

Don't Be Shocked By This
August 4, 2013

Dear Dave: I have known about GFI requirements in a home for some time, but I just learned that AFCI's are also required. Could you please explain?

Answer: A Ground Fault Circuit Interrupter (GFCI) protects you from an accident where you, the human being, might 'ground' an electrical circuit with your body.

The most likely case is where an electrical current may come in contact with water and you are personally connected to the water at the same time – e.g. your electric toaster falls into the kitchen sink while you are washing dishes.

This is why all kitchen counter top outlets, and even some island outlets near the counter, must have GFCI protection, as well as all bathroom and home exterior outlets. Should you or your children create a grounding from an electric current, the circuit will shut off in 1/40000th (one forty thousandth) of a second.

Good news for people using electric hair dryers in the bathtub.

An 'arc' of electricity is a different story. An electrical arc is an interruption of the normal flow of electricity in a circuit which can cause a fire. Natural arcs occur whenever a light switch is turned on or off, but other arcing (e.g. a shorting between wires) can be very dangerous and is not protected by a conventional circuit breaker.

An AFCI is, in effect, a newer type of circuit breaker, required in all new construction since 2002, and now in all homes since 2010. A home inspection should raise this issue if your electrical panel does not meet the code.

An AFCI is not necessary on a circuit which already has a GFCI but is required on all other household circuits. In summary, the primary purpose of a GFCI is to protect people personally contacting an electrical circuit. An AFCI is primarily designed to prevent an electrical fire.

Please feel free to email a request for a helpful brochure I have on file for AFCI's.

Dear Dave: I recently looked into financing my home/apartment building (which is considered a tri-plex). I was told that I would have to provide an updated appraisal (\$850.00). My current appraisal was done March 7, 2012. And I was told that I also needed an 'as-built' survey (\$250.00). I have not needed an 'as-built' survey in past refinances. Why do I need one now?

Answer: You will always need a new appraisal on a 'refi' of your property. However, you will not need a new as-built survey. On a 'Conventional' refinance no survey is required at all. With FHA or VA you must 'provide' a survey, but it can be an existing one.

Dear Dave: Is a Home Inspector liable for errors in the inspection? We bought a house and 2 months later found out that the heat exchanger in the furnace was cracked. It cost us over \$3,000 to fix it.

Answer: In general terms, anyone who purports to be a professional in his field can be held liable for negligence in carrying out those duties. However, most home inspectors limit their liability, in the inspection agreement that you signed, to the amount you paid, usually around \$350. You could try lodging a complaint with the State Division of Occupational Licensing, but this is a convoluted process and not likely to get you very far, especially with a furnace issue.

Your home inspection agreement would have explained that the inspection is “visual” only. Most home inspectors will remove the panel on the furnace and look for flame irregularities, gas leaks, unusual noise or obvious damage to the heat exchanger. They may also perform a carbon monoxide test. However, only a small part of a heat exchanger can be “visually” inspected without dismantling the furnace and removing it.

If you buy a house with a gas forced air system, you should always have it inspected by a Heating Technician. This could cost up to \$200 but includes a complete examination of the system. Heat exchangers have a natural life of 15 to 20 years, but I have seen them crack as early as 2 years after installation. Cracks are dangerous because they grow, and because they emit carbon monoxide. Only a thorough examination can discover cracks in the heat exchanger. You have the right and duty to inspect any and all of the home before you buy, so make sure you budget a little extra for checking out this crucial element.

Dear Dave: We are putting up a greenhouse in the back yard. How far from the property line does it have to be?

Answer: As long as it is a temporary structure, not on a permanent foundation, it doesn't matter, unless you live in a subdivision with specific covenants restricting outbuildings. If it has a foundation, then it depends on the Zoning of the property (normally 10 feet at the rear and 5 feet at the side in Residential neighborhoods).

What you do want to watch out for is easements on your property. Try to keep your greenhouse out of any designated easements, as utility companies have a permanent right to access that portion of your property. Easements will be shown on your as-built survey. Never encroach on those areas with any structure that has a permanent foundation and, if your greenhouse encroaches, keep in mind it could be necessary to move it if access is required by the beneficiary of the easement.