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NORTHWEST SCHOOL of WOODEN BOATBUILDING
Port Hadlock, WA
BOAT BUILDING • MARINE SYSTEMS

A Student's Guide to Buying Tools

Advice from Boatbuilding Instructors

Dear Student,

Welcome to the Northwest School of Wooden Boatbuilding. We have an exciting and busy year ahead of us, and the instructors are looking forward to having you in our programs. Before you arrive on campus, gathering a basic kit of good-quality tools is essential. As there are many different qualities and brands of hand tools out there, we'd like to share some of the instructors' thoughts and recommendations to help guide you through what can be an exciting, but confusing, process.

As you begin to hunt for tools, it's important to keep in mind that you get what you pay for. Higher-quality tools will more than likely cost more money. That said, even if you buy the highest-quality tools, it doesn't mean you're going to automatically produce the highest-quality work. So, taking the time to research tools, their particular use, and their comparative qualities is essential before committing to purchase them. There are many blogs, articles, and recommendations for tools out there. *Fine Woodworking Magazine* is a solid place to start; you may also consider looking through various tool vendor catalogs or, better yet, visiting a tool supply store such as Edensaw Woods. The main theme here is to educate yourself as much as possible before purchasing your tools. Even a mid-range tool kit is going to be a big investment, so it makes sense to take the time to know what you're investing in.

There are many poorly made tools on the market, and we want to make sure that you avoid these and instead invest in serviceable tools that you will not have to replace. These tools will serve you a long time, so it is worth getting the best tools that you can afford. Many of the tools we reach for most often are those we bought when we came to the Northwest School of Wooden Boatbuilding as students. As you learn more about tools and how you, as a craftsperson, use your tools, it will be easier to pick the tools that work for you.

Many people view hand tools as obsolete and archaic, but this is far from the truth. Most peoples' experience with hand tools are with low-quality, poorly tuned tools or with old, neglected tools. The planes, chisels, and saws that developed during the late 1800s and early 1900s were the result of thousands of years of tool evolution meeting the industrialization that allowed parts to be mass-produced accurately and efficiently. The best tools manufactured today follow these old designs. It is not that the tools are obsolete, but that the skills that are needed to operate them efficiently have become scarce.

Planes

The most difficult tools to choose are the planes and chisels. These will be the backbone of your tool kit, so we will start there. The first two planes you will need are a smoothing plane and a low-angle block plane. Most people opt for the metal Bailey-style planes, classified by numbers; you will want a number 3

(a number 4 will work as well). *Fine Woodworking* has many articles comparing models of smoothing planes and low-angle block planes.

At the low end of the price and quality scale are the new Stanley planes. The adjustments are coarse, but serviceable, and the tools need some tuning. Students with these planes often comment that they wish they had bought a higher-quality tool. In the mid-price range, Woodcraft has a n affordable, well-priced brand called Wood River, with quality comparable to many of the more expensive planes. Clifton and Lie-Nielson are the top of the line — high-quality tools for a little more than the Veritas. They are not tools that we would take down to the boat yard, but we may have one in our shop. You can just touch up the blade edge and go to work with these planes. We always want the best, but keep in mind that you have many tools to buy and you can always upgrade.

Chisels

The choices get overwhelming when you start to look at the variety and makes of chisels. You will need a set of bench or firmer chisels: ¼", ⅜", ½", ⅝", ¾", and 1". *Fine Woodworking* has run many articles over the years comparing brands of chisels. Some brands, like Crown and Robert Sorby, offer more than one line of chisel.

We are impressed with and recommend the Narex brand. They hold an edge and are just about ready to use right out of the packaging. They are higher-quality tools at an affordable price. Hirsch, Sandvik, Ashley Ile, and Henry Taylor are also in this price and quality range. Woodriver has come out with a six-piece set as well. At the higher end of the price range, there are many choices from $30 to $300 a chisel. Robert Sorby, Crown, and Barr all make nice chisels in the western tradition of woodworking. Pfeil Swiss Made, which makes some of the best carving chisels, has a high end set of six chisels available through Woodcraft. If you want to buy Japanese-style chisels, you can find some very nice tools at Japan Woodworker (now owned by Woodcraft).

