

# Homeowner's Guide



## How to Maintain Your Cedar Home, Cedar Deck and Cedar Roof

by  
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## Introduction

The 1979 (or second) oil crisis occurred in the wake of the Iranian Revolution. In the wake of protests, the Shah of Iran, Mohammad Reza Pahlavi, fled his country in early 1979, allowing Ayatollah Khomeini to gain control.

The protests shattered the Iranian oil sector. While the new regime resumed oil exports, it was inconsistent and at a lower volume, forcing up prices. Saudi Arabia and other OPEC nations increased production to offset the decline, and the overall loss in production was about 4%. However, a widespread panic resulted, driving the price far higher than would be expected under normal circumstances.

In the United States, the Carter administration instituted price controls. President Jimmy Carter made symbolic efforts to encourage energy conservation, such as urging citizens in a famous July 15, 1979, 'malaise' speech to turn down their thermostats. He also installed solar power panels on the roof of the White House and a wood-burning stove in the living quarters. However, his successor Ronald Reagan, ordered the solar panels removed and the wood stove dismantled.

It was during this time period in the early 1980s that I started building passive solar greenhouses made of cedar. To capture the full solar exposure a greenhouse must face south. The problem there is that the sun bleached the wood which in turn took out all the natural cedar color.

After a couple years I started getting calls from some of the greenhouse owners wanting to know if I could restore the cedar color.

There weren't many choices back then, but after a little research I found a product that would bring the natural cedar look back.

Several of the cedar greenhouses were attached to cedar homes. Of course once the owners saw how fresh and new the greenhouses looked, they wanted their homes to look the same.

Now, after doing several hundred cedar home, deck, and roof projects, I believe that qualifies me to share some very important information with you on the following pages.

Namely:

- 1) No two cedar projects are the same
- 2) Consumers need to be educated more
- 3) Products change at least every other year now
- 4) You learn something new every day
- 5) Taking care of cedar is a challenge

## **Chapter One**

### **What You Need To Know About Cedar**

Out of all the wood species I have worked with, cedar has the most peculiar characteristics.

Known for its extremely fine and even grain, its flexibility and strength in proportion to its weight, Western Red Cedar is a species of wood whose lumber can be used in a variety of ways. Western Red Cedar is renowned for its high impermeability to liquids and its natural phenol preservatives, which make it ideally suited for exterior use and interior use where humidity is high.

The cellular composition of cedar, millions of tiny air-filled cells per cubic inch, provides a high degree of thermal insulation on both roof and wall applications. Western Red Cedars' slow growth and natural oily extractives are responsible for its decay resistance and its rich coloring, which ranges from a light straw color in the sapwood to a reddish pink in the heartwood. It is a stable wood that seasons easily and quickly, with a very low shrinkage factor. It is free of pitch and has excellent finishing qualities.

Most of the cedar we deal with today is western red cedar. It either comes from the western part of the United States or western Canada.

The first thing a home owner must understand is that no two cedar boards will look the same. The reason they aren't, is because they come from different parts of the forest and feed on different minerals in the soil. That causes them to have different variations in their color.

Even the same tree will have different colors. Going toward the center of the tree the wood will have different tones. The grain will change giving it a different appearance.

There are a lot of variables when working with cedar. You'll find wood that has knots and "clear or select wood" that doesn't have knots.

One side of cedar siding is smooth and the other is rough. When the rough is installed outward and showing, it usually takes more stain/sealer. That's

because the pores of the wood are larger on the rough side of the wood. The opposite is true when you are working on the smooth (finish) side.

What is important to know is that cedar needs to be maintained regularly. With the cost of cedar and installation continually going up, it's always better to take care of it sooner than later. The longer you wait the more difficult it will be to restore a natural cedar look.

Most people prefer the natural look of cedar. It's only been in the last several years that I have seen older cedar homes being colorized (a solid color). The problem with a solid stain is that you end up hiding the natural beauty of the cedar.

## **Chapter Two**

### **Cedar Siding – What to Look For**

When I go on a cedar job the first thing I look for is how the cedar siding was installed. Is there a good nail pattern (are the nails on 16” centers).

Then I want to see if the installer used stainless steel nails. That is an absolute must when working with cedar. Why? Because by using stainless steel nails you will prevent those ugly stains often seen running down the side of a house. Cost wise it runs a little more, but it’s really a small price to pay when you’re purchasing an expensive material like cedar to side your home.

