



Central TN Inter-NACHI Chapter

March 2010

Message from the Chapter President:

Dear Folks,

Test, test, hello! Can you hear me? (I'm never sure if you're really out there :-)

Hopefully everyone had a chance to submit their burning question to Terry Wilson or Melissa for Nicole Avers the new State Director of Home Inspector license department.

My thanks go to Melissa Osburn for being the forward thinker & scheduling this. This is certainly an important time to access the director to gain insight into how things are going to be working from this point forward. So sign up now to attend by clicking here

<<http://tn.nachi.org/centraltennessee/event571-register.html>>.

In the yearly survey we asked about changing the day of our meetings. The questions were phrased in such a way to ask if there was a desire to change. Since most of us humans don't care for change, the results were predictable; very few wanted a change. However, several longtime & actively participating members have conflicts with other meeting they need to attend. I need to rephrase the question then: Will changing the meeting night to the 2nd Monday or 2nd Thursday of the month cause any other conflicts? You can make a note on the registration page to let me know or email me directly <mkamick@bellsouth.net>.

In addition to Nicole Avers, several members will be sharing the topics that were covered at the recent HITA meeting. So don't miss out on a premier event.

See you this coming Tuesday.

Best Regards,
Michael Amick
Central TN InterNACHI Chapter President
615-974-6760 cell

This Month's Meeting:

When: March 9th

Time: Meeting starts @ 7pm

(Dinner and social time 6:30pm-- *Dutch Treat*)

Where: Corky's BBQ

100 Franklin Rd., Brentwood, TN 37027

Register for the meeting:

<http://tn.nachi.org/centraltennessee/events.html>

Guest Speaker: Nicole Avers,
State Director of Home Inspector Licensing

Mark your calendars and plan not to miss this month's meeting.

If you have not been to a meeting lately here are a few of the companies and speakers you have missed!!!!

January: Joy Black, CPA-*In the Black Accounting*

February: Pierre Billard-*Partridge Hill Svcs, Ilc*

March: Nicole Avers-*State Director of Home Insp.*



Central TN Inter-NACHI Chapter

BREAKING NEWS

Just a Little Humor

In honor of our snow storms these past few weeks. Nobody does snowmen quite like Calvin and Hobbes!





Central TN Inter-NACHI Chapter

Safety Notes By: Ed McDaniel

Safety Suggestions for Inspecting the Electrical Panel Interior

How might the astute inspector spot trouble in an electrical panel cover before opening it?

At least one death of an electrician, has been reported to have occurred during the removal of a panel cover

Atlanta GA, a licensed electrician was opening the panel for inspection.] Apparently there was an incipient problem with the spring-loaded bus-bar assembly. When the cover was removed the bus assembly moved, an arc caused an electrical explosion, killing the inspector. -- J. Aronstein to D. Friedman, personal communication, 12/1991.

The following photos and text provide examples of external evidence that may let the inspector avoid trouble or a nasty surprise when inspecting electrical equipment.

Before touching the electrical panel the inspector should look for these conditions:

- **Escape path:** make sure that you know where you will turn and/or step back to retreat from the equipment if you discover a sudden and dangerous surprise (sparks, rats, bees, etc).
- **Wet floors or other wet conditions:**
 - Do not touch electrical equipment if you are standing on a wet surface.
 - Notice the cold water pipe condensation dripping onto and into the electrical panel in the left hand photo below



This photo shows a common way that water may enter an electrical panel as well as drip on its exterior.

A cold water pipe produces condensation which drips on the panel top. This pipe is too close and is in a poor location over this electrical service box.

Is there:

- **Wet equipment:** the electrical panel cover is wet
- **Panel Rust:** the electrical panel cover is rusty

The pair of photographs below show two clear warnings that water has been entering an electrical panel - watch out for rust, and for circuit breakers that may not trip in response to an over current, due to internal corrosion.

This defect is not one for which a home inspector (nor most electricians) can reliably test in a home, but the warning remains appropriate. Replace such breakers, and if the electrical panel is badly corroded the entire panel needs replacement.



