

Ever wish they had personal ads for contractors? What would yours say?

Seeking quality contractor for long-term relationship. Must enjoy long talks about my needs, respond to my calls 24/7/365, always give fair pricing and do quality work. Honesty is a must. Professional, friendly office staff is a plus. Cheap shysters need not reply.

Friends don't let friends blind date – especially not with a contractor. You found a contractor who makes YOU happy. Help your friends find one too.

When your friends become our friends, we'll take you BOTH to dinner!

Friend's Name

Friend's Company Name & Phone #

Referred by Name

Referred by Company Name & Phone #

Give this ad to a friend. After they schedule a service with Advance Air, they can fax, email or mail in this card and you'll both receive \$50 gift certificates to your favorite restaurants.

For more information call Karen DeSousa at 508-763-3738. Restrictions may apply.

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For changes of address, or if you'd like to receive this newsletter via email, please contact Karen DeSousa at karen@advanceair.net or 508-763-3738.



Boiler Inspections are the Law in Massachusetts

For those of you who dutifully perform your annual boiler inspections, kudos to you. For those who are asking themselves, "What's an annual boiler inspection?" read on!

In Massachusetts, all non-residential gas or oil-fired boilers over 200,000 BTUs must be inspected and tagged by a licensed inspector annually, unless they are being used exclusively for agricultural purposes or owned by the Federal Government. Though 200,000 BTUs may sound very large, you may be surprised to find that the typical residential boiler is about 120,000 BTUs.

If your boiler is insured, your insurance company is very likely using their own certified boiler inspector to make sure you meet all of the safety requirements. This is perfectly acceptable and you will not be required to have an additional inspection from the state. However, if you self-insure your boiler, or your insurance company is not doing the required inspection, you can contact the Massachusetts Dept. of Public Safety directly to schedule your boiler inspection, or go online and print out an application for inspection at www.mass.gov/dps.

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Why get an inspection?

Boilers are reliable and safe when properly operated and maintained. However, the effects can be devastating if boilers run unchecked for long periods. If you think of the components involved in operating a boiler – combustible fuels, high pressures, flame, heat, etc. - it doesn't take much imagination to envision horror scenarios.

Boiler disasters are not confined to the days of yore, though certainly they were more frequent in the early 1900's. There have been several catastrophic boiler explosions in the U.S. within the last few years, some resulting in death or serious injury and all resulting in significant property damage.

2007 Boiler Explosion in Tennessee

One such incident was a boiler explosion at an automotive rubber manufacturing plant located in Tennessee in 2007. Fortunately, this incident resulted in no deaths, although one plant employee was seriously injured.

According to the Tennessee Division of Boiler Inspection's Report, just before 2 pm on a regular workday, one of the two boilers in the rubber plant exploded without warning.

The immense pressure in the steam boiler sent the main portion of the boiler flying through a roll-up door into the main part of the plant. It was still on fire when it landed over 100 feet away!

The rear door of the boiler flew 100 feet in the opposite direction - through a cement block wall - leaving 30' hole in the exterior wall of the plant (see photo on page 2). The door damaged several vehicles in the plant's parking lot and landed in a pedestrian walkway, fortunately not on top of any pedestrians. The accident was bad, but the worst part was that it was totally preventable.

What's Inside:

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Checklist for daily

Boiler Maintenance

Advance Air Apprentice

Wins Award

Advance Air & Heat, Inc

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...Boiler Explosion

What caused the explosion?

The boiler was equipped with redundant water-level safety devices, but both were found to be non-operational at the time of the incident. These devices would have prevented the incident by shutting off the boiler when water levels got too low.

If a boiler keeps firing with low water, the dry walls of the boiler overheat. When new feed water enters the overheated boiler, it instantly turns into steam and expands, creating such high pressure that the boiler explodes.

The maintenance staff onsite was aware that the main low-water cut-off safety device was malfunctioning. They had ordered a new one but it hadn't arrived. Instead, they relied on emergency back-up safeties to keep them out of danger. Unbeknownst to them, however, the emergency back-up safety had been wired improperly when installed and never functioned correctly.

Good Tip: Keep extra safety devices and other important parts in stock on-site so they can be quickly replaced. Redundant safeties are there for a reason!

This incident is a good example of how things can go wrong, despite the fact that the boiler was relatively new and equipped with redundant safety devices.

