



Hand Nailing versus Gun Nailing

Trela Roofing & Remodeling's mission statement is, 'To provide our customer with the highest quality installation of the best quality products available, at a fair and reasonable price.' Hand nailing of roofing shingles is the vastly superior method of installation. Gun nailing is fraught with numerous problems.

The average Home roofing project contains 4,000 to 6,000 nails. If we assume that the installer will properly install every one of those nails correctly, there still is a major difference between the typical gun nail and the nails that Trela Roofing & Remodeling uses for our roof installations. And we are not talking about the length of the nails; we will assume they are also the same and proper length. (Note: Proper roof shingle installation also requires roofing nails penetrate through the wood decking and therefore should be visible from inside the attic space as nail points extending through the wood decking). So everything is still the same, except the size of the head (called the 'crown') of the nail. Gun nails typically have head sizes of 3/8 inch or smaller. The nails that Trela roofing & Remodeling specifies and uses for roofing installations are 7/16 inch which provides superior holding power because the head is significantly larger. Also, we use 11 gauge nails which are thicker and have larger shafts and head thickness than typical gun nails which are just 12 gauge (the larger the number the smaller the nails, heads and shaft thickness).

Workmanship is equally as important as the type of nails and materials that are being used. You can take the highest quality materials, but use inferior labor practices and you will end up with a very poor roofing job. It takes many years of

instruction and practice to become proficient at hand nailing roofing shingles. Nail gun proficiency can be acquired very quickly. Roofing manufacturer's warranties require specific nail placement on their roofing shingles. Warranties can be voided for improper installation of roofing nails. Wind damage most often occurs when shingles are gun nailed because of improper placement or poor holding power of smaller headed nails. Hand nailing tends to be more accurate in regards to proper placement.

Older homes are usually constructed with sheathing type boards with various widths and lengths. These boards are installed with spaces between the boards to allow for expansion and contraction. There can also be knot holes in the sheathing boards. Newer homes are built with plywood for the decking. The plywood is also installed with spacing in between sheets to allow for expansion and contraction. Regardless of the type of materials used, there will be gaps in the properly installed wood roof deck. These gaps are serious problems for gun nailed roofing. One never knows if the gunned nail went into solid wood or into one of the gap areas. Since the machine is doing the work, there is no 'feel' for whether or not the gunned nail went into solid wood or one of the numerous gaps in the decking. The human installer 'feels' the roofing nail being driven into solid wood or the softness of the gap in the decking.

Professional roofers generally do not use hammers for installing roofing shingles. They use roofing 'hatchets'. These tools are specifically designed for installing roofing shingles. They have a larger head surface than the typical hammer. The larger head surface allows for the proper installation of roofing nails by driving the nail snug to the surface of the roofing shingle with overdriving or tearing the material.

In addition to being accurately located on the roofing shingle, nails must be driven flush with the surface of the roofing shingles. The nails cannot be over driven or

under driven. Over driven nails tear the roofing shingle while under driven nails will cause bumps or 'nail pops'. Nail gun machinery requires precise air pressure adjustments to avoid these issues. Air temperature, wood decking variations, underlayment thicknesses, and variations in roof shingles themselves affect the proper installation of pneumatic nails. These variables require constant adjustment of the nail gun air pressure. Only the most dedicated installer would leave the roof, climb down the ladder, adjust his compressor, return to the roof and continue installing shingles, especially when he is being paid only for the number of shingles that he installs, (i.e. 'piece work').

Take a look at the You Tube video, "The Worst Roofing Job in History" which was not recorded by our company. It reveals in vivid manner the consequences of a gun nailed, improperly installed shingle roof.

Our founder, Anthony Trela, hand nailed every roof he installed. Our company continues that tradition of craftsmanship, with every Premium System roof being installed by the hand nailing method.

Trela Roofing & Remodeling

NOTE: In all pictures, gun nail fastener is to the left with the hand nail fastener to the right.