Central TN Inter-NACHI Chapter

Safety Procedures for Removing Electric Panel Covers: for Electrical Inspectors & Home Inspectors



- **Distance:** Warn clients to remain at a safe distance.
- **Assistance:** Do not permit your client to assist you in removing or installing the panel cover. Only one person should be touching electrical components at any time.

The author asks clients to stand a little back while removing the cover, which makes it easier to remain in a blocking position (below). We might inform the client that opening the panel is a dangerous step, and that if sparks fly the client should not touch the inspector - though other parties present at the inspection might want to *kick* the inspector or take similar measures if necessary.

- **Blocking:** Stand so as to block your client from touching the panel or its components.
- **Touching:** Do not permit your client to touch electrical equipment.

At an inspection in a damp dark crowded basement the author was standing blocking the very curious and active participatory client from the open electrical panel after the cover had



Central TN Inter-NACHI Chapter

been removed.

The client reached over the author's shoulder. The client asked, "What's this?" as he stuck his finger straight into an open fuse socket while his arm contacted the inspector's shoulder, assuring that they both would get an electrical shock.

- Grounding: Check visually (and electrically if needed) for presence of system grounding before touching electrical components.

Electrical Panel Cover Fastener Screws & Electrical Meter Box Mounting Screw Hazards

- Looking: Look carefully for evidence of burning, arcing, or other damage before touching or moving components. Eg.: sharp sheet metal screws in panel covers may short hot wires.



- Unsafe Electrical Panel Screws: the electrical panel cover screws have been replaced with sharp pointed sheet metal screws
- Electrical Panel Access, Rats & Other Distractions: (distractions from being careful) there are rats at your feet, or there is a *rats nest* of wires or other obstruction to safe cover removal - watch what you say.

At an inspection the author had encouraged a nervous buyer to accompany him into an ugly dark muddy basement to inspect the mechanical systems.

The client, a woman not properly dressed for an inspection, wore high heels and a tight skirt.

She was wobbling in the dirt floor in a dark crowded corner of the basement, terrified and already shaking in the dim light. The author, encountering a maze of wires in the way of the electrical panel, forgot to edit his thoughts, and muttered aloud: "geez what a rats nest."

The client screamed "RATS!!!" and ran terrified from the basement, falling towards the dark stairs.

- Distractions during an electrical inspection are themselves dangerous.

A NE ASHI inspector reported that:

As I just touched an electrical panel cover screw with my Milwaukee screwdriver I saw a tremendous flash of light - as bright as the sun. I was certain I was dead. As moments passed I realized I was still standing there, alive. Am I alive? I asked myself. I learned that from behind me and my client, the real estate agent had chosen that moment to take a flash photograph of the proceedings.

This distraction is more risky than it may appear. A sudden flash, a sudden shout or movement, could cause an inspector to lurch, touching an electrically live and dangerous component. It is important for the inspector to learn and practice calm, steady movements and to resist distractions.

How to Look for Unsafe Panel Cover Screws & for Evidence of Burning and Arcing When Approaching the Electrical Panel

- Look at the electrical panel before touching the electrical panel cover; is there evidence of a problem such as
- Arcing, Overheating or Burnups: you see evidence of electrical failures such as burned or overheated components. In the photo at left the ground wires are clearly overheated - something



Central TN Inter-NACHI Chapter

is wrong. In this case a homeowner was badly shocked when he touched his metal workbench.

The pair of photos just below shows at left, electrical arc flashover soot, and at right, the repair - tape on the electrical wire, but the wire is *still* too close to the screw mounting hole for the panel cover.

- Look for improper and unsafe electrical cover screws, sharp pointed sheet metal screws, and look for electrical cables that pass too close to the screw openings in the electrical panel.



Sharp sheet metal screws: If you find that a sharp-tipped sheet metal screw has been used (usually to replace a lost original fastener) you should be alert for pierced, damaged, short-circuited wires in the panel - both during removal and during panel cover replacement.

