

Standard Operating Procedure

Level 2 Inspection

Factory-Built Chimney Attached to a Building Heating Appliance

This Standard Operating Procedure (SOP) is promulgated by the Chimney Safety Institute of America (CSIA) solely as general guidance for chimney sweep professionals. Since all operations are different and since it is not possible to foresee all potential hazards, this SOP must be tailored to fit the needs of each particular operation. CSIA does not warrant in any way whatsoever that adhering to this SOP will reveal every possible defect in an appliance, fireplace, venting system or chimney. Accordingly, CSIA makes no guarantee, nor does it assume any responsibility, for any damage, claim, or legal action that may arise in connection with a chimney sweep professional's use of this SOP.

Introduction

A Level 2 inspection includes everything defined from the Level 1 inspection, with additions. This level of inspection is recommended when the appliance or fuel is to be changed or if a Level 1 inspection is not sufficient to determine serviceability of the venting system. A Level 2 inspection is also used when the property is being sold or if there has been a building or chimney fire, weather or seismic event or any operating malfunction likely to have caused damage to the chimney.

Before evaluating a factory-built chimney it is desirable to identify it. If the label is still attached to the chimney, this should provide you with the make and model. It is always best to have the manufacturers' installation instructions in-hand when inspecting the chimney. Since the chimney is a tested and listed product, the manufacturer will define the proper installation.

Many of the installation requirements are the same for these chimneys. Most areas of the country will have a few dominant models. After servicing these chimneys you should be able to identify them and be aware of any unusual requirements a specific manufacturer might have. The rain cap may be helpful in identifying the make and model of chimney. Pictures of the installations will assist in identification.

Choice of inspection level

You must determine that the system is not blocked and is capable of continued use as is. You are also in a position to determine the overall cleanliness of the venting system. This will require disconnecting the appliance from the chimney, and using a light, look up the chimney and into the flue. If the chimney is dirty it will require sweeping. This level of inspection applies to all accessible portions of the chimney. For this reason you must go in the attic to check all of the appropriate clearances.

Video Inspection

When you scan the chimney with the video camera, set up the drop cloth and bring in the proper equipment. Take pictures of irregularities within the chimney and save them to include with the job sheet when submitted to the office. Be certain to identify the photos with the date and location of the job. The video scanning is a mandatory part of a Level 2 inspection, and is the only way to see into offsets in many chimneys.

Appliance

Look at the general condition of the appliance. This would include door gasketing, warped baffles, damaged glass, and cracks in the appliance, rust or anything else that could create problems in the operation. Make sure any dampers operate freely. Also make a note on the job sheet of damaged accessories such as burned out grates, catalytic combustors or firebrick in poor condition. If there is a barometric draft regulator, draft hood, stack damper or heat reclaimer inspect for proper operation.

Check the appliance clearance. For listed appliances you will need to consult the appliance installation manual or data plate for the requirements. For unlisted appliances the clearances should conform to local code requirements which is normally 36" from appliance to combustible material in all directions. If there is clearance reduction system used for the connector or the appliance, confirm that it is also appropriately designed and installed. If possible, have the homeowner provide you with the manufacturers' installation instructions for the appliance. This will help you to determine proper clearances from the appliance to combustibles as well as floor protection requirements. Often you will find a label attached to the appliance that contains this information.

Connector

If there is a barometric draft regulator, draft hood, stack damper or heat reclaimer inspect it and note it on the job sheet. Make sure the connector is of the proper thickness, secure, and that it maintains the proper rise. Look at the overall installation clearances. If there are multiple appliances using a manifold, look for good design and proper sizing of this component.

Clearance Reduction

If there is clearance reduction used for the connector or the appliance, confirm that it is appropriately designed and installed. Describe the installation and materials used.

Floor Protection

For wood burning appliances measure the size of the floor protection. It should extend 18 inches beyond the stove in all directions unless listed otherwise. Describe the material on the job sheet. Make a note describing if it is site built or a listed product.

The Chimney

Make sure the chimney is appropriate for the appliance. Many modern wood stoves require a UL 103 HT type chimney. Check where the connector joins the chimney to be certain that the connection is secure. Look for signs of water entry or any other leakage at this connection. It will be important to confirm that the flue is properly sized for the application. If changes are to be made be sure to define the flue size required for the new installation.

Sweeping

Once you have performed the initial inspection, begin the sweeping process. If the chimney is so dirty you cannot complete the inspection you will have to sweep it before you can evaluate the condition of the flue liner. Make a note of the volume or nature of the deposits found in the chimney. Whether sweeping from the bottom or the top, listen for odd sounds that could indicate a separation in the chimney or some unusual assembly. When sweeping, use tools that will not damage the interior of the chimney.

If there are indications that there was a chimney fire, take pictures and document your findings before sweeping the flue. It may be useful to ask the homeowner to contact their insurance company and ask them if they prefer to have you sweep the chimney or if they would rather you leave the evidence undisturbed.

Rooftop Inspection

A Level 2 inspection includes examination of the chimney system from the roof. Check the flashing, chimney support, chimney cap, chase cover and shrouds. Decorative shrouds should be listed or designed in accordance with the chimney manufacturers' recommendations. Get an accurate measurement of the interior dimensions of the chimney. If there is a rain cap make sure it is the correct one as provided by the manufacturer and not obstructed or restrictive. Proper chimney termination height can also be determined as well as the height of the cap above the chase top, if one exists, as specified by the manufacturer.

Attic Inspection

A Level 2 inspection includes examination of the chimney system where it passes through accessible attics. Check the chimney condition and clearance to combustibles. Look for evidence of water leaks where the chimney passes the roof. Check to see if there is an attic insulation shield in place. Many chimneys were installed before attic insulation shields were required so it is not uncommon to find systems that do not include this feature. If the chimney is not equipped with an attic insulation shield make sure that insulation is pushed back away from the chimney. It may be desirable to recommend the addition of an attic insulation shield if the attic is drafty and contains loose fill insulation.

Basement or Crawl Space

If any portion of the chimney system passes through an accessible basement or crawl space then these areas should be included in the Level 2 inspection.

Delivering Your Report to the Client

After you have completed the inspection, you should discuss your findings with the client, provide them a copy of the report, and obtain their signature on the report. Without the client signature it is difficult to prove that you informed them of the conditions observed. You should maintain the inspection report in a permanent filing system.