Next, I look for any missing or damaged boards. You don’t want to start adding new wood if you can avoid it. New and old won’t match and it will stick out like a sore thumb. But if it does become necessary, switch boards from back to front, for example, so it will blend in.

The next thing I look for is mold. That will usually be on the East or North side of the house. I also look for sun bleached on the South and southwest part of the house. These are the areas of a house that will require a little more attention in order to restore the natural color of the cedar.

I look for “gray” areas around the doorways, roof lines, entrance ways, railways and even areas close to the ground. This gray color is simply called MOLD. Most people call it weathering. This is usually caused when water splashes off objects causing the protective coating or natural oils to wash out. This leaves a FUNGUS which eventually turns gray-green or black. If you attempt to stain or paint or re-seal this area, the FUNGUS or MOLD will bleed through. The MOLD must be removed first.

Next I try to determine how old the cedar is was the last time it was cleaned, and what product was used at that time.

Doing this is all part of my homework to determine how to best approach this project in order to do the best possible job.

If the cedar hasn’t been taken care of for quite some time it starts to take on a dead look. In this stage it’s very difficult to bring back the beauty of cedar. I always encourage home owners to maintain it the best they can.

Yes it will cost a little to keep it up, but it will cost a whole lot more down the road if they don't.

## **Chapter Three**

### **Taking Care of Your Cedar Siding**

Giving your home a bath is the first thing you'll want to do. I like to compare it to taking a shower; first you shower to get clean and then you put on a fresh set of clothes. In short, before you apply new stain/sealer you should get the mold and dirt out of the pores of the wood.

The most effective way of accomplishing this is to use a pressure washer or power washer as some people call it. If you intend to do it yourself be very careful not to use too much pressure. If you are new at this I would suggest no more than 1100 – 1200 PSI, and no closer than 12" to the wood.

Just remember that because cedar is a soft wood it can be easily damaged. To get the "feel" of the pressure washer, it would be a good idea to practice on your sidewalk, patio, or a piece of 2x4.

If the house is dirty or has mold you will probably need a cleaning solution. You can try a mixture of TSP, which can be purchased at any hardware store, and bleach. You can use a garden sprayer or chemical hose attached to the pressure washer to apply.

Pre-soak the cedar first by getting all the wood wet before you apply the bleach. You can use a garden sprayer or chemical hose attached to the pressure washer.

The purpose of pre-soaking is to make the cedar pores swell up so that it's easier to clean. You might want to soak the south and southwest sides of the house often. Don't do a rush job – take your time and do a thorough and complete job.

## **Chapter Four**

### **Applying Stain to Cedar**

No other material can match natural wood's beauty for exterior surfaces like siding and fencing. But if you don't protect the wood from the elements, it can weather to an unsightly gray.

When you are staining the cedar you are also sealing the pores of the wood. However, I have found that many people use the word stain when what they really mean is they have added color to the cedar.

Now this may sound confusing, so for our purposes when we use the word “stain” we will mean: to use a semi-solid or solid color stain.

When we use the word “seal” or sealing, we will be referring to it as a clear or semi-transparent product.

There are four color levels of products you can use on cedar:

- Clear – Of course no products are 100% clear.
- Semi-transparent – This application has a light tint and is recommended if you want your cedar to look more natural.
- Semi-solid – This level has color but allows you to still see the grain of the wood.
- Solid – The grain of the wood won't show.

These are your choices. I personally use a semi-transparent product with a light tint made for cedar in 90% of the work I do.

#### **Materials List**

One gallon for every 100-200 square feet of wood surface depending on wood texture and density.

Options for application equipment:

- Natural bristle brush
- Roller and roller pans, 3/8" nap roller cover
- Pump up compression garden sprayer
- Airless sprayer with .015" tip

## Rags, and container for rag and waste disposal

The most important thing to keep in mind when applying these products to cedar is that it's not like painting. Once the pores of the cedar start filling up with the product, it's time to stop. Remember that if it starts to run out of the pores and you have to start wiping the excess off the wood, it will leave flash marks.

Do not begin until you have read and understand all instructions. If you have questions, ask (call) at your local paint store. Do not apply if rain is expected within 24 hours. In certain climates you may have to wait for a different time of year to do this. I recommend doing a small test area on your project to insure your satisfaction with color choice and appearance before proceeding with the entire job.

