

CAHI MONTHLY NEWS



President's Corner

Happy Holidays to you and yours,

As you know there is no seminar in December, a long standing decision due to the holiday season and members being busy with family.

The heating seminar at ICPA in Cromwell was attended by a total of 52 members, over the two days November 23 and 24. Eight continuing education credits were earned, all in attendance reported a very worthwhile day at the facility. The cost to CAHI members--zero, all expenses were paid from the education fund, a total of \$4539.25. Breaking that down, \$75.00 per attendee paid to ICPA, and \$12.29 per person for food, as lunch was also provided by CAHI. Other organizations charge their members to attend, some as much as \$325.00 for the same program, the point being, you can get a lot of return for your membership.

Our next scheduled seminar is the annual law seminar on January 5th, starting at 4:00 PM with several vendor displays from all over the country, check the web site for updates. If you attended last year's seminar you will remember that it was a great production, and of course with Attorney Kent Mawhinney as keynote speaker it is always very informative. We have another project in the works, for the next 5 months, January through May we will be meeting in Seymour at the Basement Systems facility, this is an exciting project in partnership with Larry Janesky that will have five- two hour seminars, all on energy auditing and conservation, with a test and certification at the end of the program. Continuing education certificates will be given at every session, you only need to attend all 5 if you would like to be certified. This pilot program, the brainchild of CAHI Secretary Barry Small, was pitched to Larry Janesky, and as a result is being developed by CAHI and Doctor Energy, a division of Basement Systems. This program will be the model for a national presentation. Meetings will still be on the 4th Wednesday of every month, but as stated in Seymour, not North Haven. Dinner will be from 6:00 to 7:00 PM with the seminar workshop at 7:00 to 9:00 PM.

On another note, several years ago we approached the Connecticut Association of Realtors, with the proposal of providing continuing education to agents and appraisers, for a price. We saw this market as an opportunity to increase our corporate income. Part of our marketing plan included the purchase of the CAHI trailer, complete with extensive graphics and detail. In spite of repeated efforts and much expense the real estate community was not as enthusiastic as we were, and we stopped the pursuit. The trailer has been used, but not as intended. For 2 years on the last Saturday of every month it was used to transport food to various churches from a New Haven distribution point, as part of the Angel Food Ministry in Connecticut. It got great exposure, but not to our intended audience. At a recent Board meeting we decided it was time to cut our losses and sell the trailer. We have several interested parties, the only fair way that we could come up with to include all of our membership is to have an auction. A reserve has been established, the best offer over the reserve will own the trailer. The trailer will be on display at the Holiday Inn on January 5th.

Sincerely,

Pete Petrino

CAHI President

December 2010 Volume 2, Issue 12

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| Meeting Dates | |
|----------------------------|--------------------------------------|
| Dec 22 | NO SCHEDULED MEETING |
| Jan 5 | Law Seminar Starts at 4PM |
| Jan 26 | Septic Systems Bradley Korth P.E. |
| Holiday Inn | |
| 201 Washington Ave. | |
| North Haven, CT. | |
| (203) 239-6700 | |



CONNECTICUT LAW SEMINAR

SPONSORED BY

THE CONNECTICUT ASSOCIATION OF HOME INSPECTORS, INC.

The Connecticut Association of Home Inspectors invites you to attend an informative and enjoyable Home Inspection Law Seminar brought to you by Connecticut's premier home inspection law expert, Attorney Kent Mawhinney of Markowitz & Mawhinney, LLC of Bloomfield, CT. Attorney Mawhinney offers home inspection legal issues which include tips and anecdotes that provide for fresh and exciting presentations year after year. In addition he will recommend business practices which will help you market and run a successful Connecticut business, keeping you from harm's way. Kent's program which relates specifically to CT laws is stimulating and entertaining while fulfilling the 3 hour legal issues continuing education licensing requirement.

In addition to enjoying the camaraderie of fellow inspectors, this is the only seminar that offers the following included with your fee:

Visit with vendors from: Sun Nuclear, Streamlight, American Ladder, Flir, and many CT based home inspection related service providers.

