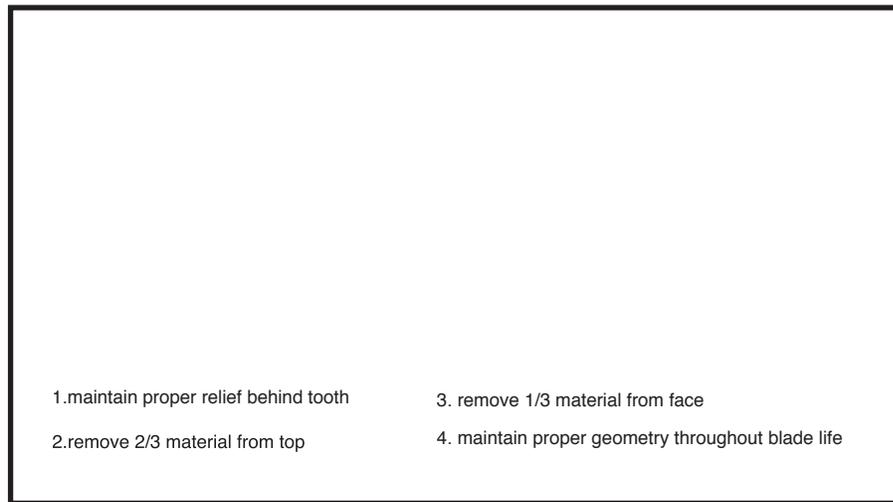


CHOOSING A TOOL SERVICE

SERVICE

Selecting a tool service on price alone can often prove costly in more ways than one.

FIGURE 1 properly serviced saw must have a certain amount of material removed from both the top and the face of the tooth.



1. maintain proper relief behind tooth
2. remove 2/3 material from top
3. remove 1/3 material from face
4. maintain proper geometry throughout blade life

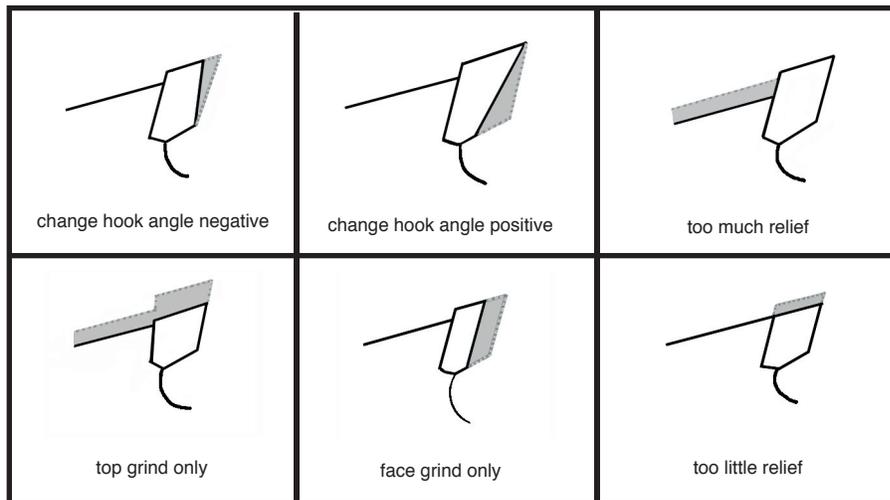


FIGURE 2 if any of the improper service grinds appear on your blades, you are reducing your tool's service life as well as reducing it's performance level.

Proper service of your tooling can mean the difference between making money and not making money.

In the past, tooling has often been an afterthought in the woodworking industry. Machinery, raw materials and other items have taken priority over tooling. How many times have companies ordered a machine and forgotten about tooling? How many jobs have been taken with consideration given to the tooling required to perform the job economically? Little or none.

Today, however, more and more shops are taking a serious look at tooling with respect to tool life and downtime. Tool servicing, on the other hand, is still the least thought about aspect in the production of wood products. It's not that no one cares about service of their tools. It's just that the primary concern is getting the job completed on time and out the door. But service plays a crucial role in this area and has direct bearing on your profit margins.

Low price often begets low quality

Most shops handle service through their maintenance department and, in many cases, price is what determines who gets the service business. Price, however, should not be the sole determining factor in regard to service. An expensive tool sent out for servicing to a "best price" shop may or may not be returned to you restored to its original working condition. In some cases the tool may perform adequately for a short time before requiring service again. In other instances, tools sent to "best price" shops are returned in a condition that may actually be worse than when the tool was new. It is also not uncommon to see cases of tools returned with a significant or even a total loss of remaining service life.

