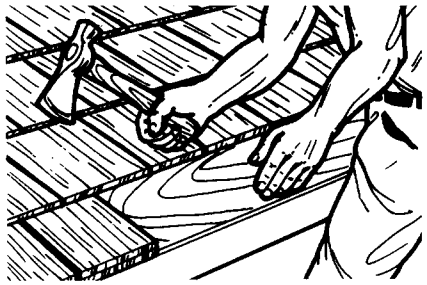
HOW-TO BOOKLET #3079
SHINGLES & SHAKES

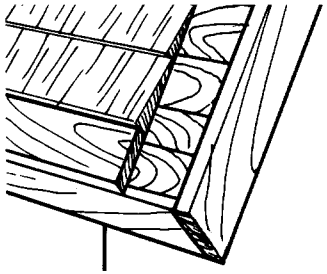
TOOL & MATERIAL CHECKLIST

- ❑ Bundles of New Shingles/Shakes
- ❑ Bevel Siding
- ❑ Prybar
- ❑ Caulking Gun Shell
- ❑ Nails
- ❑ 1X6 Straightedge
- ❑ Chalkline
- ❑ Asphalt Roofing Cement
- ❑ Filler Boards
- ❑ Hammer
- ❑ Roofer's Hatchet

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.



Sequence shows step-by-step for re-roofing with wooden shingles/shakes. First, cut away the first course of shingles at the eaves.



Remove old shingles at the edges of gables. You should cut back to approximately 5-1/2 to 6 inches from the rakes, as illustrated.

Reshingling or reshaking a wooden shingle or shake roof has "if", "and", and "but" conditions. You can do the job yourself:

- If the roof pitch is not too steep and you are in no danger climbing on the roof to re-do it,
- And if the roof shingles are even and flat on the decking and don't require removal,
- But, you can remove the shingles/shakes, if necessary, and the work schedule can be in a time frame that lets you recover the roof quickly before rain can damage the decking and contents below the deck.

Applying a wooden shingle/shake roof is physically hard work whether the new shingles go on over the old shingles or you have to strip the shingles down to the bare decking or sheathing. In skill, the project is within the range of a do-it-yourselfer. In this How-To Booklet we detail and illustrate the basics of installing new shingles/shakes over old ones.

MATERIALS/SPECIAL TOOLS

At one time, cedar shingles or shakes were widely used for roofing because of their inexpensive cost. Today, these shingles are almost exclusively made of western red cedar and cost more than asphalt shingles. They are also more difficult to apply than asphalt shingles and they don't have much resistance to fire. This may be a consideration.

The overwhelming benefit offered by wood roofing is appearance. Another is a superior R-factor (thermal resistance). 1/2-inch thick cedar shingles have an R-factor twice that of a typical asphalt shingle: .94 as compared to .44 for asphalt shingles. Heavy, hand-split shakes with a 1-inch average butt thickness have an R-factor of 1.69. This compares well with an R-factor of .05 for 1/2-inch slate.

Shingles are cut by machine. Shakes are split by hand on at least one face, and have a rough, rustic look that cannot be duplicated by machine.

Both wood shingles and shakes come packaged the same as for asphalt shingles. Each square is designed for ordinary application of 100 square feet. There are four bundles in each square. Wood shingles come in several different sizes, with varying exposures. Each bundle covers 25 square feet.

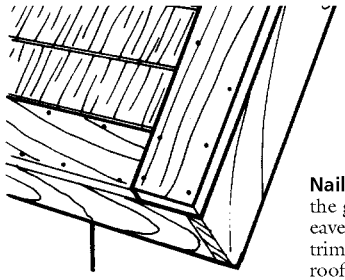
If you can afford wood shingles, which cost about twice as much as the heaviest asphalt shingles, buy the top grade: #1 Blue Label. These are 100 percent clear edge-grain heartwood.

Although we present the basic tools and materials in the checklist on the Booklet cover, this equipment may be needed for the project:

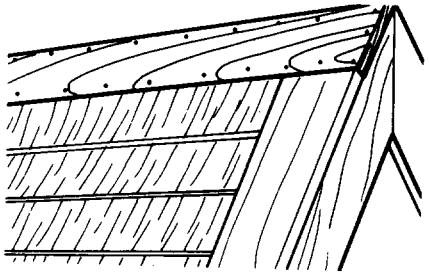
Nailholder. Some do-it-yourselfers like to keep nails in pockets or a container, but a nail apron worn about the waist is best for a shingle re-do.

