



Welcome to our instructional and certification program for inspecting and screening properties for the presence of tainted Chinese drywall.



A trustworthy advocate for the concerned homeowner

Whether you're a current home inspector looking to add Chinese drywall to your list of services and certifications or someone wanting to learn more about Chinese drywall, we will guide you through the information and steps necessary to become a well educated inspector of properties for the presence of tainted, reactive or Chinese drywall.

Chinese Drywall Screening Modules

1. About Us
2. “Facts and Fears”
3. What you need to become a Chinese drywall inspector
4. How to visually inspect

Proceed at your own pace....



A trustworthy advocate for the concerned homeowner

We are pleased you are being responsible and taking the initiative to educate yourself on this issue.



A trustworthy advocate for the concerned homeowner

All information you are about to receive is proprietary of Chinese Drywall Screening, LLC and as such, it is copyrighted material.



Chinese Drywall Screening, LLC developed this training program to help professionals learn how to visually identify this particular “tainted” construction material.



Howard Ehram

Founder of Chinese Drywall Screening, LLC

Welcome to our training on how to visually identify and inspect for “tainted” or Chinese drywall. I developed this training to help professionals across the world learn how to visually identify this particular “tainted” construction material. Due to the cost of air sampling and too the destructive nature of opening up wall board to see behind the walls, visual identification still remains the best means of initially screening and identifying properties with “tainted” drywall.

As of March 2010, my team and I, have done over 1,000 Chinese drywall inspections, making us one of the most experienced firms in the United States to identify tainted drywall using visual means of identification.

In addition, I am becoming extremely proficient in troubleshooting homes that might only have small amounts of “tainted” drywall and am on the forefront of research working with attorneys, forensic inspectors, researchers, engineers, scientists and others in identifying and trying to come up with solutions to help property owners with “tainted” drywall.

Along the way, I have also seen how unqualified inspectors can come into a home and misdiagnose the situation either out of ignorance or out of the desire to generate construction work without regard to the property owner’s financial resources or family situation.

My team and I have put together a training video that we think will not only be helpful for professionals wanting to add Chinese drywall inspection to their list of credentials, but also to others such as attorneys, members of the media and homeowners wishing to know more about what is turning into a complicated and potential environmental disaster of global proportions.

Howard Ehram, EI, CDP, LEED AP, CGC 1509717
Chinese Drywall Screening, LLC

Howard Ehram is the founder of Chinese Drywall Screening, LLC. He has a Bachelor's degree from the University of Florida in Civil Engineering. He worked for a large general contracting company in Central Florida for 8 years before moving to Port St Lucie, Florida in 2003 to start a new career in commercial development.

From 2003 to 2009, Ehram managed commercial development projects for a master planned community developer. His certifications and licenses include Engineering Intern, Certified General Contractor, LEED AP and a Certified Development, Design Construction designation from the International Council of Shopping Centers. Howard enjoys life on the Treasure Coast with his beautiful wife of 14 years and three fantastic children.

In 2007, it was discovered that one of his properties was displaying characteristics understood to be caused by tainted drywall from China. The combination of his professional experience, dealing with the issue first hand, helping others and continual research has put Howard in a position to be an excellent resource for property owners and managers in dealing with the Chinese Drywall phenomenon.

Everyday brings to light more information about "tainted" or "defective" drywall and the destructive nature of it. Howard's mission is to empower the consumer with accurate information and guidance in this very stressful time for homeowners and builders.

About Chinese Drywall Screening, LLC

- Visual identification still remains the best means of initially screening and identifying properties with “tainted” drywall.
- Chinese Drywall Screening LLC has done over 1,000 screenings
- We have unique troubleshooting experience
- We are in the forefront of research working with researchers, scientists and others

We are committed to helping home and property owners...

- Inexperienced inspectors can come into a home and misdiagnose
- The more qualified professionals trained to screen for Chinese drywall, the better

We are dedicated...

- In training other professionals to provide the best information they can in screening for Chinese or defective drywall
- In helping to provide a standard of education and training that will raise our people above the bar
- To provide a means of assisting other professionals add to their list of services and credentials

The more home inspectors know about this issue...

- The better you can assist homeowners and property managers with factual information
- When you are out meeting with realtors and home and property managers, they will appreciate your knowledge and will look to you as an expert also

Introduction

Welcome to our instructional and certification program for inspecting and screening properties for the presence of “tainted” or Chinese drywall. Whether you are a contractor or a current inspector looking to add Chinese drywall to your list of certifications or someone who will be joining our inspector network, we will guide you through the information and steps necessary to become a well-educated inspector of properties for the presence of tainted Chinese drywall.

As part of our program we have four sections we will be guiding you through. These sections include:

- Part 1: Background and About Chinese Drywall Screening, LLC
- Part 2: Chinese Drywall “Facts and Fears” by Karen M. Scott
- Part 3: What you need to become a Chinese drywall inspector
- Part 4: Performing an inspection

You will be able to proceed at your own pace.

Two other things we need to remind you:

1. This is a proprietary program subject to copy write laws. You are not entitled to copy and disburse without our express written permission.
2. As part of your purchase of this program you are also entitled to become a subscriber to our newsletter and information update program. We strongly urge you to do so. This will enable you to receive new information and research along with case studies that might supplant some of the current information presented as more becomes known about this issue.

<http://www.chinesedrywallscreening.com>

<http://www.csmonitor.com/2009/0404/p99s01-usgn.html>

CDS featured in The Real Deal - "Chinese Drywall Screening, started in mid-January by Howard Ehram, is one of the first commercial enterprises to spring up in the wake of concerns about drywall."

<http://therealdeal.com/miami/articles/chinese-drywall-spawns-treatment-industry>

Links to Chinese Drywall Screening, LLC in the news.....

CDS featured on Fox 35 News in Orlando -Howard Ehram being interviewed during a news story on Lennar having 400 tainted homes.

http://www.myfoxorlando.com/dpp/news/state_news/071309chinese_drywall

CDS featured on ABC News Nightline - Top run story featuring In depth national news feature following Howard Ehram on location during a screening and providing expert information.

<http://abcnews.go.com/video/playerIndex?id=7640954>

CDS featured on FOX WPBF Channel 25 regarding Real Estate Transactions - "Ehram, a certified general contractor, works alongside a traditional home inspector examining the Port St. Lucie house."

<http://www.wpbf.com/news/19374368/detail.html>

CDS featured in the Palm Beach Post, Treasure Coast Palm Edition - "Chinese Drywall Screening LLC has documented about 100 homes in Port St. Lucie with the Chinese drywall, said Howard Ehram, a civil engineer who founded the company."

<http://www.tcpalm.com/news/2009/may/07/people-crowd-room-stuart-learn-more-about-chinese-/>

CDS featured in the Palm Beach Post - "Chinese Drywall Screening, started in mid-January by Howard Ehram, is one of the first commercial enterprises to spring up in the wake of concerns about drywall."

http://www.palmbeachpost.com/business/content/business/epaper/2009/03/11/a6b_dry_biz_0312.html

CDS featured on FOX WPBF Channel 25 as expert regarding Chinese drywall – "Howard Ehram is a Chinese drywall screener. He said the drywall could be the cause of the residents' problems. "The gases will react with copper and blacken the wires," he said. "It will even de-laminate mirrors and corrode faucets, anything that's metal to the corrosion effects."

<http://www.wpbf.com/news/18865711/detail.html>

CDS featured in Time Magazine - Howard Ehram of Chinese Drywall Screening removes an electrical plate to see if the receptacles show any signs of Chinese drywall in a home in Port St. Lucie, Fla.

<http://www.time.com/time/nation/article/0,8599,1887059,00.html>

CDS featured in Christian Science Monitor - "The builders are victims too," says Howard Ehram, a civil engineer who founded Chinese Drywall Screening, of Port St Lucie, Florida, to meet growing demand from homeowners for diagnosis and advice. Insurance companies "don't know what to do," he says, since contaminated drywall counts neither as a covered peril nor as an exclusion. He adds: "I've never seen a crisis in the construction industry to this degree ... this is widespread and far-reaching."

Karen M. Scott

Asset Advisors and Managers, Inc

Topics

- What Chinese Drywall Is
- Where it comes from
- Possible medical effects
- The impact to property owners as well as the community
- What steps a property owners should take if they have it
- Current remediation and repair protocol
- Legislative and judicial updates

CHINESE “TAINTED” DRYWALL

Facts and Fears Presentation

Information based on available resources as of 2/12/2010

Please consult an attorney for legal advice if needed.

What is drywall?

- Drywall is the generic name for panel-type products consisting of a noncombustible core, primarily of gypsum, with a paper surfacing on the face, back, and long edges.
- Gypsum is a mineral quarried from rock formations in a crystalline form known as calcium sulfate dehydrate.
- Drywall manufacturers also rely increasingly on “synthetic” gypsum which is a by-product of “scrubbing” smoke stacks from fossil burning plants



What is “tainted” Chinese Drywall?

- Tainted “Chinese” drywall contains higher amounts of strontium and carbonate ion (carbonate) associated together than in domestic
- Not all Chinese manufactured board is “tainted”
- We are now seeing cases of defective American recycled drywall
- Researchers think there is a high correlation between houses with high levels of hydrogen sulfide and formaldehyde present from other sources in humid conditions or where the air handler is improperly sized or low rates of air exchange are made
- Newer “tighter” energy efficient homes with lower air exchanges could also be contributing to problem



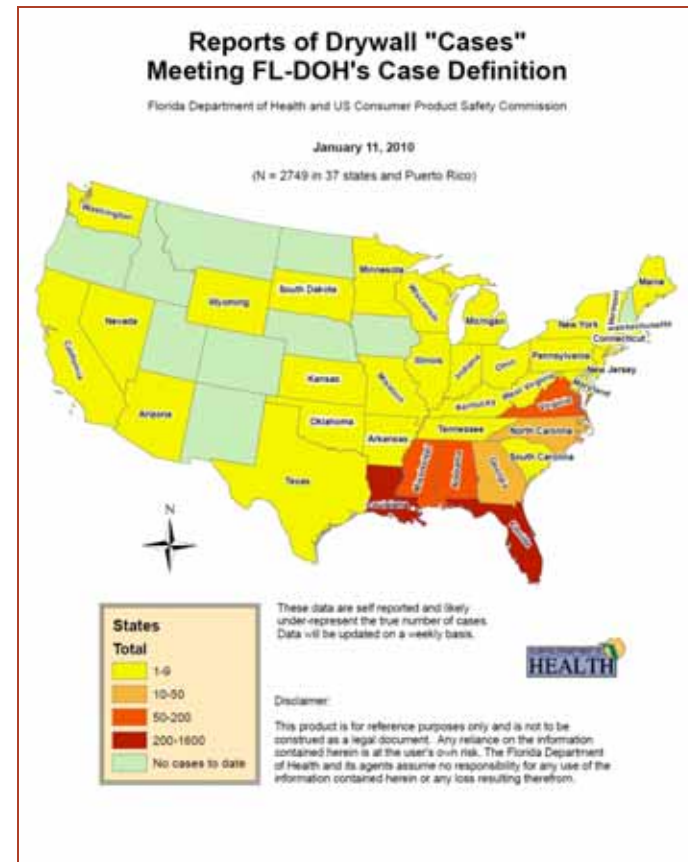
What is “tainted” Chinese drywall?

- The black coating or “soot” on copper is copper oxide/copper sulfide
- The corrosion on silver and copper may be related to hydrogen sulfide and formaldehyde or some marker correlated (ie: formic acid) potentiated by dew points
- The corrosion on copper related to hydrogen and formaldehyde does not seem as significant but that could be related to the mass of the metal reacting at a slower rate
- There has been found regional differences in copper corrosion at AHU locations with more severe corrosion occurring in Florida East Coast than West Coast, Virginia or Louisiana however visual screening in other rooms did not show as significant as a difference
- There is a disconnect between air chamber testing that shows higher amounts of off gassing of carbonyl sulfide and field testing that shows little or no presence

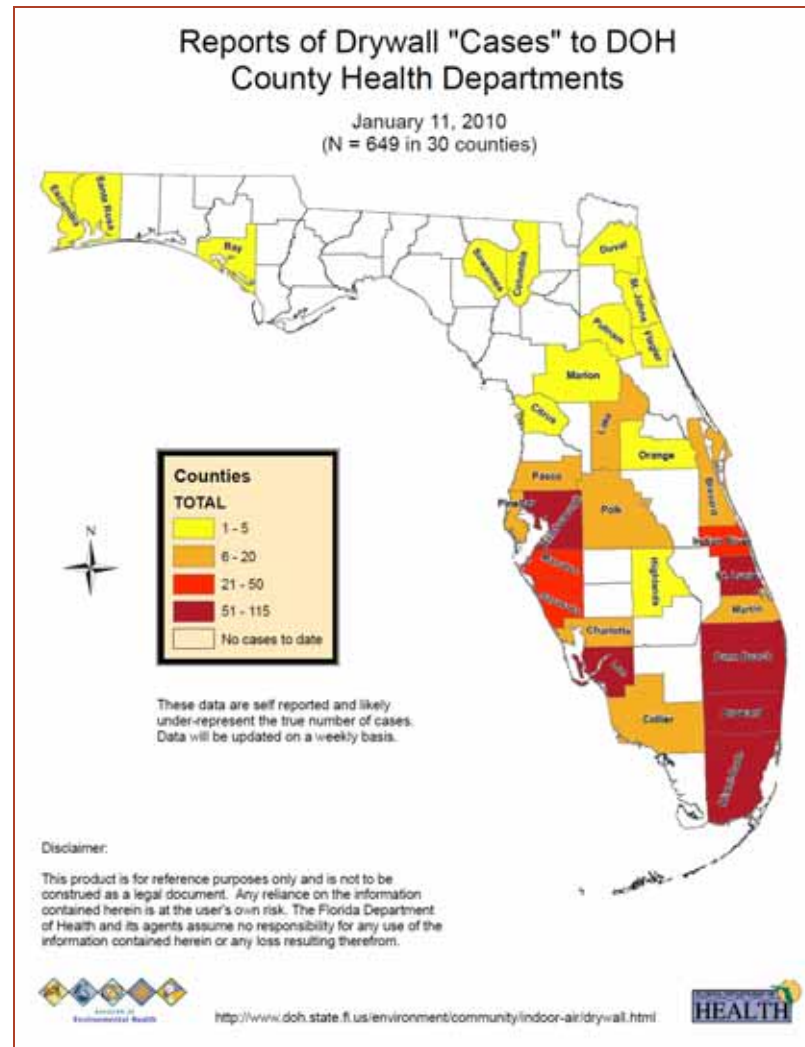
*Results from 51 Home Sampling Report, November 2009
published for the CPSC*

Where has it been found to date?

- As of January 11, 2010 the CPSC reports 2,749 homes in 37 states, the District of Columbia and Puerto Rico
- 76% of all reports are from Florida
- Reports of “tainted” drywall in hotel in Bahamas
- Shipments made to Guam and American Samoa



30 Counties,
649 homes
as of January
11, 2010



Posted the Florida
Department of
Health

Homeowners need to
report to their local
department of health
if they have Chinese
or corrosive drywall

Why were we using this “stuff”

- Global building boom
 - Scarcity of supply
 - Cost

Potentially how many homes?

- An initial analysis by Aaron Kessler of the Sarasota Herald-Tribune on March of 2009 based on shipping records in one year alone, 2006, showed that at least 550 million pounds of drywall from China entered the country.*
- Based on a 2,000 square foot house it was extrapolated that it would be enough to build more than 60,000 average size homes. The amount offloaded in Florida could build 36,000 homes.*

** HeraldTribune.com, March 30, 2009 1 a.m. **

Who Manufactured It?

- Knauf Plasterboard Tianjin Ltd.
- Taishan Gypsum Co. Ltd., also known as Taian Taishan Plasterboard, Beijing New Building Materials Public Limited Co., or BNBM, a state-owned entity controlled by the Chinese government
- Shandong Taihe Dongxin Co. Ltd.,
- Pingyi Zhongxing Paper-Faced Plasterboard Co. Ltd., also known as Shandong Chenxiang Building Materials Co. Ltd.*
- KPT claims that other Chinese companies also produced bad drywall tied to what it says were contaminated mines in the Shandong region. The company said it stopped using the mines in late 2006 and has disputed that its product poses a health hazard.

The Puzzle Grows

Now reported found in American labeled board
35 different manufacturers listed under the Multi
District Court drywall guidelines

Why is it “tainted”?

Still only theories...

- Bad gypsum from mines in Shandong province, one mine which was apparently closed down in 2006?*
- Chinese factories did not as vigorously “scrub” the fly ash as they should have?** , ***, ****
- Fungicide used prior to shipping?****
- Something in adhesive?****
- Bacteria interacting with iron and sulfur compounds?****
- Organics that infiltrated mines from surrounding farm areas?****
- Marcasite?

CNN, March 24, 2009 news report , **MSNBC.msn.com* Aaron Kessler, Sarasota Herald Tribune, May 30, 2009, **** Duane Marsteller, June 14, BradentonHerald.com*

What about medical side effects? The following are being reported...