Rinse thoroughly with clean water. Make sure the wood surface is clean, dry and in good condition. You may need to wait a few days for the wood to completely dry depending on weather conditions. Cover plants, grass, concrete, trim, and any other areas you don't want stained.

### **Clean-up:**

Following label directions, dispose of rags and other waste including roller covers and brushes in a water filled container. Seal the container and dispose of it properly.

## Chapter Five Cedar Decks

More than half the work we do is on cedar decks.

Give your tired-looking deck a facelift sooner rather than later. A regular maintenance program for your cedar deck is the most important thing you can do as a home owner. Wood that is left unprotected will soak up moisture, leading to serious damage. Because decks come in for abuse--harsh sun, foot traffic, rain, snow, and ice--you may need to treat your deck on a regular basis, perhaps even once a year.

It often only takes a year or two for a fresh-looking deck to become dreary. Where you once enjoyed barbecuing and chatting with friends, you suddenly want to avoid. Often, however, what looks like severe damage can be fixed with a little elbow grease and the right products.

There are several reasons why you should clean your deck and keep it looking good. First of all you have to understand that a house is a vertical surface that the sun rotates around during the day. The deck is a flat (horizontal) surface which gets more sunlight (UV or ultra-violet rays) during the day.

A flat surface is a good place for leaves to accumulate over the fall and winter, and this will cause rotting if left uncorrected. Leaves should be removed on a weekly basis (yes weekly!). It only takes several minutes to remove them, but if you don't the leaves will break down and get in-between the cracks of the cedar boards, causing them to rot. This is the number one problem with cedar decks.

Decomposing leaves get wet and retain moisture, causing mold to grow. With soft cedar wood this is a problem because it happens on an accelerated basis. This is more of a problem if the deck is on the north side of the house because mold likes the side of the house with the least sunlight.

Take the time to examine all the wood carefully, to see if any boards are rotten. Unfortunately, most wood rot occurs in places that are hard to see--under the decking boards, at the ledger (the board that is attached to the house), on the underside of stair treads, and so on. If possible, crawl

underneath the deck to make your inspection.

If the rot is less than 1/2 inch deep, the board can probably be left in place. More extensive rot calls for the replacement of boards. Hire a carpenter, or use a flat pry bar to carefully remove rotten boards. If nails or boards are popping up or coming loose, do not simply pound the old nails down again; remove them and replace them with longer nails, special decking nails, or decking screws.

If any part of your deck stays wet for a day or more after a rainfall, take steps to see that it can dry out. You'll probably need to sweep away leaves and dirt from between boards, or where the deck meets the house. Perhaps a bush or tree limb needs to be trimmed back, or a gutter downspout moved to direct water away from the deck.

Basic maintenance includes hosing off the deck in the spring and fall. Remove any leaves and twigs as soon as you can during the winter.

Only use a semi-transparent product on a cedar deck if you want the natural look. Do not use a dark solid color stain on the south side of the house. This will turn your deck into a solar collector making it unusable during the daylight hours in the summer months.

To clean a deck, purchase a deck cleaner and follow directions--usually, this means scrubbing and rinsing. Always hand scrub first with a commercial deck cleaner found at any paint store. Follow up with a pressure-washer and equip it with a fan tip. Work carefully, so you do not make indentations in the wood.

Seal a deck as soon as possible after cleaning it. Sprinkle a few drops of water on the wood. If it doesn't bead up and instead soaks right in, the deck needs to be sealed.

### **Tips for Sealing a Cedar Deck**

- If you want the natural look, use a semi-transparent product made especially for cedar. The application should be by a garden sprayer. This will give a uniform coat verses rolling it on with a paint roller.

- The disadvantage of using a roller is apparent when you apply a semi-transparent product. When you start overlapping those areas will have double the amount of product. That will cause the deck to look two-tone. And for that very reason we prefer to use a sprayer when using a semi-transparent product.
- Don't try to make the color of your deck the same color as your home. You want a contrast to define these are separate areas. Refer to magazines and other decks in your neighborhood to see what they have done.
- Another tip is to stain your rails while which will give your deck a start contrast and a more pleasing appearance.
- Keep in mind that a semi-transparent product will not last as long as a solid product.
- If you are having a cedar deck built make certain your builder uses stainless steel nails.
- Lastly, when building a cedar deck you can use a lower grade wood (boards with knots) on the floor of the deck, and use a higher grade wood (clear or select which means no knots) on the railings. The reason for this is that cedar is expensive and will save you a few dollars.

