

Spring Maintenance – Roof Inspection

[Intro Music]

(Host) Spring into action! My next topic will focus on the homes roofing system. I'll begin by describing why the roof should be inspected, then what to look for and do. Hello and welcome to EBC Home Hints, the podcast dedicated to making your home a safer place, one episode at a time. I'm your host, Paul Rochette, and today we're diving into the world of doing a visual inspection of your Roofing system.

(Host) The visual inspection of the roofing system is necessary to identify issues that can arise from winter weather conditions. Whether in snowy regions, heavy winds and rain areas, or extremely arid places. Each of these locations can experience damage to everyone's roofing systems. Rather than focus on one area, I'll discuss all areas of your roofing system, for easier identification.

(Host) Before discussing what to look for, within the roofing system, Lets define the roofing system and its components. If you were to remove the roof, leaving only the walls, everything above the walls is considered the roofing system. This does include the gutters and by extension the downspouts as well as the chimney stack. Components, from skylights, to vents, valleys, objects attached to the roof. What are these components and how to identify them.

There are about twenty-four roofing components a roof can have. I cannot discuss them all, but I can try to explain how to identify specific areas of your roofing system. Right above the outside wall, most homes have an overhang, called the eave. Eaves are usually closed off by what is called a soffit. This is the flat area under the eave of the roof. Some homes have an eave, but no soffit. Many times, in older style homes, you just saw the rafters. The supports for the roof. Homes with closed eaves with soffits, have gutters attached to the eave, to direct water off the roof. Homes with long overhangs may not have gutters.

The roof top, either flat, slanted like a shed roof, or sloped will use different building materials. Asphalt shingles are the most well-known and affordable material. Depending on its design the possible issues you're looking for are basically the same. Different materials will be used depending on your climate and geographical location. You might have a clay tile, standard orange clay color and appears humped. Slate is another, made of

slate stone and is flat and overlapping each row. Metal, quickly becoming a popular option. This can either be sheets of metal, or now metal shingles that look like asphalt. Flat roofs will have either asphalt rolls, or a sealed membrane. I cannot forget the green living roof.

Elements of the roof, that you may see, are plumbing vent pipes sticking up through the roof. Perhaps your home has a skylight, or exhaust fan. The fan removes heat from the attic. Some homes have valleys, formed when two roofing slopes meet. Valleys are a potential area for leaks. Like the upper part of a mountain range is the ridge. The ridge of a sloped roof is the top segment where the two halves of the home meet.

Without getting into math, when I say the slope of the roof, this is calculated by the rise over run equals the slope. As an example, the greater the slope, the higher the ridge line is in relation to the outside walls. The lower the slope going down to a flat roof, would be a very low ridgeline height. So, why is a slope something I need to know? Unless your roof is flat, the slope of any roof is dictated by the climate region you live in. Slopes big and small have their own problems. So, it's best to understand the slope of the roof. Now you have a basic understanding of a roofing system, let's focus on what you're looking for.

(Host) Winter's harsh conditions can wreak havoc on any roof. We all know, leading to winter regardless of the region, you have animals preparing for the season, from heavy winds, rain, and snow that can cause damage.

The best visual inspection is to start in one place and follow a path around the home. I start down then working up. So, in this case looking at the downspouts. I can speak from experience; poor downspout setup and drainage causes a lot of damage to the foundation of any home. Are the downspouts intact and not damaged? Downspouts either connect into an underground drain line or have an angle sending water away over the yard. If the downspouts do not enter an underground line, you want water to be sent from between 4-5 feet away from the foundation, ideally 10 feet or more. Look for potential water issues. Does water pool up by the house and foundation? Do you see trenches, or holes under the downspouts? Potentially, water is coming into the basement. All this can be attributed to improper downspout configuration. You will want to take care of this quickly. As a side note, if your downspouts run into a ground drain and still see water, or erosion. Your' in-ground drain, or downspout might be clogged. Have a professional evaluate.

Moving up, look at the gutters. You're looking for breaks, bent or missing gutters. Do you see water staining at sections where the gutters connect to each other? Because they run horizontally, each gutter section should be sealed from inside the gutter. This prevents water from draining in places you don't want. Your gutters should have a gentle slope

towards the downspouts, allowing water to flow. Look for dirt, debris, inside the gutters. You can learn more about your roofing system by what debris is in the gutters. Dirt and nuts might be from a tree being too close to the home, allowing things to fall, or critters storing items in this area. I have a gutter guard style cover over my gutters. We had a tree too close to the home, allowing dirt, leaves and broken up nuts into the valley and gutter. In fact, mine was worse, because the tree was also next to a valley. Squirrels caused the gutter to fill with small debris as well as damaged some valley shingles. All this happened in one year. So, it does not take long. This should be corrected.

Behind the gutters is usually wood, or composite. Look for rotting, water damage, holes, or openings. Regardless of whether you have flat soffits, or an open rafter design, the attic should never be open, or visible. Soffits play multiple roles, some are made from solid material, others vented. I will be discussing the difference in other podcast programs. The takeaway is to keep the elements and critters out of your attic.

