Introduction to InterNACHI's Standards of Practice Course

Student Verification and Interactivity

Student Verification

By enrolling in this course, the student hereby attests that s/he is the person completing all coursework. S/he understands that having another person complete the coursework for him or her is fraudulent and will result in being denied course completion and corresponding credit hours.

The course provider reserves the right to make contact as necessary to verify the integrity of any information submitted or communicated by the student. The student agrees not to duplicate or distribute any part of this copyrighted work or provide other parties with the answers or copies of the assessments that are part of this course. If plagiarism or copyright infringement is proven, the student will be notified of such and barred from the course and/or have his/her credit hours and/or certification revoked.

Communication on the message board or forum shall be of the person completing all coursework.

Interactivity

Interactivity between the student and the course provider is made by the opportunity to correspond via email. Students will receive a timely response within 24 hours during the work week and by close of business on Monday for questions received over the weekend.

The student can join in the conversation with other students by visiting the online forum dedicated to this course. Students are free to post questions and comments there. The thread will be monitored by the course instructor.

Need Help?

At any time, you may email Director of Education Ben Gromicko at ben@internachi.org.

Exceeding the Standards of Practice

by InterNACHI's Legal Counsel Mark Cohen and InterNACHI Founder Nick Gromicko

Inspectors sometimes ask about the potential legal consequences if their inspections go beyond what InterNACHI's Standards of Practice (SOP) require.

Of course, every inspection must, at a minimum, substantially meet the requirements of the SOP. If an inspector fails to comply with the SOP, the customer would have valid claims against the inspector for breach of contract and misrepresentation.

Therefore, when in doubt about what the SOP requires in a particular situation, the inspector should err on the side of caution and exceed what the SOP requires. It is better to do a little more than what may be required than to do less and risk a potential claim and harm to your reputation.

A word of caution: if an inspector consistently goes far beyond what the SOP requires, a customer might successfully argue that the inspector voluntarily assumed a duty greater than the contract required. Most inspection contracts contain language stating that the inspector will perform the inspection in accordance with InterNACHI's SOP. An inspector who goes far beyond what the SOP requires may open himself up to a claim that there was an oral agreement that he was going to do a more rigorous inspection than what's required by the SOP.

If an inspector voluntarily assumes a duty greater than the duty required by the contract, the inspector has an obligation to perform those additional tasks with reasonable care.

Introduction

This course is designed to review InterNACHI's *Standards of Practice for Performing a General Home Inspection.*

Many slides in this course contain images that can be enlarged by clicking on the image or on a link below the image.

Most of the terminology contained in the Standards can be found within the glossary at the end of this course.

After each section, there is a brief quiz to test your understanding of the course content. The quizzes are multiple-choice and are designed to give you guidance in areas that you may need to review again. Sections can be accessed using the "Previous Page" button and the "Next Page" button at the bottom of each page, or you can use the navigation bar on the left side of each page.

The *Standards of Practice* are not exhaustive and cover only the minimum requirements that an InterNACHI member must follow for a general home inspection. Your state or province may have adopted licensing and their own Standards of Practice that you must also follow in order to keep your license active and in good standing. Please take the time to read and understand InterNACHI's *Standards of Practice for Performing a General Home Inspection* before taking this course.

This course mirrors InterNACHI's *Standards of Practice* and covers:

1. Definitions and Scope

2. Limitations, Exceptions & Exclusions

3. Standards of Practice

3.1. Roof
3.2. Exterior
3.3. Basement, Foundation, Crawlspace & Structure
3.4. Heating
3.5. Cooling
3.6. Plumbing
3.7. Electrical
3.8. Fireplace
3.9. Attic, Insulation & Ventilation
3.10. Doors, Windows & Interior

4. Glossary of Terms

1. Definitions and Scope

1.1. A **general home inspection** is a non-invasive, visual examination of the accessible areas of a residential property (as delineated below), performed for a fee, which is designed to identify defects within specific systems and components defined by these Standards that are both observed and deemed material by the inspector. The scope of work may be modified by the Client and Inspector prior to the inspection process.

· ***component*:** A permanently installed or attached fixture, element or part of a system.
· ***general home inspection (also, home inspection and standard home inspection)*: The process by which an inspector visually examines the readily accessible systems and components of a home and operates those systems and components utilizing these Standards of Practice as a guideline.**
· ***inspect*: To examine readily accessible systems and components safely, using normal operating controls, and accessing readily accessible areas, in accordance with these Standards of Practice.**

A non-invasive, visual examination relates to the fact that, in most cases, home inspectors are not required to dismantle or remove components, with the one exception being the removal of electrical panel covers (dead fronts). A residential property can include apartments, condos, single-family homes, and structures containing multiple units. However, some authorities limit these to a building with a maximum of four units. Any inspection must include an agreement between the inspector and the client as to which components and systems the inspector will be evaluating.

I. The general home inspection is based on the observations made on the date of the inspection, and not a prediction of future conditions.

- ***condition*: The visible and conspicuous state of being of an object.**
- ***evaluate*: To assess the systems, structures and/or components of a property.**
- ***inspected property*: The readily accessible areas of the buildings, site, items, components and systems included in the inspection.**

Remember that, as an inspector, you can only report on what you can see, given reasonable access.

II. The general home inspection will not reveal every issue that exists or ever could exist, but only those material defects observed on the date of the inspection.

1.2. A material defect is a specific issue with a system or component of a residential property that may have a significant, adverse impact on the value of the property, or that poses an unreasonable risk to people. The fact that a system or component is near, at or beyond the end of its normal useful life is not, in itself, a material defect.

- ***unsafe*: In the inspector's opinion, a condition of an area, system, component or procedure that is judged to be a significant risk of injury during normal, day-to-day use. The risk may be due to damage, deterioration, improper installation, or a change in accepted residential construction standards.**

For example, a cracked foundation or a dangerous electrical condition would constitute a material defect, but a roof covering that had exceeded its intended lifespan would not, unless it was also showing signs of leakage.

1.3. A general home inspection report shall identify, in written format, defects within specific systems and components defined by these Standards that are both observed and deemed material by the inspector. Inspection reports may include additional comments and recommendations.

- **report: (verb form) To express, communicate or provide information in writing; give a written account of.**
- **inspection report: A written communication (possibly including images) of any material defects observed during the inspection.**

Quiz #1: Definitions and Scope

A home inspection is a(n) _____.

non-invasive visual examination of a commercial property
non-invasive, visual examination of the accessible areas of a residential property
invasive, visual examination of a residential dwelling

T/F: An issue that would be considered a safety hazard would also be considered a material defect.

False
True

A component is defined as _____.

something attached to something else
a permanently installed or attached fixture
a temporarily installed or attached fixture

Although not always required, home inspectors normally remove the covers on _____.

enclosed plumbing chases
boilers and furnaces
electrical panels

An inspection report may include _____.

all of these
additional comments beyond identified material defects
images
recommendations

A residential building with up to _____ units is covered by this SOP.

10
four
two

T/F: A material defect is one that could seriously affect the home's value.

False
True

A home inspector must produce a _____ report regarding his/her observations of the condition of the property.

written
verbal

T/F: A home inspector is required to report on the future condition of the structure.

True
False

2. Limitations, Exceptions & Exclusions

2.1. Limitations:

I. An inspection is not technically exhaustive.
II. An inspection will not identify concealed or latent defects.
III. An inspection will not deal with aesthetic concerns or what could be deemed matters of taste, cosmetic defects, etc.
IV. An inspection will not determine the suitability of the property for any use.
V. An inspection does not determine the market value of the property or its marketability.
VI. An inspection does not determine the insurability of the property.
VII. An inspection does not determine the advisability or inadvisability of the purchase of the inspected property.
VIII. An inspection does not determine the life expectancy of the property or any components or systems therein.
IX. An inspection does not include items not permanently installed.
X. These Standards of Practice apply only to properties with four or fewer residential units.

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2.2. Exclusions:

I. The inspector is not required to determine:

A. property boundary lines or encroachments.
B. the condition of any component or system that is not readily accessible.
C. the service life expectancy of any component or system.
D. the size, capacity, BTU, performance or efficiency of any component or system.
E. the cause or reason of any condition.
F. the cause for the need of correction, repair or replacement of any system or component.
G. future conditions.
H. compliance with codes or regulations.
I. the presence of evidence of rodents, birds, animals, insects, or other pests.
J. the presence of mold, mildew or fungus.
K. the presence of airborne hazards, including radon.
L. the air quality.
M. the existence of environmental hazards, including lead paint, asbestos or toxic drywall.
N. the existence of electromagnetic fields.
O. any hazardous waste conditions.

P. any manufacturers' recalls or conformance with manufacturer installation, or any information included for consumer protection purposes.
Q. acoustical properties.
R. correction, replacement or repair cost estimates.
S. estimates of the cost to operate any given system.

II. The inspector is not required to operate:

A. any system that is shut down.
B. any system that does not function properly.
C. or evaluate low-voltage electrical systems such as, but not limited to:

1. phone lines;
2. cable lines;
3. satellite dishes;
4. antennae;
5. lights; or
6. remote controls.