How to avoid a boiler disaster

The Tennessee Division of Boiler Inspection's investigation report included some good advice for avoiding future boiler disasters:

1. Train and certify of all on-site boiler operators.
2. Maintenance to the boiler, controls and safety devices should be performed by a qualified outside vendor.
3. Boilers and controls and safety devices should be tested annually during maintenance.
4. All pressure relief valves should be removed, inspected, and pressure tested annually.
5. Follow all daily operational tests and tasks recommended by the boiler manufacturer. (see daily checklist on opposite page)
6. Install audible and visual alarm systems that notify the entire building's occupants when boiler problems occur.
7. Establish emergency and evacuation procedures for all employees in the case of a boiler incident.
8. All mandatory inspections should be performed by a certified commissioned boiler inspector.
9. Report any boiler-related incidents to the State Boiler Inspection Division immediately.
10. Install a remote monitoring system to monitor boiler operations while boiler operators are inside boiler room.

Now is the time of year to do your boiler maintenance, check your safety devices, clean and service all boiler components, and get your annual inspection scheduled (with your insurance agent, or MA DPS). We can help you make sure they all of your devices are working as they should be. Give us a call, it could save your life!

Key Boiler Safety Features:

1. **Safety Valves**
The primary safety feature on a boiler, they are designed to relieve all pressure generated by the boiler in case of emergency.
2. **Water-Level Controls and Low-Water Fuel Cutoff**
Sometimes combined into one unit, these monitor the water levels in the boiler, and cut off the fuel to the boiler to stop it from heating when water levels are too low.
3. **Water Gauge Glass**
A gauge glass is literally a window into your boiler, letting you visually see water levels.
4. **Boiler Log**
Keeping a log of boiler operating conditions may be tedious, but since most problems occur slowly over time, it may be the best way to spot negative trends and potential problems before they cause major problems.



Photo #6 – View of East Wall from Outside Plant

Aftermath of Tennessee Boiler Explosion (Rear Wall of Plant)

Checklist for Daily Steam Boiler Maintenance for Boilers Over 9 HP

According to Mass General Law, Section 46A, when operating a steam boiler exceeding nine horsepower, daily maintenance should be performed including the following items:

1. Give the boiler measured bottom blow-downs in accordance with instructions provided by the company supplying the feed-water treatment;
2. Remove accumulations on water surfaces by using surface blow valves;
3. Blow-down water column;
4. Test low-water cutoff and feed-water regulator;
5. Operate safety valves manually on start-up;
6. Check lubrication on auxiliary equipment;
7. When starting boiler, make sure ignition operates properly; and
8. Keep boiler room clean.
9. Keep a log book of these checklist items and track the completion of these items daily.

These procedures should be reviewed and staff trained and evaluated on a regular basis to ensure that the tasks are being done consistently and correctly. An annual maintenance check-up is also recommended.

Advance Air provides assistance and training to daily boiler operators to help establish correct daily maintenance procedures. Call us today to schedule a refresher course or a full training course for your boiler operators and sleep better tonight!

Advance Air Apprentice Wins Award



Tony Ward, a fifth year apprentice at Advance Air & Heat was recently recognized for his Outstanding Achievement in Service Technology by Local 51, the Providence, RI branch of the United Association (U.A.) of Plumbers and Pipefitters. This honor qualifies Tony to participate in the regional contest to select the U.A. Apprentice of the Year for 2009 and includes several prizes sponsored by Klein Tools.

Advance Air has been a member of the United Association since 1986, when the company was first formed. The U.A. has the first nationally registered joint apprenticeship program in the United States - 60 years and growing. The goal of the program is to prepare its apprentices to uphold the principle that every job done by a United Association member is "Done Once. Done Right." Apprentices in Local 51 undergo five years of extensive classroom and on-the-job training before they become journeymen technicians. The stringent requirement of 248 classroom hours and 10,000 on the job hours is far above what is required for licensing in both Massachusetts and Rhode Island.

With the great competition in the Local 51 Apprenticeship Program, we at Advance Air & Heat are proud of Tony's stand-out achievement. Way to go Tony!



Advance Air & Heat's Tony Ward wins award for Outstanding Achievement in Service Technology 2009

Annual Preventative Maintenance Checklist

1. Call Advance Air.
2. Request Annual Maintenance Agreement.
3. Never worry about scheduling PMs again.

Advance Air offers custom PM Agreements specific to your equipment and building operations. Visits are scheduled automatically in our PM scheduling system, making it easier on you. And the best part is that when it's time to turn on your heat or air conditioning, it'll be ready and waiting for you.

Call now to schedule your annual maintenance visit:

508-763-3738