Recently, we have been recommending the Narex set of chisels. They are a decent set of beginning chisels that should serve you well. They take a bit of preparation to get them flat and comfortable to use. As you add higher-quality tools, these will become your rough service set of chisels, the ones you take down to the boat yard.

Spokeshaves

The spokeshave is a tool that was used extensively in the wheelwright's trade. It's a combination of a plane and a drawknife. There are many varieties of spokeshaves for all sorts of specialized jobs; you are looking for a pair of general service spokeshaves. They come with flat or round bottoms — get both if you can but the flat is the primary used one. When we say round bottom, we mean that the sole of the tool curves from front to back. They are made for working on the inside of a curve, not a tool for making a round piece. Be sure to get ones with the adjustable blades — they are much easier to set up. I prefer spokeshaves patterned on the Stanley 151 mode, but have not yet found a maker who matches the quality of the old Stanley. Stanley, Kunz, and Anant use this pattern, and they are serviceable with a lot of work. We recommend the Lie Nielson Boggs Flat spokeshave if you can afford it- you can usually use it straight out of the box. Other high end spokeshaves are the wood-handled Veritas and the cast metal Clifton.

Measuring Tools: Combination Square, Steel Rule, and Tape Measure

When buying your combination square, keep in mind that in joinery you can only be as accurate as your layout. Starrett is our recommended brand, but there are others. We want you to have the six-inch square; it is less awkward to use and, as a lot of boat work occurs away from a bench, it is a convenient size to carry. The Starrett 6" Combination Square is the standard and a tool you will have forever.

Empire and Irwin make low quality combo squares that will eventually fail but the replacement price is low.

While we are discussing layout tools, one of our favorites is a six-inch steel rule. For example, an old General brand with sixteenths and eights on one side; the other has sixty-fourths, and thirty-seconds, but you may rarely use that side in woodworking. Starrett, Veritas, and other companies also make steel rules. You will also need a 25' tape measure; in addition, we like to have a 16' or 12' tape in our apron or pocket.

Cabinet Scraper

The cabinet scraper is a flexible square piece of tool steel. It is nothing like a paint scraper or putty knife. It is sharpened to finish a worked piece of wood and does the same job as sandpaper but produces a better surface. You'll use a mill file and burnisher to sharpen it. You can find these in most tool catalogs. We recommend the Two Cherries brand.

Drills

If you are planning to enter the trade and work on large vessels, we recommend a ½" electric drill. If you already have one, bring it along — most likely it will be fine. However, there is no substitute for a Milwaukee 0234-6 Magnum 5.5 Amp 1/2-Inch Drill. Others will work, but I have yet to see any drill take abuse like or outlast a Milwaukee.

Much of the work you will do at the school can be done with an 18-volt cordless drill. Students tend to gravitate toward compact rechargeables for their convenience. They have also become the tool of choice in the boat yard. There are many brands of cordless tools on the market. Dewalt and Makita make solid, dependable cordless drills. Whatever you buy, be sure to get a professional-grade tool.

Drawknife

The drawknife is a very useful tool boatbuilders use to shape spars and rough out timbers. They are also used in log building, which may help you to track them down. Until this year, they have been required tools; but, since they are not a heavily used item, we have recategorized them as optional. For the past several years, we have been using the Austrian drawknives from Lee-Valley. Woodcraft also carries a drawknife by Robert Sorby. In the world of supply chain shortages, Two Cherries offers good substitutes. As drawknives used to be a very common tool there are a lot of good used ones out there. Just be sure the blades are not worn down in the center, the handles are secure, and that the back is flat and not pitted from rust.

Brace

Another tool to look for is a good brace. They come in various sweeps measured by the radius of their swing. Look for a 3" to 6" sweep. Like the drawknife, they were once common and can be bought second-hand. Make sure the jaws that hold the bit are in good shape, not chewed up from misuse, and there is a wire spring to push the jaws apart as you open the chuck. Make sure the brace has a working reversing mechanism, and that it ratchets. I suggest looking for a Fray, Yankee, or Stanley. There are new ones on the market, but it will cost you to get the quality of the old ones that were made before electric drills.