D. any system that does not turn on with the use of normal operating controls.
E. any shut-off valves or manual stop valves.
F. any electrical disconnect or over-current protection devices.
G. any alarm systems.
H. moisture meters, gas detectors or similar equipment.

III. The inspector is not required to:

A. move any personal items or other obstructions, such as, but not limited to: throw rugs, carpeting, wall coverings, furniture, ceiling tiles, window coverings, equipment, plants, ice, debris, snow, water, dirt, pets, or anything else that might restrict the visual inspection.
B. dismantle, open or uncover any system or component.
C. enter or access any area that may, in the opinion of the inspector, be unsafe.
D. enter crawlspaces or other areas that may be unsafe or not readily accessible.
E. inspect underground items, such as, but not limited to: lawn-irrigation systems, underground storage tanks or other indications of their presence, whether abandoned or actively used.
F. do anything which may, in the inspector's opinion, be unsafe or dangerous to the inspector or others, or damage property, such as, but not limited to: walking on roof surfaces, climbing ladders, entering attic spaces, or negotiating with pets.
G. inspect decorative items.
H. inspect common elements or areas in multi-unit housing.
I. inspect intercoms, speaker systems or security systems.
J. offer guarantees or warranties.

K. offer or perform any engineering services.
L. offer or perform any trade or professional service other than general home inspection.
M. research the history of the property, or report on its potential for alteration, modification, extendibility or suitability for a specific or proposed use for occupancy.
N. determine the age of construction or installation of any system, structure or component of a building, or differentiate between original construction and subsequent additions, improvements, renovations or replacements.
O. determine the insurability of a property.
P. perform or offer Phase 1 or environmental audits.
Q. inspect any system or component that is not included in these Standards.

Quiz #2: Limitations

T/F: A home inspection report should include comments based on the decor.

False
True

T/F: An inspection report should not comment on the property's possible commercial use.

False
True

T/F: Home inspectors are required to move furniture when needed.

True
False

T/F: A home inspection report is a warranty of components and systems.

True
False

The home inspector is required to determine _____.

the presence of mildew
the presence of mold
both of these
neither of these

T/F: Home inspectors are required to evaluate unsafe parts of the structure.

False
True

A home inspection report must include identification of the presence of _____.

none of these
all of these
lead paint

radon
asbestos

T/F: The inspection report should include a determination of whether any additions were completed to code.

True
False

T/F: Repair estimates are not required in the inspection report.

True
False

T/F: Inspectors are not required to check for compliance with local codes or regulations.

False
True

Section 3.1. Roof

Enlarge

Included in inspecting the roof are the roof-covering materials, sheathing and guttering systems.

The roof is the second largest area of inspector liability, and it's not always an easy area to assess properly.

3.1. Roof

I. The inspector shall inspect from ground level or the eaves:

A. the roof-covering materials;
B. the gutters;
C. the downspouts;
D. the vents, flashing, skylights, chimney and other roof penetrations; and
E. the general structure of the roof from the readily accessible panels, doors or stairs.

While the SOP requires inspectors to inspect the roof, how this is accomplished depends on the inspector's comfort level; many inspectors never walk a roof. In many cases, the safest way to examine a roof is from a ladder at the eaves. (Refer to InterNACHI's Safe Practices for the Home Inspector course.)

An examination of the roof helps identify the type of material used (slate, asphalt shingle, wood shake, roll roofing, etc.). Based on a visual inspection, a determination can be made as to its general condition, as well as any problems or deficiencies.

Inspecting the guttering, as well as noting its material, condition and attachment, may also give visual clues as to the condition of the roof. (For example, is the gutter full of aggregate from worn asphalt shingles?)

Downspouts are a critical part of the gutter system; they should be properly connected to both the guttering and the structure, and, when discharging above grade, should be diverting water well away from the structure and the foundation.

Vents, flashings, skylights, etc., can be a significant problem, as they are all engineered holes in the roof covering. If not properly installed or maintained, they may allow rainwater to enter the sheathing and/or attic space. Some components, such as the chimney cricket, can be difficult to evaluate from up close.

II. The inspector shall describe:

A. the type of roof-covering materials.

III. The inspector shall report as in need of correction:

A. observed indications of active roof leaks.

Evaluating the roof structure is best done from inside the attic space (with safe access); it is an extremely important part of the inspection. Inspectors must check the underside of the sheathing for signs of moisture penetration, looking closely at roof penetrations for signs of flashing failure, and obvious signs of structural problems, such as split rafters and improperly cut roof-truss systems.

IV. The inspector is not required to:

A. walk on any roof surface.
B. predict the service life expectancy.
C. inspect underground downspout diverter drainage pipes.
D. remove snow, ice, debris or other conditions that prohibit the observation of the roof surfaces.
E. move insulation.

F. inspect antennae, satellite dishes, lightning arresters, de-icing equipment, or similar attachments.
G. walk on any roof areas that appear, in the opinion of the inspector, to be unsafe.
H. walk on any roof areas if it might, in the opinion of the inspector, cause damage.
I. perform a water test.
J. warrant or certify the roof.
K. confirm proper fastening or installation of any roof-covering material.

As discussed previously, walking a roof is a matter of choice, but some roof coverings can be easily damaged by careless inspection. With materials such as slate, tile, and some types of shingles, an inspector can crack or dislodge parts of the covering.

Predicting life expectancy of any component can be very risky, and roofing materials make that task more difficult still. A standard asphalt shingle roof, for example, has a lifespan that is dependent on prevailing weather, overhanging trees, the number of layers of covering, and adequate ventilation, to name but a few factors.

Underground downspout terminations fall into the "*If you can't see it, you can't report it"* category. Often, the drainage system has failed due to silting up, root system blockages, or collapsed pipe work.

It is also unsafe to walk most roofs when they are wet, icy, snow-covered or mossy. Removing snow, ice or debris to inspect the roof is hazardous, similar to being up on the roof in adverse weather conditions.

Inspecting antennae, satellite dishes, and similar items is not required, but a competent inspector will check their attachment to the fixed systems of the roof, such as chimneys and through-the-roof mountings.

Recommended: InterNACHI's Roof Inspection course.

Quiz #3: Roof

T/F: Home inspectors are required to walk every roof.

False
True

_____ need not be inspected.

Skylights
Roof vents and flashings
Television antennae and satellite dishes
Downspouts

T/F: Inspectors are required to gain access to all attic spaces.

False
True

T/F: The inspector is required to report on the visible condition of the roof-covering materials.

True
False

The condition of _____ need not be reported.

the downspouts
the guttering
underground drainage

T/F: Home inspectors are trained to determine the future life expectancy of roof-covering materials.

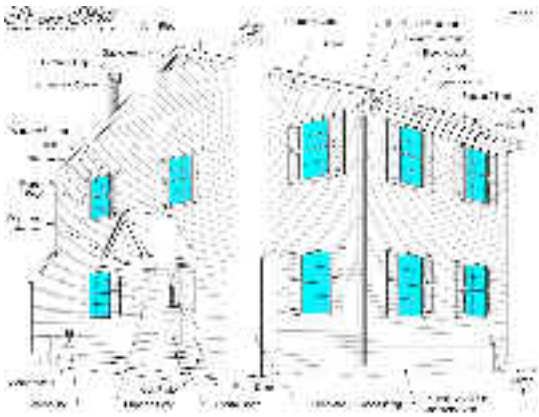
True
False

Which of the following should the inspector remove prior to evaluating the roof?

leaves
none of these
debris

snow and ice
all of these

Section 3.2. Exterior



Enlarge

This section includes the exterior of the home, the components that are attached to it, and the lot that it sits on.

3.2. Exterior

I. The inspector shall inspect:

A. the exterior wall-covering material, flashing and trim;
B. all exterior doors;
C. adjacent walkways and driveways;
D. stairs, steps, stoops, stairways and ramps;
E. porches, patios, decks, balconies and carports;
F. railings, guards and handrails;
G. the eaves, soffits and fascia;
H. a representative number of windows; and
I. vegetation, surface drainage, retaining walls and grading of the property, when they may adversely affect the structure due to moisture intrusion.

Many inspectors start with a walk around the structure, taking notes as well as photos, and looking closely at the structure for walls out of plumb, whether a chimney is leaning, etc., and generally getting the feel of the home. Many things that are observed outside are clues to greater issues with the property. The exterior itself can be very complicated, with

multiple components and systems. All exterior systems should be thoroughly evaluated.

Wooden components are susceptible to rot, particularly when they are installed near grade or just under the roof line. For example, exterior flashings and trim are typically problematic issues even on an otherwise well-maintained home. It is not unusual to see trim rotted away due to poor installation of flashings. It is unusual to find a garage door frame without rot. The attachment of any exterior component should be checked, particularly decks, stoops, steps and stairs, many of which show signs of inadequate attachment and poor flashing.

