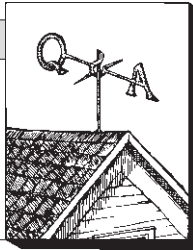


Why's the Subfloor Sagging?

by Henry Spies



Sagging Subfloor

Q. We installed 3/4-inch APA Sturd-I-Floor-rated plywood over 2x12 joists on 24-inch centers. Even though the plywood is glued and nailed with 8d screw-shank nails every 5 inches along each joist, the plywood is sagging between joists in places. We are considering adding another layer of 3/8-inch plywood, but think it will just conform to the underlying sags. We were planning to use hardwood strip in some areas and carpet in others. Any ideas?

A. There are several possible reasons why the floor sagged. One is that the subfloor absorbed enough moisture that it expanded and buckled between the joists. Even though you may have left enough space between the ends of the sheets, the subfloor was so over-nailed that it could not expand along the length of the sheets. The American Plywood Association (APA) recommends nailing every 12 inches. This allows the subfloor to move slightly so the expansion can take place at the ends where the space has been left.

A second possibility is that heavy construction materials, such as a stack of drywall, were stored on the sagging area. The subfloor may have permanently deflected because of creep under an excessive load.

A third possibility is that the subfloor panels span only one joist space in the sagging areas or that the panels were run in the wrong direction. The APA assumes that the panels run continuous over two or more joist bays with the long dimension (called the strength axis) laid perpendicular across the joists.

In any of these cases, it will be necessary to block the subfloor from the bottom, or replace it. Neither the underlayment nor the hardwood strip flooring will span the 24-inch spacing without sagging also.

Cathedral Sealing

Q. In an unfinished upstairs bedroom with a cathedral ceiling, extensive frost has formed on the inside of the sheathing behind the ceiling insulation. My insulation sub has told me to install a vapor barrier and not to worry. What do you suggest?

A. Installing a polyethylene vapor barrier is a step in the right direction. Make sure the vapor barrier is well sealed, especially around any recessed lighting fixtures. You may also need to install a continuous ridge vent and a continuous soffit vent to ventilate the space between the insulation and the sheathing. The insulation must not be so thick that it fills the entire joist cavity. It should leave a continuous channel for airflow from soffit to ridge. Continued condensation will cause mold and delamination of the sheathing.

Bright Brass

Q. Several of my customers have ordered exterior brass lanterns to be installed near front doors and garages, and want them to stay shiny. Is there something that can be put on the brass to protect it from tarnishing?

A. Exterior lamps usually come with a coating of clear lacquer which protects the finish temporarily. A field-applied second coat will extend the protection somewhat. One product made for this purpose is *Stay Brite Brass Lacquer* and is available from a number of mail-order supply houses including WoodCraft Supply (P.O. Box 1686, Parkersburg, WV 26102-1686; 800/225-1153). If the brass tarnishes, it can be repolished and lacquered again. This can be done indefinitely if the lamp is solid brass. However, if the lamp is just

brass-plated it can be polished only a few times before you will wear through the plating.

French Door Failure

Q. Why do paint-grade French doors crack along the joint between the stiles and the top and bottom rails? Is there anything that can be done to prevent this problem?

A. Any door where the stiles and rails are visible will show some signs of movement where these members meet. While the weight of the glass in French doors may compound the problem, the movement is due to dimensional changes in the wood caused by the differences in temperature and moisture between the indoor and outdoor air. Sealing the door, particularly along the top and bottom edges is your best protection, preferably before installation. The bottom edge is often ignored during the finishing process because it is not visible. A storm door, which reduces the temperature difference, will also help.

Restoring an Old Tin Roof

Q. What is the best coating for an old tin roof? How should the tin be prepared?

A. Much depends upon how much the tin (galvanized iron) has rusted. If the rusting is only spotty, it can be cold-galvanized with a product such as Z.R.C. Cold Galvanizing Compound (ZRC Products Co., 21 Newport Ave., Quincy, MA 02171; 617/328-6700). It is durable and almost as good as the original galvanizing coating, but it is expensive. I have also had good luck with asphalt-based aluminum paint.

Any coating should be applied only over clean, dry metal. The surface should be thoroughly wire-brushed, and any grease or oil removed with a solvent or a phosphoric-acid detergent metal cleaner. ■

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