- Respiratory Irritation
- Headaches
- Eye Irritation
- Nose Bleeds
- Coughing or Difficulty Breathing
- Urinary infections
- Long-term effects unknown at this time

Who seems to be impacted? The following are being speculated...

- Children with less developed respiratory systems and allergies
 - Adults with weakened immune systems
 - Household pets
 - Some people react, some don't
- Could be allergies simply emerging with time
- What about combinations with other household chemicals?

However, experts can not find significant link between off-gassing and typical medical complaints...

- “Upper airway, skin and eye irritation were common complaints from some occupants in the complaint homes. Both hydrogen sulfide and formaldehyde are known irritants at certain levels, although the concentrations found in each of these compounds in this fifty-one home study were below the irritant levels. Nevertheless, it is possible that additive or synergistic effects of these and other compounds in the subject homes could cause irritant effects”.

** CPSC Report, November 23, 2009*

If this is such a big problem then why only 2,749 homes nationally?

- People are not reporting to the local Departments of Health and the Consumer Product Safety Commission which is critical
- Over 90 cases on the docket as part of Multi District Class Action in the U.S. District Court for the Eastern District of Louisiana representing thousands of property owners
- Russ Herman, a lead plaintiffs lawyer stated in the Miami Herald on September 3 that there are 400 plaintiffs and 20 defendants who have filled out "profile forms" for the litigation, representing potentially 6,000 clients for first go round in January
 - CDS has done over 1,000 screenings

What is the impact to real estate values??

- Value of houses with tainted drywall has reportedly dropped to as much as 10% to 30% of houses in same neighborhood with good drywall
 - Stigma of houses will be hard to overcome
 - County Appraisers starting to work with homeowners
 - Impacts real estate market through foreclosure pool
 - Lenders and realtors requesting testing
- Condominium and Homeowners Associations have vulnerability

Communities & Builders...

- Builders and drywall contractors are victims too...
- Why did building departments not catch this? They are also victims.
- Community outrage... good or bad? Realtors reporting that prospective homeowners are asking to be steered away from communities reported to have it

Where Can I learn How to Detect It?

- Web sites for The Florida Department of Health and the Consumer Product Safety Commission contain visual screening information
 - Chinese Drywall Screening, LLC presents a comprehensive training video for home inspectors and others wanting to learn how to inspect available through www.Internachi.com

How Do You Detect It?

- Visual screening for corrosive effects still remains most effective
 - Generally only in ½" drywall
 - To date not located in greenboard, wetboard or durorock
 - Not all Chinese labeled drywall is off gassing
- Corrosive drywall is being found in American labeled drywall now
 - Now being found in both residential and commercial properties

Why should someone pay for an inspection and a report?

- Peace of mind for you or your tenants
- Attorney's request or for future claims
- Property Appraisers requesting for reduction in taxes
 - Insurance claims
 - Tax purposes
 - Real estate sale
 - Lenders request

OK, what should I tell a homeowner if I notice they have it...

- Don't panic
- Report to the Department of Health
 - Report on line with the CPSC
- Get a good attorney to help with builder, lender and insurance
 - Contact their builder
 - Get base line medical tests done
- Do not remediate without careful consideration of all options and if you do choose to remediate, do not sign any releases or waivers with the builder or general contractor without an attorney's advice

Tell them to be savvy...

- Be aware that class action lawsuits could result in years of litigation and what they get might not cover remediation
 - Tell them to watch out for scam artists
- Look for reputable attorneys, construction and inspection companies to assist them
 - There is no “silver bullet” or quick fix as of yet

Other resources...

- Public adjustors who can assist with insurance claims
- Accountants for tax advice before proceeding on starting any work
- Reputable agents to assist with mortgage forbearance
 - Licensed general contractors

How do you remediate?

- Still no silver bullet at this time
- Best remediation appears to be removal of tainted drywall by licensed contractor
 - Need protocol to identify tainted drywall along with an accepted method of remediation for certification of removal or clean-up issued by an acceptable governing body

How Do You Remediate?

- Does this require hazmat removal? *Not at this time although a safe workplace plan should be devised and implemented when removing*
- Where do you take the old drywall? *Landfills can take it at their option.*
- Do you have to tear out all the drywall? *At this time it is recommended.*
- What about cross contamination? *Still considered a possibility but as long as you remove things from the source of the off gassing and properly clean them, they should not continue to off gas themselves.*
- What about metal components of the house? *Coil will need to be replaced due to potential Freon loss; Copper wiring and tubing needs to be deliberated; Other metals impacted might need replacement; needs research*
- What about your appliances? *If there is any concern about fire or life safety, then you should consider replacing.*

Manufacturers efforts...

- These might be a solution but we need to know about what is causing the off gassing first
- These could be possible short term solutions
- These methods can be costly so homeowners should research all avenues before committing. It might end up better to remove all drywall because of market perception
- Remediation is still not recommended right now
- Sabco Riss System changes air filtration system in home by modifying air handler
www.RISSsystem.com
- Sabretech is testing using Chlorine Dioxide gassing and tenting www.sabretechservices.com
- AbShield paint containment http://www.abshield.net/chineseDrywallIssue_Abshield.shtml

Who is qualified to remove? No one is but certification is in the works....

- Florida Atlantic University launches training program and certification classes based on suggested protocol from Florida Professional Coalition for Chinese (Reactive) Drywall
- Defective Drywall in America workgroup announces “BESI” certification program for identification, removal and management of remediation of defective drywall

What needs to happen?

- Potential Legislation or Emergency Disaster Funds? FEMA?
- Increased funding to find ways of more efficiently detecting it?
- Homeowner and builder insurance policies to step up?
- Required protocol or licensing for inspection and remediation?
- Homeowner Assistance through rent or mortgage relief?
- Tax relief to impacted homeowners from local property appraiser staff?
- IRS and casualty damage?

What is the government doing?

- The first complaints to the Florida Department of Health were June of 2008 and they started some initial investigations
- Press attention, reports of medical concerns and opportunistic inspectors and contractors galvanizes politicians and the Florida State Attorney General's Office into action the start of 2009
- May of 2009 joint agency action began with the Consumer Product Safety Commission being appointed to take the lead

What is happening today?

The courts gear up
Consumer Product Safety Commission
IRS and HUD

The courts gear up...

- First motions have been filed and heard and remediation costs are being discussed based on Knauf Tianjin's monitoring of seven test homes in Virginia
- Judge Fallon in New Orleans is fast tracking multi district litigation through use of "profile forms" rather than traditional interrogatories and to establish recognized procedures and authorities
- The first drywall lawsuit in Florida is set for trial September 10, 2010 in Miami-Dade Circuit court.
- Lennar Homes has expanded it's lawsuit against Knauf and 20 others including additional Chinese manufacturers.
- Senate is reviewing legislation called the Foreign Manufacturers Legal Accountability Act of 2009 that will make it easier to sue over defective products.

CPSC continues work...

- Finding limited correlation between medical complaints and gasses but pledging to continue looking through investigations underway with several laboratories
- Finding correlation between presence of hydrogen sulfide and formaldehydes, especially in humid conditions
- Monitoring ports through US Customs and Border and identifying and monitoring warehouses still holding supplies of Chinese manufactured drywall
- Continuing to encourage reporting on houses impacted by defective drywall
- Continuing talks with Chinese officials to help identify sources and solutions of problem
- Working with an ASTM committee that has just initiated discussions of formation of proposed new standard on inspection of drywall for air quality issues
- Starting to work on refining inspection programs and defining remediation protocols

CPSC , November 23, 1990

Electrical and Fire Safety...

- To date, CPSC has not received any reports of fire, electric shock or fire pre-cursor incidents related to problem drywall.
- CPSC electrical engineering staff has done a preliminary study of harvested electrical components and found significant evidence of corrosion but no indications of overheating of conductors or conductive parts due to the corrosion
- Sandia National Laboratories has been tasked with further investigation and have found corrosion due to copper sulfide and copper oxide on unprotected copper
- The National Institute of Standards and Technology has been tasked with studying fire safety components. Their findings are similar to SNL's. They have committed to expanding their sampling and to study corrosion and its effects of fire safety materials over longer periods of time.

Key sources of info include public and private sector websites...

<http://www.doh.state.fl.us/environment/index.html>

<http://www.cpsc.gov/info/drywall/index.html>

<http://www.chinesedrywall.com>

<http://www.chinesedrywallscreening.com>

<http://Assetadvisorsandmanagers.com>

If you are interested in keeping up with the latest information on Chinese drywall, please sign up for our newsletters through www.Chinesedrywallscreening.com

Courtesy of:



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Chinese Drywall Screening, LLC
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www.Chinesedrywallscreening.com

2/22/2010

Welcome to Part 3

What you need to become an inspector for Chinese or defective drywall

What do you need to start inspecting for Chinese or defective drywall?

- Ideal inspectors have a home inspection and construction background
- Professional in appearance
- Caring attitude



A trustworthy advocate for the concerned homeowner

We are dealing with property owners and buyers and it is important to understand and respect clients needs and the impact the results may have on them.

Other attributes for a successful Chinese or defective drywall inspector...

- Inspectors also have to possess some practical skills and tools
- Knowledge of building construction
- Physically fit enough to get into attics and tight places
- Comfortable opening up electrical panels and devices

CHINESE
DRYWALL | **S**CREENING LLC

A trustworthy advocate for the concerned homeowner

The following tools, or their equal, are required for Chinese Drywall Screening, LLC inspections:



Husky 16 In. Large Mouth Tool Bag

Model # 53435 Internet/Catalog # 100073645

\$24.97/EA Each ([Home Depot](#))



BLACK & DECKER 4.8V Cordless Rota Screwdriver

Model # PP360 A Internet/Catalog # 100671597

Store SKU # 165861 **\$29.97/EA Each** ([Home Depot](#))



BLACK & DECKER

Pivot Plus Cordless Drill / Screwdriver

Model # PD700G Internet/Catalog # 100618982

Store SKU # 165861 **\$29.97/EA Each** ([Home Depot](#))



BLACK & DECKER 50PC B&D SCREWDRIVING BIT SET

Model # 71-500

Store SKU # 197674

\$9.97/EA Each (Home Depot)



DEWALT (Home Depot)

Features:

- 20 Degree Pivot Mode allows for tight space accessibility
- Can be used in straight or Pivot Mode
- Qualified for Cordless Impact Tools up to 2000 in/lbs of torque



3M 2-Pack N95 Approved Respirator With Cool Flow Valve

Model # R8811 Internet/Catalog # 100565510

Store SKU # 572226

\$6.97/EA Each (Home Depot)



322 Aluminum Foil Tape, 1.89 In. x 50 Yd.

Model # 3220020500

Store SKU # 915245

\$7.74/RL Roll (Home Depot)



Stanley Quick Change Retractable Knife

Model # 10-499

Store SKU # 693640

\$5.49/EA Each (Home Depot)



Werner Co. 13 Ft. Aluminum Telescoping Multi Ladder

Model # MT-13 Internet/Catalog # 100658842

\$109.00/Each (Home Depot)



**Workforce 8 Ft. 9 In. x 11 Ft. 9 In. Premium 8 Oz.
Canvas Drop Cloth**

Model # 633792 Internet/Catalog # 100653615 Store SKU # 633792

\$19.97/EA Each ([Home Depot](#))



Ryobi Tek4 4V High Intensity LED Flashlight

Model # RP4400 Internet/Catalog # 100671264

\$19.97/EA Each ([Home Depot](#))



**Wet Ones: Antibacterial Hands & Face
Citrus Scent Wipes, 15 ct** ([Walmart](#))



Depot® Brand Self-Stick Notes
1 1/2" x 2", "Yellow, 100 Sheets Per Pad, Pack Of 12
Item # 442306 **Your Price \$4.99**



Coghlan's Lensatic Compass
\$7.98 ([Walmart](#))



Q-Tips Cotton Tip Applicator 6"

\$6.95 Box of 200 + shipping

\$81.35 Case of 2000 + shipping

www.AllegroMedical.com



Indoor Shoe Covers
Courtesy Service Products

Ships within 24 hours via UPS ground. Overnight,
Call 1 (800) 945-1816 for pricing.

www.shoecovers.net

CHINESE | **S**CREENING
DRYWALL LLC

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Working with clients...

Before I go on an inspection, I like to gather as much information as possible about the property to help me better determine if tainted drywall is present. Please keep in mind that we are not there to prove they have it as much as help determine that they don't.



Please keep in mind that we are not there to prove they have it as much as help determine that they don't.

Questions to ask...

- Who is the builder?
- What are the interior and exterior wall types?
- When was the property completed?
- Were there any extensive repairs or remodeling that included drywall installation since 2001?
- Do you know if any of the neighbors have a problem or are there known issues with the builder?
- What is the reason for the screening? Sale or rental of property? Peace of mind?

Questions to ask...

- Is the home on well and/or septic?
- Have they had any issues with you're A/C system? Specifically, the coils?
- If so, when was the last coil replacement?
- Is there more than one air handler unit?
- Make sure to get information for each system if there is more than one. This is important information to help you “read” the coils.

Questions to ask...

- Is there any unusual tarnishing or pitting on metal finishes like faucets, mirrors, silverware or jewelry?
- Are there problems with any of the appliances or electronics such as the stove controls, microwave, TV's, computers, or thermostat?

Questions to ask...

- Is anyone in the property suffering from migraine headaches, sore throats, bloody noses, maybe more in the morning?
- If they are concerned, explain to the property owner that some people have reported these symptoms and might have different sensitivities to the elements present in Chinese or defective drywall than other people.

We do not recommend giving medical advice to anyone reporting the above symptoms. If they ask you, suggest they contact their medical practitioner...

Questions to ask...

- Can you smell something that smells like matchbooks or other unexplainable odor? Is it more noticeable when the air conditioning isn't running?
- Any other complaints not previously mentioned?

Remember our goals are...

- To gather as much evidence as possible to ascertain the presence of tainted Chinese drywall
- Document it's presence in a professional manner for real estate, legal and other transactions
- Help home and property managers understand to what general degree they may have defective drywall in their property



Keep in mind that at Chinese Drywall Screening, LLC we believe we are an advocate to the property owner or buyer and it can be overwhelming to them to discover that the property has tainted drywall. If you find indicators that the property does have tainted drywall, you want to be calm and reassuring that this is a curable and workable situation.



For the latest information on Chinese or defective drywall subscribe to our newsletter at www.Chinesedrywallscreening.com

**“TAINTED” CHINESE
DRYWALL LABEL
INVESTIGATION**

CHINESE DRYWALL SCREENING
LLC

A trustworthy advocate for the concerned homeowner

Presented
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INTRODUCTION

Chinese Drywall Screening, LLC has been asked to perform destructive drywall identification in assistance to attorneys and homeowners involved in litigation. This is a policy procedures and tools manual for that process. Since the reports will be used for litigation it is important you follow all procedures exactly.

SCHEDULING AND INVESTIGATION PROCEDURES

Scheduling

1. Attorney sends client info to CDS, complete with valid contact info.
2. CDS contacts client, collects missing info and schedules inspection.
3. A schedule is sent to each inspector showing updates

Inspections Procedures

1. All inspectors present any paperwork required for signature to homeowners
2. Take photo of exterior of house or address posted on exterior if multi family unit
3. Enter through front door of house and note if any odors are present. Odors related to Chinese drywall as well as attempts to "freshen" them should be noted on your log.
4. Inspect A/C coils of each system as applicable. Make notes about the copper u-bends of the coils and straight copper tubing around the u-bends.
5. If coil(s) shows no evidence of taint, proceed to Phase 1 Visual section
6. If coils show slight signs of corrosion or dusting of soot, proceed to Phase 1 Visual, Suspect as these houses would be suspected of being potentially tainted and you need to look until you find what is causing the sulfur attack on the coil

Phase 1 Visual

1. If no evidence is found, initiate standard Phase 1 inspection protocol which is visual inspection checking and recording evidence of non-corrosion in air conditioning coils, receptacles and refrigeration lines
2. Make sure photos are taken showing clean, non-corroded coils (Figure 1) and receptacles, logged with location (Figure 2)
3. No coring needed

Phase 1 Visual, Suspect

1. This house is suspected as potentially tainted
2. If coils are suspect or show slight signs of evidence (this is not for obvious cases where coil is black) then follow the standard protocol to determine reactive areas of the home.
3. Continue sweeping entire home until positive signs of sulfur attack are found or home is determined to have no evidence.