A major safety concern of steps and decks is the lack of proper guardrails and handrails. Even when present, they are often found to be unsafe due to design or inadequate installation or attachment.

II. The inspector shall describe:

A. the type of exterior wall-covering materials.
B. as in need of correction any improper spacing between intermediate balusters, spindles and rails.

III. The inspector shall report as in need of correction:

A. any improper spacing between intermediate balusters, spindles and rails.

Competent inspectors also evaluate the lot and grounds of the home, and report on trees that pose a threat to the structure, retaining walls that are damaged or rotten, footpaths and walkways that present a trip hazard, and the general topography of the site and its ability to drain surface water.

Every inspection report should detail the type and materials of the home's components and systems. The report should show what the exterior wall structure is made of and how it is covered. An example of this might be: "Frame constructed with vinyl siding," or brick veneer, or solid masonry, etc.

As a side note, InterNACHI's Residential SOP does not require inspectors to evaluate detached garages. However, many inspectors do so as part of their exterior inspection,

and some are further required to include garages in their general home inspections, as mandated by their state. In this case, inspectors should note the same types of defects as described for the home's exterior structure in general. InterNACHI provides useful guidelines in its How to Inspect the Exterior course (Section 31: Inspecting a Garage), as well as an article title A Garage Inspection. Inspectors should further note that, according to the NEC (210.8A2), all garages are now required to have GFCI-protected electrical receptacles/outlets, and the absence of them should be called out and noted in the inspection report.

IV. The inspector is not required to:

A. inspect or operate screens, storm windows, shutters, awnings, fences, outbuildings, or exterior accent lighting.
B. inspect items that are not visible or readily accessible from the ground, including window and door flashing.
C. inspect or identify geological, geotechnical, hydrological or soil conditions.
D. inspect recreational facilities or playground equipment.
E. inspect seawalls, breakwalls or docks.
F. inspect erosion-control or earth-stabilization measures.
G. inspect for safety-type glass.
H. inspect underground utilities.
I. inspect underground items.
J. inspect wells or springs.
K. inspect solar, wind or geothermal systems.
L. inspect swimming pools or spas.

M. inspect wastewater treatment systems, septic systems or cesspools.
N. inspect irrigation or sprinkler systems.
O. inspect drainfields or dry wells.
P. determine the integrity of multiple-pane window glazing or thermal window seals.

Quiz #4: Exterior

An inspector is not required to report on the siding's _____.

condition
flashings
material
color

T/F: An inspector should report on vegetation around the home when it may adversely affect the structure due to moisture intrusion.

True
False

An inspector is required to report all of the following elements of a deck, except its _____.

supports
flashing
furniture
attachment

T/F: An inspector should report on the condition of soffit trim.

False
True

T/F: The home inspector should report on whether the home is in an area of seismic activity.

True
False

T/F: An inspector should estimate the depth of a property's local groundwater table.

False
True

T/F: The home inspector should confirm that the lot lines conform with the property's legal description or listing details.

True
False

Section 3.3: Basement, Foundation, etc.

Enlarge

This section covers all of the visible structural elements of a residential property. It is vital to understand these systems, as they pose the greatest liability for a home inspector.

(Remember that this course is about the Standards and not about how to inspect the various systems themselves. Take InterNACHI's Structural Issues for Home Inspectors course.)

3.3. Basement, Foundation, Crawlspace & Structure

I. The inspector shall inspect:

A. the foundation;
B. the basement;
C. the crawlspace; and
D. structural components.

This section covers many different building types. In some parts of the U.S., homes are usually built on slabs; in other regions, the majority are built with full

basements. Similarly, some areas have primarily stick-built structures, while others use concrete block, brick or adobe.

In all cases, the inspector is required to report on the visible structure only and report on the material and type of foundation (e.g. poured concrete slab or concrete block foundation). Also, the wall structure and materials should be reported when they can be determined.

When evaluating the structure, one of the biggest problems is moisture seeping into it. Sometimes, it is obvious, such as when there is water pooling on the floor. Often, the signs are more subtle, such as efflorescence or staining of the interior trim. All accessible areas should be inspected for signs of moisture. When indications of moisture intrusion are found, those areas should be probed, examined further, and reported as in need of further evaluation to determine the extent of any potential damage.

II. The inspector shall describe:

A. the type of foundation; and
B. the location of the access to the under-floor space.

III. The inspector shall report as in need of correction:

A. observed indications of wood in contact with or near soil;
B. observed indications of active water penetration;
C. observed indications of possible foundation movement, such as sheetrock cracks, brick cracks, out-of-square door frames, and unlevel floors; and
D. on any observed cutting, notching and boring of framing members that may, in the inspector's opinion, present a structural or safety concern.

The structure should be very carefully inspected for any potential signs of movement. This could manifest in various ways, ranging from severe foundation cracks to signs of cracking in the interior finished walls.

Just as in the case of attic spaces, the home inspector should always attempt to gain access to the foundation structure whenever it is safe to do so. Your evaluation is based on observed conditions. Many homes have very small accesses into crawlspaces, and

basements are often choked with stored items. If access is restricted, the inspector should report the limitations of the inspection. If the home has a sump pump, it should be checked as long as there is safe access to it; in some cases, the pump is sealed as part of a radon mitigation system and should not be disturbed.

Evaluating the design of the structure and its effectiveness are beyond the scope of a home inspection, and any load or engineering calculations should be left to professional engineers and architects. Always report the facts as you have visually observed them; do not offer your opinions or speculation. When in doubt regarding a structural (or any other) issue, defer further evaluation to a licensed professional.

IV. The inspector is not required to:

A. enter any crawlspace that is not readily accessible or where entry could cause damage or pose a hazard to the inspector.
B. move stored items or debris.
C. operate sump pumps with inaccessible floats.
D. identify the size, spacing, span or location or determine the adequacy of foundation bolting, bracing, joists, joist spans or support systems.
E. provide any engineering or architectural service.
F. report on the adequacy of any structural system or component.

Quiz #5: Basement, Foundation, etc.

The inspector is not required to report on the _____.

basement
foundation
footings
crawlspace

T/F: The home inspector is required to report on any indications of foundation settlement.

False
True

T/F: All home inspectors are generally qualified to offer engineering advice.

True
False

The following should be evaluated by the home inspector: _____.

foundation bolting
beam size
joist span length
none of these
all of these

T/F: An inspector is required to use a moisture meter to evaluate structural dampness or rising damp.

True
False

T/F: The home inspector is required to enter all crawlspaces.

True
False

T/F: The home inspector is required to remove paneling to properly evaluate the foundation.

True
False

The inspector is required to report on the _____.

footings
adequacy of structural systems
visible structure

Section 3.4. Heating

Enlarge

3.4. Heating

I. The inspector shall inspect:

A. the heating system, using normal operating controls.

II. The inspector shall describe:

A. the location of the thermostat for the heating system;
B. the energy source; and
C. the heating method.

III. The inspector shall report as in need of correction:

A. any heating system that did not operate; and
B. if the heating system was deemed inaccessible.

When reporting on the heating system, it is typical to state the fuel type and distribution method, such as forced air by electric furnace, or hydronic via oil boiler, etc.

When inspecting a boiler or furnace, an inspector should operate it only using its normal controls, such as the room thermostat. S/he is not required to remove fixed-appliance cabinetry.

Electric furnaces that are typically used in warmer climates are integral to the home's air-conditioning system. These should also be operated only using their normal controls. Any deficiencies should be noted in the report.

The home inspector is required to make note in the report of any limitations to the evaluation of the system. Such notes may include that the mechanical room was locked, or access to the boiler was blocked by personal belongings, etc.

IV. The inspector is not required to:

A. inspect or evaluate the interior of flues or chimneys, fire chambers, heat exchangers, combustion air systems, fresh-air intakes, humidifiers, dehumidifiers, electronic air filters, geothermal systems, or solar heating systems.
B. inspect fuel tanks or underground or concealed fuel supply systems.
C. determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the heating system.
D. light or ignite pilot flames.
E. activate heating, heat pump systems, or other heating systems when ambient temperatures or other circumstances are not conducive to safe operation or may damage the equipment.
F. override electronic thermostats.
G. evaluate fuel quality.
H. verify thermostat calibration, heat anticipation, or automatic setbacks, timers, programs or clocks.

While most inspectors will attempt to give a client as much information as possible about the heating system, it is often the situation that its full evaluation is beyond the *Standards of Practice,* or the expected knowledge or capabilities of home inspectors. Many systems are enclosed or otherwise inaccessible, as in the case of most heat exchangers and radiant-heat systems.

Underground fuel tanks are, by definition, not readily accessible, but their presence should be reported if their presence is known or suspected. If the presence of an underground fuel storage tank is listed on the seller's disclosure, the inspector should make note of the fact and recommend further evaluation by a specialist.

Any analysis of the adequacy or efficiency of a heating unit and its distribution is technically beyond most home inspectors' ability. A heating system's performance should be evaluated by trained and/or licensed personnel.

Any system should be operated only in its normal environment, and care should be taken not to damage any system or control by inappropriate use.

