

18. International Phase I Standards of Practice for Inspecting Fireplaces and Chimneys

18.1 About These Standards for Inspecting Fireplaces and Chimneys Although this Standard applies to both commercial and residential fireplaces and chimneys, it exceeds the requirements of both InterNACHI-CCPIA's *Commercial* and *Residential Standards of Practices*. The inspection shall include examination of readily accessible and visible portions of solid-fuel-burning, low-heat fireplaces and chimneys.

18.2 Purpose

The purpose of this document is to establish international standards for the inspection of fireplaces and chimneys. This document also provides universal fireplace and chimney inspection reporting language.

18.3 Definitions

18.3.1 Fireplace and Chimney-Specific Definitions

- **accessible:** in the opinion of the inspector, can be approached or entered safely without difficulty, fear or danger.
- **chimney:** a structure containing one or more flues for removing gases to the outside atmosphere.
- **clean-out:** an opening in a chimney that provides access to the flue for cleaning purposes.
- **clearance:** the minimum distance through air measured between the surface of something heat-producing and the surface of something combustible.
- **connector:** the pipe that connects a fuel-burning appliance to a chimney.
- **crown:** the sloped top of a masonry chimney designed to shed water away from the flue; also called a **splay** or **wash**.
- **damper:** a manually operated plate for controlling draft in a flue.
- **fireplace lintel:** a horizontal, non-combustible member that spans the top of the fireplace opening.
- **flue:** a passage through which gases move from the fire chamber to the outer air.
- **hearth:** the floor within a fireplace.
- **hearth extension:** non-combustible material in front of and at the sides of a fireplace opening.
- **mantel:** a shelf or horizontal ornament above a fireplace opening.
- **Phase I:** a type of fireplace and chimney inspection that exceeds the standards required by a traditional home inspection.
- **single-wall metal chimney:** a field-constructed chimney not permitted in one- and two-family dwellings.
- **solid fuel:** wood, coal, pellets, and other materials that can be burned for heat.
- **thimble:** the tube or lining through a wall that a connector passes through to enter a flue or that a flue passes through to exit a roof.
- **wall protector:** non-combustible shield between a wall and anything heat-producing for the purpose of reducing the required clearance.

18.3.2 Terminology Commonly Found in Commercial Property Inspection Reports

Visit <https://www.nachi.org/comsop.htm#101>.

18.4 Goal of the Inspection

The goal of the inspection is to provide observations which may lead to the decrease of hazardous conditions associated with fireplaces and chimneys.

18.5 Limitations

The inspection is limited to readily accessible and visible portions of the fireplace and chimney. The inspection should not be considered all-inclusive or technically exhaustive.

This Standard does not require the inspector to:

- inspect appliances, wall furnaces, stoves, water heaters, incinerators, mechanical draft systems, draft regulators, catalytic converters, pollution-control devices, heat-reclamation devices, spark arrestors, induced-draft chimneys, fire-stopping, or for condensation issues.
- determine fire rating, adequacy of combustion air, status of product listing, compliance with manufacturers' instructions, proper clearances, proper load paths, combustibility, proper placement of flue size changes, proper thimble installation, or repair history.
- remove or inspect fireplace inserts, stoves or accessories.
- determine the need for fire-stopping, chimney enclosures, hearth thickness mitigation, or seismic reinforcing.
- test smoke detectors or carbon-monoxide detectors.
- perform video scans, smoke tests, flue-gas measurements, or engineering calculations.

These Standards do not apply to the inspection of mobile homes.

18.6 Optional Add-On Inspection Service

Although InterNACHI-CCPIA's *Standards of Practice for Inspecting Commercial Properties* and InterNACHI's *Standards of Practice for Performing a General Home Inspection* do not require the inspector to perform a Phase I Fireplace and Chimney Inspection, it may be offered in conjunction with a complete commercial or residential property inspection, or as a separate, stand-alone inspection service.

18.7 Inspection Frequency

The inspector should advise his/her client that all fireplaces and chimneys should be inspected prior to the client's first use, and not less than annually.

18.8 Visual Inspection

18.8.1 Initial Inspection

18.8.1.1 The inspector should inspect for solid fuel-burning appliances or fireplaces improperly located where gasoline or other flammable vapors or gases are present.

18.8.1.2 The inspector should inspect for unused openings in chimneys and flues.

18.8.1.3 The inspector should inspect for lack of a smoke detector. A smoke detector should be installed in the same room as the fireplace.

18.8.1.4 The inspector should inspect for lack of a carbon-monoxide detector. A carbon-monoxide detector should be installed in the same room as the fireplace.