We will not reinstall a sharp-pointed screw in a panel cover if wires are crowded close to the screw opening. Having seen more than one shorted and burned panel from precisely this cause, we warn clients about this unsafe detail. It is trivial to correct.

It's an easy fix: use a blunt tipped screw, or file off the sharp point of the SMS.

Before re-installing the cover of the electrical panel, check to assure that no electrical wires have moved close to the panel cover screw mounting holes where they might be pierced or damaged.

Now that we have removed the cover and carefully set the cover and screws aside (don't lose the screws),

What to Look for Inside the Electrical Panel as Immediate Safety Concerns to the Inspector

- Evidence of water entry *inside* the electrical panel (photo at below right) means that circuit breakers may be corroded and won't trip,





Central TN Inter-NACHI Chapter

connections may be unreliable, neutral or ground connections may be lost, and touching the equipment could be dangerous.

- Evidence of overheating, melting, burnups inside the electrical panel (photo at below left) - this was the ground that overheated when there was no neutral connection in the sub panel and neutral and ground buses were improperly bonded.

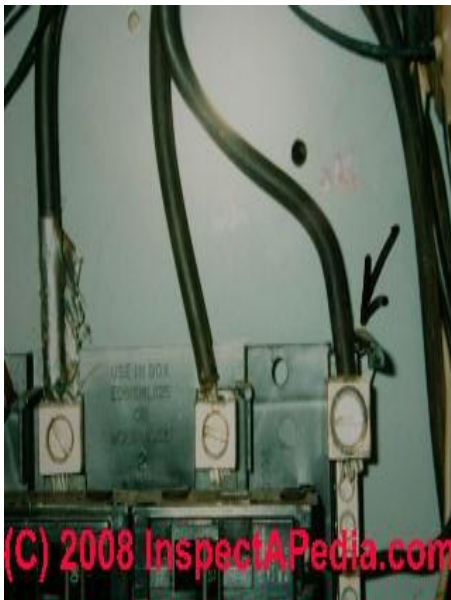
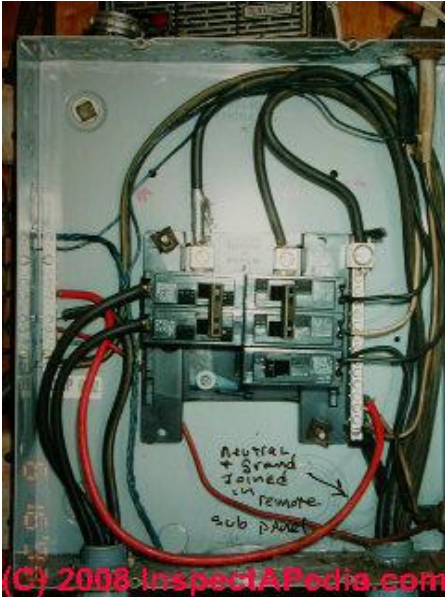


- Evidence of missing bonding or improper bonding (such as ground to neutral in a sub panel) may combine with evidence of overheating (photo above left) to indicate improper wiring, damaged equipment, and unsafe conditions.

The loss of neutral in a garage sub panel (the steel screw bound in the aluminum neutral lug in photo at below right) combined with improper bonding (ground to neutral - red wire in photo at below left) and other conditions to shock an owner when he touched his metal workbench.



Central TN Inter-NACHI Chapter



- Evidence of burned or overheated wires or damaged circuit breakers, aluminum wiring, faulty equipment, mis-wiring, linking, bus and bonding defects, and many other defects.



Central TN Inter-NACHI Chapter

Anti-Tip Brackets for Freestanding Ranges

By Nick Gromicko, Rob London and Kenton Shepard

Submitted By: Melanie Moore-Full Disclosure Home Inspection

Anti-tip brackets are metal devices designed to prevent freestanding ranges from tipping. They are normally attached to a rear leg of the range or screwed into the wall behind the range, and are included in all installation kits. A unit that is not equipped with these devices may tip over if enough weight is applied to its open door, such as that from a large Thanksgiving turkey, or even a small child. A falling range can crush, scald, or burn anyone caught beneath.