The inspector should return all controls to their previous settings after completing the inspection.

Please take InterNACHI's HVAC Inspection course.

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Quiz #6: Heating

T/F: The inspector is required to describe the energy source.

False
True

T/F: If the furnace or boiler is inaccessible, it is not necessary to report this.

True
False

Heating systems should be operated using the _____.

fuel shut-off valve
main disconnect
thermostat

T/F: Inspecting electric furnaces falls outside this SOP.

True
False

The following heating systems must be reported on: _____.

electric furnaces
all of these
forced hot air
hydronic
none of these

T/F: Inspectors are required to uncover the heat exchanger for a full evaluation.

True
False

T/F: If a gas-fired boiler's pilot light is not lit, the inspector is required to light it.

False
True

The inspector is required to note the _____ in the heating section of the inspection report.

fuel type
life expectancy of the system
carbon monoxide levels

T/F: All underground oil tanks should be fully evaluated.

False
True

T/F: Inspectors are not required to operate radiator bleed valves.

True
False

T/F: The inspector is required to visually inspect the interior of all boiler flues.

False
True

T/F: Determining the efficiency of geothermal heating systems is not covered by this SOP.

False
True

T/F: Inspectors are required to determine the age of filters on oil boilers.

False
True

T/F: Inspectors are required to perform and report on a full evaluation of dehumidifiers.

True
False

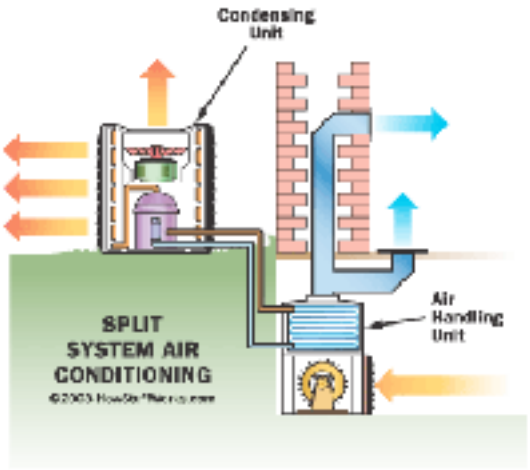
T/F: Any winterized systems should not be operated by the inspector.

True
False

T/F: The inspector should return thermostats and other controls to their previous settings after evaluating such systems.

True
False

Section 3.5. Cooling



Enlarge

Due to the nature of air-conditioning equipment, other than basic operation, little is required of the inspector under these Standards. Please take InterNACHI's HVAC Inspection course.

3.5. Cooling

I. The inspector shall inspect:

A. the cooling system using normal operating controls.

II. The inspector shall describe:

A. the location of the thermostate for the cooling system; and
B. the cooling method.

As is the case with heating units, cooling systems should be operated using only their normal controls. With cooling equipment, the non-requirements can be the most important considerations if the inspector does not wish to damage the system.

Most electronic or computerized reporting systems have fields or comment boxes that define the type of system, its fuel supply, and whether it is a stand-alone system or part of the overall HVAC system.

Most inspectors perform their visual inspection of the cooling system by evaluating the components located outdoors, such as the condenser cabinet, refrigerant lines, and electrical disconnect. Inside the home, they inspect the evaporator cabinet, drain lines, filters, and, in some cases, the temperature splits between the supply and return air. In addition to the make and model number of the equipment, most inspectors also note the total capacity of the system.

III. The inspector shall report as in need of correction:

1. any cooling system that did not operate; and
2. if the cooling system was deemed inaccessible.

IV. The inspector is not required to:

A. determine the uniformity, temperature, flow, balance, distribution, size, capacity, BTU, or supply adequacy of the cooling system.
B. inspect portable window units, through-wall units, or electronic air filters.
C. operate equipment or systems if the exterior temperature is below 65° Fahrenheit, or when other circumstances are not conducive to safe operation or may damage the equipment.
D. inspect or determine thermostat calibration, cooling anticipation, or automatic setbacks or clocks.
E. examine electrical current, coolant fluids or gases, or coolant leakage.

The primary issue when inspecting cooling systems is to operate the equipment only when the ambient temperature allows it. Even then, care should be taken to use the normal controls and operating procedures. Compressors can be easily damaged by forced operation in cold weather or by cold starts after periods of inactivity.

Normally, inspectors evaluate only fixed systems that are hard-wired into the electrical supply. These may include permanently-installed through-wall units, especially in some condominium complexes, and many commercial properties, such as hotels and motels.

Electronic air filters can pose a danger to the untrained inspector, as they clean the air by attracting dirt particles to the filter with a strong electrostatic charge.

As servicing and evaluating air-conditioning equipment is a specialist field, inspectors should defer further evaluation to a trained and/or licensed technician, if it is warranted.

Quiz #7: Cooling

T/F: The inspector is required to operate the air-conditioning system using only normal controls.

False
True

T/F: The inspector should always report on the type of AC system.

False
True

T/F: The inspector should always run all AC systems for the purpose of evaluation.

True
False

T/F: Inspectors need to dismantle electronic air filters to check the system's operation.

False
True

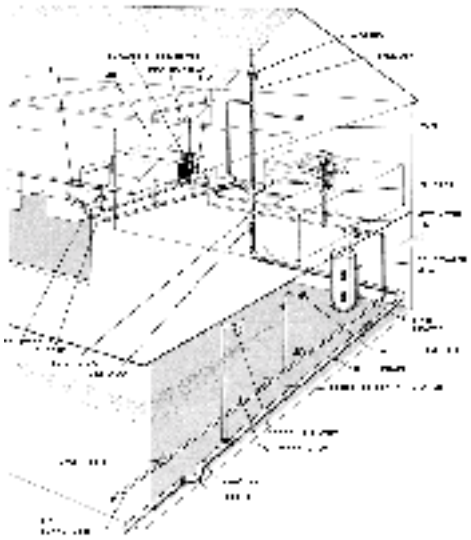
Air-conditioning systems should not be operated if the outdoor temperature is below _____.

55 degrees F
65 degrees F
75 degrees F

T/F: The inspector is required to check the air-conditioning system for leaks.

True
False

Section 3.6. Plumbing



Enlarge

A home's plumbing system includes not just the water supply, waste pipes and vents, but many other areas. Normally, an evaluation of the plumbing also includes other supply piping, such as gas and oil lines. Take InterNACHI's Plumbing Inspection course.

3.6. Plumbing

I. The inspector shall inspect:

A. the main water supply shut-off valve;
B. the main fuel supply shut-off valve;
C. the water heating equipment, including the energy source, venting connections, temperature/pressure-relief (TPR) valves, Watts 210 valves, and seismic bracing;
D. interior water supply, including all fixtures and faucets, by running the water;
E. all toilets for proper operation by flushing;
F. all sinks, tubs and showers for functional drainage;
G. the drain, waste and vent system; and
H. drainage sump pumps, and operate pumps with accessible floats.

II. The inspector shall describe:

A. whether the water supply is public or private based upon observed evidence;
B. the location of the main water supply shut-off valve;
C. the location of the main fuel supply shut-off valve;
D. the location of any observed fuel-storage systems; and
E. the capacity of water heating equipment, if labeled.

III. The inspector shall report as in need of correction:

A. deficiencies in the water supply by viewing the functional flow in two fixtures operated simultaneously;
B. deficiencies in the installation of hot and cold water faucets;
C. mechanical drain stops that were missing or did not operate if installed in sinks, lavatories and tubs; and
D. toilets that were damaged, had loose connections to the floor, leak, or had tank components that did not operate.

Most computerized reporting systems include a field that identifies the location of the main water shut-off valve. Some inspectors also physically tag it as a future aid to the home buyer. Caution must be exercised with old shut-off valves, as they can easily leak when they have not been operated in some time. Evaluation of the supply should also include the materials of the supply and waste piping.

Inspectors should determine whether the water supply is from a private well or a public supply. An inspector may recommend water testing of a private water source to determine the safety of the supply.

The water-heating system must be identified and described and its visible condition reported. Special care should be taken to evaluate the TPR valve and discharge line. The inspector is not required to operate the TPR valve, but it needs to be present and it should have a proper discharge line and termination. Many regions also require that the tank be strapped due to potential seismic activity.

All toilets should be fully evaluated and the inspection report should reflect any deficiencies in the water supply, waste service, connection to the floor, and obvious defects, such as cracked pans. It is common to find rotted sub-flooring adjacent to

the toilet due to leakage around the mounting flange.

The most common procedure used when evaluating plumbing fixtures is to stopper the sinks, run the faucets (noting their operation), then unplug the sink and inspect the waste and its connections for signs of leakage. Damp stains in the bottom of cabinetry are a reliable sign of previous or ongoing problems that should be reported. Fixtures that are slow to drain should also be reported, as these can be signs of blockage or poor ventilation in the system.

