

## Real Estate eNews

### Electrical Problems

When home inspectors point out potential electrical issues, they do so because faulty, old or inadequate wiring can cause major problems for home buyers and sellers.

In fact, during a typical year, home electrical problems account for 67,800 fires, and \$868 million in property losses. Home electrical wiring causes twice as many fires as electrical appliances do. As a result, catching these problems early means saving time, money and anguish. Experienced electricians can diagnose and repair the problems, assuring homeowners and their property are protected.



What are some common electrical problems home inspectors encounter? Amateur wiring of outlets, broken outlets and non-GFCI outlets in close proximity to a water source. Double or triple taps are also a common scenario. Double tapping occurs when two or more wires are connected to one circuit breaker or electrical lug. Most circuit breakers and other electrical connections are only rated (UL listed) to safely hold one wire, however.



For example, a homeowner may decide to add additional outlets in a room or area in the home. If there is not enough space in the electrical box to accommodate the circuit breakers needed for these outlets, some homeowners simply wire two appliances into the same breaker.

This practice can result in hot spots in the electrical box. A double tap can also loosen over time, causing arcing. With arcing, carbon is released. Carbon build-up provides resistance to the current, making it more difficult for the conductor to make contact. The current continues to increase, eventually tripping the breaker because of the loose connection. There may also be signs of overheating, such as discolored or melted wires. An experienced professional can provide guidance regarding the installation of a larger electrical box with more space for the required breakers. In other cases, it may be possible to add a sub panel to an existing electrical box to provide extra room.

What about aluminum wiring? It is estimated that two million homes were built with aluminum wires between 1965 and 1973. This wiring has proven to be inadequate, and has led to electrical fires and other problems.

Aluminum wiring will have "Al" or "Aluminum" marked every few feet along the cable. A home inspector can help identify this older and unsafe type of wiring. Warning signs of dangerous conditions include warm-to-the-touch face plates on outlets or switches, flickering lights, circuits that don't work, or the smell of burning plastics. Qualified electricians make use of specialized tools, material and training to repair problems created by aluminum wiring.

Even open or missing outlet covers can provide a problem in the home. Also dust, dirt, moisture, insects and small animals can gain entry into electrical equipment and disrupt the electrical operation.

Uncovered outlets are easy to diagnose, but create safety and fire hazards. If an electrical fire starts in an electric box with open holes or missing covers, the fire could spread beyond the box, resulting in possible property damage.



When a home inspection reveals double-tapping in a fuse or circuit box, or any other electrical concern, a licensed electrician should be called in. Each town or city has its' own wire inspector who may have slight differences in their requirements for inspection and code compliance. There are a few simple and relatively inexpensive solutions to correct the problem of double-tapping, but only a qualified electrician should make the call.