Before moving to the roof surface, I want to discuss something many people do not know. Every roof is built to handle only so much weight. For homes with asphalt shingles, the biggest issue is that people want to save money and will add replacement shingles over old ones. Depending on a home's age, older shingles can be heavier than newer systems. Every home with asphalt shingles should only have one layer. For every layer of shingle, increases the weight that is on the roof. This places stresses from the internal rafters and transfers down the walls and into the foundation. Many times, people can get away with two layers, I have seen up to four on a roof. Let's use an analogy, you put a waterproof band aid on your skin. You wash your hands and place another one on top. What you have effectively done is remove the roof's ability to breathe. Sandwiching two layers over one another reduces the life span of the top layer. As with the band aid, other than the added weight, the shingles are not properly bonding to the lower shingle layer. The home with four layers of shingles had several cracked rafters in the attic, as well as water and weight damage to the sheathing covering the roof. I will discuss what you're looking for when looking at the roof surface.

(Host) Sometimes snow comes down as ice rain, or layers of snow then it freezes. The roof can experience more weight because ice is heavier. We need to look for sagging, or bulges in the roof line. When looking at the roof, from the ground, does the roof look like waves on an ocean? This can be poor building methods, or something more significant. If you see your roof has low or high spots, you will want to look in the attic. Look for cracking, sagging, even separation from the upper sheathing. Anything like this should be evaluated by a professional.

So far, we have either been looking from the ground, or ladder to inspect the gutters. As a professional home inspector, I cannot suggest people start getting up on their own roofs. Falling is a real danger. **(Falling Scream Effect)**. In 2023 82% of roofing fatalities were from slips, falls, or trips. If not confident, please get a professional.

So much can be seen from the ground. Even a ladder up against the house allows you to take pictures or use binoculars. Regardless of the roofing system used, structural issues, or other damage can be very similar. The green roof, the inspection might show standing water, or in the attic water damage from holes, or condensation. If done correctly, there is a waterproof membrane under the living roof. The downside is as things age, they begin to break down, causing leaks or mold concerns. Even the best building materials in the world have a life span. What can affect them is small damage, improper installation, or poor maintenance.

Typical building materials, like asphalt look for standing water, broken or missing shingles and tabs, holes, warped shingle tabs, debris buildup, even loss of granules. Does your roof have moss growing? This will degrade the shingle and its life span. You would need to look in the attic for dark, dirty sheeting. This indicates either moisture or poor attic ventilation. A professional would need to review what the root issues are.

The idea is to discover any damaged areas early. This can and does limit damage to the sheathing of the roof and potential damage to the home. Look for shingle repairs, like tar on a shingle. Tar will dry out and crack, effectively making this a very short-term fix. You're looking for cracked, split, popped up shingles. Asphalt shingles have small granules attached to their surface. Its role is to prevent ultraviolet rays from passing through, reducing the shingles life span. Consider it a protective shield. When inspecting, you will see signs of missing granules in the gutters. Now some will come off over the years. You're looking for large areas of bald spots or worn shingles. If excessive, you need to have it evaluated.

Other roofing types, you're looking for cracks, breaks, missing, lifted, otherwise damaged materials. Like slates, cement tiles, or clay tiles. If not taken care of, costs can become very high to even replace a couple tiles. Most of these roof types, you should never walk on. Professionals know where they should stand when walking on such a surface. Roofs like these require someone that understands what is needed to replace a broken tile.

Metal sheets of roofing can have a long-life span. There are several types of metal roofs and how they are installed. I cannot go over all of them, but can tell you broadly, what to look for. Some metal roofs are attached with screws. Look for loose or missing screws,

scratches, corrosion, rust, even the flashing around objects, or panel alignment. Any one of these can allow water to invade the home or degrade the life span of the roof.

Let's say you found a limb on the roof. Look for the impact area. Might be a hole, a crack on the surface. Best to have a service professional remove the debris and repair your roofing system. Over time, all these issues will shorten your roofs life span. These are expensive enough to not take care of them. **(Cha Ching money Effect).**

Let's face it, nature typically wins. Between heat, ultraviolet radiation, combined with arid climates, all working together to break building materials down. The bottom line is regardless of the region, or climate; mother nature works 24/7 to break into your roofing system. I know the crime rate is going up all over, but even the weather beats out criminals. Perhaps the roofing system will eventually have an alarm for us to monitor, like we do for home intrusions. I can see it now; the police got dispatched **(PAUSE) (Police Siren)** because you have a leaky roof. I would say that's over kill.

Finally, if you have a chimney, do a visual inspection of the surface. Part of the roofing system, chimneys require flashing material around the base where it goes through the roofing material. Any excessive liquid tar over the flashing can indicate previous failure in water proofing. Lifted flashings, rips, or tears can indicate something that needs to be investigated. Depending on the chimney material used over the chimney, look for fallen material, openings, rot, etc. Anything visible and does not look normal should be called out. I will be discussing a more detailed chimney inspection in future podcasts.

[Closing Music]

1. (Encourage Listeners)

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