Inspectors should report on the functional flow of water through the fixtures. The most common method is to run two or more faucets or fixtures at the same time. Significant drops in flow at an individual faucet during this test can be a sign of either poor supply pressure or partially clogged piping, which would require further professional evaluation. Some inspectors use a pressure and flow meter, but this is not required.

Fuel supply lines and storage devices should also be inspected and described, such as gas lines and their shut-offs, oil tanks and their locations (if known), and any propane or LPG tanks.

Any sump pumps, if accessible, should be evaluated and operated during the plumbing inspection, with any deficiencies noted.

IV. The inspector is not required to:

A. light or ignite pilot flames.
B. measure the capacity, temperature, age, life expectancy or adequacy of the water heater.
C. inspect the interior of flues or chimneys, combustion air systems, water softener or filtering systems, well pumps or tanks, safety or shut-off valves, floor drains, lawn sprinkler systems, or fire sprinkler systems.
D. determine the exact flow rate, volume, pressure, temperature or adequacy of the water supply.
E. determine the water quality, potability or reliability of the water supply or source.
F. open sealed plumbing access panels.
G. inspect clothes washing machines or their connections.
H. operate any valve.
I. test shower pans, tub and shower surrounds or enclosures for leakage or functional overflow protection.
J. evaluate the compliance with conservation, energy or building standards, or the proper design or sizing of any water, waste or venting components, fixtures or piping.

K. determine the effectiveness of anti-siphon, back-flow prevention or drain-stop devices.
L. determine whether there are sufficient cleanouts for effective cleaning of drains.
M. evaluate fuel storage tanks or supply systems.
N. inspect wastewater treatment systems.
O. inspect water treatment systems or water filters.
P. inspect water storage tanks, pressure pumps, or bladder tanks.
Q. evaluate wait-time to obtain hot water at fixtures, or perform testing of any kind to water heater elements.
R. evaluate or determine the adequacy of combustion air.
S. test, operate, open or close: safety controls, manual stop valves, temperature/pressure-relief valves, control valves, or check valves.
T. examine ancillary or auxiliary systems or components, such as, but not limited to, those related to solar water heating and hot water circulation.
U. determine the existence or condition of polybutylene plumbing.

As in the case of heating boilers, the inspector is not required to ignite pilot lights and should never start any system that has been shut down. There are many tales of inspectors who, in an effort to be helpful, have activated a plumbing system, only to have a major flood on their hands!

While the age and size of a water heater can often be determined from its data plate, it is usually a mistake to guess how well it will meet the future loads placed on it and, especially, how long it is likely to last. There are too many variables that come into play, such as usage, maintenance and water quality. Many inspectors have fallen into the trap of, in effect, warranting a system, only for that system to fail soon after or be shown to be inadequate for new needs.

The inspector can only comment and report on what s/he can see. The inspector is not required to remove any fixed access panels. Many plumbing components are hidden in this way and are, therefore, not accessible for inspection. Bath and shower drains are examples of components that simply cannot be inspected non-invasively. The internal parts of other components, such as the bladder in a pressure tank, are generally inaccessible and cannot be evaluated for their condition.

Evaluation of septic and other sewage systems is, likewise, beyond the capabilities of most inspectors. In many states, this is a separately licensed profession.

Inspection of sprinkler systems and irrigation equipment is not required by these Standards.

Finally, water-filtration and water-softening equipment and other treatment systems should be evaluated and serviced by the original installers and manufacturers' agents.

Quiz #8: Plumbing

When inspecting toilets, inspectors should check _____.

the water supply
waste connections
all of these
attachments
for cracks in the bowl

T/F: Inspectors should flush all toilets.

False
True

T/F: All visible wastes, drains and vents should be inspected.

False
True

Reporting on the inspection of the water heater should include the _____.

size of the unit
identification of any sludge buildup
age of the unit
presence of a TPR valve

T/F: It is not necessary to report on leaky faucets.

True
False

T/F: Inspectors should determine whether the water supply is public or private.

False
True

T/F: Inspectors should identify main water and fuel shut-off valves.

True
False

Functional water flow should be evaluated by _____.

using a pressure and flow meter only
the local utility company
running two faucets simultaneously

When evaluating the water heater, the inspector should report on its _____.

age
total capacity
life expectancy
fuel type

Mechanical drain stoppers should be reported as _____ if missing or if not working properly.

a structural failure
a significant defect
in need of repair

T/F: Inspectors are required to operate all plumbing and fuel shut-off valves.

False
True

T/F: Sump pumps are not included as part of a home inspection.

False
True

T/F: The inspector must determine the potability of the water supply.

True
False

T/F: The inspector must guarantee that shower pans and bath wastes are free of leaks.

False
True

T/F: Evaluating water softeners and purifiers is part of a home inspection.

False
True

Section 3.7. Electrical

Enlarge

The evaluation of the electrical supply and systems is fairly complicated, as it covers so many areas. It also poses potential dangers to the inspector, and often highlights defects that could endanger the lives of the home's inhabitants. Take InterNACHI's Electrical Inspection course.

Always think safety! Protect yourself and your clients by getting proper training on electrical inspection, and equip yourself with appropriate safety gear. Take InterNACHI's Safe Practices for Home Inspectors course.

3.7. Electrical

I. The inspector shall inspect:

A. the service drop;
B. the overhead service conductors and attachment point;
C. the service head, gooseneck and drip loops;
D. the service mast, service conduit and raceway;
E. the electric meter and base;
F. service-entrance conductors;
G. the main service disconnect;
H. panelboards and over-current protection devices (circuit breakers and fuses);
I. service grounding and bonding;

J. a representative number of switches, lighting fixtures and receptacles, including receptacles observed and deemed to be arc-fault circuit interrupter (AFCI)-protected using the AFCI test button, where possible;
K. all ground-fault circuit interrupter receptacles and circuit breakers observed and deemed to be GFCIs using a GFCI tester, where possible; and
L. for the general absence of smoke or carbon-monoxide detectors.

II. The inspector shall describe:

A. the main service disconnect's amperage rating, if labeled; and
B. the type of wiring observed.

III. The inspector shall report as in need of correction:

A. deficiencies in the integrity of the service-entrance conductors' insulation, drip loop, and vertical clearances from grade and roofs;
B. any unused circuit-breaker panel opening that was not filled;
C. the presence of solid conductor aluminum branch-circuit wiring, if readily visible;
D. any tested receptacles in which power was not present, polarity was incorrect, the cover was not in place, the GFCI devices were not properly installed or did not operate properly, evidence of arcing or excessive heat, and where the receptacle was not grounded or was not secured to the wall; and
E. the absence of smoke detectors.

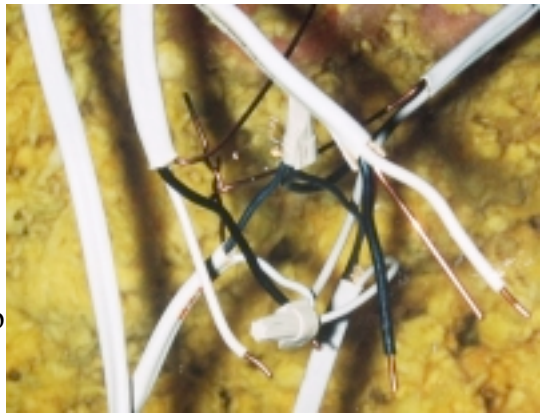
Again, electrical inspections can be fairly complicated, especially in the case of older properties where there may be a variety of systems and wiring types, some of which would not meet current codes. However, home inspectors do not perform code inspections. They are only required to evaluate the condition of the systems and report deficiencies that pose a danger to the property or its occupants.

The initial evaluation usually starts outside with an inspection of the service supply from the utility company's equipment, then follows the attachment to the home, the service entrance cables, metering unit, and the connection to the main panel. The objective is to note visible deficiencies in the components and, wherever possible, determine the service amperage. Some older homes may have a 60-amp supply that may not be sufficient for a typical family's needs today.

Evaluation of service panels comes next, with the inspector removing the dead front (the electrical panel's cover) from the accessible main and sub-panels. Here, inspectors are looking at the condition of the panel, breakers or fuses, and attachment of branch circuit wiring, and determining the materials used in the system. In some cases, inspectors may find solid branch circuit wiring that may require further evaluation by a qualified professional. It is common to find examples of wiring installed by homeowners that is potentially unsafe and should be reported.

Grounding and bonding of the system and its components should also be evaluated wherever possible, with any problems reported. For example, changes to the plumbing system have frequently resulted in the disconnection of the grounding system.

When evaluating outlets (receptacles) or switches, the inspector should report on their condition and function (including polarity, "open" terminals, etc.), and the lack of grounding systems at older properties. The inspector is not required to remove plugs from outlets that are in use or move furniture to gain access. The inspector should also evaluate whether GFCIs are installed in potentially damp areas, and check those present for proper operation.



Smoke detectors or the lack of them should also be reported, although, in many regions, the fire marshal's office will have to issue a Certificate of Compliance before a home sale's closing.