18.8.2 Fireplaces

18.8.2.1 The inspector should inspect for combustible lintels above fireplace openings.

18.8.2.2 The inspector should inspect for combustible material within 6 inches above fireplace openings that projects out 1½ inches or less from the face of the fireplace.

18.8.2.3 The inspector should inspect for combustible material within 12 inches above fireplace openings that projects out more than 1½ inches from the face of the fireplace.

18.8.2.4 The inspector should inspect for throats or dampers located less than 8 inches above fireplace openings.

18.8.2.5 The inspector should inspect for manually operated dampers that do not operate or close properly.

18.8.2.6 The inspector should inspect for dampers and damper components that have rust or corrosion.

18.8.3 Hearths, Hearth Extensions and Fire Chambers

18.8.3.1 The inspector should inspect for hearth extensions that have a thickness of less than 2 inches.

18.8.3.2 The inspector should inspect for hearth extensions that are less than 16 inches in front of or less than 8 inches beyond each side of fireplace openings (6 square feet or less).

18.8.3.3 The inspector should inspect for hearth extensions that are less than 20 inches in front of or less than 12 inches beyond each side of fireplace openings (greater than 6 square feet).

18.8.3.4 The inspector should inspect the hearth, hearth extension and chambers for joint separation, damage or deterioration.

18.8.4 Single-Wall Metal Chimneys

18.8.4.1 Initial Single-Wall Metal Chimney Inspection

18.8.4.1.1 The inspector should inspect for single-wall metal chimneys in one- and two-family dwellings. Single-wall metal chimneys should not be used in one- and two-family dwellings.

18.8.4.1.2 The inspector should inspect for wall protectors (heat shields) with less than 1-inch air gaps.

18.8.4.2 Interior Single-Wall Metal Chimneys

18.8.4.2.1 The inspector should inspect for exposed interior single-wall metal chimneys that are not continuously enclosed where they extend through closets, storage areas, or habitable spaces, or where the surface of a chimney could come into contact with people or combustible materials.

18.8.4.2.2 The inspector should inspect for interior single-wall metal chimneys for distances less than 18 inches from wood frame walls or combustible materials.

18.8.4.2.3 The inspector should inspect for interior single-wall metal chimneys 18 inches or under in diameter that are less than 2 inches from non-combustible walls.

18.8.4.2.4 The inspector should inspect for interior single-wall metal chimneys over 18 inches in diameter that are less than 4 inches from non-combustible walls.

18.8.4.3 Exterior Single-Wall Metal Chimneys

18.8.4.3.1 The inspector should inspect for distances between exterior-mounted, single-wall metal chimneys that are less than 2 feet from doors, windows or walkways.

18.8.4.3.2 The inspector should inspect for distances between exterior-mounted, single-wall metal chimneys that are less than 18 inches from wood-frame walls or combustible materials.

18.8.4.3.3 The inspector should inspect for distances between exterior-mounted, single-wall metal chimneys 18 inches or under in diameter that are less than 2 inches from non-combustible walls.

18.8.4.3.4 The inspector should inspect for distances between exterior-mounted, single-wall metal chimneys over 18 inches in diameter that are less than 4 inches from non-combustible walls.

18.8.5 Chimney Outlets

18.8.5.1 The inspector should inspect for missing ventilating thimbles where chimneys pass through combustible roofs.

18.8.5.2 The inspector should inspect for chimneys that terminate less than 3 feet above the highest point where they pass through the roof surface.

18.8.5.3 The inspector should inspect for chimneys that terminate less than 2 feet above any portion of a building (ridge, wall or parapet) within 10 feet.

18.8.5.4 The inspector should inspect for chimneys that terminate less than 3 feet from adjacent buildings or building openings.

18.8.5.5 The inspector should inspect for chimneys that terminate less than 10 feet above grade or walkways.

18.8.5.6 The inspector should inspect for chimney outlets that jeopardize people, overheat combustible structures, or that might cause flue gases to enter nearby building openings.

18.8.5.7 The inspector should inspect the crowns of masonry chimneys for slopes that direct water into flues.

18.8.6 Flues and Liners

18.8.6.1 The inspector should inspect for galvanized flues and connectors. Flues and connectors should not be galvanized.

18.8.6.2 The inspector should inspect readily accessible and visible flues for rust or corrosion.

18.8.6.3 The inspector should inspect for masonry chimneys that are not lined. All masonry chimneys should be lined.

18.8.6.4 The inspector should inspect for linings that don't extend the entire length of the chimney to a level of 2 inches or more above the crown, splay or wash.

