

Power-Driven Fastener Considerations

Power-driven fasteners are an acceptable substitute for hand-driven fasteners provided they are of equivalent size and quality. Several things should be considered when using power-driven fasteners.

- 1. Contact.** Lightweight, pneumatic nail or staple tools do not provide sufficient force against the panel to ensure that the panel is tight against the framing. This can cause problems with fastener “pop,” or squeaks when fastening floor sheathing or underlayment. Normally the force required to eliminate gaps beneath underlayment or floor sheathing can be provided by the operator if he stands on the panel, or applies hand pressure adjacent to where the fastener is being driven.
- 2. Thin Galvanizing.** Power-driven fasteners are typically smooth and uniform in diameter to avoid jamming the feed mechanism of the nail or staple tool. The usual electrogalvanizing, which provides the required smoothness, may be too thin to provide long-term corrosion resistance. Where a high degree of corrosion resistance is required, it will usually be necessary to use fasteners of a material that does not corrode, such as aluminum, stainless steel or hot-dip galvanized.
- 3. Overdriving.** Typical nail or staple tools commonly used for building construction often countersink the fastener, which is an undesirable condition when installing wood structural panels for roof, wall or floor applications.

Adjusting the air pressure is an unpredictable way of controlling the depth to which the fastener is driven. Since material densities vary, it is impossible to find an air pressure setting that will consistently drive the fasteners flush with the panel surface.

The solution to overdriving fasteners is to use nail or staple tools that have a depth control adjustment feature, which permits driving fasteners so that their head or crown is flush with the panel surface. For further information, contact the nail or staple tool manufacturers.

We have field representatives in many major U.S. cities and in Canada who can help answer questions involving APA trademarked products. For additional assistance in specifying engineered wood products, contact us:

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