Nailstripper. This tool can save you time. It is not for removing nails but for lining up wood-roofing nails ready for use. The nails are loaded into the stripper, with the nail head up, so that you can grab a few at a time as you need them and without flipping them over. With a nailstripper, you can put down four or five shingles or shakes at one time. It is worn on the chest with a harness and costs about $20.

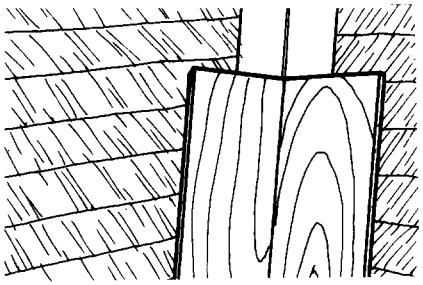
Shingler's hatchet. Although you can get by with a hammer and a saw or chisel, a shingler's hatchet is recommended for wood roofing. Also called a lather's hatchet, it is often used by the pros for asphalt shingling. You can hammer nails with it as well as trimming wood shingles or shakes. If you buy this tool, make sure it has a sliding gauge for fast, accurate checking of exposure. The gauge is on the blade of the hatchet and is adjustable. A good hatchet has a cross-hatched, non-skid head at the blunt end, with a sharp blade and heel at the other.



Nail strips of lumber along the gable edges and the eaves to replace the shingles, trimming at perimeter of the roof. Replace bad fascia.



At the edges, remove the old shingles and then replace them with a strip of bevel siding, orienting the thin edge downward.



Place additional strips of lumber inside each valley in order to divide the old metal from the new valley material, as shown above.

Safety harness. You can buy this at boat supply stores. The harness straps around your body and has a built-in hook that may be attached to any solid spot on the roof. Or attach it to a nylon rope safety line.

Rubber-soled shoes. Don't buy shoes with spikes. The soft rubber soles are good enough to prevent slipping on the roof.

CAUTION: If the roof has a steep pitch to it and you do not feel totally comfortable on the roof's surface, please do not climb onto the roof. Call in a professional roofer.

ESTIMATING NEEDS

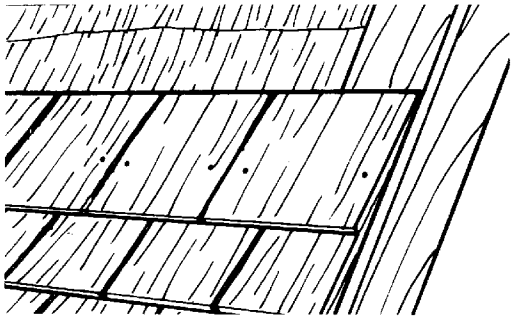
The best way to find out how many shingles/shakes you need to recover the roof is to measure the roof. If access is not too difficult, use a tape measure so you can hook it over ridges and edges and stretch it out to the maximum length. With multiple planes, it's best to make some rough drawings of each plane, and then mark the measurements as you go along.

Multiply the length times the width of each plane and add them together. Once you have the square footage of the entire roofing area, divide the area by 100 to find out how many "squares" of roofing you need. Each square will cover 100 square feet.

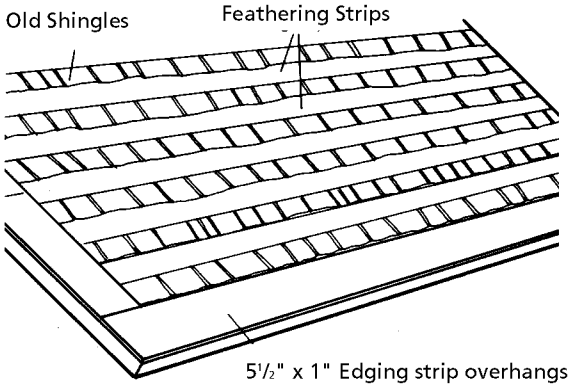
You'll also need other materials—nails, edging strips, bevel siding, and so on, as detailed in this Booklet. You can add the materials package as you go.

PREPARING THE ROOF

As mentioned, this Booklet concerns the basics of applying shingles/shakes over existing shingles/shakes. If your inspection shows that the wood shingles may be left in place, there are several things you must do to prepare the old surface for the new surface.



Fasten the new shingles on top of the old shingles. Use the old shingles to align the new ones. Nails are 5d rust-resistant for shingles.



For high wind areas, remove 5-1/2 inches of old wood shingles around perimeter. Drawing shows how siding is used to make roof uniform. Butt wide edge of siding to butts of shingles.