18.8.6.5 The inspector should inspect for liners that are visibly softened, cracked, deteriorated or damaged.

18.8.6.6 The inspector should inspect readily accessible and visible flues and liners for excessive accumulation of creosote, soot, or other combustible material.

18.8.6.7 The inspector should inspect for flues that have two or more openings at the same level.

18.8.6.8 The inspector should inspect for venting into the space around and between liners. The remaining space surrounding a chimney liner should not be used as a vent.

Table 18.8.7.1 Maximum Fireplace Opening for Round Flues

Round Flues	Maximum Fireplace Opening
4 inches in diameter	150 square inches
5 inches in diameter	235 square inches
6 inches in diameter	339 square inches
7 inches in diameter	461 square inches
8 inches in diameter	603 square inches
9 inches in diameter	763 square inches
10 inches in diameter	942 square inches
11 inches in diameter	1,140 square inches
12 inches in diameter	1,357 square inches
13 inches in diameter	1,592 square inches
14 inches in diameter	1,847 square inches
15 inches in diameter	2,120 square inches
16 inches in diameter	2,412 square inches
17 inches in diameter	2,723 square inches
18 inches in diameter	3,053 square inches
19 inches in diameter	3,402 square inches
20 inches in diameter	3,769 square inches
21 inches in diameter	4,156 square inches
22 inches in diameter	4,561 square inches
23 inches in diameter	4,985 square inches
24 inches in diameter	5,428 square inches
25 inches in diameter	5,890 square inches
26 inches in diameter	6,371 square inches
27 inches in diameter	6,870 square inches
28 inches in diameter	7,389 square inches
29 inches in diameter	7,926 square inches
30 inches in diameter	8,482 square inches

Table 18.8.7.2 Maximum Fireplace Opening, in Square Inches, for Rectangular Flues

Find the maximum size of the fireplace opening by matching the flue dimensions to the left column and top row of chart.

	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	25"	26"	27"	28"
4"	240	280	256	288	320	352	384	416	448	480	512	544	576	608	640	672	704	736	768	800	832	864	896
5"	300	350	400	450	400	440	480	520	560	600	640	680	720	760	800	840	880	920	960	1000	1040	1080	1120
6"	360	420	480	540	600	660	576	624	672	720	768	816	864	912	960	1008	1056	1104	1152	1200	1248	1296	1344
7"	420	490	560	630	700	770	840	910	784	840	896	952	1008	1064	1120	1176	1232	1288	1344	1400	1456	1512	1568
8"	480	560	640	720	800	880	960	1040	1120	1200	1024	1088	1152	1216	1280	1344	1408	1472	1536	1600	1664	1728	1792
9"	540	630	720	810	900	990	1080	1170	1260	1350	1440	1530	1296	1368	1440	1512	1584	1656	1728	1800	1872	1944	2016
10"	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1700	1900	1600	1680	1760	1840	1920	2000	2080	2160	2240
11"	660	770	880	990	1100	1210	1320	1430	1540	1650	1760	1870	1980	2090	2200	2310	1936	2024	2112	2200	2288	2376	2464
12"	576	840	960	1080	1200	1320	1440	1560	1680	1800	1920	2040	2160	2280	2400	2520	2640	2760	2304	2400	2496	2592	2688
13"	624	910	1040	1170	1300	1430	1560	1690	1820	1950	2080	2210	2340	2470	2600	2730	2860	2990	3120	3250	2704	2808	2912
14"	672	784	1120	1260	1400	1540	1680	1820	1960	2100	2240	2380	2520	2660	2800	2940	3080	3220	3360	3500	3640	3780	3136
15"	720	840	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050	4200
16"	768	896	1024	1440	1600	1760	1920	2080	2240	2400	2560	2720	2880	3040	3200	3360	3520	3680	3840	4000	4160	4320	4480
17"	816	952	1088	1530	1700	1870	2040	2210	2380	2550	2720	2890	3060	3230	3400	3570	3740	3910	4080	4250	4420	4590	4760
18"	864	1008	1152	1296	1800	1980	2160	2340	2520	2700	2880	3060	3240	3420	3600	3780	3960	4140	4320	4500	4680	4860	5040
19"	912	1064	1216	1368	1900	2090	2280	2470	2660	2850	3040	3230	3420	3610	3800	3990	4180	4370	4560	4750	4940	5130	5320
20"	960	1120	1280	1440	1600	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600
21"	1008	1176	1344	1512	1680	2310	2520	2730	2940	3150	3360	3570	3780	3990	4200	4410	4620	4830	5040	5250	5460	5670	5880
22"	1056	1232	1408	1584	1760	1936	2640	2860	3080	3300	3520	3740	3960	4180	4400	4620	4840	5060	5280	5500	5720	5940	6160
23"	1104	1288	1472	1656	1840	2024	2760	2990	3220	3450	3680	3910	4140	4370	4600	4830	5060	5290	5520	5750	5980	6210	6440
24"	1152	1344	1536	1728	1920	2112	2304	3120	3360	3600	3840	4080	4320	4560	4800	5040	5280	5520	5760	6000	6240	6480	6720
25"	1200	1400	1600	1800	2000	2200	2400	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000
26"	1248	1456	1664	2080	2288	2496	2496	2704	3640	3900	4160	4420	4680	4940	5200	5460	5720	5980	6240	6500	6760	7020	7280
27"	1296	1512	1728	1944	2160	2376	2592	2808	3780	4050	4320	4590	4860	5130	5400	5670	5940	6210	6480	6750	7020	7290	7560
28"	1344	1568	1792	2016	2240	2464	2688	2912	3136	4200	4480	4760	5040	5320	5600	5880	6160	6440	6720	7000	7280	7560	7840
29"	1392	1624	1856	2088	2320	2552	2784	3016	3248	4350	4640	4930	5220	5510	5800	6090	6380	6670	6960	7250	7540	7830	8120
30"	1440	1680	1920	2160	2400	2640	2880	3120	3360	3600	4800	5100	5400	5700	6000	6300	6600	6900	7200	7500	7800	8100	8400

