

Chimney and Fireplace Inspection Report



1234 Inspection Way, City, CA 91406
Inspection prepared for: Mr. and Mrs. Client

Inspector: Greg Butler
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Disclosure

This report is the result of a general visual inspection of the condition of the chimney. It is only intended as a record of this inspection and it is not a statement of the worthiness or safety certification. No warranty of safety or function is to be implied since conditions of deterioration and use are beyond our control.

Chimney A

1. Chimney Location

Location: This chimney is located at the east side of the house.
Type: This chimney is constructed from masonry.

2. General Comments

2.1. The chimney is a lined masonry type, which is the most dependable, because the flue liner not only provides a smooth transition for the byproducts of combustion to be vented beyond the residence but provides an approved thermal barrier as well.

3. Chimney Flashing

3.1. The base flashing between the chimney and the roof are in acceptable condition.

4. Masonry Chimney

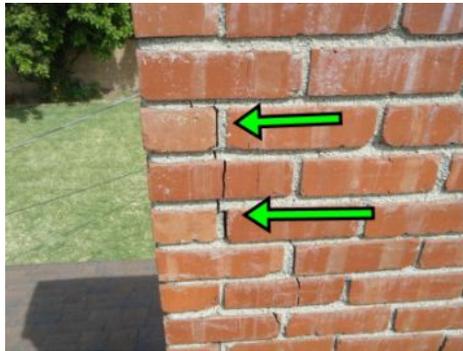
4.1. There are larger than typical cracks in the chimney bricks and grout joints. They can result from shrinkage, seismic activity, common settling, thermal extremes, moisture contamination, and the expansion and contraction associated with freezing and thawing.

4.2. This chimney may not meet basic drafting standards, which require a chimney to extend three feet above the roof line, and two feet above any point measured in a tenfoot radius. Proof that the fireplace was built by a professional contractor with permits is recommended, or have a specialist evaluate.

R1003.9 Termination. Chimneys shall extend at least 2 feet (610 mm) higher than any portion of a building within 10 feet (3048 mm), but shall not be less than 3 feet (914 mm) above the highest point where the chimney passes through the roof.



large cracks noted



large cracks



vertical cracking in brick



vertical cracking noted



vertical cracking noted



chimney is too short

5. Masonry Chimney Ash Dump

5.1. The ash dump door was functional when tested.

6. Masonry Chimney Straps

6.1. This chimney extends 5 feet or more above the roof line. The buyer may wish to add additional stability via straps or brace. Due to the type of chimney present, and considering the house is located in an active seismic zone, bracing is suggested as precautionary measure.

7. Masonry Chimney Crown

7.1. The chimney crown, which is designed to seal the chimney and shed rainwater, is cracked and damaged exposing the rebar. This should be repaired to reduce the possibility of further damage as a result of moisture penetration into this opening.



damaged crown



cracks noted in cap

8. Masonry Chimney Flue

8.1. The flue liner is missing within the upper 1/3 portion of the chimney. The location of this missing material is within the attic space and therefore, possess a real and present hazard. It is our suggestion that this condition be repaired prior to use.



missing flue liner

9. Masonry Chimney Spark Arrestor

9.1. A functional spark arrestor is in place on the chimney.

Fireplace A

We evaluate chimneys / fireplaces and their components in accordance with state or industry standards. There are a wide variety of chimneys, which represent an even wider variety of interrelated components that comprise them. However, there are three basic types, singlewalled metal, masonry, and prefabricated metal ones that are commonly referred to as factorybuilt ones. Singlewalled metal ones should not be confused with factorybuilt metal ones, and are rarely found in residential use, but masonry and factorybuilt ones are a commonplace. However, significant areas of all chimney flues cannot be adequately viewed during a field inspection, as has been documented by the Chimney Safety Institute of America, which reported in 1992: "The inner reaches of a flue are relatively inaccessible, and it should not be expected that the distant oblique view from the top or bottom is adequate to fully document damage even with a strong light." Therefore, because our inspection of chimneys is limited to those areas that can be viewed without dismantling any portion of them, and does not include the use of specialized equipment, we will not guarantee their integrity and recommend that they be videoscanned before the close of escrow.

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Notice: Rule 445 adopted March 7th 2008 stipulates rules for the installation of, or the burning of solid fuel, wood burning fireplaces. We encourage all of our clients to read this rule as it sets forth guidelines for individuals who wish to install solid fuel fireplaces or specific dates and time frames for those who wish to burn solid fuel.
<http://www.aqmd.gov/rules/reg/reg04/r445.pdf>

1. Fireplace Location

This fireplace is located in the living room.

2. Fireplace Type

This fireplace is a masonry unit.