IV. The inspector is not required to:

A. insert any tool, probe or device into the main panelboard, sub-panels, distribution panelboards, or electrical fixtures.
B. operate electrical systems that are shut down.
C. remove panelboard cabinet covers or dead fronts.
D. operate or re-set over-current protection devices or overload devices.
E. operate smoke or carbon-monoxide detectors.
F. measure or determine the amperage or voltage of the main service equipment, if not visibly labeled.
G. inspect the fire and alarm system or components.
H. inspect the ancillary wiring or remote-control devices.
I. activate any electrical systems or branch circuits that are not energized.

J. inspect low-voltage systems, electrical de-icing tapes, swimming pool wiring, or any time-controlled devices.
K. verify the service ground.
L. inspect private or emergency electrical supply sources, including, but not limited to: generators, windmills, photovoltaic solar collectors, or battery or electrical storage facility.
M. inspect spark or lightning arrestors.
N. inspect or test de-icing equipment.
O. conduct voltage-drop calculations.
P. determine the accuracy of labeling.
Q. inspect exterior lighting.

In all cases, the electrical inspection is a visual one, and the inspector should not put himself or the client in any danger while evaluating the system. To that end, the inspector is not required to insert any tools or measuring devices into main or sub-panels. Systems or circuits that are turned off at the time of inspection should not be energized, as they may have been shut down due to existing faults.

Operating breakers or removing fuses is also not recommended, as this can disrupt operation of the homeowner's electronic devices, including clocks, alarm systems or computer equipment.

Low-voltage systems need not be inspected and are excluded from this SOP. Such systems include alarm equipment, intercoms, some lighting circuits, and irrigation systems.

Similarly, lightning arrestors, power generators, and any electrical storage devices are excluded from these Standards, as are swimming pools and exterior spa systems. Some inspectors have received specialist training to evaluate these systems and charge accordingly.

While the inspector should report obvious deficiencies in labeling of fuses and breakers, s/he is not required to evaluate every circuit and its labeling for accuracy, nor is it possible to fully evaluate hidden systems, such

as grounding rods and their continuity. It is also well beyond the scope of most inspections to give an opinion as to the adequacy of the systems to support future usage.

Quiz #9: Electrical

The inspector is not required to report on the _____.

main disconnect
connections at the supply pole
meter box
service entrance conductors

T/F: The inspector is required to evaluate the operation of all GFCI receptacles (outlets).

True
False

T/F: The inspector's report should include details about the grounding and bonding systems.

False
True

T/F: The inspector should test the grounding system for continuity.

True
False

T/F: The inspector should test all receptacles for reversed polarity.

False
True

T/F: All accessible electrical service panels should be inspected.

True
False

T/F: The type of branch circuit wiring should be identified in the inspector's report.

True
False

Which of the following tools is required to be used during the electrical inspection?

GFCI tester
wire calipers
voltmeter

T/F: All circuits should be turned on prior to the electrical inspection.

True
False

T/F: All breakers should be operated to check that they re-set properly.

False
True

T/F: The inspector should test all alarm systems.

True
False

T/F: The inspector is not required to evaluate generators and their switching equipment.

True
False

T/F: The inspector is required to wear appropriate safety gear/apparel while performing the electrical inspection.

False
True

Section 3.8. Fireplace

Enlarge

Fireplaces and chimneys are difficult areas for home inspectors to assess, as it is awkward, if not impossible, to determine their true condition, especially the critical area inside the chimney flue.

3.8. Fireplace

I. The inspector shall inspect:

A. readily accessible and visible portions of the fireplaces and chimneys;
B. lintels above fireplace openings;
C. damper doors by opening and closing them, if readily accessible and manually operable; and
D. cleanout doors and frames.

II. The inspector shall describe:

A. the type of fireplace.

III. The inspector shall report as in need of correction:

A. evidence of joint separation, damage or deterioration of the hearth, hearth extension or chambers;
B. manually operated dampers that did not open and close;

C. the lack of a smoke detector in the same room as the fireplace;
D. the lack of a carbon-monoxide detector in the same room as the fireplace; and
E. cleanouts not made of metal, pre-cast cement, or other non-combustible material.

Most home inspectors try to evaluate a fireplace below the damper. In many cases, the damper is not operable or has been fixed (or stuck) in position. Issues that the inspector should be sure to note are those of obvious, visible problems with the firebrick in the hearth and fire back.

The hearth extension should be evaluated with reference to the size of the fireplace aperture and elevation. Any combustible materials should conform to required clearances.

Further evaluation of the fireplace and chimney is best left to a licensed sweep or someone who has received specialist training in this area.

A chimney in poor condition has the potential to become a serious fire hazard and may also allow harmful gases to seep into the home. Externally, the chimney should be evaluated for any separation from the main structure, as well as for signs of spalling brickwork, failing mortar, improper flashing, and significant leaning. Some inspectors recommend that a rain cap be fitted to prolong the chimney's life.

IV. The inspector is not required to:

A. inspect the flue or vent system.
B. inspect the interior of chimneys or flues, fire doors or screens, seals or gaskets, or mantels.
C. determine the need for a chimney sweep.
D. operate gas fireplace inserts.
E. light pilot flames.
F. determine the appropriateness of any installation.
G. inspect automatic fuel-fed devices.
H. inspect combustion and/or make-up air devices.
I. inspect heat-distribution assists, whether gravity-controlled or fan-assisted.
J. ignite or extinguish fires.
K. determine the adequacy of drafts or draft characteristics.

L. move fireplace inserts, stoves or firebox contents.
M. perform a smoke test.
N. dismantle or remove any component.
O. perform a National Fire Protection Association (NFPA)-style inspection.
P. perform a Phase I fireplace and chimney inspection.

As stated above, the inspector is not able (without specialist equipment) to fully evaluate the interior of the flue, nor is s/he required to evaluate screens, doors or other decorative features. Under no circumstances should an inspector light or attempt to light any fireplace, whether it's a solid-fuel burning type, electric or gas mantle. By the same token, if a fire is blazing in the firebox during an inspection, then the fireplace is not accessible to be inspected.

Determining the overall safety and efficiency of the fireplace is beyond the scope of this SOP (and most home inspections). If it is known that a client intends to use a fireplace, recommend that it be fully evaluated by a qualified professional.

Quiz #10: Fireplace

Which of the following types of fireplaces should be operated by the inspector?

all types
coal fires
wood fires
gas mantles
none

T/F: The inspector should evaluate the operation of the damper.

True
False

T/F: Inspectors are not required to inspect hearth extensions.

True
False

T/F: Combustible materials located close to the fireplace should be noted in the report.

True
False

T/F: The inspector is required to report a cracked lintel above the fireplace.

False
True

T/F: Doors and screens in the fireplace should be evaluated for toughened or tempered glass.

True
False

Section 3.9. Attic, Insulation & Ventilation

Enlarge

Any inspection of the attic and insulation is inherently tied to other systems, such as the roof framing, the chimney, and the electrical system. The inspector should enter the attic space only if it is safe to do so. A lot of unfinished attics have no flooring, and many inspectors have, at some time, slipped and damaged a ceiling. Take InterNACHI's Safe Practices for the Home Inspector course.

3.9. Attic, Insulation & Ventilation

I. The inspector shall inspect:

A. insulation in unfinished spaces, including attics, crawlspaces and foundation areas;
B. ventilation of unfinished spaces, including attics, crawlspaces and foundation areas; and
C. mechanical exhaust systems in the kitchen, bathrooms and laundry area.

II. The inspector shall describe:

A. the type of insulation observed; and
B. the approximate average depth of insulation observed at the unfinished attic floor area or roof structure.

III. The inspector shall report as in need of correction:

A. the general absence of insulation or ventilation in unfinished spaces.

Generally, one of the few areas in a home where insulation can be inspected is in an unfinished attic. Most computerized reporting programs include fields for identifying insulation type and R-values; however, in many cases, the insulation has been installed in such a way that the manufacturer's intended R-value has been corrupted. Any signs of damp insulation should be reported, as these may indicate leaks into the attic area from the roof covering, or problems with the ventilation or vapor retarders.

Ventilation is also a critical issue for attics. A poorly vented attic can cause serious moisture problems and may also significantly reduce the lifespan of the roof-covering materials.

Mechanical venting systems, such as whole-house fans and turbine vents, need to be inspected for proper installation and operation.

All homes should be insulated to reduce heating costs and/or maintain a comfortable indoor temperature in warmer regions. Any home with little or no visible insulation should be reported, as it will likely be very expensive to heat or cool the home (or both).

An important aspect of the attic inspection is evaluating the condition of the roof sheathing, the underside of flashed areas, and the rafters and trusses for signs of cracking and improper modification (wherever visible). Signs of damp in the sheathing, for example, could indicate a failure of the roof covering, flashing or ventilation system.

IV. The inspector is not required to:

A. enter the attic or any unfinished spaces that are not readily accessible, or where entry could cause damage or, in the inspector's opinion, pose a safety hazard.
B. move, touch or disturb insulation.
C. move, touch or disturb vapor retarders.
D. break or otherwise damage the surface finish or weather seal on or around access panels or covers.