Chances to win amazing raffle prizes, some valued at \$500 and more.

Full Course Buffet Dinner

Cash Bar

Dinner Entertainment

All this for a recession-buster price of \$79.00 if you sign up by December 29th. After this date the seminar is still a bargain at \$99.00.

Here are the details:

Date: Wednesday, January 5, 2011

Time: Dinner 4:30pm - 6:00 pm; Seminar 6:00 pm to 9:00 pm

Location: Holiday Inn - 201 Washington Avenue, North Haven

SPECIAL OFFER!

All Connecticut licensed home inspectors and interns are invited. Non-members joining CAHI on or before the day of the law seminar will have member status through May, 2011 - a five month bonus (only offered at this seminar). The member fee for licensed home inspectors is \$219, interns \$169, and associates \$124. To take advantage of this special offer, the fee must be paid on or before January 5, 2011.

Sign up online at:

<http://ctinspectors.com/specialevents/lawseminar/>

Or mail your check payable to CAHI to:

Tom Hauswirth, CAHI Treasurer
5 Fox Run Rd.
Deep River, CT 06417

We look forward to seeing you there so put it on your calendar today!

.....Education Reminder

All licensed Connecticut Home inspectors must complete Connecticut State approved Continuing Education every two (2) years to keep their license in Connecticut current. A Three hour Law Seminar is mandatory during the license cycle.

All Connecticut State approved Home Inspection licenses are due to expire as of 06/30/2011.

This means that if you have a Home Inspection license in Connecticut, to maintain your license past June 2011, you must be sure your license education requirements are current.

CAHI keeps attendance records, we do not keep a tally on individual CEU's, this is your responsibility.

To check your records, the telephone number for the Connecticut State Department of Consumer Protection, Occupational / Professional Licensing Division: (860) 713-6145

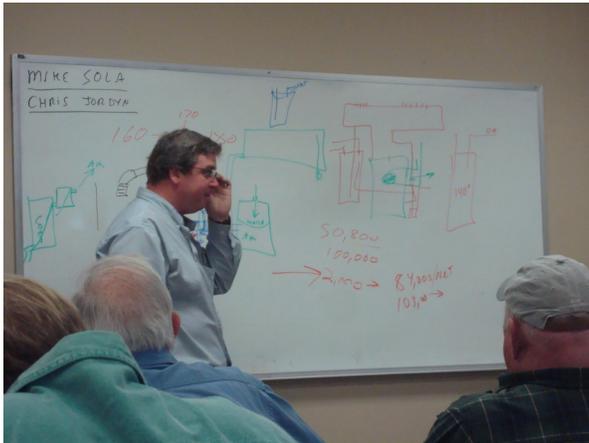
Please ask for Robert Kuzmich, R.A. (License and application Specialist.)

Trailer for Sale or Rent
~~XXXXXX~~



Sorry for the poor photo quality. They were taken during a heavy rain shower and I had to balance the angle used vice making sure camera did not get wet. My camera stayed nice and dry. For a better look at the trailer, come to our CT Law Seminar where it will be on display

ICPA Photo Gallery



Primary Instructor



Everyone was tuned in



Discussion with working systems



Discussion with working systems



Operational Solar System



Test or Lunch Order ?

Heating Article

Written by Randy Howland

It is still possible to find a portion of the heating industries past in the basements of the area. In some of the basements of what are now three family homes in Bridgeport, it is still possible to find chunks of coal littering the floor, or to be able to establish where the coal bin was located. Moving forward in history there are still 50 to 60 year old gravity-fed furnaces and boilers operating. Many heating systems are older than we are, and are still operating.

Since those early days, we have invented many types of heating systems and provide clients numerous choices for ways of heating their homes: from electric to oil to gas or from steam to hot water heat to forced hot air. My goal is to help you to be able to better understand and identify the type of system present and have an understanding of its basic operation.