Bracket Inspection

Inspectors can confirm the presence of anti-tip brackets through the following methods:

- It may be possible to see a wall-mounted bracket by looking over the rear of the range. Floor-mounted brackets are often hidden, although in some models with removable drawers, such as 30" electric ranges made by General Electric, the drawers can be removed and a flashlight can be used to search for the bracket. Inspectors should beware that a visual confirmation does not guarantee that the bracket has been properly installed.
- Inspectors can firmly grip the upper-rear section of the range and tip the unit. If equipped with an anti-tip bracket, the unit will not tip more than several inches before coming to a halt. The range should be turned off, and all items should be removed from the stovetop before this action can be performed. It is usually easier to detect a bracket by tipping the range than through a visual search. This test can be performed on all models and it can confirm the functionality of a bracket.

If no anti-tip bracket is detected, inspectors should recommend that one be installed. Clients can contact the dealer or builder who installed their range and request that they install a bracket. For clients who wish to install a bracket themselves,

Parts supplied for installation:



the part can be purchased at most hardware stores or ordered from a manufacturer. General Electric will send their customers an anti-tip bracket for free. According to the U.S. Consumer Product Safety Commission (CPSC), there were 143 incidents caused by range tip-overs from 1980 to 2006. Of the 33 incidents that resulted in death, most of those victims were children. A small child may stand on an open range door in order to see what is cooking on the stovetop and accidentally cause the entire unit to fall on top of him, along with whatever hot items may have been cooking on the stovetop. The elderly, too, may be injured while using the range for support while cleaning. InterNACHI inspectors who inspect ovens should never leave the oven door open while the oven is unattended.

In response to this danger, the American National Standards Institute (ANSI) and Underwriters Laboratories (UL) created standards in 1991 that require all ranges manufactured after that year to be capable of remaining stable while supporting 250 pounds of weight on their open doors. Manufacturers' instructions, too, require that anti-tip brackets provided be installed. Despite these warnings, retailer Sears estimated in 1999 that a mere 5% of the gas and electric units they sold were ever equipped with anti-tip brackets. As a result of Sears' failure to comply with safety regulations, they were sued and subsequently required to secure ranges in nearly 4 million homes, a measure that has been speculated to have cost Sears as much as \$500 million.

In summary, ranges are susceptible to tipping if they are not equipped with anti-tip brackets. Inspectors should know how to confirm that these safety devices are present.



Central TN Inter-NACHI Chapter

UPCOMING TRAINING OPPORTUNITY

Indoor Air Quality Class in Nashville, TN on
April 23rd & 24th, 2010

Did You Know Indoor Pollutants Can Be 2 to 5
Times Higher Indoors than Outdoors?

<http://www.epa.gov/iaq/voc.html>

Would you like to help building owners with their
**employee's health while adding more income to
your business?**

- Did you know that you do not have to purchase expensive equipment?
- How would you like to take a course that will add value and more income?
- Would you like to make an extra income of \$400 to \$600 per test?
- Want to be a part of the environmental movement?

Find out how easy it is to perform an IAQ tests and inspections by attending this course.

We will not only teach you the methods that are used in multiple IAQ inspections and sampling, but also explain the up-to-date industry equipment used. Most importantly you will be taught how to market your professional new service and how to clearly explain the next step to your client.

You will receive the following;

- CEU's from many other professional organizations.
- Discounts from our approved labs on analysis
- FREE inspection forms and example agreements
- Plus many more discounts on products and supplies.....

Class Price-\$400.00 (non-members) Call for ESA
Member pricing

Due to limited seating, please register early by
calling Michelle at 570-326-6617

Or email michelle@esaassociation.com

Ask what our membership can do for you!