E. identify the composition or R-value of insulation material.
F. activate thermostatically operated fans.
G. determine the types of materials used in insulation or wrapping of pipes, ducts, jackets, boilers or wiring.
H. determine the adequacy of ventilation.

Whether by accident or design, many attic spaces are not accessible for inspection. For example, in finished attics, there may be areas where there is no access at all. These should be reported as not accessible for visible inspection.

There may also be situations when, despite the presence of hatches and access panels, the inspector will not able to proceed with his inspection, such as when the attic is full of stored items, panels are decorated over, the access is too small for the inspector to get through, or the area has no available flooring. The important issue here is to report how the area was inspected and what the limitations were.

The inspector is not required to remove insulation or insulation components to evaluate systems, as these are considered fixed materials. The insulation properties (material type and R-value) cannot always be accurately determined.

Quiz #11: Attic, Insulation & Ventilation

T/F: The inspector is required to enter all attic spaces.

False
True

T/F: The inspector should calculate the flow rate of attic ventilation.

False
true

T/F: Inspectors are not required to remove attic insulation to examine any interior roof components.

True
False

T/F: Turbine roof vents are considered cosmetic features only.

False
True

T/F: The material and R-value of insulation must be reported.

False
True

T/F: The inspector must remove all access panels to attic areas.

True
False

T/F: The lack of continuity of vapor retarders need not be reported.

True
False

T/F: If the inspector cannot gain access to the attic, s/he needs to explain such limitations in the report.

False
True

T/F: Any visibly cracked rafters or modified trusses should be reported.

False
True

T/F: If requested, the inspector is required to advise the homeowner of the attic's potential for being converted into a living space.

True
False

Section 3.10. Doors, Windows & Interior

Enlarge

The interior can sometimes be under-inspected, as much of it is decorative in nature and, as such, falls outside these Standards. However, there are several areas that the inspector must fully evaluate.

3.10. Doors, Windows & Interior

I. The inspector shall inspect:

A. a representative number of doors and windows by opening and closing them;
B. floors, walls and ceilings;
C. stairs, steps, landings, stairways and ramps;
D. railings, guards and handrails; and
E. garage vehicle doors and the operation of garage vehicle door openers, using normal operating controls.

II. The inspector shall describe:

A. a garage vehicle door as manually-operated or installed with a garage door opener.

III. The inspector shall report as in need of correction:

A. improper spacing between intermediate balusters, spindles and rails for steps, stairways, guards and railings;
B. photo-electric safety sensors that did not operate properly; and
C. any windows that were obviously fogged or displayed other evidence of broken seals.

Doors and windows that stick or fail to operate smoothly may indicate settlement in the structure or poor installation of components.

Likewise, the inspector should take a good look at all floor-to-wall, wall-to-wall, and wall-to-ceiling joints, as cracking or separation can indicate underlying structural problems. Take InterNACHI's Structural Issues for Home Inspectors course.

As is the case with the exterior, interior stairs, steps and railings should also be fully evaluated for uneven treads, trip hazards, missing handrails, and any deficiencies in the balustrades or lighting.

Automatic garage doors can be problematic to inspect, and many inspectors have found themselves buying the homeowner new doors or openers as a result of improper inspection and operation.

Automatic safety systems have been mandated on garage doors for more than 10 years due to injuries, particularly to children. As this is a safety concern, the doors should be evaluated for proper automatic reversing, and photo-electric eyes should be assessed for proper operation and installation, according to the manufacturer's instructions.

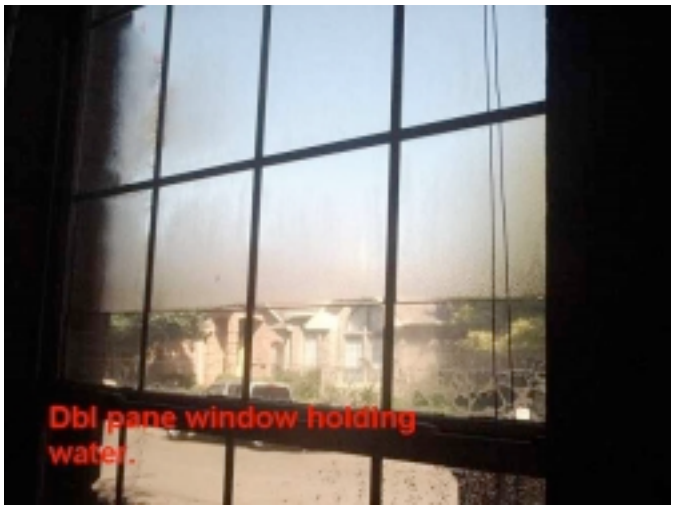
Double-glazed or "thermo-seal" windows should be visibly inspected, and any signs of fogging or other moisture penetration should be reported.

IV. The inspector is not required to:

A. inspect paint, wallpaper, window treatments or finish treatments.
B. inspect floor coverings or carpeting.
C. inspect central vacuum systems.
D. inspect for safety glazing.
E. inspect security systems or components.
F. evaluate the fastening of islands, countertops, cabinets, sink tops or fixtures.
G. move furniture, stored items, or any coverings, such as carpets or rugs, in order to inspect the concealed floor structure.
H. move suspended-ceiling tiles.
I. inspect or move any household appliances.
J. inspect or operate equipment housed in the garage, except as otherwise noted.
K. verify or certify the proper operation of any pressure-activated auto-reverse or related safety feature of a garage door.
L. operate or evaluate any security bar release and opening mechanisms, whether interior or exterior, including their compliance with local, state or federal standards.
M. operate any system, appliance or component that requires the use of special keys, codes, combinations or devices.
N. operate or evaluate self-cleaning oven cycles, tilt guards/latches, or signal lights.
O. inspect microwave ovens or test leakage from microwave ovens.
P. operate or examine any sauna, steam-generating equipment, kiln, toaster, ice maker, coffee maker, can opener, bread warmer, blender, instant hot-water dispenser, or other small, ancillary appliances or devices.
Q. inspect elevators.
R. inspect remote controls.
S. inspect appliances.
T. inspect items not permanently installed.
U. discover firewall compromises.
V. inspect pools, spas or fountains.
W. determine the adequacy of whirlpool or spa jets, water force, or bubble effects.
X. determine the structural integrity or leakage of pools or spas.

Most of the areas here that the inspector is not required to inspect have been covered in other lessons, but it is worth re-stating that:

- decorative features are not inspected;
- appliances and other non-fixed elements are not required to be inspected;



- pools and spas are specifically excluded;
- alarm and other low-voltage systems fall outside these Standards; and
- inspectors are required to perform only a visual inspection of the home and its systems.

Elevators and other personal lifting equipment are normally required to be inspected annually by a specialist contractor or a state-licensed engineer.

Also, regarding safety glass, many inspectors may try to evaluate its presence in high-traffic areas, but it is often not properly marked and, therefore, difficult to report.

Always note the presence of security bars on windows and inspect them for easy manual release from inside the building, especially those covering bedroom windows, as their improper operation or installation may present a danger to anyone trapped inside, should a fire break out.

Remember: These Standards represent only the required minimum, although many inspectors invest a lot of additional time, effort and money in obtaining further education to allow them to far exceed these Standards.

Quiz #12: Doors, Windows & Interior

The inspector is required to evaluate _____ doors and windows.

all
no
all first-floor
a representative number of

T/F: The inspector should test all photo-electric eyes on all garage doors.

True
False

T/F: Damaged locks and deadbolts should be reported.

True
False

T/F: Double-glazed windows that appear to have failed seals should be reported.

False
True

T/F: The inspector is required to remove a representative number of drop-ceiling tiles to check for possible leaks from above.

True
False

T/F: Interior handrails and balustrades are considered decorative features only.

False
True

_____ should always be inspected.

Ceilings
Alarm systems
Carpets

The inspector is not required to evaluate _____.

garage doors
staircases
central vacuum systems

T/F: Inspectors are required to inspect all stoves and ovens.

False
True

T/F: The inspection of pools and spas falls outside these Standards of Practice.