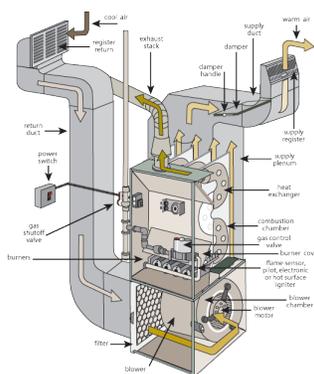
Most homes in the United States are heated with either furnaces or boilers. Furnaces heat air and distribute the air through ducts. Boilers heat water providing either hot water or steam for heating. Steam is distributed via pipes to steam radiators. Hot water heat can be distributed by radiators, baseboard convectors, or radiant heating systems.

Furnaces

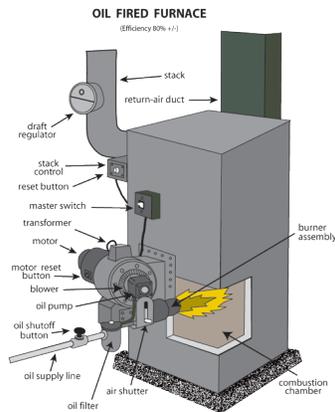
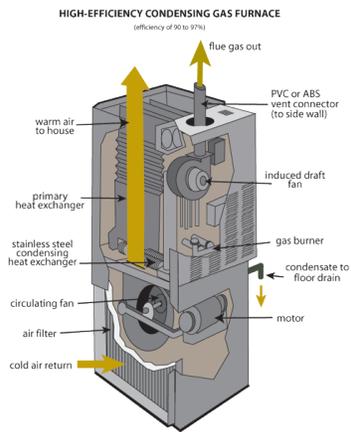
The theory behind furnaces is that when air is heated it expands and becomes lighter and rises, as the air passes through the house it cools, settles, and returns back to the furnace for reheating. This process is referred to as convection, or the movement of, air. The first furnace systems were known as gravity-fed systems. They relied totally on this natural physics of air to heat a house. Large ducts would let the air rise through the house naturally, and a single large "return" duct would put the cooling air back into the furnace for reheating.

Later, more modern furnaces had a blower added to move the heated air from the appliance through the house. One advantage of a furnace heating system is that cool air produced by an air conditioning system can also be transported through the same duct work system during the summer cooling season.

Today's most advanced furnaces are known as condensing furnaces. A condensing furnace is more fuel efficient than its predecessors. No matter which generation of appliance we are talking about the heating theory is still the same. The objective is to get as much heat out of our fuel source by designing a system that best utilizes the heat generated, no matter whether the system is fueled by fuel oil, gas or electricity. The only difference between the early gravity-fed systems or combustion furnaces and today's condensing furnaces is the unit's ability to extract heat. The key is the changes in design to what is known as the heat exchanger. Natural gas, propane or fuel oil produces a flame that heats the air. This heated combustion air passes through the furnace and comes in contact with welded metal plates that form passages for the clean air supplying heat to the house. This "clean" air will pass through the interior of these passages and be supplied to the house as heated air through duct work. These plates or "heat exchangers," keep our clean supply air and our heated, but dirty fuel air, separate. Heat exchangers come in many varying shapes, all designed to gain the greatest heat loss from the fuel. Today's condensing furnaces pass the combustion air through two heat exchangers. Current heat exchangers are able to extract over 90% of the heat from the fuel, lowering the home owner's energy costs. This increases fuel efficiency and more than offsets the additional cost for the purchase of the furnace versus a less efficient furnace.



Early furnaces were able to capture 60 to 70 % of the heat from the fuel. So 30 to 40% of the heat was lost out the chimney. Current, non-condensing models are 80 to 83% fuel efficient, with a heat loss of 17 to 20%. These conventional heating systems are vented vertically through a chimney or chase. High efficiency condensing heating systems capture over 90% of the fuels heat. They are called condensing furnaces because so much heat has been extracted from the fuel that the water vapor, in the exhaust, condenses and becomes too heavy to rise vertically up through a chimney. Condensing furnaces are vented horizontally through the side of a house through plastic pipes.



