

Tips for Top-Nailed 5/16-Inch Floors

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In my region, here in California's Bay Area, older homes typically have a floor not commonly found in many other areas: solid 5/16-inch-thick, top-nailed oak floors. Some are 2 inches wide with a square edge, some are random widths with a full bevel and walnut pegs, and some are parquet floors. That is why most flooring contractors around here must know how to renovate, install, sand and finish these floors (there are also pockets of this flooring in other regions of the country, such as Philadelphia and New York). If you mainly do tongue-and-groove floors, then you will be surprised and challenged by working with these top-nail floors (and vice versa). I have learned the following while working on these floors over the last decade.

Job-Site Conditions

As always, it is important to follow the NWFA Guidelines regarding job-site conditions and acclimation. Treat these floors like plank flooring; when acclimating the wood, stay within two points of difference in moisture between the subfloor and the wood floor. These floors do not tolerate a lot of movement well—there is no tongue and groove, so finish nails are all that is holding the boards down.

In the Bay Area most installations are on-grade or above-grade over a wood subfloor; in older homes they are 1-by-8 solid board subfloors. Some have shifted in parts and are no longer straight, and some have sagged. When homeowners add onto their homes they ask us to install new floors over these subfloors where they previously had carpeting or other floor coverings. A minimum of 3/8-inch CDX plywood needs to be installed over the old subfloor (glued and mechanically fastened) before installing a new top-nail floor.

Installing 5/16 Flooring

The thickness, or lack thereof, of this 5/16-inch floor creates challenges for installers. Here are some tips:

Get the subfloor dead-on flat. If your subfloor has variations in it, you will most likely split the floor as you nail it. The other problem you will have is trying to sand the floor flat—you don't want to be sanding down more than 1/32 inch on your new floor, because you will run into nails very fast and be out of wood to hold them in place.

Use an approved vapor retarder. Avoid using roofing felt, as the asphalt may heat up while sanding and bleed into the floor.

Mix bundles. The floors come in nested bundles in different lengths. Make sure you mix your short

and long bundles when racking for joint location, color and grain uniformity.

You can set your first row anywhere. I usually place the first row along the longest line I have and mark my nail schedule with a pencil 1½ inch from the ends and every 7 inches along the face. After you nail the first row, you can rack as many rows as you want and rough-nail a few rows at a time. I usually drive a screwdriver into the subfloor and pull the floor together, and then I randomly place enough nails to hold the floor tight. When you are done, you simply transfer your marks from the first row and use a straightedge to finish nailing the floor.

Check the settings on your compressor. If your psi is too high, you will drive the nails too deep and the floor will split very easily. If your psi is too low, you will be setting a lot of nails by hand.

Sanding Top-Nailed Floors

Again, follow NWFA Guidelines for sanding and finishing, but keep in mind the following procedures that make these floors a little different:

Set nails as you go. I can't emphasize this enough. Doublecheck when done installing, again when you vacuum, and again before you start sanding. These nail heads are nasty and will get your drum and your edger. Did I mention they are hard to see?

Use the right filler. Some fillers are good at filling grain but not at filling nail holes—they will show a slight depression over each nail hole and, when the floor is stained, they take the stain darker than the floor. I have found that making your own filler works the best. Usually when you do this you are using products that smell horrible and are extremely flammable, so keep the job site well-ventilated. But I find that for the best color match and a true-flat nail hole, it is the way to go.

Sand with good lighting. When fine-sanding the filler off the floor, work carefully in a well-lit environment. It is easy to miss a spot, and the buffer won't take care of it.

Work with a nail set. If you hit a nail head with your drum on an old floor you will put a scratch in your floor. It's likely that you will not see this until your finish coat is dry, so change your belts more frequently.

Successfully installed and finished, a solid top-nail floor can last more than 100 years. It is our job as contractors to keep up with the demand for all different products; and here, this top-nail product is a must if you want to stay in business.



See photos of 5/16 wood flooring:



An old solid board subfloor, commonly found under 5/16-inch wood flooring.



A new top-nailed 5/16-inch wood floor before sanding.



A random-width plank top-nailed wood floor with plugs.



An existing top-nailed plank floor with plugs in the Bay Area.



A new stained red oak top-nailed 5/16-inch wood floor in the Bay Area.



A new 5/16-inch strip top-nailed oak wood floor in the Bay Area.

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