

ASK THE INSPECTOR COLUMN FOR OCTOBER 26, 2016
HEADLINE: SOME "DIFFERENT" STUFF

Rarely does an inspection go by that the client does not state, "I bet you see some really different stuff." I prefer the term "creative" in some instances and simply a lack of knowledge for the balance. I will list off the five most common defects that I see, what the repercussions are and follow that with a personal concern.

Number one on the list has got to be homeowner installed wiring. Occasionally it is well done, but a lot of it is outright scary. The major issue is usually in justifying the cost of an electrician for a few plugs and lights. Those experienced enough to wire a panel, who are not electricians, are on a short list, however. A few examples follow. The code states that a 15 amp circuit should have a limit of 12 outlets and lights. I have lost count of the number of times I have calculated over 20 plugs and lights on one circuit. I have seen anywhere up to four connections on a single fuse or breaker in a panel. If these leads are tied to a fuse, then that fuse should be a 15 amp, not a 20 or even a 30 amp fuse. I see this far too often, too. Junction boxes hidden in the walls and ceilings, or no junction boxes at all are also common. When the insulation on the wiring in the panel is melted back or the buss bars are blue, you can bet this is a fire waiting to happen. Spend the money and hire an electrician.

Next on my list are attached garages and their multiple issues. The most common are the passage door from the house and the garage door opener. Far too many lack the former or it is disconnected and does not close. An operational closer for the passage door is required by code. The reason is simple; if you start your car in the garage, the air pressure differential from garage to house and the exterior will allow a direct flow of carbon monoxide from your car's exhaust into the home. As to the garage door opener, it often lacks the auto reverse that would stop it if something was in the way. As well, I have seen nearly every kind of vent terminated in the garage, dryer vents being high on the list. The worst I have ever seen was an open combustion air line for the furnace. The homeowner said he moved this from the outside wall because he felt it was allowing too much cold air into the furnace room.

The most creative garage door opener was one that was wired to an extension cord, which was wired to a fluorescent light, which was wired to some bench plugs to a light switch, which was plugged into the single garage plug, which was installed when the home was built. There was not one junction box and it was all done with an 18g extension cord wire and lots of electrical tape. After the lack of operational auto-reverse controls, comes huge storage shelves attached to the bottom chord of the garage's roof trusses. I had an inspection some time ago where the plates holding the bottom chord of the trusses together were actually pulling out from the weight of the household storage stuffed onto the shelf. Trusses are not designed to hang things from; they are made to support your roof.

Number three is bathroom fans and the lack of proper installation. Far too often I see them connected to a plastic un-insulated dryer duct and laid on top of the insulation in the attic. Many vents are terminated in the attic and not routed to the soffit or a proper roof vent. Installed this way, they supply moist, heated air to the attic. This translates into mould, ice buildup and, come spring, I get a steady stream of calls about water stains around ceiling fans in the bathroom. What has happened is that the ice has melted and is now draining back into the fan. One quick look in an attic where there is black section of plywood sheathing and it is pretty much a sure bet that the vent line is not correctly discharged. Recently, I saw one uninsulated 3" plastic vent with so much water in it that the line had sunk into the insulation and created a water trap in the vent line.

The simple furnace filter is number four on the list. I constantly see them in backwards; there is an arrow on every filter that indicates how it should be installed to follow the air flow, in most cases facing the furnace. In the summer months, I commonly see them plugged solid with dirt. Sometimes they are so plugged that the filter material has pulled out of the filter frame and is wrapped around the furnace fan. While most people realize you must change your filter in the winter, few realize that, with the amount of air conditioners we now see, the filter must be changed in the summer months, too. If the filter gets plugged in the summer it can cause the air conditioner to freeze up and possibly damage the coil. A dirty filter will greatly increase the operational time of the air conditioner, too. If unchanged in the winter, it will cause the furnace to run far longer than would otherwise be needed to reach the temperature the thermostat is calling for. Some newer furnaces will not operate without the correct amount of air passing through the furnace.

Number five on the list is the garden deck. While I expect I have not seen every "creative idea," the list is getting shorter. Decks supported on concrete blocks and posts dug into the ground or sitting on patio stones are included here. The best one yet was when the deck had settled so badly, the homeowner turned the deck block over to raise it back up! Unless decks are structurally supported, they should be lagged to the home. Over 75% I see have either been nailed or wood screws have been used. Frames made of 2x4, spacing over 30" wide on the frame are also on the list; it's a long list. A deck should have a permit and most building departments will advise you on what is expected for compliance.

And lastly, one of my concerns is the lack of combustion air in today's homes. As we seal them ever more tightly, striving for greater energy efficiency, the accessible combustion air is reduced. Fireplaces, wood stoves, gas hot water heaters, gas furnaces - if they are not fitted with an external makeup airline - and oil furnaces, all need fresh air to function properly. If it is not supplied, they could be using the inside of the home as their chimney, with deadly consequences. Speak to your TSSA HVAC Tech or your WETT chimney sweep for recommendations.

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