18.8.8 Connectors (Solid Wood-Burning Appliance to Chimney)

18.8.8.1 The inspector should inspect for connectors from solid fuel-burning appliances that have a rise to the chimney of less than ¼-inch per foot.

18.8.8.2 The inspector should inspect for connectors that are not as short or straight as practicable.

18.8.8.3 The inspector should inspect for connectors that are covered with insulation.

18.8.8.4 The inspector should inspect for connectors of natural-draft appliances connected to the positive pressure-side of a mechanical draft system.

18.8.8.5 The inspector should inspect for larger connectors entering a flue above smaller connectors.

18.8.9 Cleanouts

18.8.9.1 The inspector should inspect clean-outs for doors and frames that are not made of metal, pre-cast cement, or other non-combustible material.

18.8.9.2 The inspector should inspect combustible materials projecting beyond the faces of chimneys that are within 18 inches of clean-out openings.

18.8.9.3 The inspector should inspect for combustible materials stored within 18 inches of clean-out doors.

18.8.9.4 The inspector should inspect clean-out doors that are obstructed or do not close tightly.

18.8.9.5 The inspector should inspect the interior clean-out's lower edge for heights above the lowest accessible floor level that are less than 16 inches.

18.8.9.6 The inspector should inspect the exterior clean-out's lower edge for heights above grade that are less than 16 inches.

18.8.9.7 The inspector should inspect the bases of chimney flues for distances that are not between 6 and 12 inches below the bottom edges of their clean-out openings.

18.9 Sample Reporting Language

Phase I Fireplace and Chimney Inspection Report

Client: _____

Location of fireplace and chimney: _____

This inspection was performed in substantial compliance with InterNACHI's *Phase I Standards of Practice for Inspecting Fireplaces and Chimneys*. It exceeds what is required by InterNACHI-CCPIA's *ComSOP* and InterNACHI's *Residential Standards of Practice*. The inspection shall include examination of readily accessible and visible portions of solid fuel-burning, low-heat fireplaces and chimneys. The inspection is not all-inclusive or technically exhaustive. The goal of this inspection is to provide observations which may lead to the decrease of the hazards associated with fireplaces and chimneys.

___ The inspector noted solid fuel-burning appliances or fireplaces located where gasoline or other flammable vapors or gases were present.

___ The inspector noted unused openings in chimneys or flues.

___ The inspector noted missing smoke detectors. A smoke detector should be installed in the same room as the fireplace.

___ The inspector noted missing carbon-monoxide detectors. A carbon-monoxide detector should be installed in the same room as the fireplace.

___ The inspector noted a combustible lintel over the fireplace opening.

___ The inspector noted combustible material within 6 inches above the fireplace opening that projected out less than 1½ inches from the face of the fireplace.

___ The inspector noted combustible material within 12 inches above the fireplace opening that projected out more than 1½ inches from the face of the fireplace.

