

Small Joinery Saws

U.S. Des. Pat. No. D605,923

The Veritas® saws combine the best characteristics of the classic fine joinery saw with those of state-of-the-art materials and construction methods. The tooth pattern on the thin high-carbon steel blade provides a good balance between cutting action and surface finish. The pistol-grip design of the wooden handle makes it intuitive to hold the saw such that the index finger rests on the stainless-steel/glass/polymer composite spine, which provides strength and rigidity.

When cutting joints, it is desirable to match the tooth pattern to the thickness of the material you are using. The standard dovetail saw, with 14 tpi, is intended for material $1/2''$ to $3/4''$ thick. The fine-tooth dovetail saw, with 20 tpi, is intended for material $1/2''$ and thinner. This is by no means a hard rule, as either dovetail saw will cut well outside these ranges; however, each is most efficient within its specified range.

The two dovetail saws are filed with rip teeth to cut along the grain of the wood, as most dovetail joint cuts are rip cuts. For other fine joinery and small projects that require cutting across the grain (e.g., cutting the shoulders of a tenon), the small crosscut saw is ideal. The teeth on the crosscut saw are filed with an alternating bevel angle, so they act as small knives to sever the wood fibers, leaving a smooth, accurate cut with almost no tear-out.

Sawtooth Geometry

The teeth on the standard dovetail saw are filed rip at 14 teeth per inch, with a 14° rake using the typical 60° included angle. Set is $0.003''$ on each side.

The teeth on the fine-tooth dovetail saw are filed rip at 20 teeth per inch, with a 14° rake and a 60° included angle. A double-extra-slim file will be necessary for sharpening these teeth. Set is $0.003''$ per side.

The small crosscut saw has 16 tpi, filed with a 15° rake and a 60° included angle. Set is the same ($0.003''$ per side). The main difference with these teeth is that they are not filed directly across the blade (90°), but at an alternating 75° angle to the blade, which creates a 15° bevel on each tooth. Unlike rip teeth that are a series of little chisels, crosscut teeth are a series of little knives.

As supplied, these saws will have residual sharpening burrs on the teeth. These will disappear as the saw is “broken in”.

Since the blade is high-carbon steel, the teeth can be resharpener when necessary. Please refer to references, such as *The Complete Guide to Sharpening* by Leonard Lee (The Taunton Press, Inc.), for detailed directions on sharpening a saw blade.

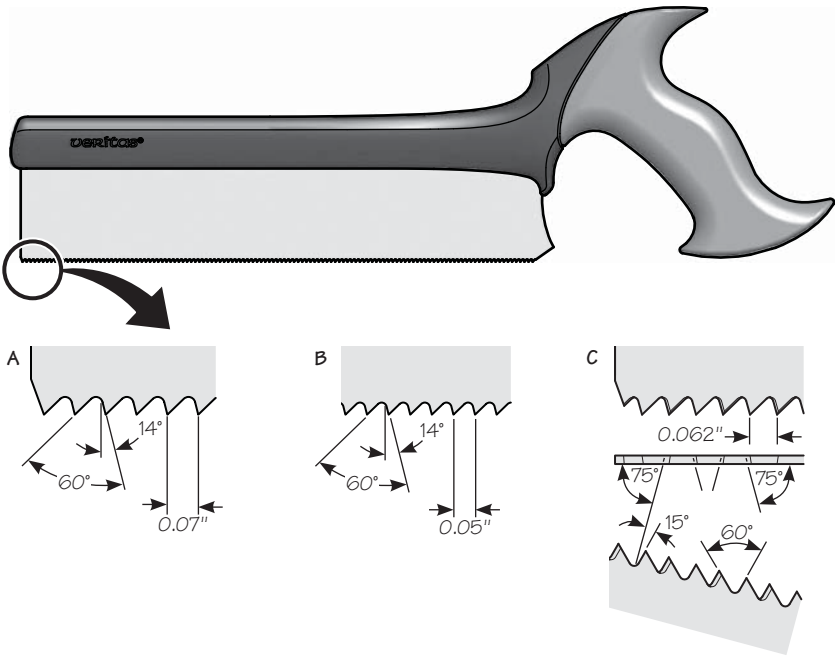


Figure 1: Sawtooth geometry for regular dovetail (A), fine-toothed dovetail (B) and small crosscut (C) saws.

