

# Sharpening services

THEY MAKE BITS AND BLADES CUT LIKE NEW,  
BUT ARE THEY WORTH THE COST?

BY TOM BEGNAL

Woodworkers use all sorts of cutting tools, some powered by hand, others by electric motors. Either way, it's important that every edge is sharp. Otherwise, the tools don't work as designed.

Typical hand tools, like chisels and plane blades, sharpen relatively easily in minutes, right in the shop. But motor-powered cutting tools are a different story. Tablesaw blades, dado blades, jointer knives, planer knives, and router bits are best sharpened by a professional. A good one will have the sophisticated equipment needed to sharpen these very long, complex, or multiple edges, many of them hard tungsten carbide. Most



## Sharpen or replace?

TOOL	AVG. COST NEW	AVG. MAIL-ORDER SHIPPING COST*	TOTAL AVG. COST NEW
10-in., 40-tooth blade	\$29 to \$105	\$10	\$39 to \$115
8-in., 24-tooth dado blade	\$95 to \$300	\$15	\$110 to \$315
Router bit	\$3 to \$140	\$9	\$12 to \$149
6-in. jointer blade	\$14	\$7	\$21
12-in. jointer blade	\$22	\$10	\$32

will ship the tool back to you within two to four days after it shows up in their shop.

**Sharpening changes the size of a tool**

Be aware that the size of a cutting tool changes slightly after sharpening. The diameter of a sawblade or dado cutter becomes slightly smaller. So, too, does the diameter of a straight router bit. The cutting radius of a round-over bit gets bigger, while the radius of a cove bit gets smaller. Planer and jointer blades end up narrower.

Whether or not a smaller tool is an issue depends on the tool itself and, to some extent, on how you plan to use it. It won't really make a difference when the diameter of a sawblade measures a few thousandths of an inch smaller after sharpening. A larger radius usually won't be an issue either, unless it's a matched set of router bits for cutting a rule joint on a drop-leaf table. When installed, planer and jointer knives can be adjusted to account for any change in width.

But if a bit is bearing-guided, and the bearing is intended to create a flush cut, the cut might not be flush after a sharpening (see "Trouble with bearing bits," p. 100). The result may be a slight step along the routed edge.

Matched rail-and-stile bits (also called cope-and-stick bits) are designed to make mirror-image cuts that fit together perfectly. Most users find that the bits can accept at least one sharpening before the fit becomes less than perfect. Check with your sharpener before sending along a set of these bits. Other types of cutters usually can be resharpened several times. Sawblades



**BEFORE**

**Telltale sign of a dull blade.**  
When surfaces start to burn, despite proper setup and a healthy feed rate, the blade needs sharpening.



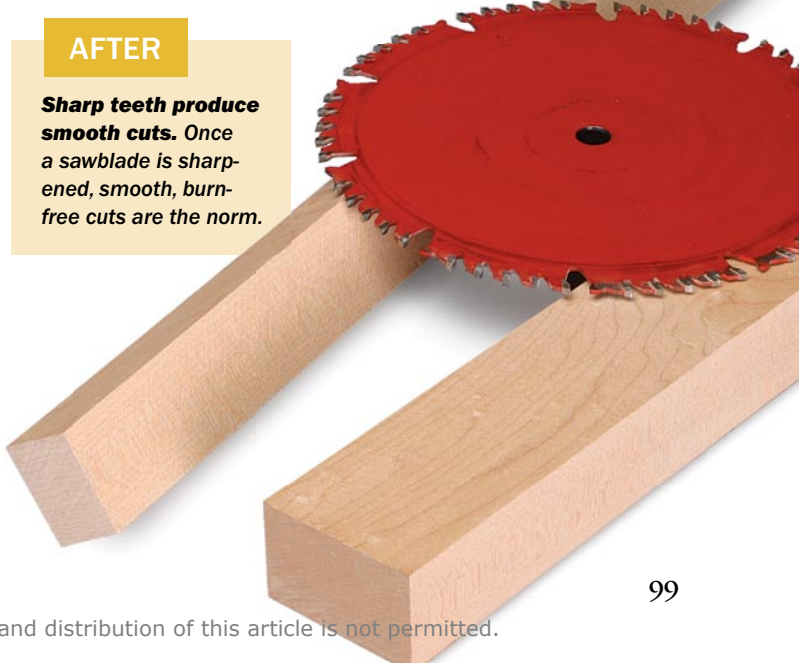
**Sawblades**

**Sharpening at the shop.** Professional sharpening services have the specialized equipment and know-how to turn dull bits and blades into sharp ones (above). Most sharpening services also can replace chipped or broken carbide teeth (right).



