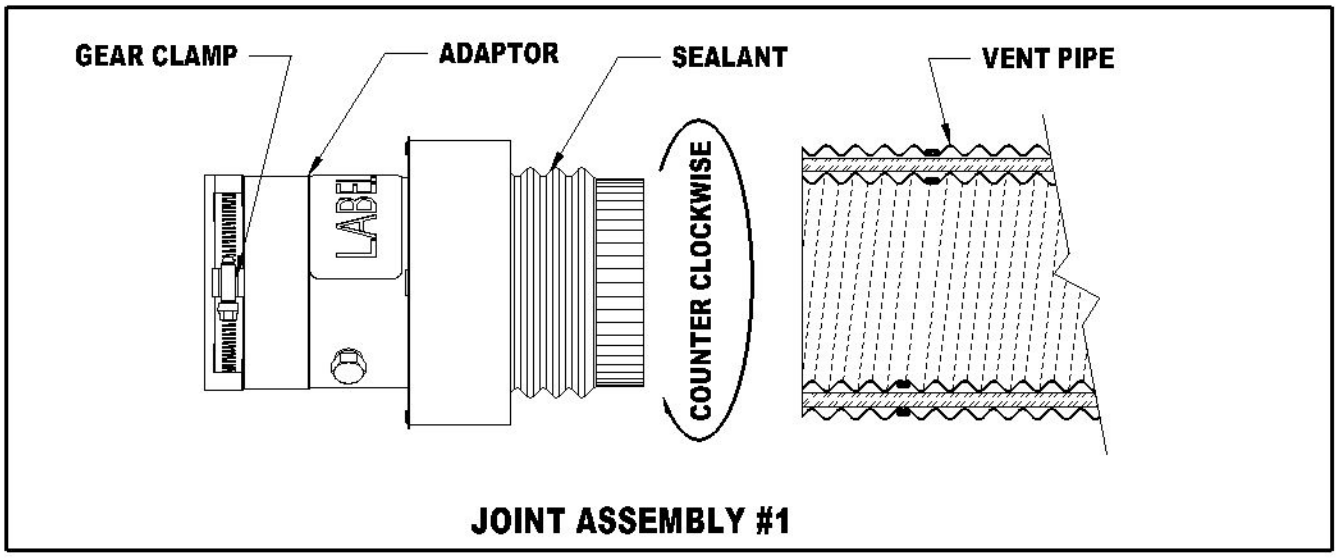
1. Slide the terminal inner section over the flexible vent pipe.
2. Attach the adaptor as per the joint assembly instructions.
3. Apply a bead of sealant around the flue collar and slide on adaptor and tighten gear clamp.
4. Seal the seam on the adaptor.
5. Slide the terminal inner section over the terminal outer section and secure by tightening the gear clamp.
6. Stretch the intake flex to the desired length and slide over intake collar and secure by tightening the gear clamp.
7. Seal the gap between the vent pipe and the terminal inner section with silicone sealant.





JOINT ASSEMBLY

1. Apply Sealant to “threaded” end of the vent adaptor.
2. Insert the threaded end into the vent pipe. Screw the adaptor into the vent pipe in a counter clockwise direction. The adaptor should be inserted fully until it is tight. If it does not completely screw into the vent, unscrew and repeat.
3. Tighten the gear clamp on to the outer sleeve to complete the joint assembly.



JOINT ASSEMBLY #1

BOILER CONNECTION

1. Connect the 6" stainless elbow to the back of the boiler. Apply a bead of high temperature sealant around the boiler flue outlet and secure the elbow to the boiler using the gear clamp.
2. Cut the vent to length using a fine tooth hacksaw. Remove any burrs before installing adapter. Install the adaptor to the vent pipe as per joint assembly instructions.
3. Apply a bead of high temperature sealant around the 6" stainless elbow and slide on adaptor and tighten gear clamp.
4. Seal the seam on the adaptor.

BURNER CONNECTION

1. Install the burner intake adaptor onto the burner. A 90 degree elbow is provided for ease of installation.
2. Install Field Controls vacuum relief valve and set per the manufacturer's instructions.
3. Install air intake flex to the vacuum relief valve tee using the gear clamp provided.

DIRECT VENT OIL BURNERS

Riello Burners - All Riello direct vent burners are shipped with the nozzle for the 3 section boiler installed. A separate nozzle is included in the burner carton for the 4 section and 5 section boilers. See the burner set up page for the appropriate burner settings**.** Final burner adjustments must be made using proper test equipment.

Boilers supplied with Riello burners will also be supplied with a 3" to 4" galvanized adapter.

The adapter is to be fastened directly to the flange opening on the burner cover using three sheet metal screws.

The Riello BF5 burners for use with direct vent systems are shipped with the controls, which provide pre and post purge. Pre purge is provided to ensure clean starts under all conditions. Post purge is provided to ensure that the boiler fires at maximum efficiency and dependability throughout the heating season. Post purge timing is variable. The factory set post purge timing should be set at approximately 45 seconds. **Post purge times in excess of 60 seconds will cause the Honeywell Aquastat to lock out on an error code.**

MAINTENANCE

The entire heating system, including the venting system must be checked annually by a qualified heating professional.