Replacing the Handle

The joint between handle and spine is such that sawing loads are not transferred through saw bolts. Since it is attached to the spine using a single threaded stud, the handle can be quickly replaced if necessary.

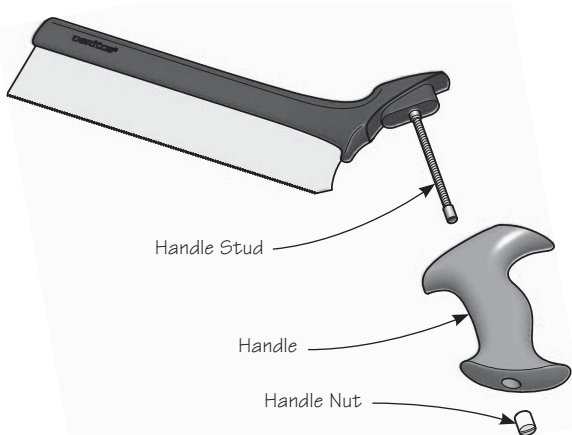


Figure 2: Assembly.

While the handle shape has been carefully developed to offer the best comfort level, we recognize that every woodworker has a preferred handle type, particularly with a dovetail saw where the saw must be an extension of your arm and comfort is critical. You may want to modify the existing handle, or make your own from scratch. The critical dimensions for the handle are shown in **Figure 3**. Make your handle such that the large boss on the spine bottoms out in the oval cavity in the top of the handle. The only critical curve is the one that surrounds the oval cavity, as this must match to the mating curve on the spine; otherwise, any shape that fits your hand comfortably will do.

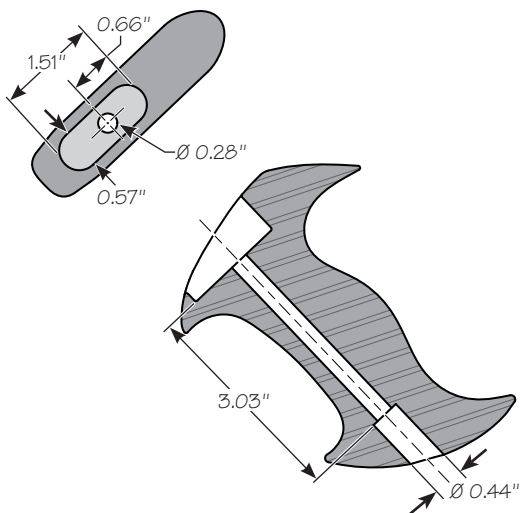


Figure 3: Handle template.

Care and Maintenance

- To ensure many years of service and to prevent damaging the fine teeth, always store the saw with the blade protector in place.
- A light coating of wax will prevent the blade from rusting.
- Rubbing paraffin wax on the side of the blade just before use will also allow the saw to run more smoothly through the cut.
- **Do not** use beeswax candles; beeswax will gum everything up.

Accessories

- 05T05.01** Dovetail Saw, 14 tpi
- 05T05.05** Fine-Tooth Dovetail Saw, 20 tpi
- 05T06.01** Small Crosscut Saw, 16 tpi
- 05T07.01** Crosscut Carcass Saw, 14 tpi
- 05T07.05** Rip Carcass Saw, 12 tpi
- 05T10.01** Rip Gent's Saw, 20 tpi
- 05T10.05** Crosscut Gent's Saw, 22 tpi
- 05T14.01** Rip Tenon Saw, 9 tpi
- 05T14.05** Crosscut Tenon Saw, 12 tpi