**AFTER**

**Sharp teeth produce smooth cuts.** Once a sawblade is sharpened, smooth, burn-free cuts are the norm.



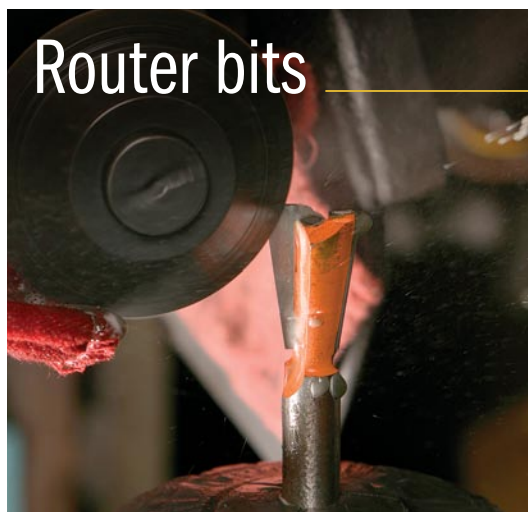
AVG. COST TO SHARPEN	AVG. COST TO SHIP OUT AND BACK*	TOTAL AVG. SHARPENING COST	AMOUNT SAVED BY SHARPENING
\$16	\$16	\$32	\$7 to \$83
\$40	\$25	\$65	\$30 to \$235
\$5	\$14	\$19	-\$16 to \$102
\$4	\$14	\$18	\$3
\$8	\$20	\$28	\$4

\*Finding a local store to do your buying or sharpening will save you the shipping costs and change the math.



## BEFORE

**Dull router bits cause burning, too.** Burning and rough edges are common to cuts made by dull bits.



## Router bits

**Like new again.** In the hands of a good sharpener, it takes just minutes to turn a dull router bit into a sharp one.

## AFTER

**Clean cutter.** Expect burning and tearout to disappear once a router bit is sharp.



and bits that come with relatively large carbide tips typically get you a few more sharpenings than blades with smaller tips, something to consider when buying.

### Cost: resharpen vs. replace

Before shipping out your favorite cutting tool for sharpening, find out if it will be worth the expense. That means comparing all the costs of buying a new tool to all the costs associated with having the dull one sharpened. The chart on pp. 98-99 offers guidance.

Most sharpening services make it easy to get prices. Many list prices online. If not, you usually can get a quick quote by phone or email. The prices shown are based on a survey of eight sharpeners located across the United States.

When getting prices, be sure to factor in the cost of shipping the tool to and from the sharpener. Sometimes, especially when the tool to be sharpened sells for a bargain price, it's cheaper to buy a new tool than to pay the cost of sharpening, plus shipping, plus taxes if applicable.

If possible, try to ship several tools at once. It's a good way to reduce the shipping cost.

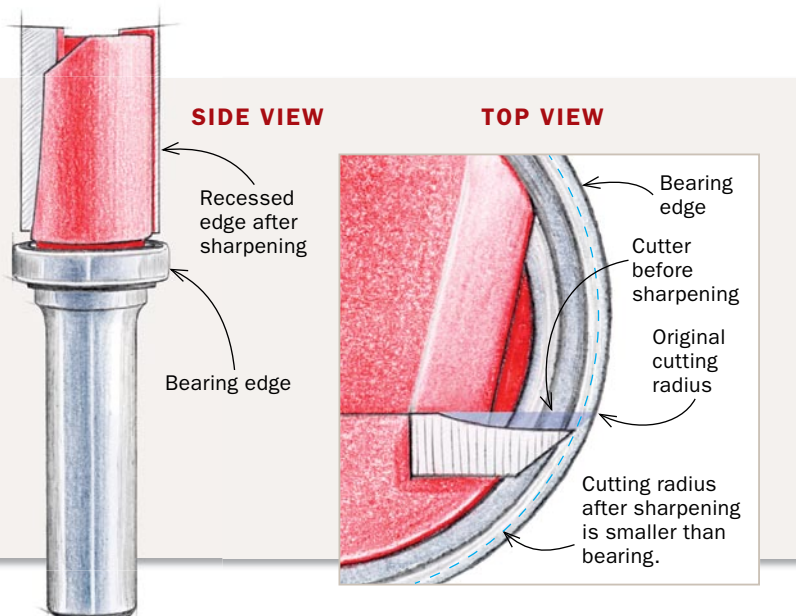
**10-in.-dia. carbide-tipped sawblades**—You can expect to pay around \$12 to sharpen a 10-in.-dia., 24-tooth carbide-tipped blade, \$14 for a 40-tooth blade, \$17 for a 60-tooth blade, and \$4 per tooth should any need replacement. Some sharpeners automatically replace sawblade tips that look cracked, chipped, or otherwise damaged. A few don't replace tips at all.