Figure 1

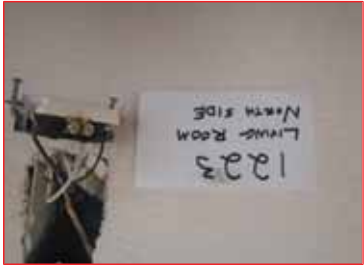


Figure 2

4. If no evidence, document with photo of coil, refrigerator and receptacles showing shiny copper wiring. This now becomes a regular phase 1 inspection. (Figure 1 and 2)
5. If tainted, proceed to instructions for Phase 2, Tainted Homes

Phase 2, Tainted Homes

1. Check Coils
2. Follow standard protocol to determine reactive areas of the home.
3. Continue sweeping entire home until positive signs of sulfur attack are found and upon discovery of reactive area(s), get label identification only in reactive area(s). (Figure 3)
4. In areas showing corrosion, start cutting samples out of walls in order to initiate visual check inside wall cavities.
5. Pick a wall that you expect to find a full sheet of drywall and check a receptacle closest to 2 feet from what you would suspect to be a factory end of the drywall. Mark a spot 24 3/4" up the wall and 24" from the expected factory end and cut a 4" x 4" hole centered on the above mark. Scope or insert your mirror to look for labels. Look at the back of the core for similarities with other drywall if no label found.
6. Avoid walls in or adjacent to wet areas.
7. Spot check ceiling drywall. Record markings and photograph.
8. Get at least one label or positive indicator of drywall type per room.
9. Upon discovery of a label, take a close up photo of the label and a 2nd shot further away that indicates relative location. Record location of where photo is being taken. (Figure 4 and 5)
10. Record all markings that are observed both photographically and also by noting on your report. Whenever possible, record dates on sheetrock and number codes.
11. Measure room sizes and height for quantity take-off for replacement of sheetrock. Verify that the obtained floor plan has necessary information for drywall take off. Add any missing information and take any major measurements as needed.
12. If a US or domestic brand or another type that is not specifically known to be reactive is discovered, then get the label ID for both sides of the wall at an area that shows with firm evidence of sulfur attack.
13. Continue this process so that at least one wall in every room or area of the home is investigated. Two rooms can be covered with one coring by observing each side of the wall. Each unique type of drywall encountered will be documented by recording exact markings and taking a photo of all or a portion of the label. Utilize a magnifying glass with a light to compare backing paper of different areas to avoid having to find label markings in each area. Get label markings for each type of paper.
14. When done with photos, take one final exterior shot of house or address to create a "bracket" around that house or unit's photos.



Figure 1



Figure 2



Figure 3

- Photo Records**
1. Core holes as necessary to gather the information. Utilize a video scope with camera capabilities to avoid unnecessary cutting of drywall. This will save time and be less destructive.
 2. Take pictures of the markings. The requirement of the multi district court is that there needs to be enough of the label in the photograph so that the brand name is easily identifiable in the photograph. The balance of the label can be recorded on the worksheet in lieu of obtaining photograph. Make sure the pictures are clear.
 3. Take overall shots of the wall to document where the sample was taken from. Make sure you include a card noting the location and you also document as part of the long shot the outlet showing the corrosion. (Figure 5)
 5. Get a close up of the outlet also. (Figure 3)
 6. Take a photo of the defective sheetrock brand in relation to the posted note and outlet if possible.

- Samples**
- Samples will be preserved and shipped to the established lab if they meet the following criteria:*
1. A unique type of reactive drywall was encountered and a sample of that type has not been previously submitted
 2. A questionable type of drywall is encountered and/or the type has known variations of being reactive.

- Procedure for sampling**
1. The sample(s) will be placed in a Ziploc freezer bag.
 2. Information will be recorded on the outside of the bag that includes:
 - a. Client name
 - b. Address
 - c. Date
 - d. Location where sample came from
 - e. CDS company name and phone number, 772-224-8660
 - f. Inspector name
 3. The labeled sample bag will be placed in another bag so that the sample is double bagged.



Figure 4

- Final procedure at client home**
1. Ask the homeowner if they are satisfied with the thoroughness of the inspection and to please initial their acceptance where indicated on client form.
 2. Specific items listed in Section VI of PPF will be inspected and documented
 3. If the homeowner asks for a copy of the report, please refer them back to their attorney who we are working for

Reporting Requirements

1. Make sure you have all room dimensions and ceiling heights so that CDS can estimate the quantity of drywall present in the property.
2. Overall pictures of the inside of the property will be taken to document the interior finishes.
3. Camera settings will be 2M (2 megapixels or 1600 x 1200). Do not include date stamps on any photographs.

4. Make sure reports include pertinent information including general property information, scope of the investigation, photographic evidence of corrosion (or lack of), photographs of drywall markings and page 2 of the PFF with sections IV, V and VI completed as applicable.
5. Email all photos and reports to Lisa@chinesedrywallscreening.com by 9 am the following morning following the inspection

Additional information:

1. Extra travel expense to be authorized on a case by case basis.

TIPS TO IDENTIFY DEFECTIVE SHEETROCK

Before you start cutting holes, here are a few things that can help you more effectively locate defective sheetrock.

Go for low hanging fruit

1. Check the attic
2. Slide out the medicine cabinets
3. Look for pocket doors for easy peek at full sheet

Create a cheat sheet

Create a diagram that shows you where different labels are typically located on a sheetr of drywall and slip it into a notebook you carry with you.

Create a sampler ring

Keep samples of the backing paper for various types of sheetrock so that as you work your way through a house you can compare the various paper types, fiber counts and backing with what you are finding. Also take note of what you are coring – if you see similar paper and textures, even though there are no labels, it is likely to be the same sheetrock type.

Use Drywall Catalogue

Keep a copy of the latest drywall catalogue with you so that you can look at pictures of documented defective Chinese manufactured sheetrock.

Bookmark the UPC bookmark

Bookmark the following on your phone is you get internet access such as on Blackberry's. If you don't keep it with your drywall catalogue and give to homeowners who have internet access. They might be able to look the code up for you while you are investigating other locations. http://www.ucc-gepir.org/GEPiR_UCCNET/jsp/client.jsp

TOOLS REQUIRED FOR DRYWALL LABEL INVESTIGATION:

Staple gun – for replacing batting in attics	Mini dust brush and pan combo
Stud finder	Paper towels
Measuring tape	Water bottle
Cordless drill	Eye protection
4" bit hole saw typically used for cutting in ceiling light fixtures	Dust mask
Router (not necessary but faster and good to have)	Gloves
Router bits	Flat bar (for prying out corner piece)
Drywall saw and 1" chisel in case there is no power on	Drop cloth (to cover personal items in closets, also good to put down under working areas)
Oscillating saw with extra bit	Masking tape
Inverter with 100' extension cord (not necessary but in case power is out)	Flashing/covers
3"x2" Telescoping mirror	Scissors
Mini flashlight	Caulk
Video scope (see comment below)	Publix bags for trash
Lantern or larger freestanding flashlight (for when power is out)	Drywall screws
Ziplocs (Each size of Gallon, Pint, Quart)	Wood strips
Sharpie	Mesh tape
Mini stapler (for attaching business card to top of sample)	Joint compound
	Putty knife
	For adhering plates or patches "Locktite Power Grab Instant Grab! All-Purpose Construction Adhesive" in the "Pressure Pack Dispenser"
The last five items are for patching in case of mess ups, upon the request of homeowners who are asking for it to be done, back up, etc. We recommend you keep these separate and don't bring them into the home. In fact, we recommend keeping two separate kits: the first being a standard screening kit which fits into a small bag and the second for label investigation which really requires a portable toolbox.	

VIDEO SCOPE

We have been experimenting with a video scope available from Home Depot for \$250.00. It is not necessary to have one, but it makes it easier to get close up photos of labels after you find them with your mirror. Since \$250.00 is for a cheaper scope that does not have a camera built in, if you get that one then take a picture of the screen with your regular camera. You can pay extra and get one with a removable screen that takes pictures and video.

The scope is extremely useful for locating how far from the penetration you made on where the label is located. Once the scope is on top of the label, mark the wand with your finger (and drywall dust), pull it out and lay it against the wall to see where the tip lines up on the outside of the wall. Then you will know exactly where to make the next cut to get on top of label. The alternative is if you get a good view on the scope screen, then just write down exactly what you see and then take a photo of the screen of the scope. Proof and accurate documentation is what is important. The means and methods can vary.

CORING FOR SAMPLES

The best approach is to look for one long wall that has marked levels of corrosion in the wall outlet and start there. Strategies will vary from home to home. If there is a high probability of Knauf Tianjin, use your guide to determine the best place to begin investigation. If no information is known, then the best approach may be to begin with a corner cut to try and get edge tape with identification. Be sure to use paper towels and water bottle to avoid drywall dust landing on the floor.

CORE HOLE REPAIR

We have been using 10"x50" white vinyl flashing (product code 233813) available at Lowes for \$26.68. Put a small bead of caulk around the inside edges and place it neatly on the wall over the hole you have made. It's cheap, quick and easy and folds nicely for the corner pieces. Be sure to caulk the inside of the curl so the edges won't pop off. Use Power Grab by Lockite which is an instant grab type of caulk and available at Lowes and Home Depot for less than \$3 a tube. Put on just a little amount and smear it flat. Also, we roll the flashing in the opposite direction of the roll it came in to try and reduce the memory of the coil in order to get it to lay flatter on the wall. Please do not leave the home looking bad. The main thing is to cover the holes, seal in the gasses and leave the house with it looking neat and professional, even if it is not a full repair. Take after photos to document the condition on how you are leaving the house.

REPORTING IN

It is important if we are hired by an attorney to investigate for certain types of drywall that we keep them informed when a claim deadline is approaching. If you are told to look for a brand by the scheduler and find it, please report back to whoever scheduled you and to Howard.



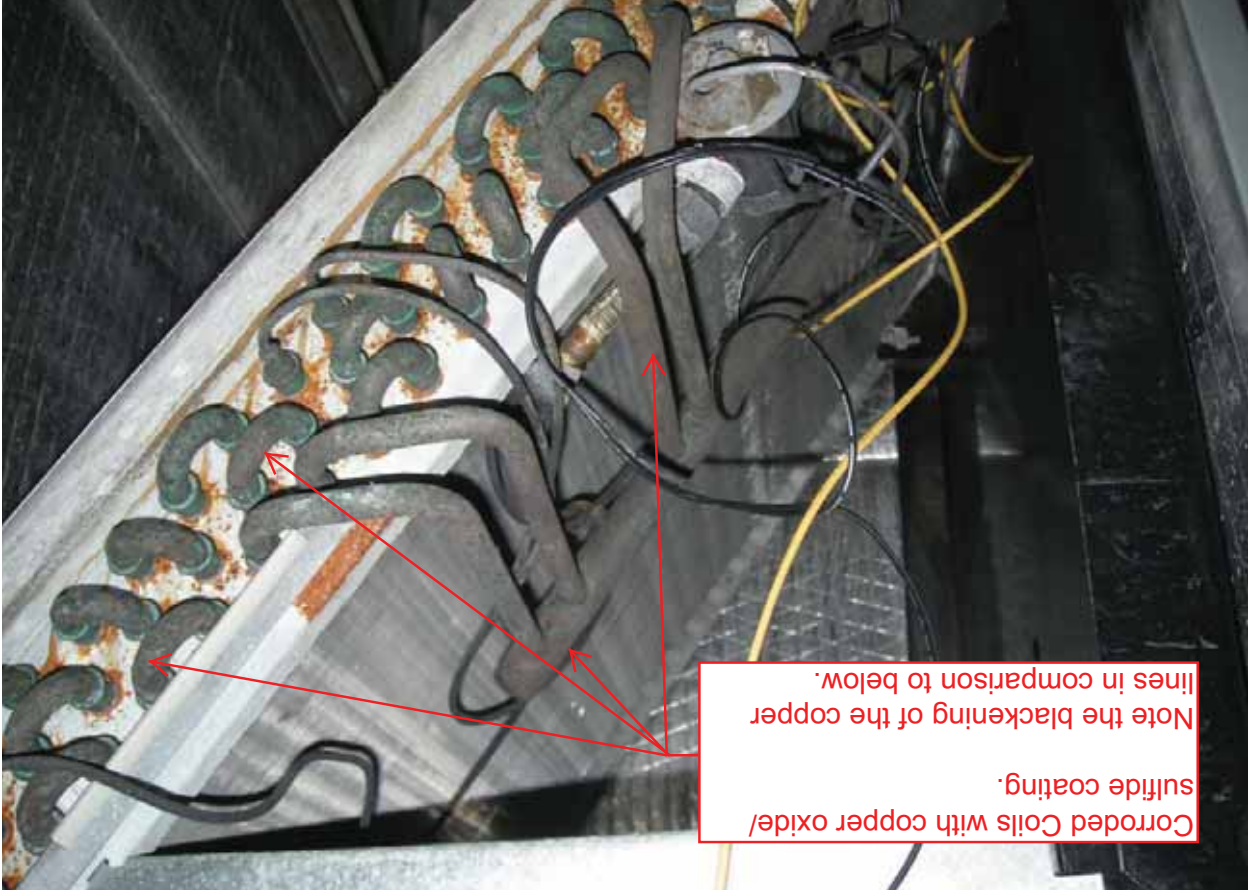
Table of Contents

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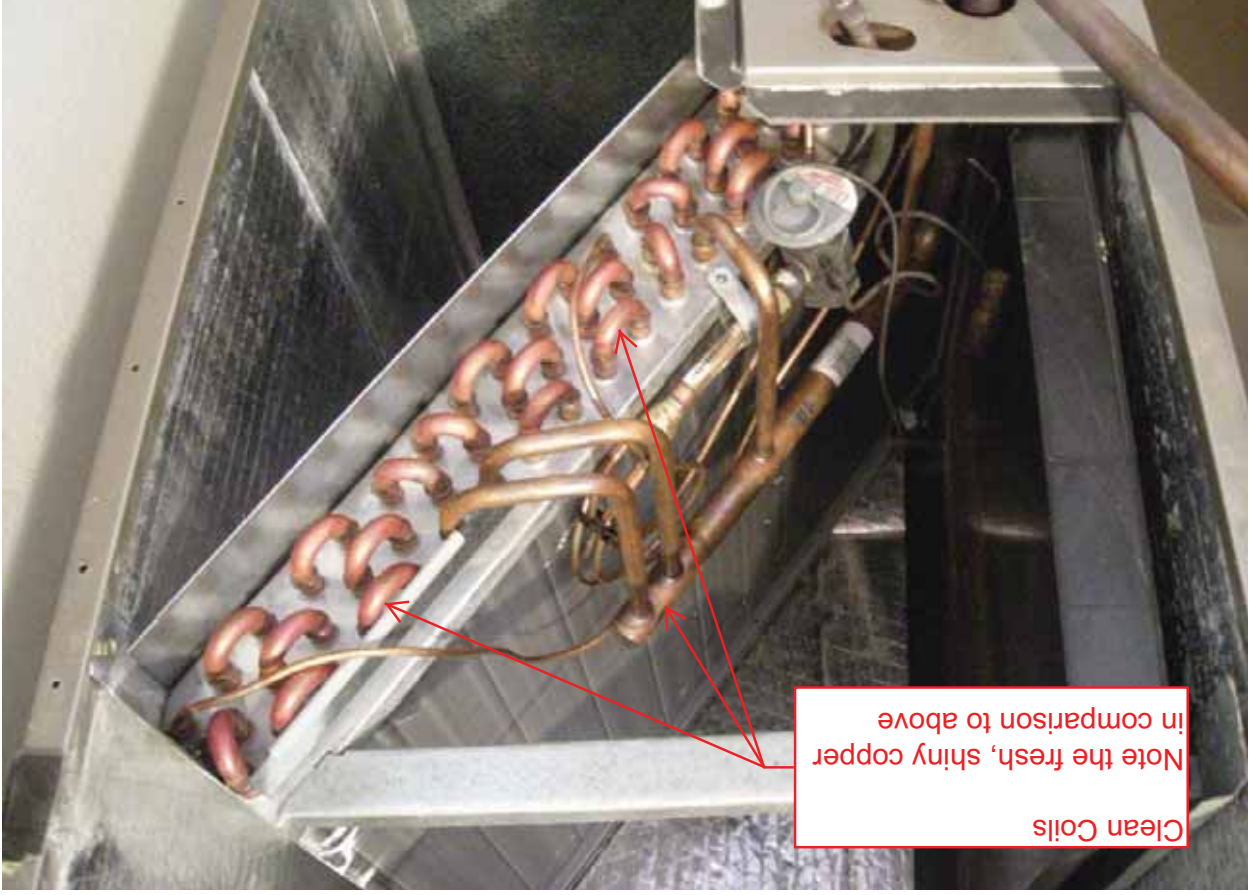