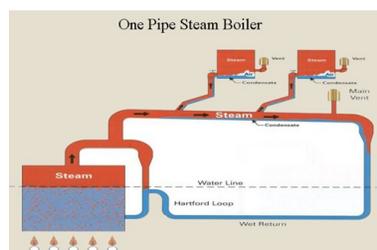
Boilers

A boiler is like a pot on a stove. The heat from the stove warms the water and passes the warm water, or if the water is really hot the steam, through the distribution system through out the house. Again, like furnaces boilers can be fueled by either natural gas or fuel oil.

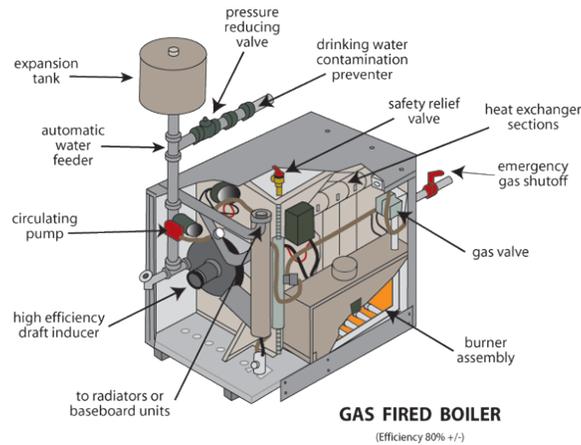
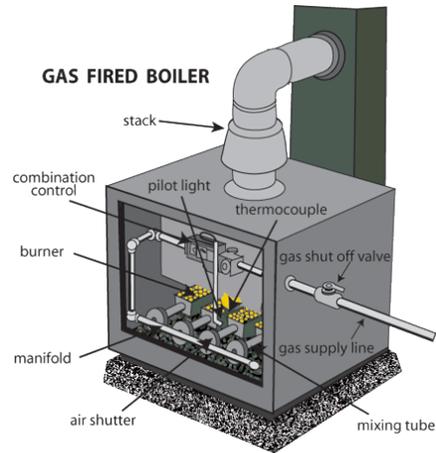
The first documented heating contractors were two brothers in New York. In 1841 the Walworth brothers installed steam boilers in peoples' homes for heating systems. Steam was the method of choice because steam would rise naturally and circulate on its own through a distribution system. Steam does not rely on pumps to circulate the steam. In 1855, steam heat became so popular that the two brothers were hired to install a steam boiler heating system in the White House. Early boilers did have a tendency to explode when water levels became too low.

The process of boiling water is less efficient than more modern hot water systems. Hot water systems circulate water immediately as it warms, where steam does not start to flow until the water in the boiler is actually hot enough, a temperature of 210 degrees, which is the boiling point in an enclosed environment.

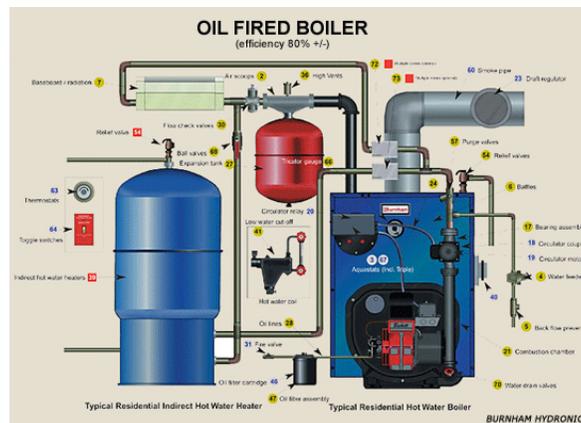
As the steam passes through the distribution system, it starts losing its heat to the radiators, or cooling. As it cools, the steam turns back to warm water, which is heavier than the steam, and as a result runs back down hill through the pipes and back into the boiler to be reheated. At this point, the condensation is like a mountain stream heading for a lake. The layout and pitch of the heating pipes is of key importance in steam systems because the pitch ensures a proper delivery of the steam and a return of the condensation. Steam is on the decline for residential use. The past artisans who truly understood the art of laying out a steam system are no longer alive. To truly get the projected life expectancy from the boiler requires some time investment from the home owner. Steam boilers should be "blown down" to stir up the scale that builds up in the boiler. The build up of scale in a steam boiler can decrease the units' efficiency which will reduce its life expectancy.