Saws

We use the Japanese style of saw; these work on the pull and are a much easier tool to use than other varieties of saws. They come in a variety of configurations and costs. You will need a rip, a crosscut, and a dovetail saw. Most of our students choose to order these through Edensaw because they carry the matching replacement blades for each saw.

Others
On the tool order form, you will find some additional tools that we list as optional (these are available from Edensaw). The Picquic screwdriver is a multi-bit tool that works well but is not rated for use in Impact Drivers- only hand use. You should also purchase the Fuller taper bit and counter bore set through Edensaw. The rest of the items on the list are pretty easy; you can always email to ask questions to tucker.piontek@nwswb.edu.

Personal Protective Equipment (PPE)
You will also need protective gear for your eyes, ears, lungs, and hands. We like safety glasses that have replaceable lenses; some people prefer goggles. Magid has a large line of safety glasses available on Amazon. Safety Headphones are comfortable to wear and will protect your ears the best. It is also nice to have a pair of lighter duty earplugs you can wear around your neck. You are not always the one making the noise and it's nice to have a pair close. Long term exposure to loud shop tools will cause hearing loss and Tinnitus- a hearing condition you need to protect yourself from. Ear buds are not safety rated and are not allowed as a substitute. Students are required to where safety glasses and hearing protection while operating power tools.

Every student is required to have a respirator for protection from dust and chemicals. The respirator must fit the shape of your face and provide a good seal. Another consideration is the availability of the cartridges. We recommend that you buy a 3M respirator on the tool list. They are well made and cartridges and parts are widely available. Wood dust can cause a lot of damage to your lungs and should not be taken lightly.

All students will be required to have a box of nitrile gloves throughout the program. We don't use many highly toxic chemicals, but people develop intolerances to all sorts of chemicals and the more you keep them off your skin, the better off you are. **You will be expected to provide all your own safety equipment throughout the year and will be expected to always use them**. Take it from us- this is a trade where your own safety should be a high priority for yourself.

Second-hand Isn't Necessarily Second-rate

Many of our favorite tools are old, used ones that we have acquired over the years; but, finding these takes a bit of looking, and it helps to know what you are looking for. There are many old tools that we have chosen not to buy because they were beyond help or would require too much of my time to restore. There are some good books on tools that can help you in selecting vintage tools. For example, Garret Hack has written a couple of vintage tool books tools that have chapters on what to look for when buying older tools.

When it comes to old tools, we try to find good functional tools that have all their parts, without paying collector prices. That means the handles and or paint may be chipped or parts have been replaced. We would avoid tools that have been cracked and repaired or have been heavily rusted. Also, just because a tool is old doesn't mean it is a high-quality tool; back then, just as now, tools were produced to different standards. Do your homework.

We will have multiple used tool vendors visiting the school throughout the academic year. This will include multiple visits during your first week on campus, to give you additional options for sourcing tools.

For twenty-five years, Bob Kaune has been selling vintage tools to our students. He is a great resource and has a huge variety of tools. He generally buys the high-quality collectors tools; however, he knows what tools we use at the School and he has good user-quality vintage planes, spokeshaves, and chisels that are moderately priced. His web site is: **antique-used-tools.com.** Not everything he has is online and the tools in good, usable condition may not be on the site. Email him to see what he has, and let him know that you are an incoming student.

We hope that this will help you in your tool buying adventures. Remember that these tools will be with you a long time, so take your time and do your research. There is a lot of information out there through the woodworking magazines, books, and websites. If you have questions, call or email us. We will look forward to seeing you in October.

Happy Hunting!

Northwest School of Wooden Boatbuilding Instructors

Resources:

Books

Hand Tools, Their Ways and Workings	Aldren Watson
The Hand Plane Book	Garret Hack
Classic Hand Tools	Garret Hack
Japanese Wood Working Tools	Toshio Odate

Websites

Edensaw Woods, Ltd	http://www.edensaw.com
Woodcraft	http://www.woodcraft.com
Garrett	http://www.garrettwade.com
Wade Lee	https://www.lie-nielsen.com
Nielsen Bob	http://www.antique-used-tools.com
Kuane	https://www.leevalley.com
Lee Valley & Veritas	
Japan Woodworker	http://www.japanwoodworker.com

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