Air Conditioning Evaporator Coils
from Home without Chinese Drywall



Chinese Drywall Screening, LLC

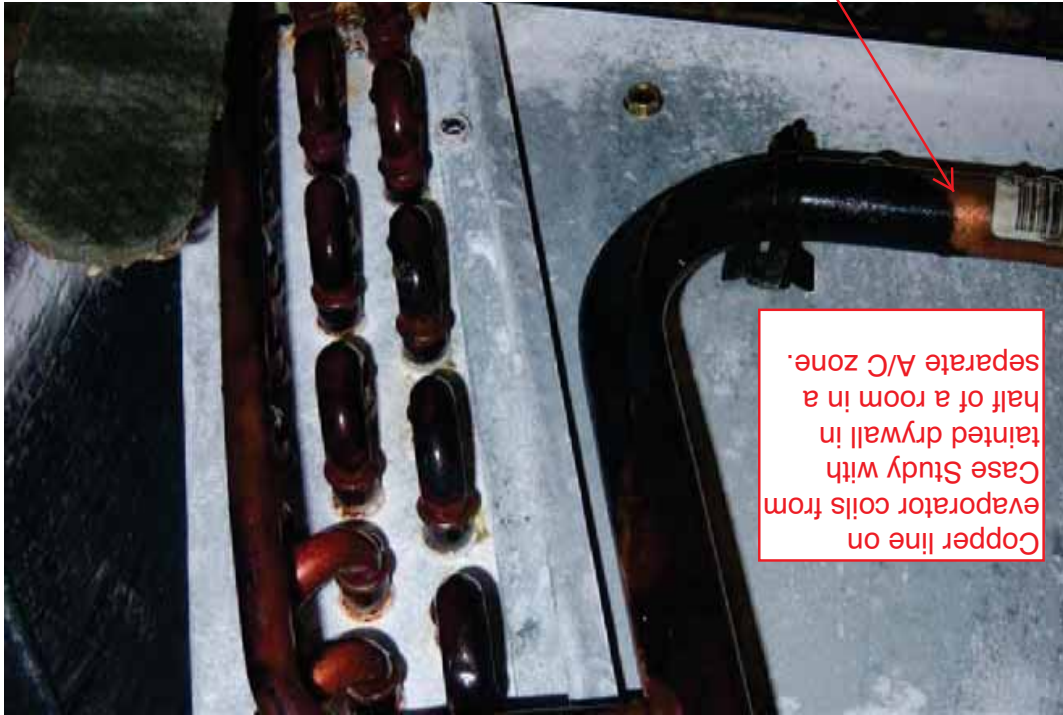


Chinese Drywall Screening, LLC

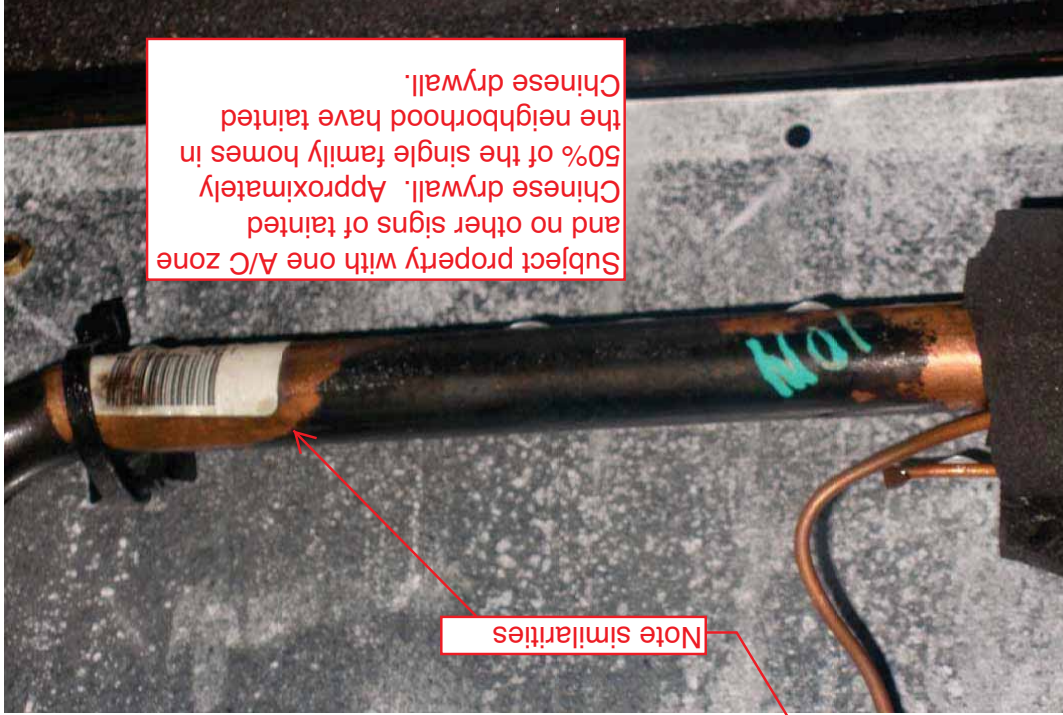




Comparison of Subject Property and Case Study



Copper line on evaporator coils from Case Study with tainted drywall in a half of a room in a separate A/C zone.



Subject property with one A/C zone and no other signs of tainted Chinese drywall. Approximately 50% of the single family homes in the neighborhood have tainted Chinese drywall.

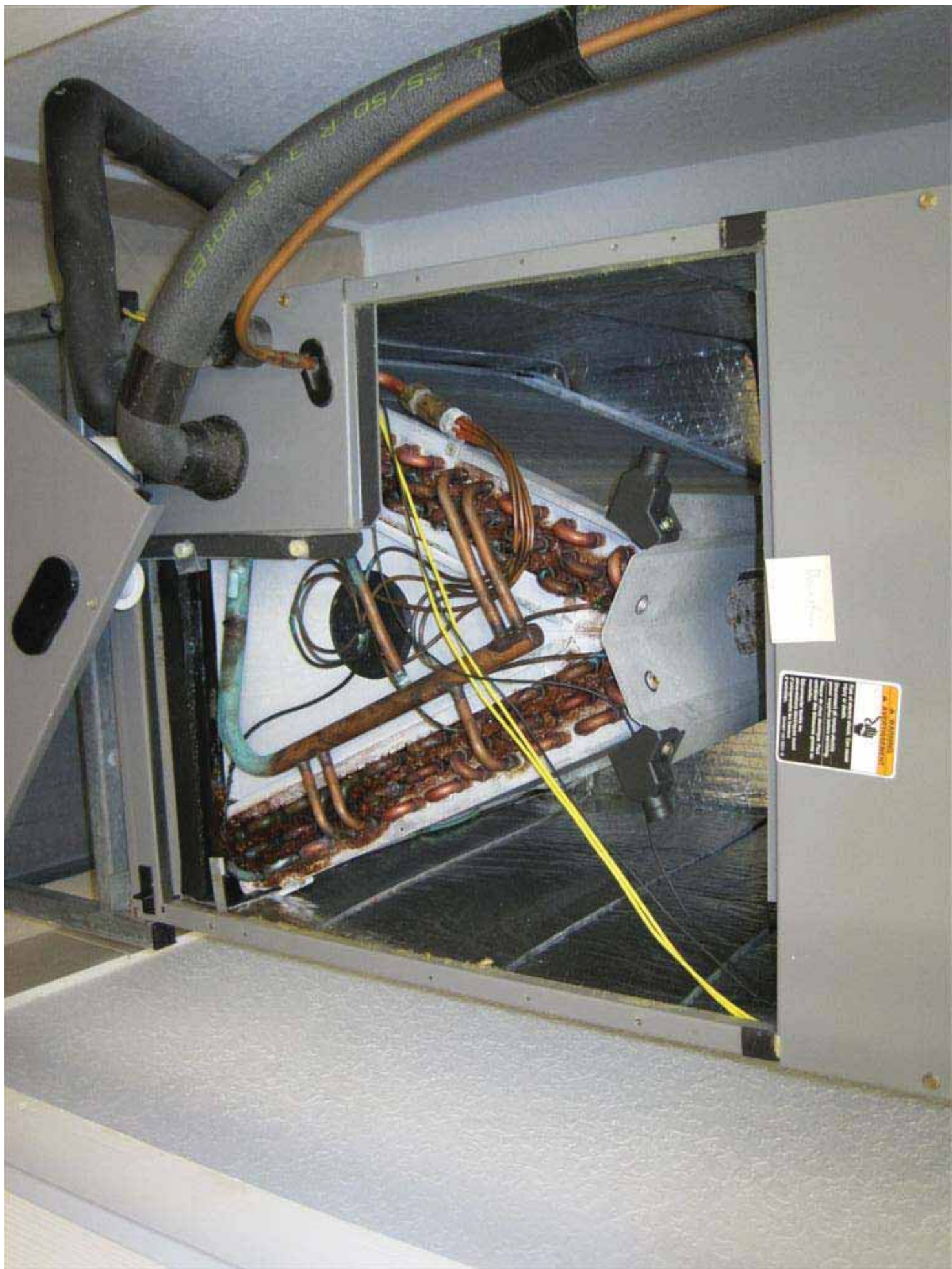
Note similarities

Non-tainted Case

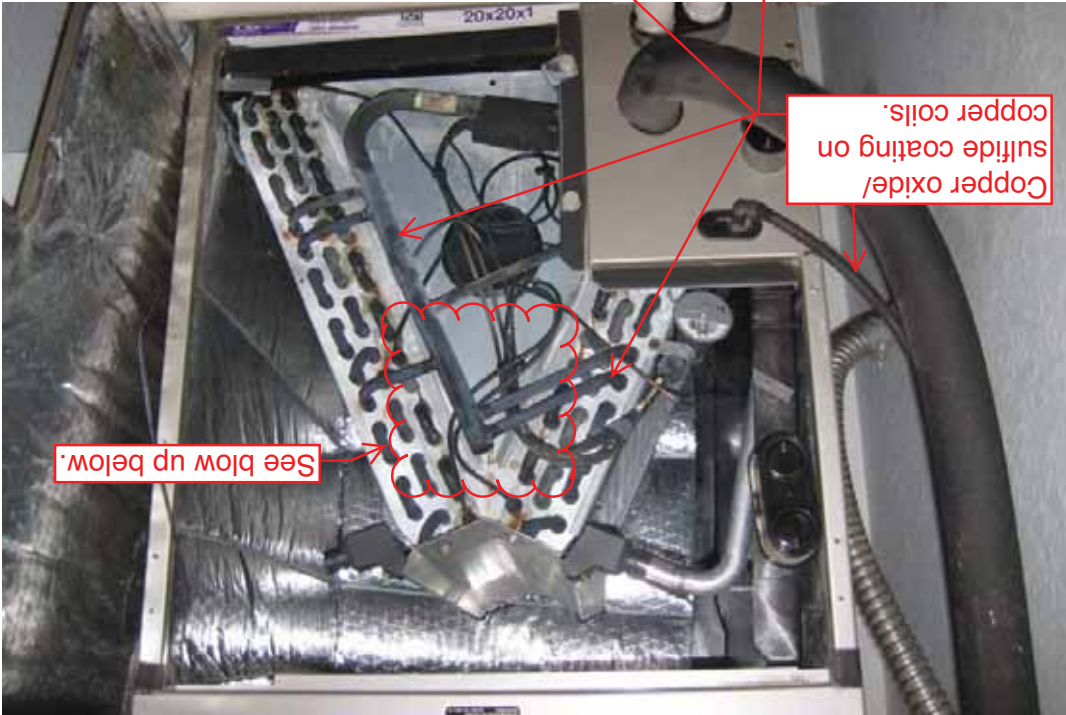


Non-tainted Case









See blow up below.

Copper oxide/
sulfide coating on
copper coils.

Air Conditioning Evaporator Coils
from Home with Chinese Drywall

New Coil



Tainted Case



Tainted Case



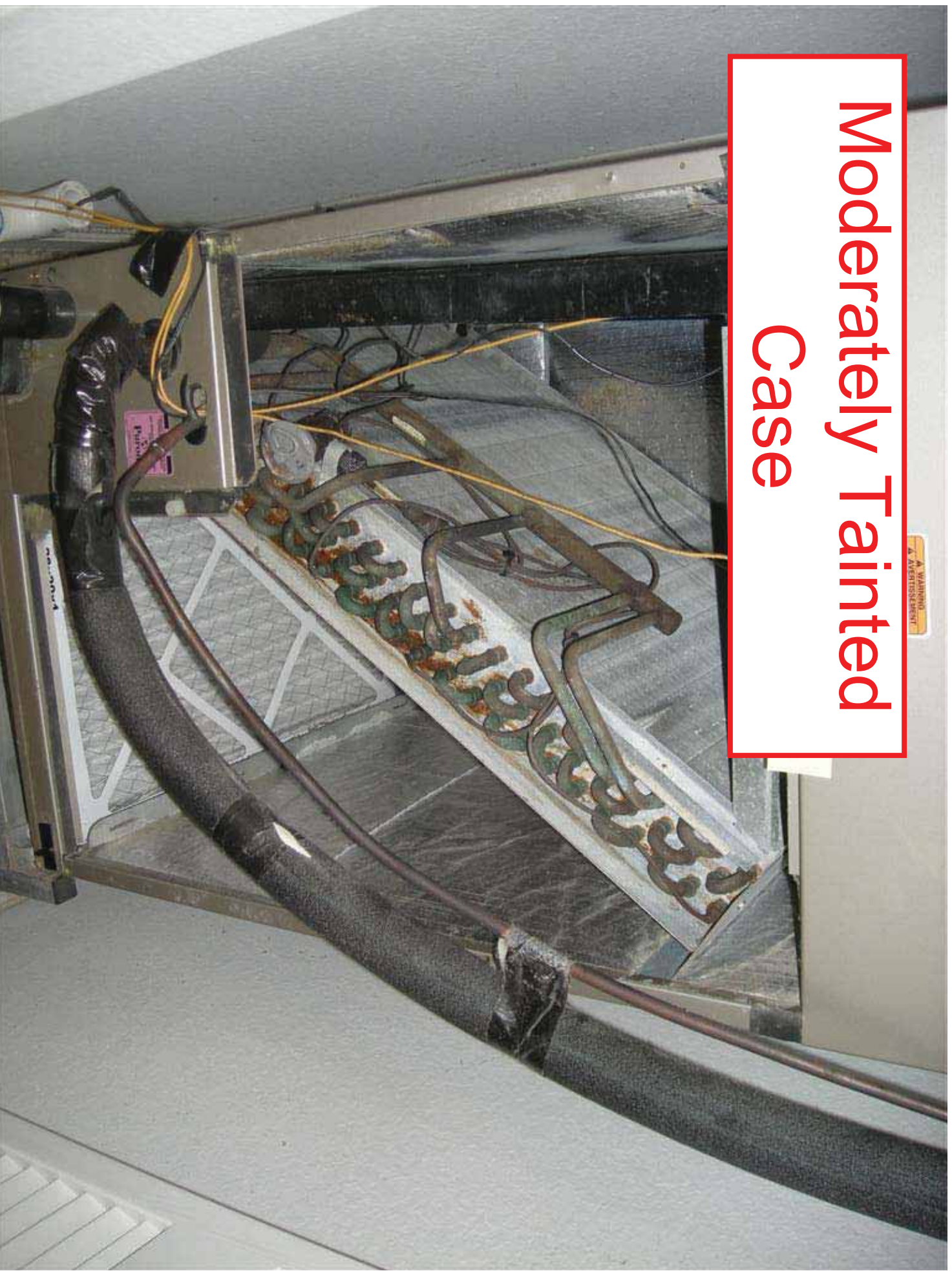
Tainted Case (New replacement coil)