The reasons why low price and low quality so often go hand-in-hand relates mainly to the old adage of getting what you pay for. A "best price" shop has about the same overhead expenses as a quality shop. In order for the "best price" shop to offer these lower prices it must find other ways of keeping expenses to a minimum. And that often entails taking shortcuts in the actual service work being performed.

When you consider the investment required to tool a first-rate production facility, or even a small cabinet shop, the question of properly servicing those tools should be viewed as insurance on that investment. To economize in this area without first scrutinizing all of the factors involved could be disastrous.

Put quality first

There are three factors to consider with the service of woodworking tools. In order of importance, they are: quality, time and price. Quality has many different facets and in actuality is the only aspect of service which should be scrutinized. Ask yourself the following questions; Do we get 18 or more sharpenings from our saw blades? Do our serviced tools perform as well or better than when they were new? Are all of our tools inspected before and after they are serviced? If you don't know the answers to these questions, find out. The answers may surprise you.

Let's look at the case of a large manufacturer of panel products. This manufacturer was sending a significant number of saw blades out each week for service. After the serviceable life of the saws was exhausted, they would have the blades re-tipped.

Immediately note that there is a problem here. A properly serviced saw cannot be re-tipped economically. To re-tip a properly serviced saw one must recut both the gullets and the seat for the carbide teeth. This is due to the fact that a properly serviced saw must have a certain amount of material removed from both the top and the face of the tooth (Figure 1). This is done to maintain the same ratio of height and thickness of the saw tooth throughout its serviceable life. If any of the improper service grinds (Figure 2) appear on your saw blades, you are reducing your tool's total service life as well as reducing its performance level.

It was discovered that this particular manufacturer was getting only 10 to 12 sharpenings from a saw and then paying 75 percent of the price of a new saw to have it re-tipped. Let's look at their most recent findings:

	PROPERLY SERVICED SAW	RE-TIPPED SAW
NEW TOOL COST	\$150.00	\$150.00
SERVICE COST/ONE	\$12.00	\$8.00
RETIP COST	\$0.00	\$112.50
# OF SERVICE LIVES	23	11
TOTAL COST (AFTER 24 LIVES)	\$426.00	\$438.50

This may seem like a small difference in cost, however when you multiply this amount by the total number of saw blades this manufacturer uses over the period of one year, it adds up. Now take into account the fact that the performance level of the re-tipped saws was only 75 percent that of the properly serviced saws and their savings began to skyrocket.

Saw blades are not the only tools which need to be serviced. Router bits, cutterheads, and drills all need to be serviced at some point in time. Quality, again, can make or break the performance level of these tools as well. If these tools do not perform properly, you lose.

Get what you pay for

Make sure when your tools are serviced that your service center is returning the tools to their original manufactured specifications. Don't allow your center to modify or change these specifications just to suit its own service capabilities. If it can't perform the service that is required, don't allow it to do any service on that tool.

Manufacturers of cutting tools have spent years of exhaustive research and testing to come up with the proper tool geometry to satisfy certain applications. When this tool geometry is changed, the tool becomes useless for the application it was originally designed for. Many manufacturers have a service facility within their plant. If there is a question regarding the geometry of a tool, return it to the manufacturer for service or ask them to supply you with the proper specifications and tolerances they use in their manufacturing process. Most will be glad to help, for they do not want a product with their name on it performing poorly at any time during the tool's serviceable life.

There is one thing you can do in your shop to help. By properly packaging the tools before they are sent out for service you can help insure the tools' service life. Too many times boxes of router bits, drills, or saws have been sent out for service without being protected from each other. Cutting edges may be chipped or broken off entirely which can end your tools service life prematurely.

There are many different components that make up a quality service center. Some of these are: the type of equipment that is used for service, the grinding wheels, the inspection equipment, and the personnel. Do yourself a favor and visit your service center. Are all of the machines clean and in good working order? Do they have the necessary equipment to inspect your tools? Are you satisfied with the production time you are getting from your serviced tools? If not, you may discover that the "best price" you've been getting has actually been costing you money.

(Reprinted from Wood & Wood Products Magazine)