

BAUER INSPECTION & CONSULTING SERVICES

(888) 594-7420

(785) 594-7420

STEPHEN L. BAUER
1315 MAPLE LEAF CT
BALDWIN CITY, KS 66006

KHIRB 0110-0016
TREC Lic. No.392

www.bauerinspections.com



January, 2011 Maintenance Reminder Newsletter

Reminders this month are:

1. Changing your furnace filter.
2. Operating your T-P valve on your water heater.
3. Cleaning your hydrotherapy tub.
4. Clean out dryer vents

My purpose is to provide timely information to help you maintain your house. Most of it is maintenance or preventive maintenance. Simple things that you can and should do around the house to better maintain your property. Although many of these things are simple to do, we often just need a reminder to do them. And that's what this newsletter is all about.

Some of you are first time home buyers and are not familiar with all of the systems and requirements of the house and its components. I'll try to explain why we want to provide these maintenance services to our homes, and the possible consequences if we don't.

Please feel free to pass on your comments regarding the inspection and this newsletter. Your feedback will help me to improve my services to you and my future clients.

Steve Bauer

**Taking care of your house makes sense,
"Because it's where you live"**

Most of my business comes from referrals. I would appreciate your sharing my name with anyone you know that might also be buying a new house. Feedback to your Realtor about your inspection, report, and this newsletter will be appreciated.

January, 2011

If you're going to follow my recommendation on the pleated media filter for your HVAC system, now is the time to change your filter. If you haven't moved into your house yet, you should change your filter as soon as you move in and call it the Jan. 1 filter. It's important to keep with the scheduled dates, both for ease of remembering when to replace the filter and to get approximately the same benefit from each filter.

We recommend the cheaper pleated filters. They cost about \$5.00 ea. And do a good of keeping the furnace and air conditioner coils clean. The more expensive pleated filters do such a good job, they restrict the air flow through the furnace and cause the blower and air conditioner to work harder, increasing your energy usage and causing excessive wear on the unit. Pleated filters should be changed every 3 months to maintain efficiency in the HVAC unit.



I recommend changing them on Jan.1, April 1, July 1, and Oct. 1. Each filter will then serve half of a cooling or heating season. I write the dates on the filters to help me keep track of where I am on this very important item.

I now use the True Blue filter sold at Home Depot, but any of the less expensive pleated filters are good.

I recommend the pleated filter over the fiberglass filter for several reasons.

- They are a better filter.
- For the size that fits into your furnace, they offer much more filtering surface area.
- They will last up to 3 months, so you only have to change them 4 times a year.
- If you only have to change them 4 times a year, you are more likely to do so.
- The cheaper fiberglass filters need to be changed every month, and they do not collect as much of the fine dirt in the air return system..
- The purpose of the filter is to keep the furnace and air conditioner clean.
- **TAKING CARE OF YOUR FILTER IS THE BEST MONEY YOU CAN SPEND ON YOUR HOUSE.**

The primary purpose of the filter is to keep the furnace and air conditioner clean. Dirt bypassing the filter can accumulate on the blower, causing it to become unbalanced and wear out bearings on the blower. Dirt accumulating on the heat exchanger can cause irregular heating and cooling of the metal, causing cracks in the heat exchanger. The biggest problem with poor filtration is that the dirt can accumulate on the bottom of the evaporator coils in the air conditioner, and restrict air flow through the coils. You might remember from the inspection report that we want the cooling differential across the coils to be between 15° and 21°. If the temperature difference is more than 21°, it's usually because of restricted air flow. The air passes through the coils slower because they are dirty, therefore the air is within the coils longer, and the air gets colder.

Although the air can get very cold (I've measured air temperature differentials as much as 39° and temperatures as low as 33°), there is not enough volume of this cold air to cool your house. What happens, then, is that the A/C runs all the time wearing the equipment out, running up a high electric bill, and still doesn't cool the house.

The major cause of A/C failure is poor filter maintenance.

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I buy at least 4 filters at a time and write the dates on the top of each filter as a reminder of when to change them.



This is a top view of the pleated filter. The air goes into this side.



This is the bottom view of the filter. Note the arrow indicating the direction of the air flow.

Also note the cardboard and metal mesh on the back. This is reinforcing to strengthen the filter as it is sucked down by the blower.



This is the way that the filter sets in most of the HVAC systems in Douglas County. The metal tray holds the bottom edge of the filter and it leans across the duct, covering the entire duct cross section. The air flow is down on this type of set-up.



Note that the arrow points down and that the wire mesh is not seen.

If this seems too basic, let me tell you that probably 40% of the filters that I inspect are installed backwards.

Don't let it be yours.



Here are two filters at changing time. The one on the left was in for 3 months. The other is new. Actually, the filter on the left was doing a great job. As they get dirty, they filter better, up to a point. But I've seen filters so dirty that no air passes through them and they get sucked into the blower.

January, 2011

T-P Valve

The Temperature-Pressure Relief valve on your water heater is one of the most important safety devices in your home. It needs to work, and you need to know that it is working. The manufacturers of the T-P Valves state under a WARNING label that “the valve lever **MUST** be operated **AT LEAST ONCE A YEAR** by the water heater owner...” As I told you at the inspection, I am going to remind you to test the T-P valve 4 times a year. I am reminding you **NOW** that you should test the T-P valve on your water heater when you go down to the furnace and change the filter.

This shows the T-P valve installed in the water heater. Some are on the side; some are on the top.