Non-tainted Case



Moderately Tainted Case



Moderately Tainted Case





**Mildly Tainted
Case**

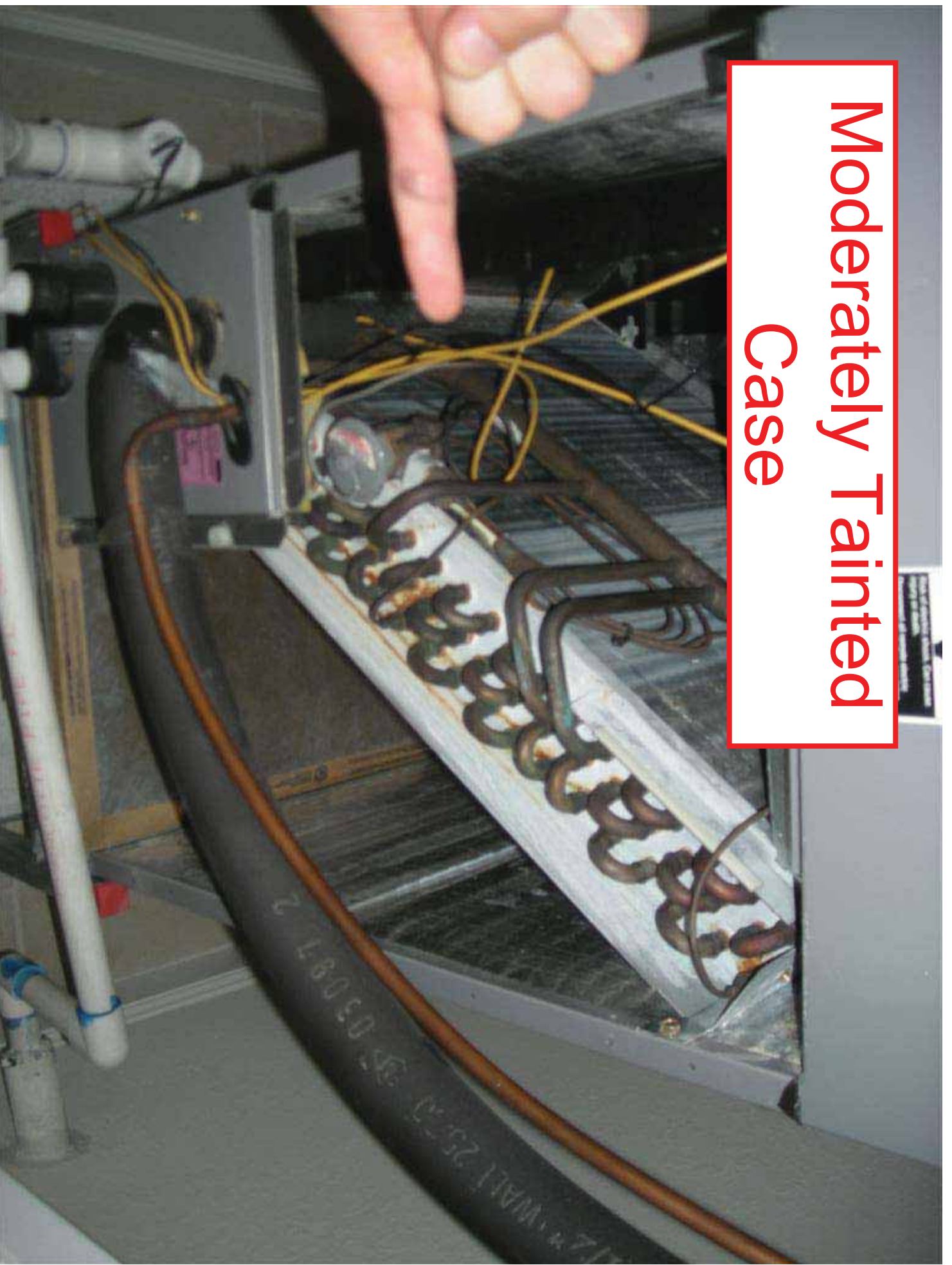
Tainted Case



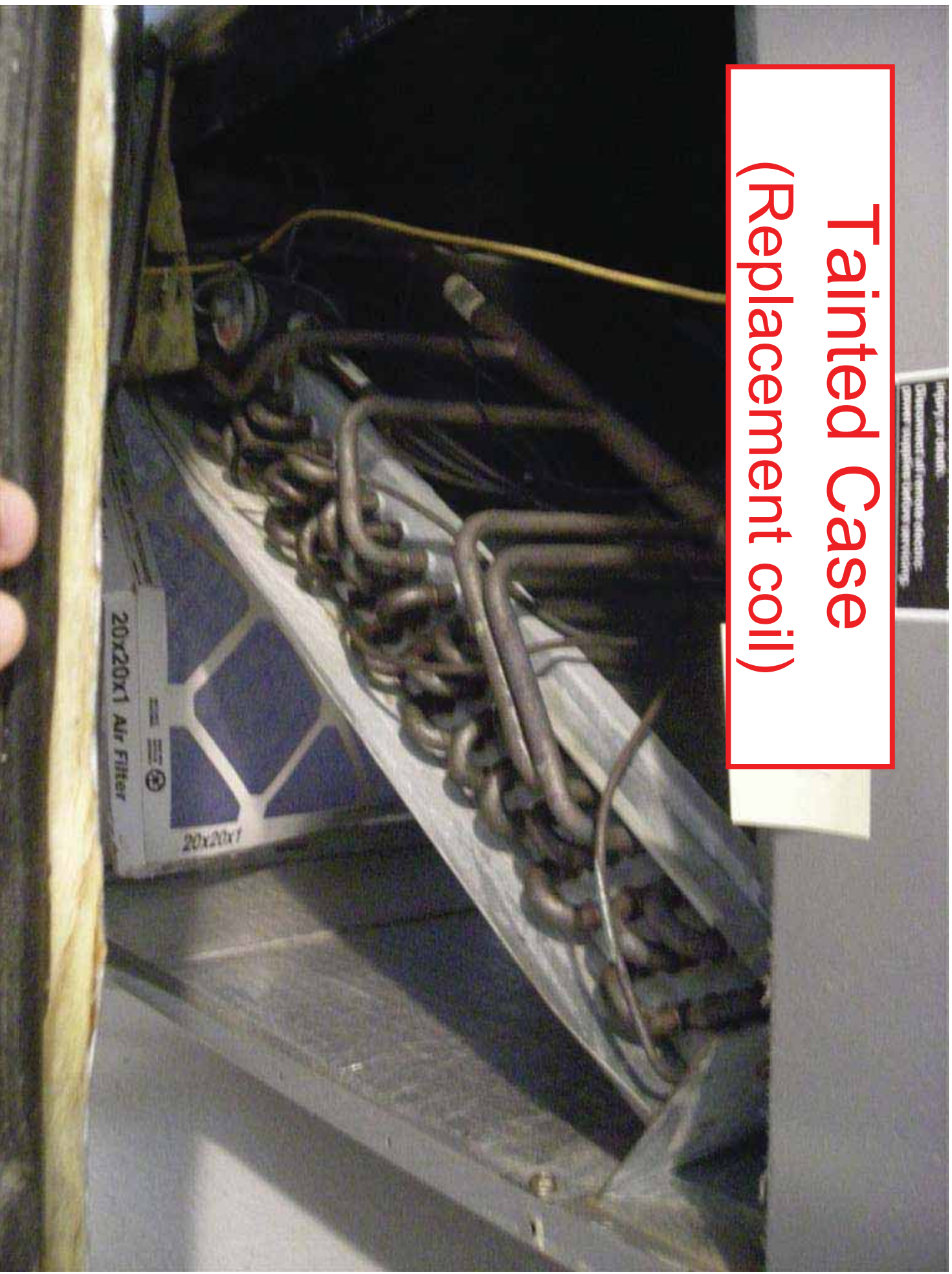
Tainted Case



Moderately Tainted Case

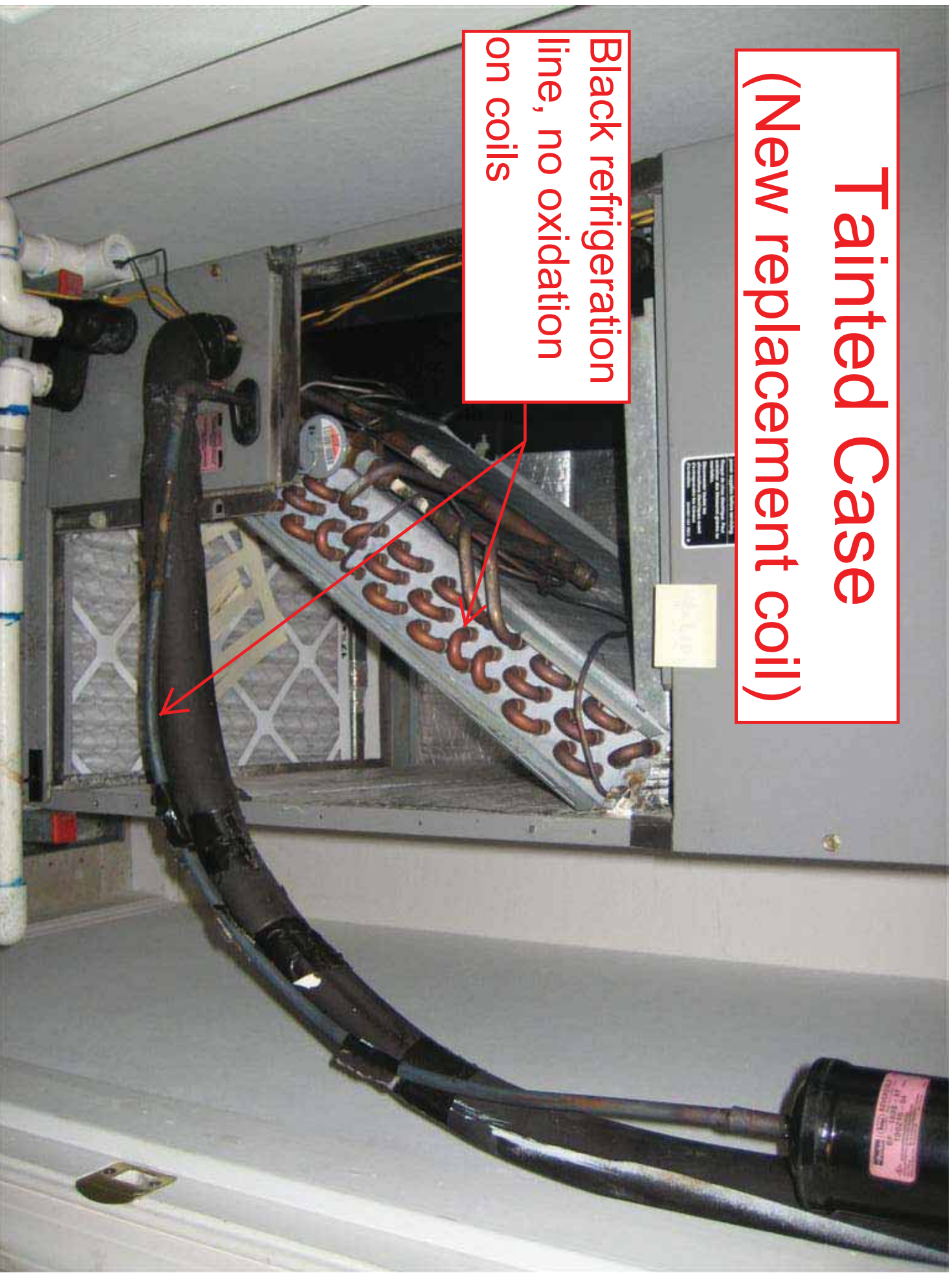


Tainted Case (Replacement coil)



Tainted Case (New replacement coil)

Black refrigeration
line, no oxidation
on coils



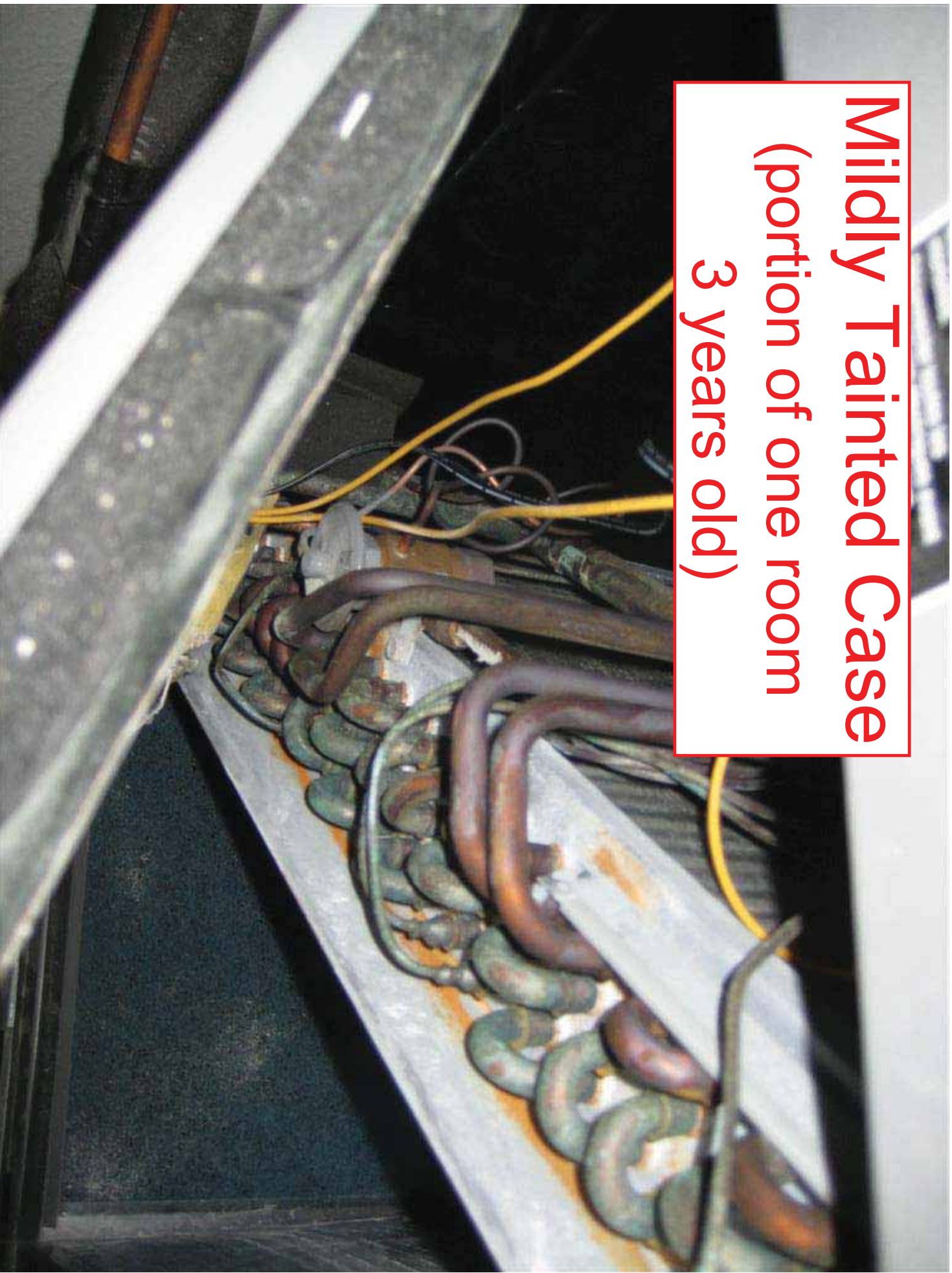
Tainted Case



Non-tainted Case



Mildly Tainted Case (portion of one room 3 years old)



Tainted Case (Replacement coil)



Tainted Case



Mildly Tainted Case



Risk of electric shock. Can cause injury or death.
Disconnect all remote electric

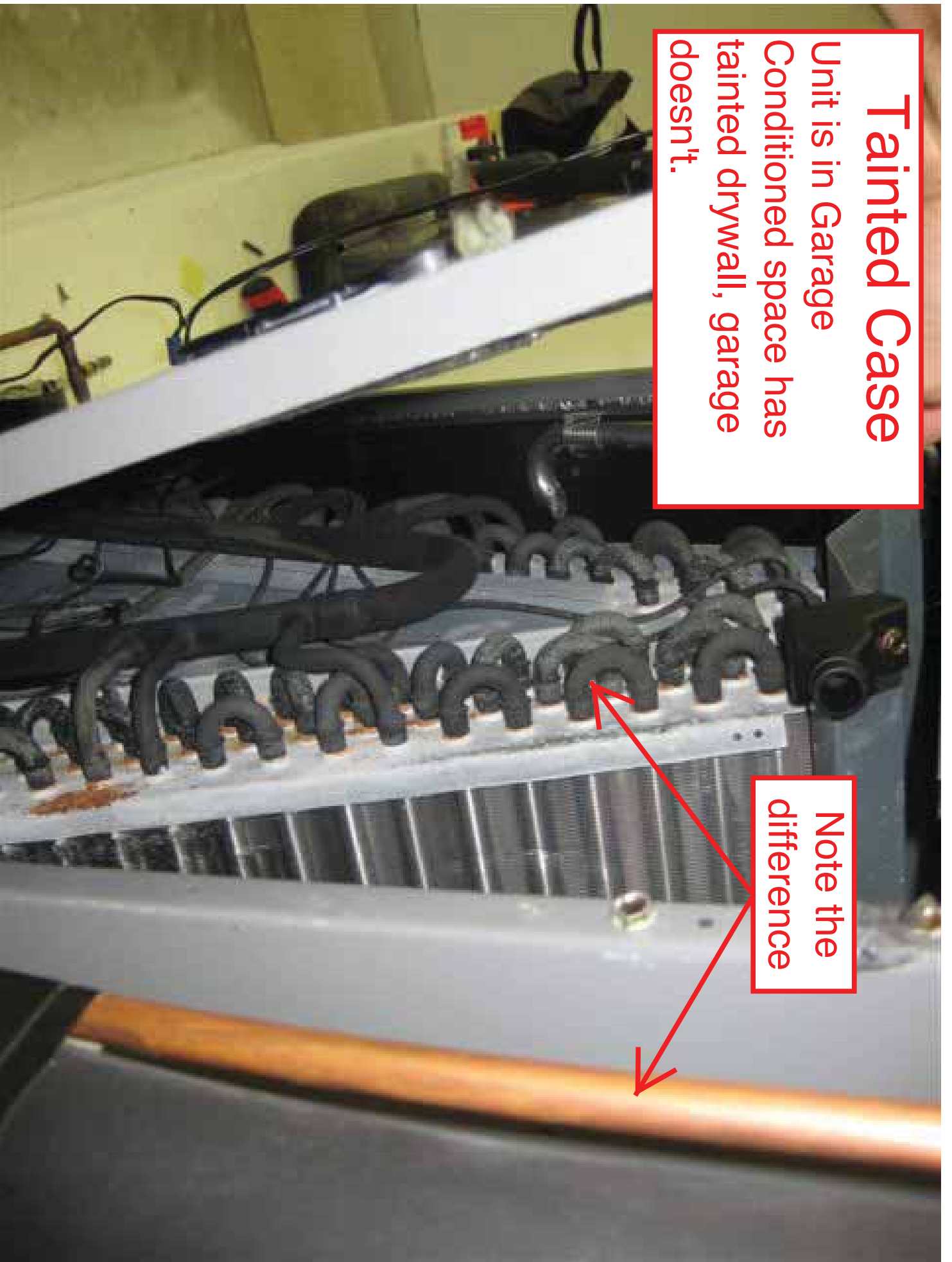
Tainted Case



Tainted Case

Unit is in Garage
Conditioned space has
tainted drywall, garage
doesn't.