3. Refractory

3.1. The visible portions of the fireplace refractory were in acceptable condition with signs of normal wear and tear.

4. Damper

4.1. The damper is functional.

4.2. We suggest blocking open the damper with a clip any time gas log sets are present.

5. Masonry Flue

5.1. The flue was viewed using a video camera. There are visible cracks in the liners that should be evaluated by a specialist before the chimney is used. The smallest cracks can expand under thermal pressure to create a serious safety threat.

5.2. There are offsets in the flue liners when viewed through the damper does not provide a completely smooth transition for the biproducts of combustion. The liners were so severely offset, they may allow stalling of the bi products during normal drafting and they may also allow gases to deteriorate the grout and the area where the chimney passes through the attic, represents a serious issue.



cracks in flue

6. Fuel / Log Starter

- 6.1. The gas at the fireplace was operational when tested.
- 6.2. The gas line in the fireplace is aluminum and should be upgraded to a more dense steel material.
- 6.3. The void / separation around the gas pipe in the sidewall of the fireplace should be sealed with refractory caulk to prevent any possibility of backdrafting a flame beyond the combustion chamber, where it could come into contact with combustible material.

7. Log Set

- 7.1. The log set appears to be in generally good condition. We are unable, however, to determine if the logs are a listed component or added after the original installation.

8. Insulation Plate

- 8.1. The insulation plate appears to be functional where visible.

9. Glass Doors

- 9.1. There are no glass doors installed on the fireplace.

10. Screens

- 10.1. The screens appear to be in generally good condition.

11. Hearth & Hearth Extension

Materials: The outer hearth extension material is constructed of tile.

- 11.1. The hearth extension is in acceptable condition.
- 11.2. Cracks were noted in the tile that surrounds the fireplace opening.

12. Firebox

- 12.1. Sealant or pointing is suggested at the firebox connection to the face in front of or behind the lintel as a safety precautionary measure. Missing material here may allow bi product to enter into the wood framing of the structure.
- 12.2. There is efflorescence, or saltcrystal formations, at various points within the firebox. Such efflorescence is relatively common and is activated by moisture intrusion, and over time, may result in the premature deterioration of the masonry material.
- 12.3. There appears to be missing mortar within /below the throat area of the firebox. This condition may be considered typical for a masonry fireplace as it is used, the mortar becomes brittle, and overtime deteriorates and falls out. Replacement of this mortar is considered normal maintenance, however, it is suggested that this area be inspected Periodically and material replaced as necessary. This material is further suggested to be replaced in order to reduce the potential for further deterioration or flame infiltration into cavities beyond the mortar.
- 12.4. Combustible materials were observed within the firebox. This material consisted of drywall and wood. Removal is suggested prior to use.



missing mortar



combustible material

13. Throat

13.1. This area of the throat was viewed with a video camera. There appears to be missing mortar within /below the throat area of the firebox. This material is suggested to be replaced in order to reduce the potential for further deterioration or flame infiltration into cavities beyond the mortar.



missing mortar

14. Fireplace Clearances

14.1. The wooden mantle is closer to the fireplace opening than current standards would permit. This distance can vary depending on the distance that the mantle projects, and you may wish to have a specialist evaluate. Building code stipulates that no combustible material is allowed within 6 inches of the fireplace opening.

11.2.5.3 Woodwork, such as wood trim, mantels, and other combustible material, shall not be placed within 6 in. (152 mm) of a fireplace opening.

11.2.5.4 Combustible material above and projecting more than 1 1/2 in. (38 mm) from a fireplace opening shall not be placed less than 12 in. (305 mm) from the top of the fireplace opening.

15. Ash Box

15.1. The ash box is suggested to be serviced to operate as intended and to be made either inoperable or operable so that the removal of combustible debris can be accomplished in a safe environment.

16. Vent

16.1. The fire stop / blocking was incomplete around the gas appliance fireplace vents when viewed from the attic. Building code stipulates that fire stop / blocking be placed at every floor level, ceiling / attic or at a minimum of 8 or 10 feet.

Note: Insulation is not a firestop replacement or substitute due to the potential heat transfer capabilities. Only an approved material is suggested in this location.

Chimney B

1. Chimney Location

Location: This chimney is located on the roof.

Type: This is a factory built chimney.

2. General Observations

There are a wide variety of factory built chimneys, which are constructed on site with approved components. Typically, the flue is installed within a "chase" or wood/metal framed enclosure from the fireplace firebox to the top of the roof. The inside portion of this chase is almost never accessible to view within without removal of the termination cover, which we cannot do. We only perform a competent visual inspection of the chase from the exterior, where it is accessible and visible. Additionally, we do not remove any portion of this chase at any time during this inspection. It is difficult to determine whether or not the chimney was actually manufactured to meet minimum building standards with regard to drafting, clearances etcetera. In short, we cannot guarantee that every particular component is the one stipulated for use by the manufacturer. With this in mind, you may wish to have a specialist who can perform destructive testing or dismantling of the materials, evaluate the chimney.

