

ASK THE INSPECTOR COLUMN FOR JANUARY 27, 2016

HEADLINE: WHERE ELSE DO HOUSES LEAK!

I get a steady stream of e-mails from readers asking if there are other areas over and above caulking their windows and doors where they are losing precious heat and energy dollars. Here are five areas that are often missed when any homeowner is tightening up their abode.

With the majority of our homes framed in wood we have a lot of wood-to-wood contact. Some of the older wood frame homes like a two storey or storey and a half balloon frame residence commonly built before WW2 by design have an open wall chamber running from the foundation to the roof. Another area is the wood floor where your joists rest upon a wood plate and are then "capped" with another dimensioned wood piece called a rim joist. It is well known that wood frame walls drop the overall insulation value of most homes. For example, an R20 wall is not R20 when you add in the fact the wood frame is attached to the exterior sheathing and it drops the true "R" value by upwards of 25%. These cavity areas are a prime candidate for spray foam or spray cellulose, whichever is most applicable.

Any sort of exterior wall penetrations like your clothes dryer, furnace vent or bathroom vent are also candidates. Double check anything with a flap cover. You would be amazed how many of these do not fit tight or even close at all. Inside your home, the biggest culprit are your exterior wall openings after your windows and doors. These are usually electrical boxes or possibly a vent for a gas or wood appliance. The vent should be checked for required clearances and then sealed with heat sealant. Your electrical boxes are an easy fix, you can buy packages of thin foam insulation pads that fit behind your plug or light switch covers.

One area where we see a lot of air leakage is the hatch to your attic. Over half of the actual hatch covers we see lack enough insulation and better than 2/3 have no weather stripping around the actual box to frame portion. Today, with the amount of insulation in most attics and the fact that nothing should be stored on top of it most people rarely enter their attics. With that in mind, to actually seal around the hatch door, use bathroom latex caulking, which can be removed fairly easily if/when necessary.

Number four on my list is one that may be more difficult, but it's surprising how many builders fail to do this. If your bathtub or shower is on an outside wall, above or behind upper kitchen cabinets or, as in a couple of cases I have seen, behind the lower units, where there is no drywall installed or the air barrier is not

finished, you may want to add insulation. Insulating under and around your tub not only completes the insulation, it will help keep the bath water warmer longer. Any sort of built-in wall cabinet on an outside wall may be questionable, too. If you suspect major air leakage, hire a contractor who carries a thermal camera or, at minimum, a laser thermometer. Quite often this testing equipment can tell if there is an issue here. While it may be a difficult fix, the open area behind a shower or the kitchen cabinets is a large space with considerable heat loss potential.

Lastly, wood-to-wood connections can be an air loss issue, as well. Just because you can't see light does not mean it's tight. In an older home, the space between the baseboard and the floor or where the trim around your windows or doors fits against the wall could be leaky. I recommend that foil tape be installed behind any window trim after the low pressure foam is blown in and trimmed off level to the frame and drywall. Pop your outside wall floor trim off carefully and then caulk the drywall/floor joint with a good bead of urethane caulking.

Owning an older home can be a bit frustrating due to a lack of any kind of air barrier in the envelope of the structure. You can buy a laser thermometer at Canadian Tire. They are often on sale for under \$50.00 and well worth the price if you are looking for air leaks around the inside of your home. It's best done in the winter where the thermometer will get enough temperature differential to show you where the air leakage is.

Air leakage is a constant battle. One small air leak at a time is my philosophy. Even if you are living in a home that meets or exceeds the Energy Star 80 rating, it's worthwhile checking every year, since sealant and caulking dries up, weather-stripping can get torn or damaged and each leak is costing you conditioned air loss.

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