Note the
difference

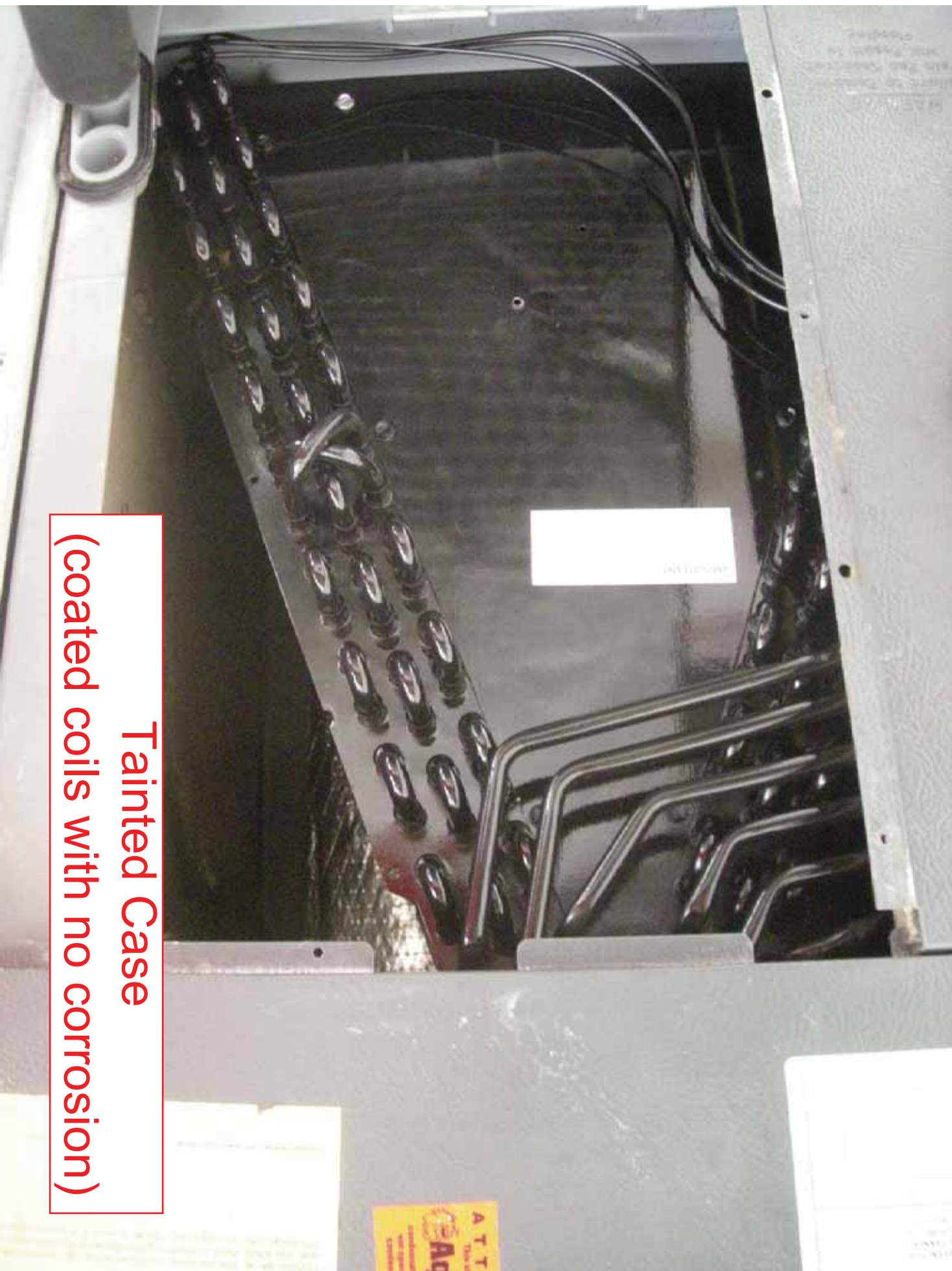


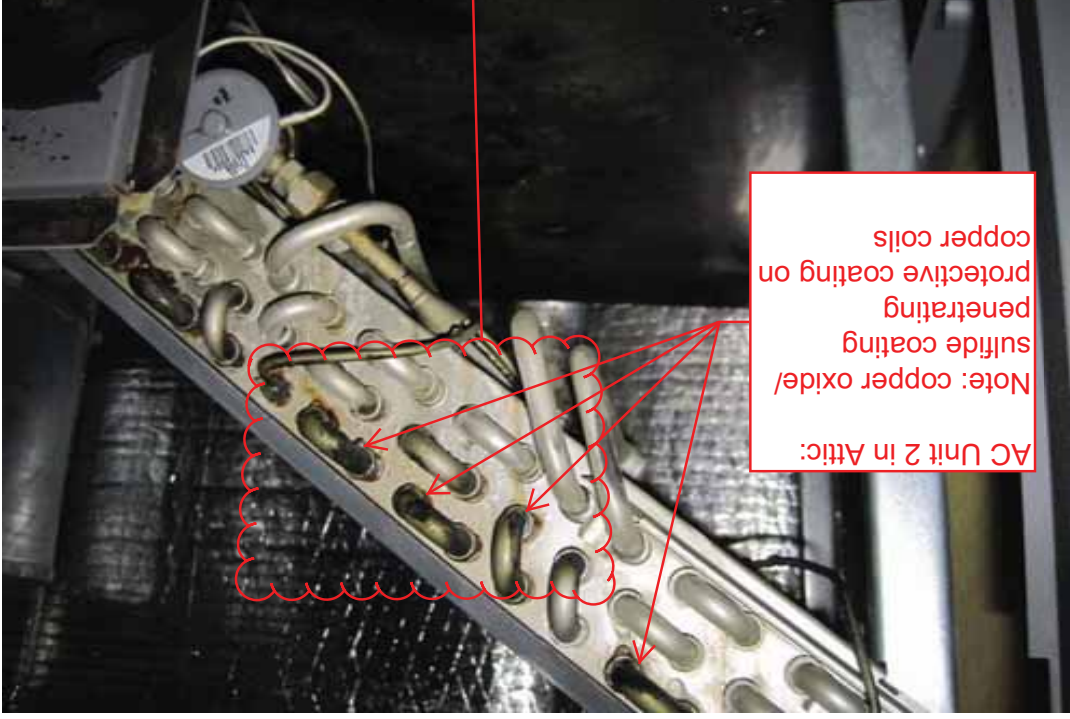
Tainted Case with Coated Coil
(corroding through)

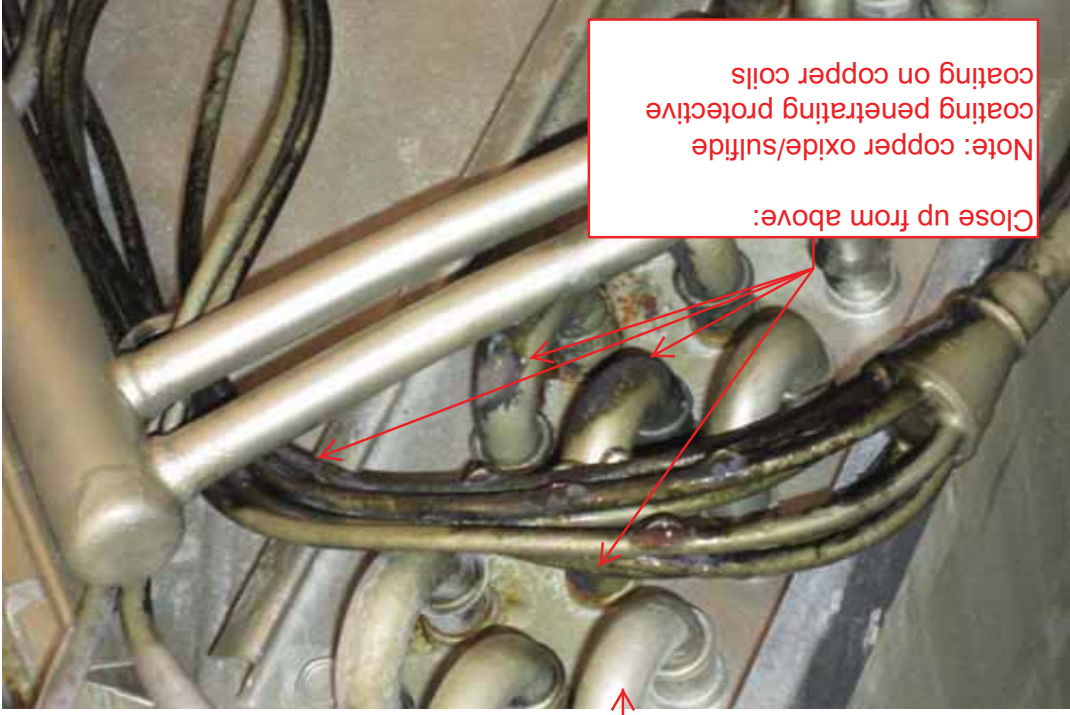


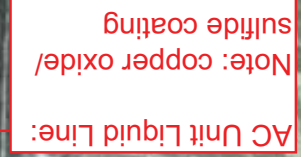
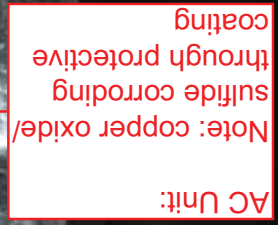
07/11/2009

Tainted Case
(coated coils with no corrosion)





