Have you read your homeowner's manual?

Developing a manual on how to operate and maintain your home

▫ By Marcus Renner ▫

The last time I bought a car it was used.

In the glove box I found not one but two different owner's manuals. I've used the manuals to figure out the radio, find out recommended service and maintenance requirements, learn tire pressure needs and a few other very valuable pieces of information that have kept the car in top mechanical shape. The manuals tell me how each system within the car is supposed to operate and what needs to be done to keep each system operating at maximum efficiency. I want my car to operate at maximum efficiency because my operating costs will be lower and the car's life will be prolonged.

That same car also had an impressive dashboard with a few extra gauges that were not familiar to me. With use, I discovered that there were many, many lights alerting me to maintenance times and potential problems (thanks for the reminder air bag replacement light). My car even lets me know when I'm being careless with different sounds indicating when the door is ajar or the lights were left on.

Over the years, I've pondered why we do not receive owner's manuals when we buy our homes. Just like cars, our homes are a conglomeration of systems that interact together to (ideally) give us comfort, shelter, and a better life. Homes generally cost a lot more than cars and we spend way more time in them. Yet when you purchase a home, if you're lucky, you may find the dishwasher manual crammed into the back of a kitchen drawer.

Since we spend so much time in and money on our homes, we trust in the builder and building code requirements to ensure they are safe, healthy and efficient. Keep in mind, a house built to minimum building code standards is a "bottom of the barrel" home. We make sure that our cars are built to greater than minimum highway safety standards. Why not tougher construction standards for our homes?

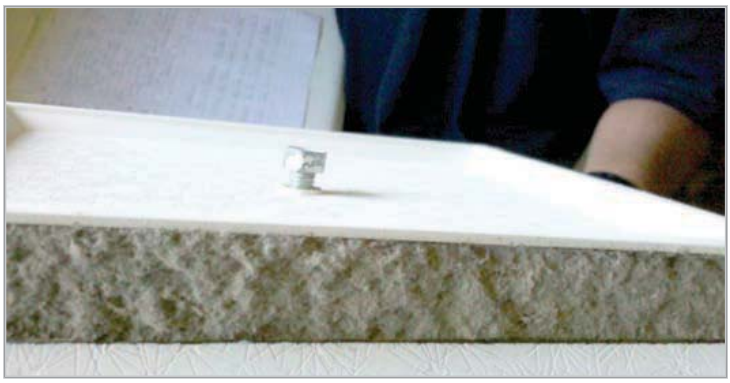
Our homes don't come with a dashboard either. There are a myriad of things that we need to be monitoring in our homes (especially in this climate). Generally, everything boils down to temperature, humidity and energy use. Homeowners often monitor the temperature inside their home.

But what is going on in the attic, walls or crawlspace?

Oftentimes, a homeowner only finds out that their home has an insufficient system when a problem occurs. The bottom line is, problems in homes cost money and the longer a problem exists, the more money it takes to solve it. The solution is that all homeowners need to understand every system in their home, know how these systems interact with each other, set up a monitoring system for the home and have a manual to offer solutions.

Melted plastic from a gas water heater. Flue gasses were entering the home. This is potentially deadly.
Marcus Renner photos

As energy auditors, we go into



Completely blocked bath fan. (above) Saturated insulation and excessive mold. The owner found this after the tenant reported being sick. The water heater failed and flooded the crawlspace. The issue existed for two months before anyone found out. (right)

hundreds of homes and regularly see the same issues because of a lack of a homeowner's manual.

Here are some of the more common issues we discover:

■ **Foundation vents in crawlspaces** – crawlspaces are the worst foundation system known to man. They trap moisture and create a petri dish environment for fungus and insects. Foundation vents are supposed to be opened in the summer and closed in the winter. If the vents stay open year round cold air causes comfort issues, can freeze pipes, and can make the heating system work overtime. If the vents stay closed year round the moist air can't get out and mold can grow on the construction materials we call mold food. Unless a crawlspace is encapsulated there is mold in it.

■ **Bath fan ventilation**: bath fans remove moisture from the wettest place in our homes. If they are not vented to the outdoors, moisture can build up in the attic and cause mold and rot. We have to keep in mind that the lowest bidder builder may not vent the fans outside.

■ **Garden hoses**: when the temperature drops below 20 degrees the phones of all the plumbers in town start ringing off the hook. Frozen pipes can cause extensive and expensive water damage. Many times a garden hose connected to a spigot is the issue. Outdoor spigots are designed to be self-draining. They cannot drain when there is a hose connected to them.

■ **Gutters**: clogged gutters can allow hundreds of gallons of water to come in contact with building materials. Left unchecked, failing gutters can rot fascia boards and eventually lead to structural failures. What could have been a quick and inexpensive cleaning job can lead to thousands of dollars in damage.

Our homes interact with extremes – temperatures nearing 100 degrees to well below zero, weeks of bone dry to many inches of rain at a time, humidity that you can almost swim through, bugs, birds squirrels and fungus that all want to live in and eat our homes. We need a vigilant eye and a process to keep ahead of the environment we live in.

An owner's manual will help keep your home running in tip-top shape. Create a list of all the systems in your home and document the recommended maintenance required. Start a home calendar that will alert you to the tasks required and their frequency. Have your home regularly inspected by a professional. Preemptive planning and inspections will save you thousands of dollars in repair costs. Do yourself and your home a favor and treat it just as good as that car parked out front.

After 20 years in the green building industry, Marcus Renner became co-owner of Conservation Pros Inc., a local building performance contractor. Conservation Pros conducts energy audits and performs the work to make buildings more efficient, comfortable, healthy and durable. He can be reached at marcus@conservationpros.com or 828.713.3346. www.conservationpros.com