A hot water boiler is considerably easier to operate and maintain for the average homeowner. A hot water boiler circulates water that is heated to a temperature of 160 to 180 degrees. The boiler heats the water and a circulator moves the water through a system of baseboard convectors, or radiators.



The physics of heat are conduction, convection and radiation. The radiator transports the water through its inner maze and warms or “conducts” its heat to the metal. The warm metal heats the surrounding air and the warmed air rises. This is called “convection.” The warm air “radiates” out through the room.



Two other methods of heat distribution that utilize hot water are:

1. **Radiant:** Radiant heating systems involve supplying heat directly to the floor or to panels in the wall or ceiling of a room in a house. These systems depend largely on radiant heat transfer and the convection provided by the rising heat. Radiant heat is the delivery of heat directly from the hot surface to the people and objects in the room. I walk on my bathroom floors and feel the heat being transferred by the resistant electric wires running through the floor. Radiant systems can be either electric resistant wiring imbedded in the surface or tubing below the surface that radiates the heat from the hot water passing through the tubes.

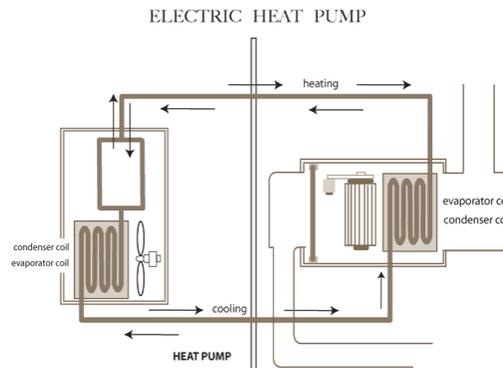
2. **Hydro-air:** A hydro air system uses a boiler that produces hot water. The hot water is piped to an air handler similar to that used for an air conditioning system but with an extra series of coils has been added. This multi-row coil is located inside the air handler, through which the hot water is circulated. A blower motor circulates the air from the house and passes it over the coil. The air is warmed and then re-circulated back to the living space through the supply duct work.

Electric Heat

The most common heating system that uses electricity as its energy source is an electric heat pump which can be found at many condominiums and in some homes. A heat pump is like a conventional air conditioner except it also can provide heat in winter. A heat pump is most efficient when there is enough heat to capture in the exterior air. That is usually when the outside ambient air temperature is above 32 degrees. A heat pump operates with a refrigerant that passes through a labyrinth of coils and tubing.

These coils start at the exterior of the house and pass through to the interior. The refrigerant cycling through the system is warmed by the outside/exterior heat that is present in the air and is deposited at the interior of the house. An additional portion of a heat pump system is an electric furnace that provides supplementary or back up heat when there is not enough heat present in the outside air.

There is a reversing valve in the exterior unit that changes the direction or flow of the refrigerant, so that in summer, the refrigerant is warmed by the heat in the house and then the warm refrigerant is cycled to the outdoors and the heat that the refrigerant is carrying is expelled into the atmosphere. Since the heat has been removed from the interior portions of the house, the result is a drop in temperature or cooler conditions in the house. In winter, the reverse occurs and the refrigerant gathers heat from the outside air and transfers it to the interior of the house to provide heat in the winter. These systems capture and move heat; they don't generate heat.

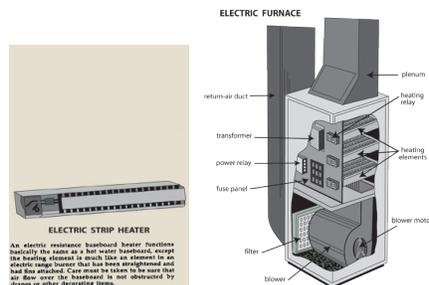


As I have stated, there are two portions of a heat pump. At the exterior of the condominium or house is the condenser/compressor. This portion of the unit cycles the refrigerant and gathers or expels the heat. During the summertime, if you place your hand above this portion of the system you can feel the heat being extracted from the interior of the house. The interior portion of the system is an evaporator coil located in an air handler. This evaporator looks like the radiator in your car. In winter, the refrigerant passes through the evaporator coil tubing and a blower passes air over the warm coils to extract the heat into the house. The interior air handler is also where the back up electric furnace is located. The same blower unit passes air over the coils of the furnace. When the resistant coils are warm the air is passed through to the house just like with our heat pump.