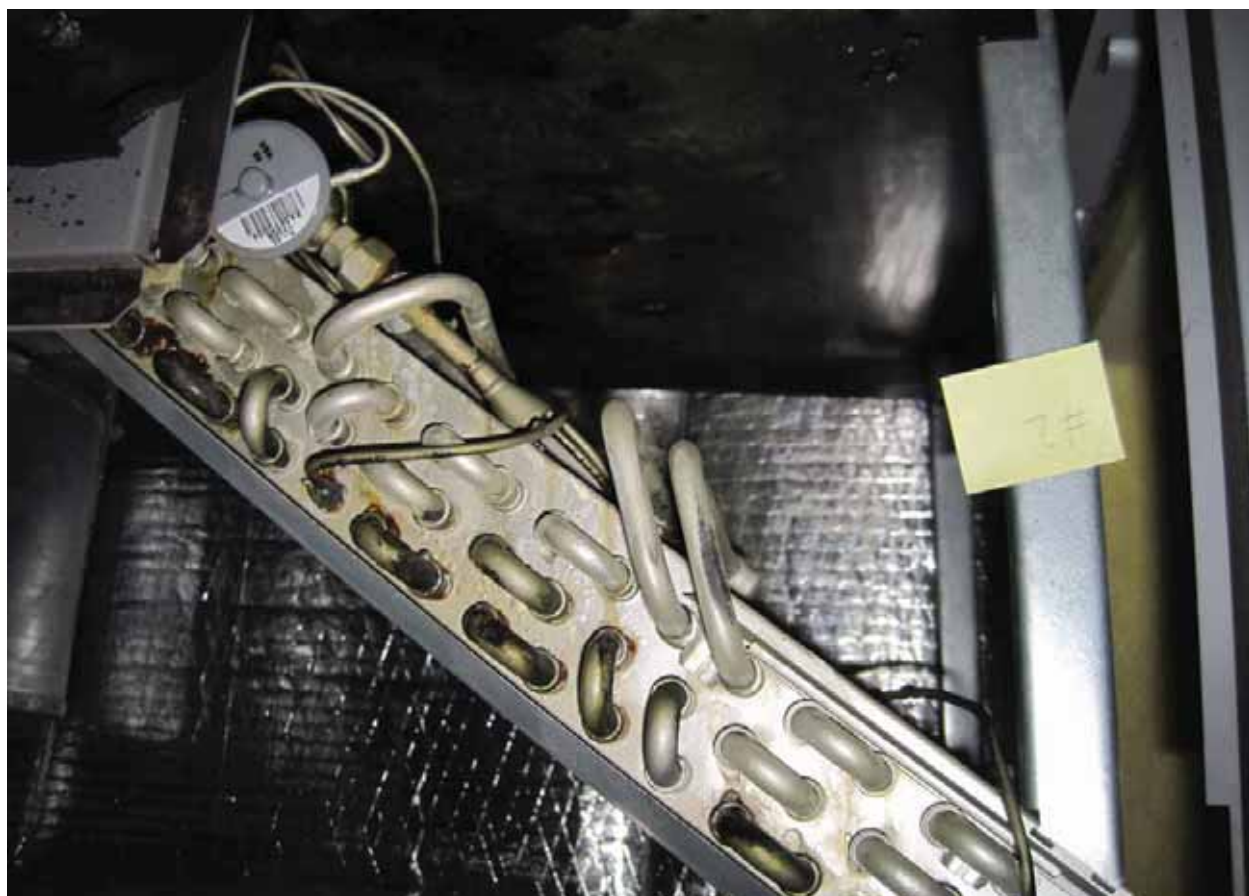














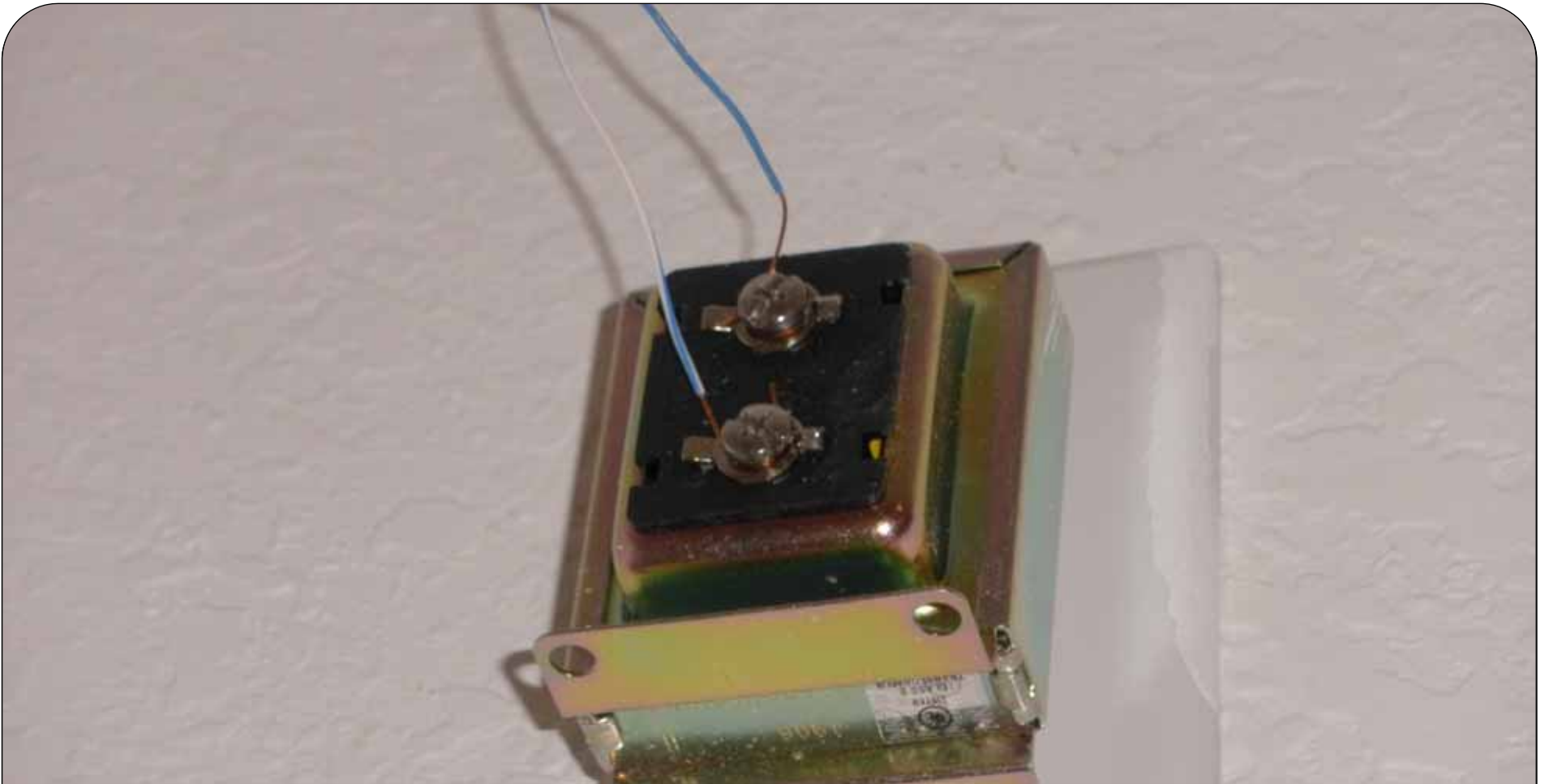


A trustworthy advocate for the concerned homeowner

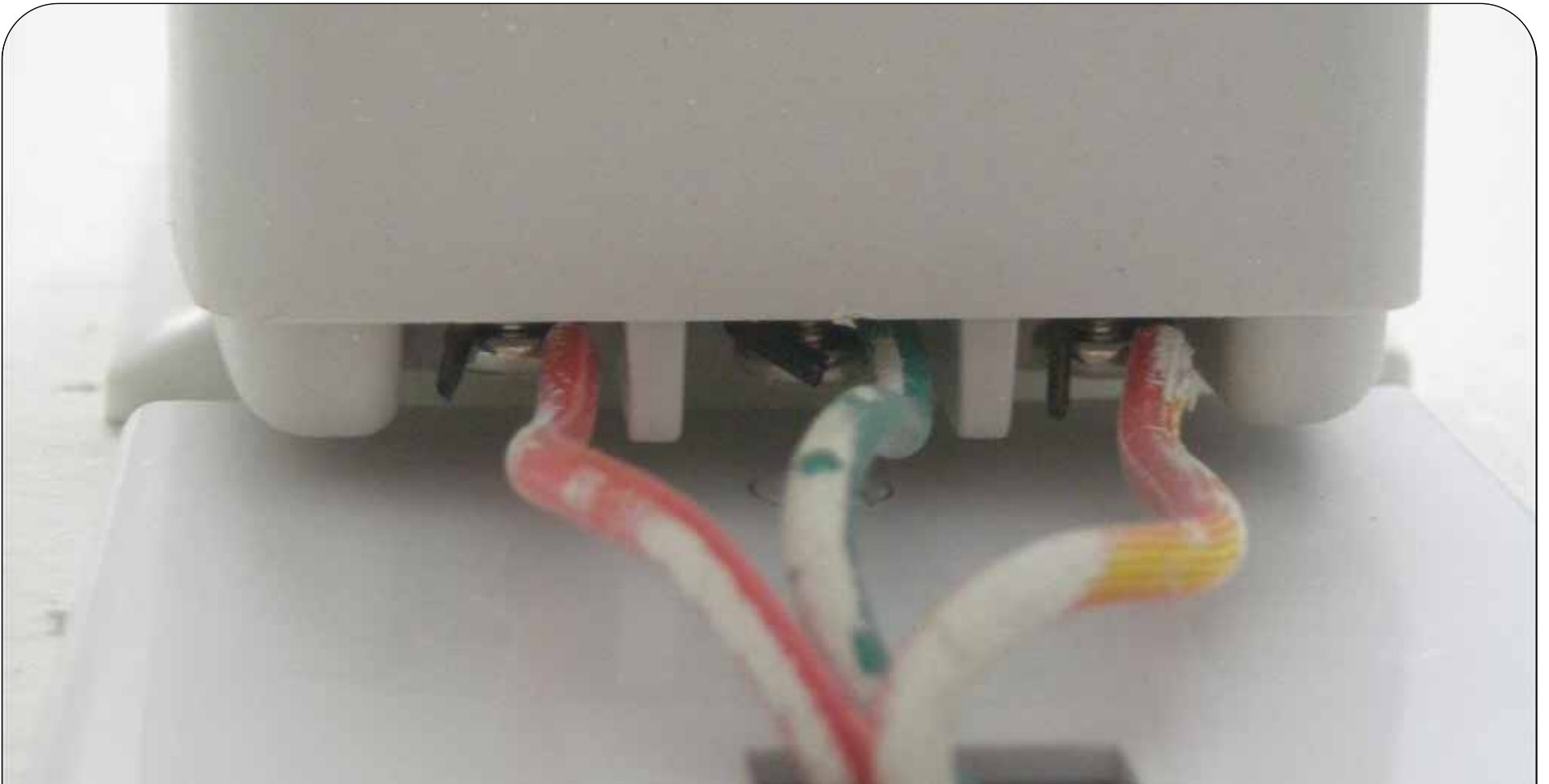
Now let's take a look at the garage...



Clean garage door opener...



Transformer...



Plug in transformer...



Black coil with a clean liquid line...

Water Heater Fittings...

Clean Water Heater



Blackened Water Heater





Water Heater Tainted and Patchy Fittings...



Water Heater Fittings Only...

Water Heater Fittings...





A trustworthy advocate for the concerned homeowner

Garage is important part of the screening.



A trustworthy advocate for the concerned homeowner

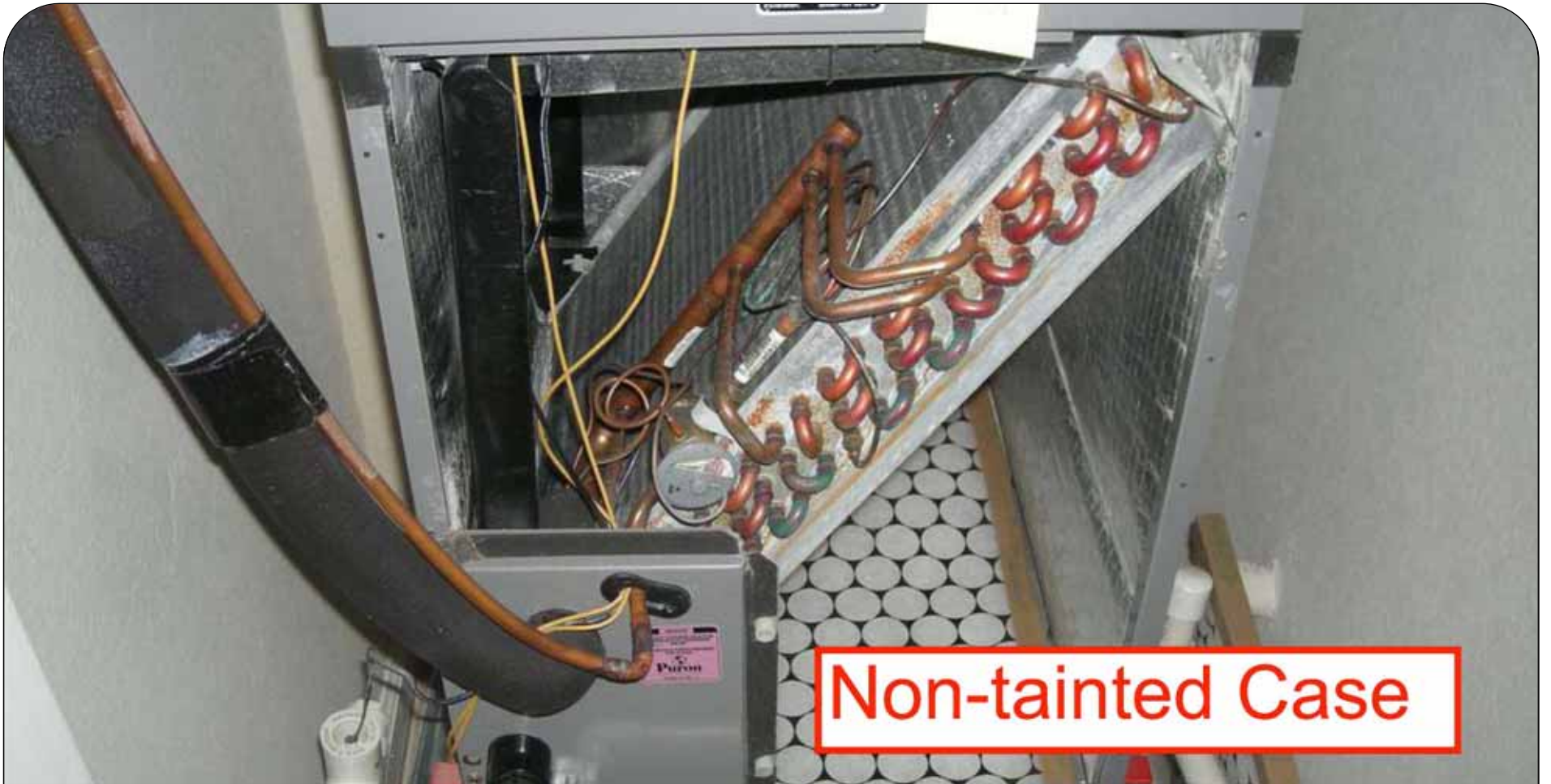
Case Study #1

Coil Exhibit

Learn the difference between clean, tainted and factory coated files



Clean Coil

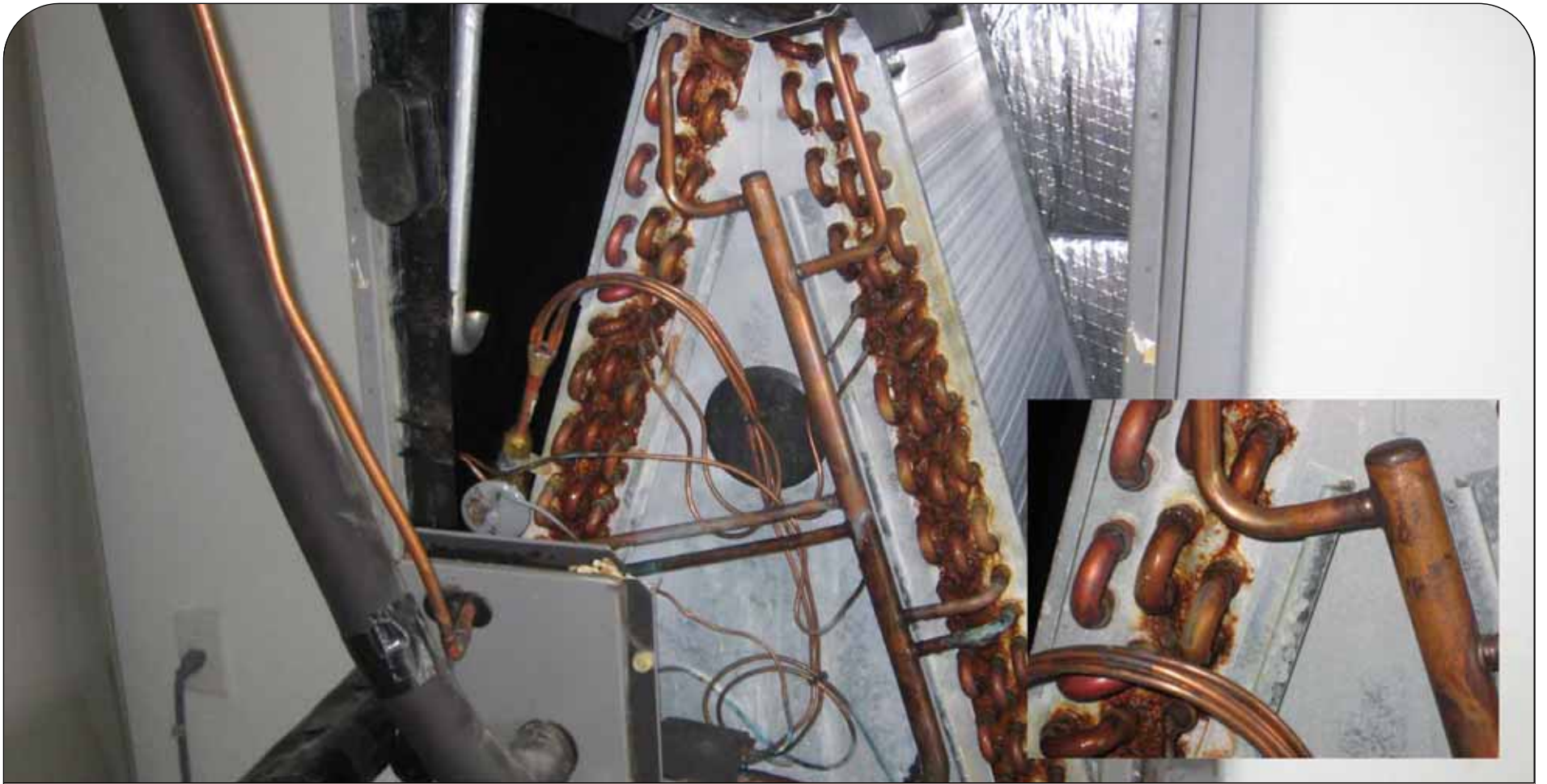


Non-tainted Case

Clean with oxidation



Clean and rusty



Clean coil



Clean coil



Coil comparison



Mildly corroded with oxidation



Corroded coil



Corroded coil

(New replacement coil)