3. Chimney Flashing

3.1. The base flashing between the chimney and the roof are in acceptable condition, only where visible, from the roof, ground, window or eave from a ladder.

3.2. The vertical chimney flashings are in acceptable condition.

4. Factory Built Chase

4.1. The "visible" portion of the chimney chase appeared to be in generally good condition at the time of the inspection.

5. Factory Built Chase Cover

5.1. The chase cover appears to be field modified or repaired. We are unable to determine if this specific fireplace requires a "listed" chase cover. This condition required attention as there are openings in the cover which will allow moisture to enter. We further observed a large opening under the chase cover to the top of the chase. In some cases, the chase cover is suggested to be somewhat oversized in order to allow the chase to cool, or ventilate. Otherwise, the openings may need to be sealed.



chase cover is field modified in substandard manner

6. Factory Built Flue

6.1. The fireplace flue does not penetrate the roof. This fireplace represents a real and present hazard and is NOT suggested to be used until this condition can be repaired.



fireplace flue does not penetrate roof

7. Factory Built Combustion Air Vent

7.1. A combustion air vent was observed, however, we were unable to confirm that this vent is attached to the fireplace box.

Fireplace B

1. Fireplace Location

This fireplace is located in the family room.

2. Fireplace Type

This fireplace is a factory built unit.

3. Damper

3.1. The damper is functional.

4. Factory Built Flue

4.1. The flue liner was inspected via video camera and found to be in acceptable condition.

5. Fuel / Log Starter

5.1. The void / separation around the gas pipe in the sidewall of the fireplace should be sealed with refractory caulk to prevent any possibility of backdrafting a flame beyond the combustion chamber, where it could come into contact with combustible material. For this condition, we suggest a more indepth examination, including any potential repairs. We suggest further assessment and advice by a qualified fireplace specialist.



log starter is suggested to be sealed here

6. Glass Doors

6.1. The fireplace glass doors are functional.

7. Screens

7.1. the screens appear to be in generally good condition.

8. Hearth & Hearth Extension

Materials: The outer hearth extension material is constructed of brick.

8.1. The hearth extension is in acceptable condition.

9. Firebox

9.1. The interior firebox appears to be in acceptable condition.

10. Fireplace Clearances

10.1. The return air vent is too close to the fireplace. Ten feet is the minimum distance which should be maintained between the air return and the opening of the firebox. An HVAC contractor is suggested to be employed to remedy this condition.

10.2. The wooden material is closer to the fireplace opening than current standards would permit. This distance can vary depending on the distance that the material project. Building code stipulates that no combustible material is allowed within 6 inches of the fireplace opening.



fireplace clearance to return air vent substandard

Estimate for Repair / Replacement

Chimney A

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1. Remove the damper and haul away.
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2. Remove up to two rows of bricks from the top and from of the back wall of the unit.
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3. Reinstall the bricks that were removed from the top of the back wall.
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4. Clean the fireplace and chimney.
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5. Parge / tuckpoint all areas where mortar is missing, deteriorated and /or damaged.
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6. Coat the smoke chamber / throat with 2000 degree rated high temperature cement to seal penetrations.
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7. Install the stainlesssteel liner in the flue.
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8. Wrap the stainlesssteel liner with the proper insulation wrap.
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9. Attach the top plate to the top of the liner.
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10. Seal the transition between the chamber and new flue.
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11. Install rain cap/spark arrester at the top of the chimney.
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12. Resurface the chimney crown and repairing any cracks within this component.
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13. Seal the inside and around the entire firebox where necessary.
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14. Seal between the facing and fireplace with the proper high temperature sealant.
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15. Install a proper ashdump door.
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16. Remove combustible materials from inside the fire box requires removing the drywall at the front of the firebox and re constructing this area in order to maintain minimum clearances to combustible in accordance to NFPA 211.
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Note: This bid does not cover the cost of modifying the mantel to create the proper clearance between the opening of the fireplace and mantel.

The approximate cost of the labor and materials will be in the total sum of \$6,955.00

Chimney B

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1. Remove existing chase cover and manufacture a new cover in accordance to OEM specifications.
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2. At some point the flue was damaged, repaired, modified or never penetrated the roof chase. Install the appropriate number of listed liners / extender to exit the top of the chase.
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3. Seal refractory panel where fuel line penetrates
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Note: This bid does not cover the cost of modifying the mantel to create the proper clearance between the opening of the fireplace and mantel.

The approximate cost of the labor and materials will be in the total sum of \$3,435.00