Please visit our website at:

www.esaassociation.com

***See attached PDF file for Radon Training Course



Central TN Inter-NACHI Chapter

Here's a chance to share your unique, strange, weird or most dangerous photos. Just send your photos with a brief description of what we are looking at to me. Each month we will include 2-4 photos in the monthly newsletter.

Also, send any information that you may like to share with all of our members. Please photos, documents, etc. as Jpeg, PDF or Doc. Jpeg and PDF are the preferred forms.

Send your photos and comments to: Terry Wilson
(wlsntw@comcast.net)

Monthly Submission:



Here is a picture of a vent pipe that is setting in a pal of water. It's not connected to the plumbing, just setting in the pal collecting rain water.

Gary Mann
Madison's Home Inspections



I did an inspection in Decatur AL today and found this in the panel. While I think everyone would agree it is not necessarily unsafe it is a least unconventional. Alabama does not have a state electrical inspector program in rural areas. I find lots of interesting installations.

Additionally, the panel was not grounded and every circuit had the neutral and ground under a common lug. I see that often in Giles Co. The one wire one screw rule is loosely enforced in a primary distribution panel.

Aubrey Tycer
Quality Home Inspections



Central TN Inter-NACHI Chapter

Is your contact information up to date:

Have you moved, changed your address or changed any of your contact information (phone, email, website, etc.). If you have.....Please got to the NACHI website and update your profile. By updating your profile you will be keeping all of your information current and correct.

Continuing Education/Professional Membership

Have you found a website or resource you would like to share? Send it in.....

Where's the best place to purchase inspection equipment and software? Do you have a place to recommend? Send it in.....

As with any profession we can only get better by sharing ideas, experiences and knowledge. By belonging to an organization and participating it speaks loudly about an inspector. It shows that you care about your profession and seek to ensure that only well trained and knowledgeable inspectors are working in our area.

Did you know the following are approved and available through Inter-NACHI?

INTERNATIONAL ASSOCIATION OF
CERTIFIED HOME INSPECTORS
(INTERNACHI)

Contact: Lisa Endza 303-502-6214

Email: lisa@internachi.org

Website: www.nachi.org

1. Plumbing Issues CE# 191-06 (8)
2. HVAC Issues CE# 192-06 (8)
3. Electrical 101 CE# 193-06 (8)
4. Structural Red Flags in Residential Construction CE# 194-06 (8)
5. NACHI's Online Structural Course CE# 097-07 (4)
6. Thermal Imaging and Building Science CE# 117-08 (16)
7. Safe Practices for The Home Inspector CE# 126-08 (4)
8. Thermal Imaging & Building Science (CE Teleconference Course) CE# 128-08 (16)
9. On-Line "Green Building" CE# 130-08 (8)
10. On-Line Plumbing Course CE# 170-08 (8)

11. Law & Order CE# 173-08 (4)
12. Inspection Water Heater Tanks CE# 175-08 (4)
13. Inspecting Means of Egress CE# 176-08 (4)
14. Introduction to Infrared Thermography Online Video Course CE# 184-08 (5)
15. InterNACHI'S On-Line Roofing Course CE# 187-08 (4)
16. InterNACHI'S On-Line Electrical Course CE# 188-08 (4)
17. InterNACHI'S On-Line Log Home Inspection Course CE# 189-08 (8)
18. Inter NACHI'S On-Line Wood Destroying Organism Inspection Course 003-09 (12)
19. On-Line Radon Measurement Service Provider Course 005-09 (12)
20. On-Line----Inspecting Foundation Walls and Piers 006-09 (3)
21. On-Line 25 Standards Every Inspector Should Know 007-09 (5)
22. On-Line Moisture Intrusion Inspection Course 008-09 (8)
23. On-Line Mold Inspection Training Online Video Course 021-09 (12)
24. On-Line Advanced HVAC Training Course 023-09 (21)
25. Deck Inspections Course 037-09 (2)
26. How to Inspect HVAC Systems 049-09 (12)
27. How to Perform Exterior Inspection 050-09 (16)
28. How to Inspect the Attic, Insulation, Ventilation and Interior 001-10 (14)