___ The inspector noted the throat or damper was located less than 8 inches above the fireplace opening.

___ The inspector noted that the manually operated damper did not operate or close properly.

___The inspector noted that the damper or damper components had rust or corrosion.

___The inspector noted that the hearth extension had a thickness of less than 2 inches.

___The inspector noted that the hearth extension was less than 16 inches in front of or less than 8 inches beyond each side of the opening (fireplace opening less than 6 square feet).

___The inspector noted that the hearth extension was less than 20 inches in front of or less than 12 inches beyond each side of the opening (fireplace openings 6 square feet or greater).

___The inspector noted hearths, hearth extensions or chambers that had joint separation, damage or deterioration.

___The inspector noted single-wall metal chimneys in one- or two-family dwellings. Single-wall metal chimneys should not be used in one- and two-family dwellings.

___The inspector noted wall protectors (heat shields) with less than 1-inch air gaps.

___The inspector noted an exposed interior single-wall metal chimney that was not continuously enclosed where it extended through closets, storage areas, or habitable spaces, or where the surface of the chimney could come into contact with combustible materials or people.

___The inspector noted an interior single-wall metal chimney less than 18 inches from a wood-frame wall or combustible material.

___The inspector noted an interior single-wall metal chimney 18 inches or under in diameter less than 2 inches from a non-combustible wall.

___The inspector noted an interior single-wall metal chimney over 18 inches in diameter less than 4 inches from a non-combustible wall.

___The inspector noted that the distance between an exterior-mounted, single-wall metal chimney was less than 2 feet from a door, window or walkway.

___The inspector noted that the distance between an exterior-mounted, single-wall metal chimney was less than 18 inches from a wood-frame wall or combustible material.

___The inspector noted that the distance between an exterior-mounted, single-wall metal chimney 18 inches or under in diameter was less than 2 inches from a non-combustible wall.

___The inspector noted that the distance between an exterior-mounted, single-wall metal chimney over 18 inches in diameter was less than 4 inches from a non-combustible wall.

___The inspector noted a missing ventilating thimble where a chimney passed through a combustible roof.

___The inspector noted a chimney that terminated less than 3 feet above the highest point where it passed through a roof surface.

___The inspector noted a chimney that terminated less than 2 feet above a portion of a building (ridge, wall or parapet) within 10 feet.

___The inspector noted a chimney that terminated less than 3 feet from an adjacent building or building opening.

___The inspector noted a chimney that terminated less than 10 feet above grade or a walkway.

___The inspector noted a chimney outlet that jeopardized people, overheated combustible structures, or that might cause flue gases to enter nearby building openings.

___The inspector noted the slope of a crown of a masonry chimney that directed water into the flue.

___The inspector noted galvanized flues or connectors. Flues and connectors should not be galvanized.

___The inspector noted a rusted or corroded flue.

___The inspector noted a masonry chimney that was not lined. All masonry chimneys should be lined.

___The inspector noted a lining that didn't extend the entire length of the chimney to a level of 2 inches or more above the crown, splay or wash.

___The inspector noted a liner that was visibly softened, cracked, deteriorated or damaged.

___The inspector noted a liner that had excessive accumulation of creosote, soot, or other combustible material.

___The inspector noted a flue that had two or more openings at the same level.

___The inspector noted an appliance venting into the space around and between liners. The remaining space surrounding a chimney liner should not be used as a vent.

___The inspector noted that the size of the flue was too small relative to the size of the fireplace opening. This relationship is the most important factor in achieving sufficient draft. A flue that is too small relative to the fireplace opening will be unable to lift and remove hazardous flue gases to the outside.

___The inspector noted a connector from a solid fuel-burning appliance that had a rise to the chimney of less than ¼-inch per foot.

___The inspector noted a connector that was not as short or straight as practicable.

___The inspector noted a connector that was covered with insulation.

___The inspector noted a connector of a natural-draft appliance connected to the positive pressure-side of a mechanical draft system.

___The inspector noted a larger connector entering the flue above a smaller connector.

___The inspector noted a clean-out door or frame that was not made of metal, pre-cast cement, or other non-combustible material.

___The inspector noted combustible materials projecting beyond the face of the chimney that were within 18 inches of a clean-out opening.

___The inspector noted combustible materials stored within 18 inches of a clean-out door.

___The inspector noted a clean-out door that was obstructed or did not close tightly.

___The inspector noted that the height of an interior clean-out's lower edge was less than 16 inches above the lowest accessible floor level.

___The inspector noted that the height of an exterior clean-out's lower edge was less than 16 inches above grade.

___The inspector noted that the base of a chimney flue was not between 6 and 12 inches below the bottom edge of its clean-out opening.

This inspection was performed by: _____

Signature: _____

Date: _____