## **Chapter Six**

### **Cedar Roofs**

It seems that this is the most neglected part of a house. I believe the reason is because it's "out of sight out of mind." Meaning, if you can't see it what does it matter. In any event, the most important part of any house is its roof and if it fails to do its job you're in big trouble.

The easiest way to know if your cedar roof needs help is to look at it after it rains. If the roof looks green you better start taking action ASAP. Another option if it's possible is to go into the attic and examine your roof plywood for water stains or wet spots. This could be a good indication that your roof is starting to fall apart and that you are a good candidate for a roof replacement.

Cedar shakes have been used as a roofing material for centuries for two major reasons. First cedar provides superior insulation. And second the wood itself contains high amounts of natural preservatives. The presence of these natural preservatives has led cedar roof owners through the years to believe that their roofs needed little or no maintenance. The truth of the matter is that these natural chemicals are depleted over time.

Over the years, rain extracts the natural preservatives from the wood and leaves it vulnerable to accelerated deterioration. As the preservatives are decreased, water enters the wood, causing the wood to expand and contract. This expanding and contracting creates cracks in the wood and provides places for algae, moss and fungi to take root. These living growths further deteriorate the wood as they draw food from it. Left unattended their spread will lead to premature roof failure.

Sunlight is also a major problem for cedar roofs. The sun's rays break down the wood at a cellular level. As the cells are broken down on the top layer of wood rain washes these cells away. This continuing cycle leads to the "greying" of cedar over the years. While many see this as the natural charm of cedar roofs, it is actually a visual signal of the deterioration of the wood itself.

If a cedar roof does not receive any maintenance it may last 10 years or more, depending on the severity of the elements. On the other hand, cedar is

the only roofing material whose life can be prolonged by proper maintenance and preservation techniques.

Basic cedar roof maintenance includes debris removal, cleaning to remove algae, fungi, moss, etc., and application of a wood preservative. Annual inspections keep tabs on your roof to determine when this maintenance is required, but it's usually needed every 3 to 5 years.

Every 10 to 15 years, a cedar roof should be restored. The restoration process includes repairs to the roofing system, including replacement of shakes and ridge caps.

I turn down 60% of cedar roof requests I look at because the home owner has waited too long and now has a major problem.

Cleaning cedar roofs is a hard and dirty job. It's definitely not a DIY (do it yourself) project.

You start at the top and start working down. The idea is to wash the dirt downward and believe me this creates a big mess.

Power washing with a pressurized machine is very effective. However, if an untrained person performs this procedure, shake damage, leakage, wood erosion, etc. are REAL possibilities.

When using water on a roof, either from a hose or a power washer, NEVER spray up the roof. Roofs use gravity to keep your house dry. Spraying water up the roof is not natural. By doing this, you will drive water up under your shakes. Drive water far enough and it will leak into your house. I guarantee it!

After the roof has been pressure washed you will still have to apply a cedar sealer on the roof, so it's a two-part process. First you pressure wash and then you seal the roof (not on the same day).

After cleaning your roof, let it dry. This may take 2 to 3 days. Then, apply whichever product you have chosen exactly as it says to do on the label. Do not become your own testing laboratory. Manufacturers have gone to great lengths to determine application techniques and quantities. If you deviate from their instructions, you only stand to hurt yourself.

Using the proper type of application equipment is essential. If a product says to use a power airless sprayer, don't try to substitute a pump garden type sprayer. Use common sense!

## **Roof Safety**

Roofs are dangerous places. Moss covered cedar shake roofs are like tilted, elevated ice skating rinks. Need I say more? Add water to these roofs and they become practically impassable.

Cleaning and sealing cedar shake roofs should not be attempted by a novice homeowner. Serious injury and death are very real possibilities.

Give serious consideration to hiring this job out. Let a seasoned professional clean and seal your cedar roof. Be absolutely sure this individual has worked on such jobs and is insured with Worker's Compensation. Make sure they attach a copy of their current certificate, indicating paid up coverage, to your contract. Don't underestimate how dangerous this job can be.