For a more in-depth description of heat pumps operation, view our [Air Conditioning topic](#).

Electric Furnace and Strip Heaters

An electric furnace or strip heater operates by the same principal as your electric wall oven. As we discussed in our electrical section electricity is energy. This energy passes better through some conductors than others. Poor conductors of electricity are used in ovens, electric cooktops and electric heating units. Heat is created by the energy passing through the conductor as seen by the red glow of heating element for an electric oven or cooktop burner. A resistance or pressure to the conductor is created by the energy passing through it. This glow is electricity that can't flow efficiently through the conductor. The only subsequent difference between furnaces and strip heaters is the additional blower that is present in an air handler for a furnace. A blower is used to move the warm air through a system of duct work. A strip heater operates on the principle that rising warm air will draw cooler air through the system to create new warm air.



NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs

Washington, DC 20207

FOR IMMEDIATE RELEASE

November 2, 2010

Release #11-057

Firm's Recall Hotline: (800) 420-7511

CPSC Recall Hotline: (800) 638-2772

CPSC Media Contact: (301) 504-7908

AmerTac Recalls Night Lights Due to Fire and Burn Hazard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product.

Name of Product: Forever-Glo® Cylinder Nite Lites

Units: About 272,000

Importer: American Tack & Hardware Co. Inc. (AmerTac), of Saddle River, N.J.

Hazard: An electrical short circuit in the night light can cause it to overheat and smolder or melt which can burn consumers or result in a fire.

Incidents/Injuries: AmerTac has received nine reports of the recalled night lights smoking, burning, melting and/or charring. No injuries have been reported.

Description: The recalled Forever-Glo® Cylinder Nite Lite is a cylinder shaped night light with a white base and clear top that plugs into the wall. Only Model Number 71107 with a manufacturer code of SY is included in this recall. The model number and manufacturer code are printed on the back of the night light. The light measures about 4 inches in height by 1- 1/2 inches wide and is about 1 inch deep.

Sold at: Hardware stores, lighting showrooms and home centers nationwide from May 2009 through September 2010 for about \$5.

Manufactured in: China

Remedy: Consumers should stop using the recalled night lights immediately. If the units are plugged into the wall, remove the light from the wall socket. Contact the firm for instructions on receiving a full refund.

Consumer Contact: For additional information, contact AmerTac at (800) 420-7511 between 8 a.m. and 5 p.m. CT Monday through Friday, or visit AmerTac's website at www.amertac.com or www.recall-center.com



CPSC is still interested in receiving incident or injury reports that are either directly related to this product recall or involve a different hazard with the same product. Please tell us about it by visiting <https://www.cpsc.gov/cgibin/incident.aspx>

Contact CAHI c/o

Scott Monforte

39 Baker St.

Milford, CT. 06461

Email: info@ctinspect.com

Web: www.ctinspect.com



Articles published in CAHI Monthly are the sole opinion of the author. CAHI does not endorse or state a position for or against the content of said articles.

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| Secretary | Barry Small , West Hartford (860) 233-6948 | Joseph Pelliccio Dwight Uffer | Eric Curtis James J. O'Neill | Public Member Public Member |
| Director | Al Dingfelder , Wallingford (203) 284-1278 | They have served as our primary leaders and in other capacities since 1992. | <p>The Licensing Board meetings are held at 9:30 am</p> <p>Dept of Consumer Protection</p> <p>165 Capitol Avenue. Hartford</p> <p>The public is always welcome.</p> | |
| Director | Ken Mita, Sr. , Wallingford (203) 269-0341 | | | |
| Director | Woody Dawson , Cheshire (203) 272-2400 | Please thank them for their service when you have a chance. | | |
| Director | Vacant | | | |
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Published by: JBDR & Associates, LLC

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