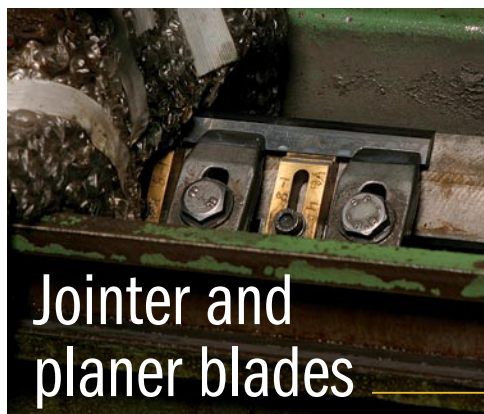
Others won't replace damaged tips unless their number exceeds 10% of the total number of teeth. That means if you send them a 60-tooth blade with six chipped teeth, they won't replace any unless you tell them to. But if that same blade has eight chipped tips, they will replace two tips to keep the number at or below 10%. The thinking here is that when 9 out of 10 teeth are fine, the blade can still cut effectively.

**Router bits**—On average, a straight router bit under 1 in. dia. can be sharpened for about \$4 per flute (per cutter edge, basically). Cove

## Trouble with bearing bits

Invariably, sharpening a tool removes material from a cutting edge. That means each sharpening slightly reduces the cutting diameter of the tool. For some tools, like tablesaw blades, the size change doesn't make a real difference. However, on cutting tools like flush-trimming router bits, where the cutting diameter and bearing diameter need to be just about the same, the reduced cutting diameter can result in a bit that trims less than perfectly flush.





## Jointer and planer blades

**Dull no more.** A grinding wheel passes along the cutting edge of a jointer knife, leaving behind a sharp, nick-free surface.



### BEFORE

**Unwelcome ridges.** Thanks to two nicks in these planer blades, boards leave the planer with a couple of ridges.



### AFTER

**Ridge-free.** Sharpening the planer blades removes the nicks, so the planed surface is glassy smooth.

bits and roundover bits with a radius less than about 1 in. will cost you about the same. Rail-and-stile bits and raised-panel bits run \$3 to \$4 per flute.

If your bit has a bearing, be aware that some manufacturers insist that you remove it before shipping. If a bearing is attached, they'll add an extra buck or two to the order. And they won't be responsible if a bearing gets damaged or lost.

Also, many services won't sharpen spiral bits. So check first before sending one out.

Most sharpeners also won't replace a damaged carbide tip on a router bit, mainly because the fix is more expensive than buying a new bit.

**Jointer and planer blades**—The average price for sharpening steel jointer and planer blades is around 67¢ per cutting inch. Carbide blades run about \$1.50 per inch. Several sharpeners have minimum rates, but all I looked at were less than \$5. Some add on a \$2 to \$4 charge to cover extra grinding time if the blade has nicks or chips deeper than 1/16 in.

**Dado sets**—Prices for sharpening carbide-tipped stacked dado sets range from about \$20 to over \$50, averaging around \$38. You get all the chippers sharpened, and both outside blades. The cost to replace a damaged tip is about \$4, the same as you'd pay to replace a tip on a tablesaw blade. Adjustable dado sets and steel dado sets can be sharpened, too. But based on my narrow survey, only about half of the sharpeners offer that service.

### Finding a sharpener

Several months ago, I posted a question on FineWoodworking.com's Knots woodworking forum and asked members to recommend a sharpening service. I received about a dozen names, and added another half-dozen of my own. To see the list or add a name, go to [www.finewoodworking.com/extras](http://www.finewoodworking.com/extras). To comment on your experience with a particular service, go to <http://forums.taunton.com/fw-knots>, and post your entry in the "Magazine Feedback" area. In time, we should have a good resource to call on when cutting tools go dull. □

## How to keep edges sharper, longer

Carbide cutting tools can dull for any of several reasons.

**Abrasion is one cause.** The cutting edge simply wears away, and in the process, changes a sharp angle to a rounded one.

**Resin buildup on the teeth** can cause problems in a couple of ways. Chemicals in the resin can react with the binder that holds all the tiny bits of carbide together. When that happens, the carbide bits begin

to break away. Also, resin buildup can cause the blade to cut hotter, and a hot-running blade can cause the binder to weaken.

**A blade that encounters a board with a hidden nail or screw will come away from the meeting with a few chipped teeth.**

**You can maximize time between sharpenings simply by following a couple of simple rules. Keep resin buildup under control**



**Resin is double trouble.** Resin buildup on carbide teeth creates corrosion and extra heat, and both are bad news.

**by cleaning the blade regularly.** (A product called Simple Green works well, and it's available at most supermarkets.) Beyond that, it's just a matter of keeping the blade a safe distance from any nails and screws.