New tainted coil with heavy oxidation on liquid line

Case



Moderately tainted coil with heavy oxidation

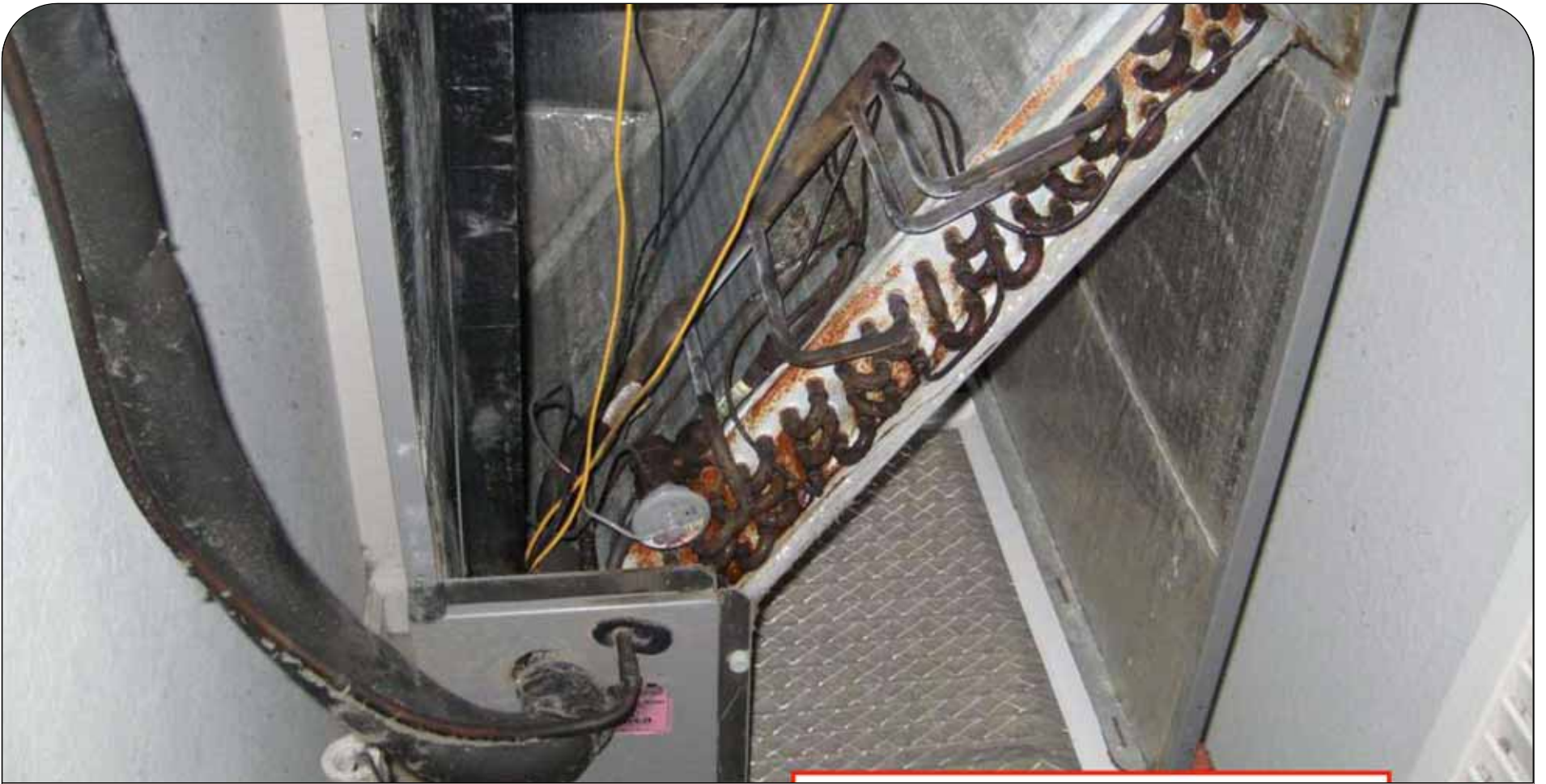
Painted Case



Moderately corroded and oxidized



Mildly Tainted

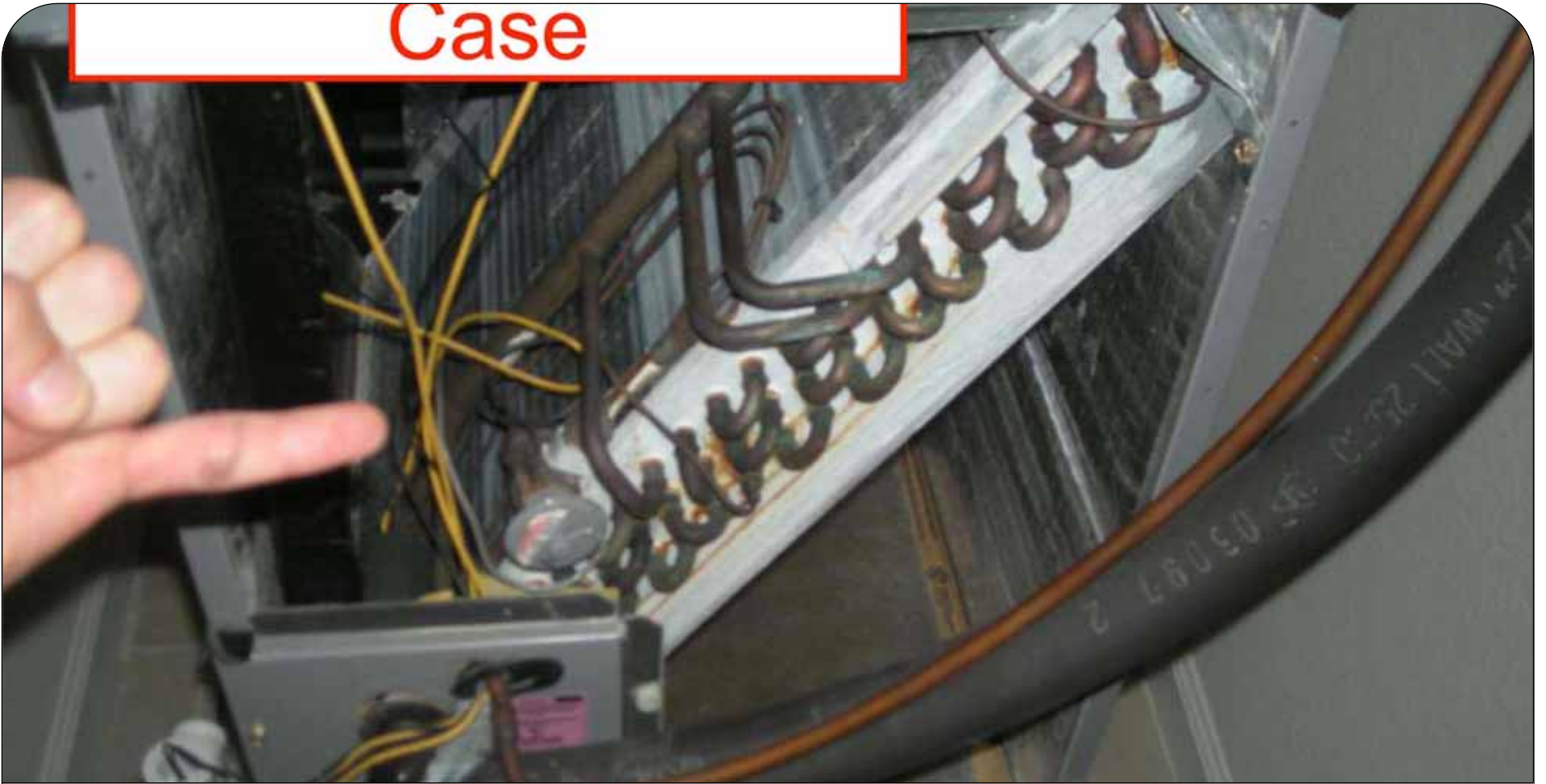


Corroded



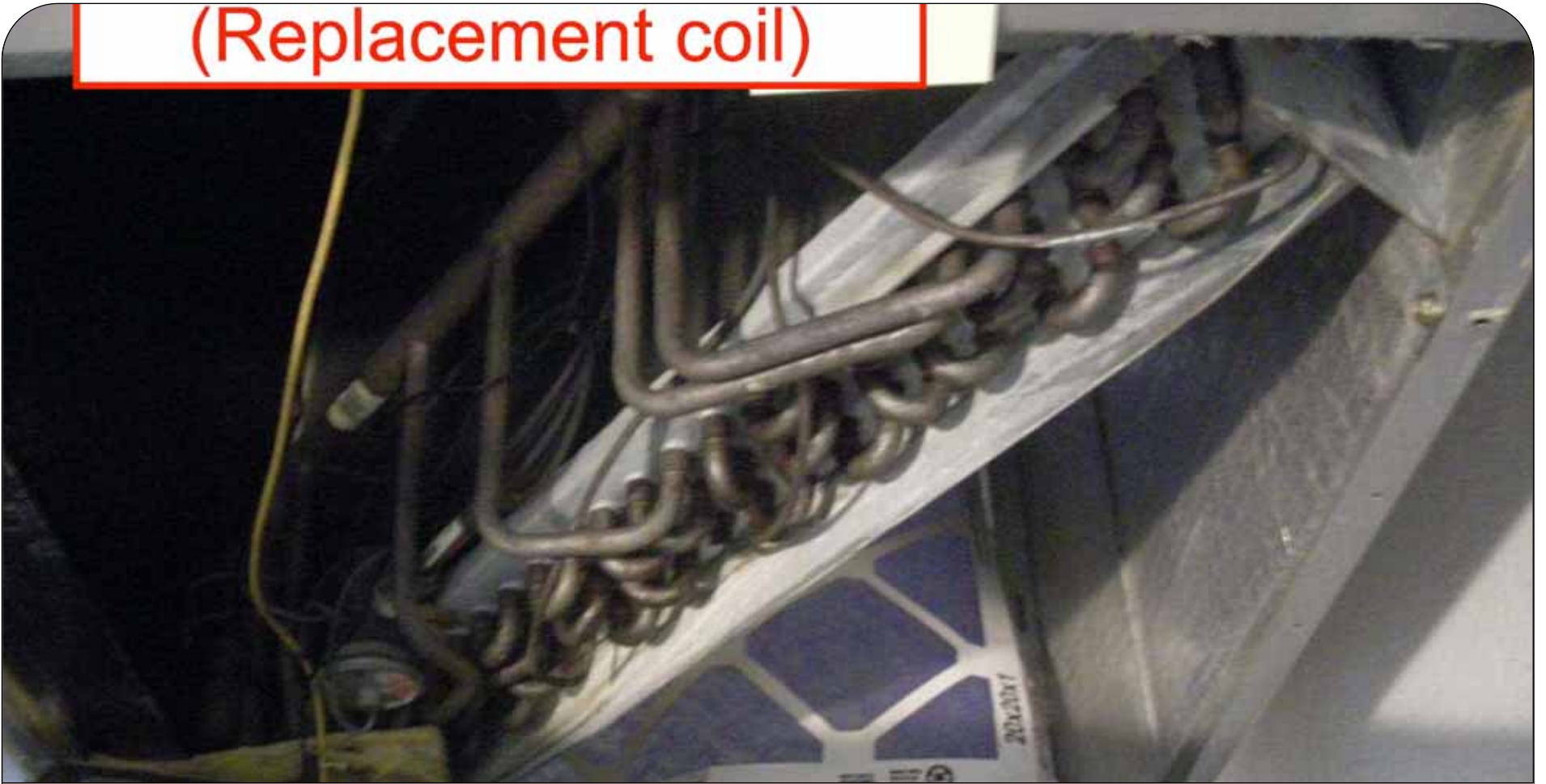
Corroded

Case



Moderately tainted

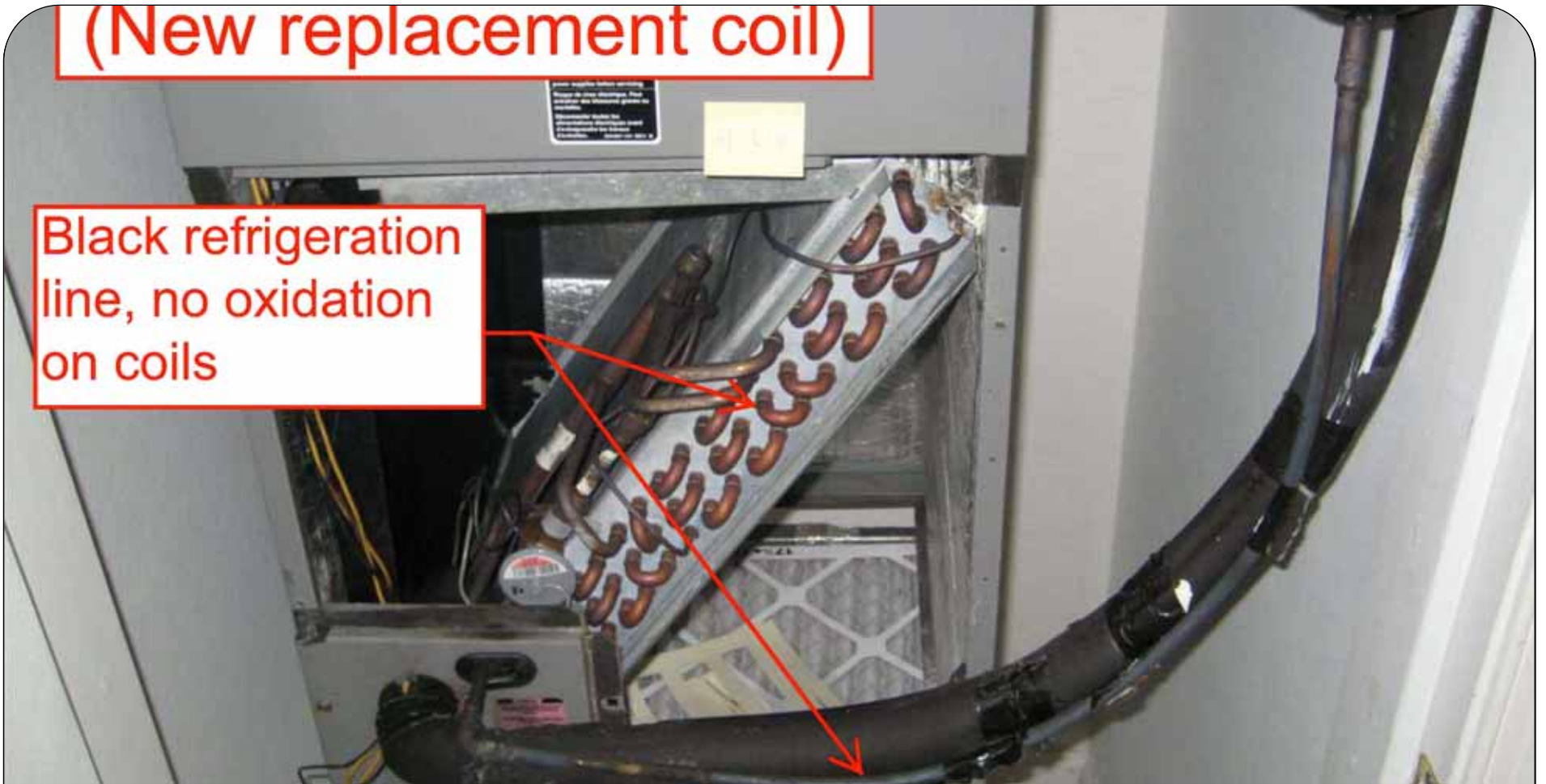
(Replacement coil)



Corroded replacement coil

(New replacement coil)

Black refrigeration
line, no oxidation
on coils



Replacement coil with corroded liquid line



Corroded

(portion of one room
3 years old)



Coil partially in one room

(Replacement coil)



Corroded



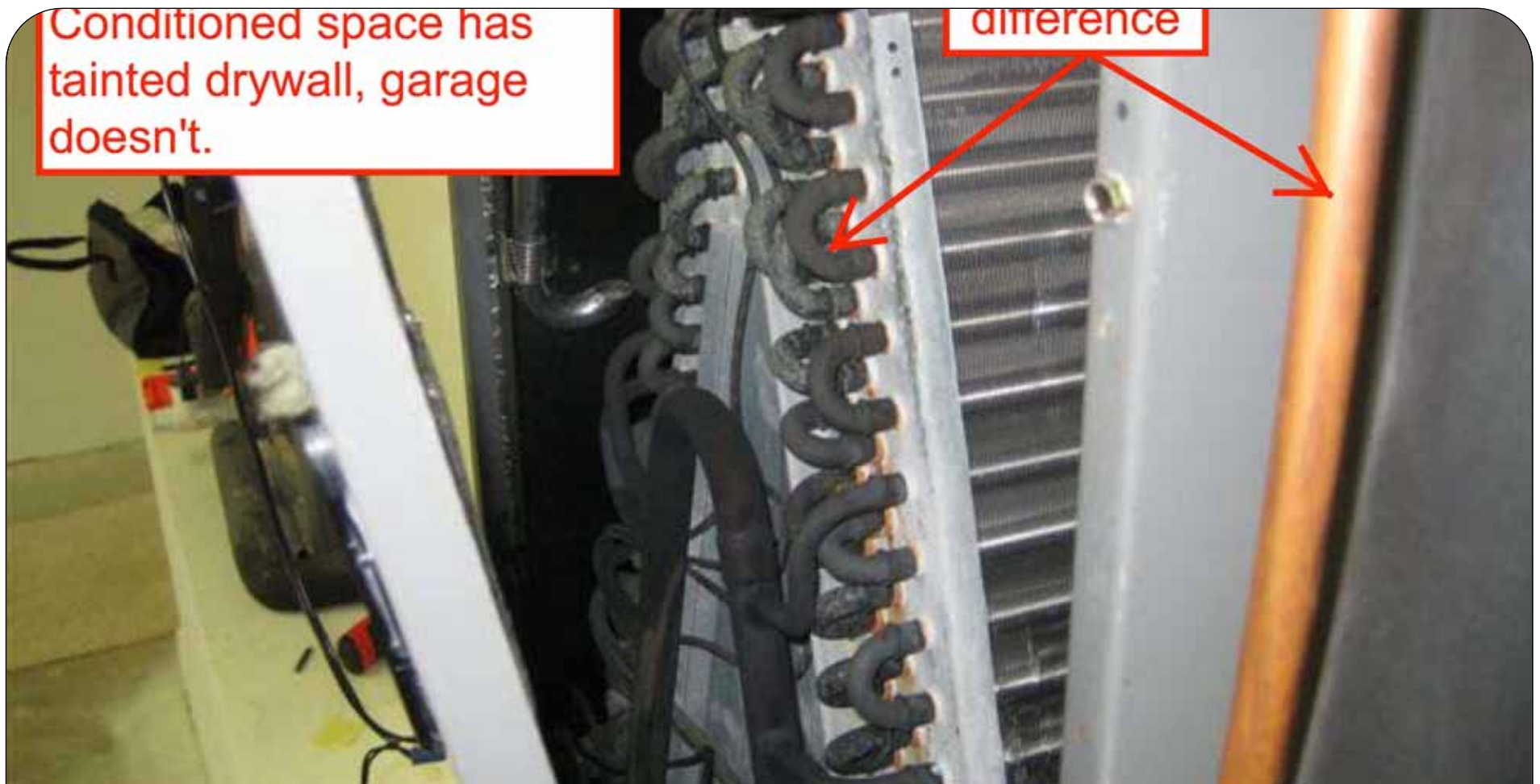
Severe corrosion



Mild corrosion



Mild corrosion



Black coil with clean liquid line



Factory coated orange



Factory coated black



Factory coated tin

Chinese Drywall Screening, LLC

For more information visit us at
www.chinesedrywallscreening.com



A trustworthy advocate for the concerned homeowner

By now you should not only have a pretty comprehensive understanding of what Chinese drywall is and how to identify it, but also be on your road to being an authority in your community. There are a couple of other things though that I would like to make sure you know.

Additional things to know...

- Occasionally we find garages that have tainted drywall due to $\frac{1}{2}$ " sheetrock in ceilings and not the walls.
- Typically ceilings and garages are supposed to be $\frac{5}{8}$ drywall
- When that happens it can be helpful because it is easy to get in an attic and spot the labeling.

Additional things to know or remember...

- We are seeing more and more houses with coils where we find maybe a slight evidence of soot on the coil due to a portion of one room having tainted drywall.
- Houses do not typically tend to only have one brand of drywall in them. In fact sometimes we can see as many as four different types and it is not unusual to see mixed American and Chinese drywall in a home.

Additional things to know or remember...

- Not all Chinese drywall is labeled or for that matter, tainted.
- We have seen 5/8" Chinese drywall on ceilings of a partially tainted home.
- Tainted American labeled drywall has been found.
- The same manufacturer of Chinese drywall may have both reactive and non-reactive batches.



A trustworthy advocate for the concerned homeowner

It's not only important to know where and how to look for the indicators of corrosive drywall but to stay on top of current information regarding the types of drywall so proper conclusions about the condition of the home can be made.



A trustworthy advocate for the concerned homeowner

Thank you for choosing Chinese Drywall Screening, LLC for your training and educational needs



If you have any questions or concerns, please email us at Inspectors@Chinesedrywallscreening.com. Also, please make sure you keep your information current with us so that you get continuous information as we learn more about Chinese or defective drywall. To join our newsletter list please go to www.chinesedrywallscreening.com