False
True

These Standards of Practice represent the _____ level of inspection.

minimum
maximum

4. Glossary of Terms

- **accessible:** In the opinion of the inspector, can be approached or entered safely, without difficulty, fear or danger.
- **activate:** To turn on, supply power, or enable systems, equipment or devices to become active by normal operating controls. Examples include turning on the gas or water supply valves to the fixtures and appliances, and activating electrical breakers or fuses.
- **adversely affect:** To constitute, or potentially constitute, a negative or destructive impact.
- **alarm system:** Warning devices, installed or freestanding, including, but not limited to: carbon-monoxide detectors, flue gas and other spillage detectors, security equipment, ejector pumps, and smoke alarms.
- **appliance:** A household device operated by the use of electricity or gas. Not included in this definition are components covered under central heating, central cooling or plumbing.
- **architectural service:** Any practice involving the art and science of building design for construction of any structure or grouping of structures, and the use of space within and surrounding the structures or the design, design development, preparation of construction contract documents, and administration of the construction contract.
- **component:** A permanently installed or attached fixture, element or part of a system.
- **condition:** The visible and conspicuous state of being of an object.
- **correction:** Something that is substituted or proposed for what is incorrect, deficient, unsafe, or a defect.
- **crawlspace:** The area within the confines of the foundation and between the ground and the underside of the lowest floor's structural component.
- **decorative:** Ornamental; not required for the operation of essential systems or components of a home.
- **describe:** To report in writing a system or component by its type or other observed characteristics in order to distinguish it from other components used for the same purpose.
- **determine:** To arrive at an opinion or conclusion pursuant to examination.
- **dismantle:** To open, take apart or remove any component, device or piece that would not typically be opened, taken apart or removed by an ordinary occupant.
- **engineering service:** Any professional service or creative work requiring engineering education, training and experience, and the application of special knowledge of the mathematical, physical and engineering sciences to such professional service or creative work as consultation, investigation, evaluation,

planning, design and supervision of construction for the purpose of assuring compliance with the specifications and design, in conjunction with structures, buildings, machines, equipment, works and/or processes.

- **enter:** To go into an area to observe visible components.
- **evaluate:** To assess the systems, structures and/or components of a property.
- **examine:** To visually look (see **inspect**).
- **foundation:** The base upon which the structure or wall rests, usually masonry, concrete or stone, and generally partially underground.
- **function:** The action for which an item, component or system is specially fitted or used, or for which an item, component or system exists; to be in action or perform a task.
- **functional:** Performing, or able to perform, a function.
- **general home inspection:** The process by which an inspector visually examines the readily accessible systems and components of a home and operates those systems and components utilizing these Standards of Practice as a guideline.
- **home inspection:** See **general home inspection**.
- **household appliances:** Kitchen and laundry appliances, room air conditioners, and similar appliances.
- **identify:** To notice and report.
- **indication** (noun form): That which serves to point out, show or make known the present existence of something under certain conditions.
- **inspect:** To examine readily accessible systems and components safely, using normal operating controls, and accessing readily accessible areas, in accordance with these Standards of Practice.
- **inspected property:** The readily accessible areas of the buildings, site, items, components and systems included in the inspection.
- **inspection report:** A written communication (possibly including images) of any material defects observed during the inspection.
- **inspector:** One who performs a real estate inspection.
- **installed:** Attached or connected such that the installed item requires a tool for removal.
- **material defect:** A specific issue with a system or component of a residential property that may have a significant, adverse impact on the value of the property, or that poses an unreasonable risk to people. The fact that a system or component is near, at or beyond the end of its normal useful life is not, in itself, a material defect.
- **normal operating controls:** Describes the method by which certain devices (such as thermostats) can be operated by ordinary occupants, as they require no specialized skill or knowledge.
- **observe:** To visually notice.
- **operate:** To cause systems to function or turn on with normal operating controls.
- **readily accessible:** A system or component that, in the judgment of the inspector, is capable of being safely observed without the removal of obstacles,

detachment or disengagement of connecting or securing devices, or other unsafe or difficult procedures to gain access.

- **recreational facilities:** Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment and athletic facilities.
- **report:** (verb form) To express, communicate or provide information in writing; give a written account of. (See also **inspection report**.)
- **representative number:** A number sufficient to serve as a typical or characteristic example of the item(s) inspected.
- **residential property:** Four or fewer residential units.
- **residential unit:** A home; a single unit providing complete and independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.
- **safety glazing:** Tempered glass, laminated glass, or rigid plastic.
- **shut down:** Turned off, unplugged, inactive, not in service, not operational, etc.
- **structural component:** A component that supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
- **system:** An assembly of various components which function as a whole.
- **technically exhaustive:** A comprehensive and detailed examination beyond the scope of a real estate home inspection that would involve or include, but would not be limited to: dismantling, specialized knowledge or training, special equipment, measurements, calculations, testing, research, analysis, or other means.
- **unsafe:** In the inspector's opinion, a condition of an area, system, component or procedure that is judged to be a significant risk of injury during normal, day-to-day use. The risk may be due to damage, deterioration, improper installation, or a change in accepted residential construction standards.
- **verify:** To confirm or substantiate.

These terms are found within the Standards of Practice. Visit InterNACHI's full Glossary.


YOUR STANDARD HOME INSPECTION: WHAT WE CHECK
© InterNACHI 2011
1 interior & exterior walls, windows & doors
2 HVAC
3 basement/crawlspace
4 fireplace
5 roof & attic
6 electrical
7 plumbing

Code of Ethics

The International Association of Certified Home Inspectors (InterNACHI) promotes a high standard of professionalism, business ethics and inspection procedures. InterNACHI members subscribe to the following Code of Ethics in the course of their business.

I. Duty to the Public

1. The InterNACHI member shall abide by the Code of Ethics and substantially follow the InterNACHI Standards of Practice.
2. The InterNACHI member shall not engage in any practices that could be damaging to the public or bring discredit to the home inspection industry.
3. The InterNACHI member shall be fair, honest, impartial, and act in good faith in dealing with the public.
4. The InterNACHI member shall not discriminate in any business activities on the basis of race, color, religion, sex, national origin, familial status, sexual orientation or handicap, and shall comply with all federal, state and local laws concerning discrimination.
5. The InterNACHI member shall be truthful regarding his/her services and qualifications.
6. The InterNACHI member shall not:
    a. have any disclosed or undisclosed conflict of interest with the client;
    b. accept or offer any disclosed or undisclosed commissions, rebates, profits, or other benefit from real estate agents, brokers, or any third parties having financial interest in the sale of the property; or
    c. offer or provide any disclosed or undisclosed financial compensation directly or indirectly to any real estate agent, real estate broker, or real estate company for referrals or for inclusion on lists of preferred and/or affiliated inspectors or inspection companies.

7. The InterNACHI member shall not release any information about an inspection or the client to a third party unless it may affect the safety of others, violates a law or statute, or all of the following three conditions are met:

    a. the client has been made explicitly aware of what information will be released, to whom, and for what purpose; and
    b. the client has provided explicit, prior written consent for the release of his/her information.

8. The InterNACHI member shall always act in the interests of the client, unless doing so violates a law, statute or this Code of Ethics.

9. The InterNACHI member shall use a written contract that specifies the services to be performed, limitations of services, and fees.

10. The InterNACHI member shall comply with all government rules and licensing requirements of the jurisdiction where s/he conducts business.

11. The InterNACHI member shall not perform or offer to perform, for an additional fee, any repairs or associated services to the structure for which the member or member's company has prepared a home inspection report for a period of 12 months. This provision shall not include services to components and/or systems that are not included in the InterNACHI Standards of Practice.

II. Duty to Continue Education

1. The InterNACHI member shall comply with InterNACHI's current Continuing Education requirements.
2. The InterNACHI member shall pass InterNACHI's Online Inspector Exam once every three years.

III. Duty to the Profession and InterNACHI

1. The InterNACHI member shall strive to improve the home inspection industry by sharing his/her lessons and/or experiences for the benefit of all. This does not preclude the member from copyrighting or marketing his/her expertise to other Inspectors or the public in any manner permitted by law.
2. The InterNACHI member shall assist the InterNACHI leadership in disseminating and publicizing the benefits of InterNACHI membership.
3. The InterNACHI member shall not engage in any act or practice that could be deemed damaging, seditious or destructive to InterNACHI, fellow InterNACHI members, InterNACHI employees, leadership or directors. Accusations of a member acting or deemed in violation of such rules shall trigger a review by the Ethics committee for possible sanctions and/or expulsion from InterNACHI.

4. The InterNACHI member shall abide by InterNACHI's current membership requirements.
5. The InterNACHI member shall abide by InterNACHI's current message board rules.

Members of other associations are welcome to join InterNACHI, but a requirement of membership is that InterNACHI must be given equal prominence in their marketing materials (brochures and websites) compared to other associations of membership.

Quiz #13: Ethics

The InterNACHI inspector should _____ follow the SOP and COE.

substantially
without exception

T/F: The InterNACHI inspector shall discriminate on the basis of race, color, religion, sex, national origin, familial status, sexual orientation or handicap.

True
False

T/F: The InterNACHI inspector is required to be truthful about his or her qualifications.

False
True

T/F: The InterNACHI inspector shall not accept any disclosed or undisclosed commissions, rebates, profits or other benefit related to a property to be inspected.

True
False

The InterNACHI inspector is not allowed to offer to perform repair services on an inspected home for a period of _____ months from the date of inspection.

six
12
three

Thank you for taking this course.

Dear Student,

You have now completed this course.

Before progressing to the Final Exam, please make sure that you've clicked on every slide and completed each quiz.

Remember that you can re-take this course and its corresponding final exam again and again, without limit.

Also, be sure to check out our course textbooks and downloadable PDFs at InspectorOutlet.com.

If you have any questions, please contact Course Instructor/Director of Education Ben Gromicko at ben@internachi.org.