Remove all loose and protruding nails, and hammer new nails in different spots than the old nails. Renail any loose shingles, and replace the missing ones with similar shingle material. This does not have to be a perfect job, since the main purpose is to provide a uniform surface. If you can't find an exact replacement, do the best you can.

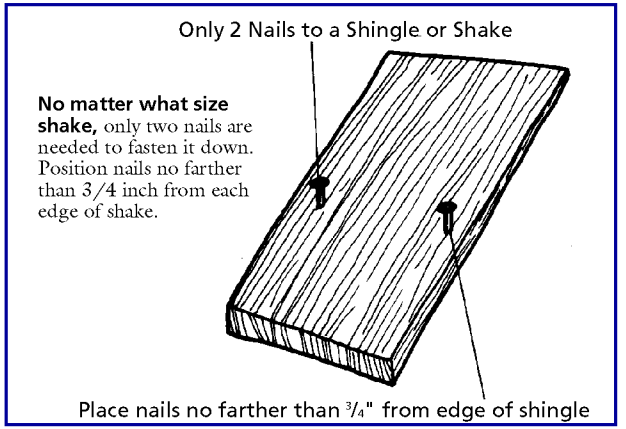
Badly warped or curled shingles should be split in sections, and each section nailed down separately. Any individual shingles that are badly deteriorated should be removed and replaced.

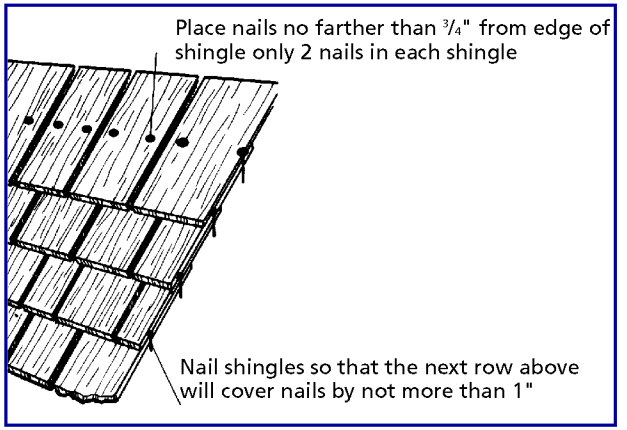
If you reside in an area where high winds are prevalent, it's smart to remove badly weathered shingles from the rakes and eaves. Cut off the shingles 5-1/2 inches from each edge, and replace with nominal 1X6-inch lumber. If necessary, cut back shingles to fit in the lumber. Add strips to the sides, also, as shown in the illustrations. Use strips of beveled siding and butt the wide edges against the bottoms of the shingle courses, with the thin edges against the top edges of the course below. The siding will "feather out" the surface so that the new roofing will lay flat. Before applying the new roof, sweep up all debris on the roof surface.

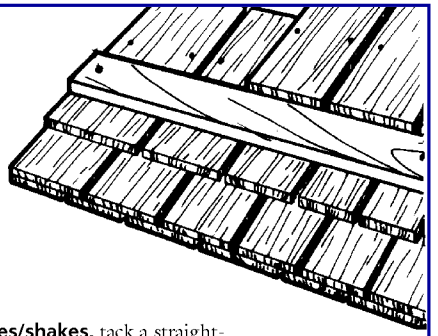
If the roof is in bad shape, we recommend that the shingles be stripped from the roof and new singles applied from scratch. A crowbar is the best tool for removing shingles and shakes, using the curved end to pull up the shingles and also to remove the nails. This is easier than bending over and pulling with a hammer. You also can try using a flat tiling spade to remove the shingles, but we think the crowbar is best.

LAYING THE SHINGLES/SHAKES

If the old shingle courses are straight, you can use them to help align the new ones. Otherwise, snap a chalkline with a horizontal line for each shingle course. Tack a long piece of straight 1X4, with a nail protruding slightly at each end, flush to the butt line of each course. Set the bottom of each shingle at the top of the 1X4. Move the 1X4 up for each course.





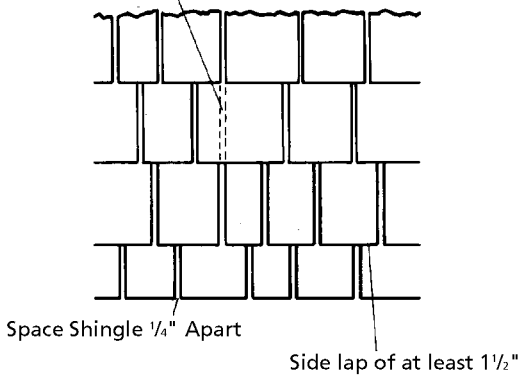


To align shingles/shakes, tack a straight-edge 1X4 along a horizontal chalkline.