The purpose of the T-P valve (Temperature-Pressure Relief Valve) is to relieve excess pressure from the Water heater in case it builds up too much temperature or pressure in the tank. If the gas valve or thermostat on the Water heater malfunctions and the water gets too hot, this valve should automatically open and relieve the pressure in the tank. If the T-P valve fails to operate as designed, AND the water heater overheats, the Water heater tank could explode, as a bomb, and destroy your house.

The T-P valve is about \$10.00 and looks like this first photo when new.

After they've been in the water heater for several years they can look like the valve in the second photo. Deposits from the water can build up in the valve and significantly affect it's operation.



Testing the T-P valve involves lifting the lever to allow water to flow out of the valve and into the drain pipe. I usually just give it 2 quick lifts to get a little water to come out and observe the flow that comes out. It has the full water pressure in the house, so should come out with a robust flow. My 2 quick lifts release less than a ½ cup of water. Draining more is not a problem as long as you're not making a mess on the floor.



Testing the T-P valve 4 times a year not only tests the valve to be sure it is working, but it also flushes out the valve 4 times a year, reducing the buildup in the valve and allowing it to operate as a properly functioning safety device for a much longer time. I don't know, but suspect that the T-P valve could last the life of the water heater if tested this often from when it is new.

Sometimes when I test a T-P Valve, I cannot even move the lever. I test so many that I have a good feel as to how much force is required to release the water, and when I exceed that force and the lever still doesn't trip, I stop and recommend that the valve be replaced.



There are also many T-P valves that I can open the trip lever completely, and no water comes out at all. In this case also, the opening in the valve is clogged and the valve needs to be replaced.



If I recommended that your T-P valve be replaced in the inspection report, be sure that it was replaced before you test it. If you force it open with more force that would normally be required by the internal pressure, you might not be able to seal the valve after you test it. If it continues to drip slightly after you test it, you might want to lightly tap the end of the valve with a hammer to try to improve the seat.

If it continues to drip, you should replace it.



Don't take the chance.

January, 2011

It's time to clean your hydrotherapy tub

If you have a hydrotherapy tub in your bathroom, I suggest you consider cleaning it again. I hope you cleaned it when you first moved in, but now I think it's time to clean it again.

The procedure outlined here might be a little different that what I recommended at the inspection.

This cleaning is more thorough.



First, fill the tub with Hot water to well above the jets.



Then add about a 1/4 cup of your **non-sudsing** dishwasher soap.



It does a good job of cleaning some of the scum and oils in the tub and plumbing, and yet doesn't produce the suds that are not good for the hydrotherapy tub.

It also allows the liquid chlorine treatment to be more effective.



Let this run for at least 20 minutes to clean the pipes and plumbing.



Then drain the tub, and refill with COLD water, again, well above the jets.



Then, turn the tub on again and add a 1/2 cup of liquid bleach to the water that will disinfect the tub and plumbing.

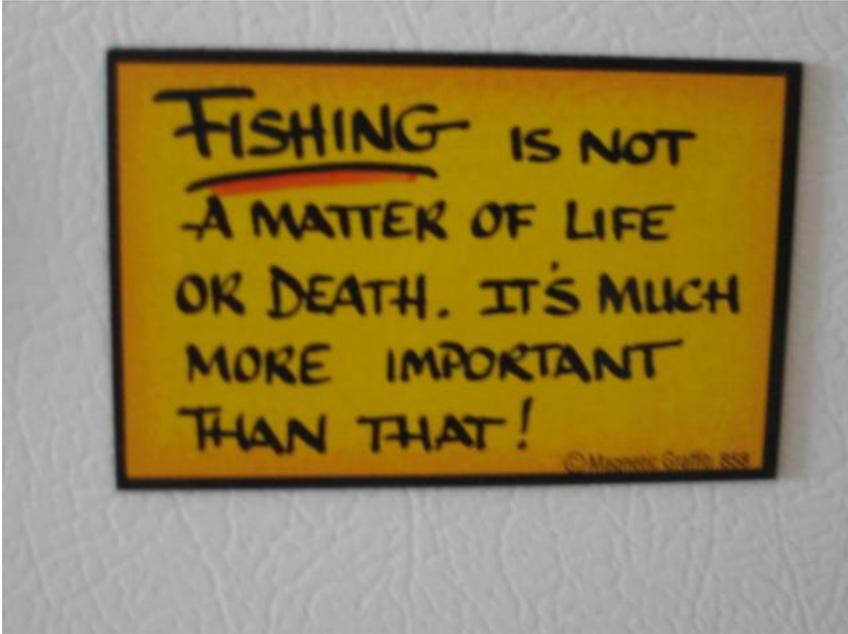
The bleach should kill the algae and bacteria that might be in the pipes and pump.



Let this run for another 20 minutes, then drain, clean the bathtub ring that you probably just created and rinse the tub and you're ready to use it again.



The purpose of this cleaning is to disinfect and sanitize your tub and plumbing. As described above, you might still need to do some physical cleaning to get rid of the bathtub ring that might be created at and above the water line.



January, 2011

Now is a good time to check your dryer and bathroom vents. They might be plugged with dryer lint....



...or wasp's nests. The reason to do it at all is to get the best air flow, whether it's a dryer vent or bathroom vent.

The reason to do it now, is because if you do have wasp's nests in the vent, they won't attack you when it's this cold.



Just squeeze and remove the screen...



...clean out the vent, and replace the screen.