In re-roofing, the sizes of the nails usually are 5d for shingles and 8d for shakes. Do not drive the nailheads into the shingles, but just to the surface (see illustrations).

The courses are nailed at the proper exposure with the joints offset at least 1-1/2 inches from the joints of the previous course. If you are using a roofer's hatchet, set the sliding gauge to the same distance as the exposure so that you can quickly check exposure dimension as you work. As you start a new course, tack the 1X4 along the horizontal chalkline and butt the shingle edges against it for easy alignment. Use the head of the hatchet for nailing, and the blade to split the shingles when necessary. If you don't have a hatchet, use a hammer and saw.

Specially cut ridge shingles are the easiest to apply at the ridge of the roof. But you can make your own Boston Hip ridge. We recommend getting special ridge shingles, since the two sides of the ridge should be beveled snugly against each other and must be sawed or planed to the proper angle.



Space wood shingles 1/4 inch apart. In succeeding courses, leave a gap of at least 1-1/2 inches between the joints of the shingles.

Each course should be nailed with alternately facing overlaps. In short, first the right-hand shingle overlaps the left one, then the left one overlaps the right, and so forth. Double the first ridge or hip shingle. Succeeding shingles take the same exposure as for field shingles.

With shakes, start with a double layer for the first course. Stagger the shake joints in the upper layer of the first course, relative to the joints of the layer below. The first course should project over the eaves by 1 to 2 inches. Put a strip of roofing felt over the top edges of the first course of shakes. Then lay the shakes as you would shingles, checking the alignment as you go.

CONSTRUCTION DATA

If you must work on the new roof, use boards as a walk-way. You should always wear soft-soled shoes during application. Never wear hob-nailed shoes.

Because hand-split shakes come thicker than ordinary roofing materials, butt lines at eaves shed water runoff across a slightly wider area. Use of wider guttering than usual will reduce splashing and runoff. For handsplit shakes 3/4-inch thick or less, use 5 inch gutter widths. For thicker shakes, 6 inch gutters are recommended. Use treated or painted wood gutters.

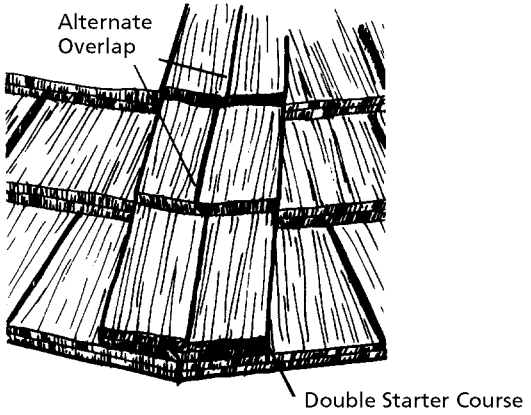
Interlaced strips of roofing felt are recommended for shakes. These can be important to the roof's future longevity. An underlayment of roofing felt, however, is questionable. It can adversely affect the roof's life expectancy in hot, humid climates because condensation may create a moist layer under the shakes. Do not use a roofing felt underlayment instead of the recommended interlacement.

Straight-split shakes are equal thickness throughout. The smoother end (front end) of the shakes should be at the top. This end, from which the shakes are split, allows for a tighter and more weather-resistant fit.

Under ordinary weather conditions, red cedar does not need any finishing or preservatives. It will weather naturally to a silver-gray color. Over a long period it will become almost black. If you live in a very humid area, such as the southeast, or in any area below overhanging trees, a fungicide is desirable to inhibit moss, fungus, and mildew. Some shingles and shakes may come pretreated. Apply the fungicides carefully, following manufacturer's instructions to the letter.

Always clean wood roofs periodically to remove accumulated debris and to prevent moisture buildup. Use a stiff broom or brush to keep the joints clear between shingles—a vulnerable area in wood roofs.

Wooden shingles and shakes may be colored. Use a penetrating wood stain—not paint—for this job. Paint can seal the shingles/shakes so moisture can't escape. There are several stains made especially for roofs.



Double the starting course at the eaves of hips. Alternate overlap of shingles. Choose uniform 3-5 inch shingles for a good looking job. You can interweave felt at starter course.