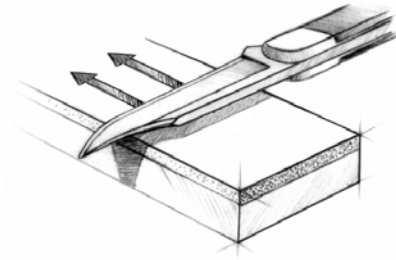


Knife Sharpening

Every knife needs sharpening from time to time. With the following instructions, you will be using the safest and most effective method of sharpening your knife. If you are looking for other information about knife care, please refer to www.buckknives.com, Knife Care & Repair or Warranty.



What not to do

Never sharpen your knife on a power-driven grinding wheel. This can burn the temper from your blade, which will make the edge brittle and possibly chip or crack. Sharpening your knife in this manner will void the warranty.

Knife Sharpening Equipment

For best results, use a sharpening stone. For quick touch-ups on a blade that is not too dull, use our fine grit diamond sharpening stone or our Arkansas Washita honing stone. For a more thorough sharpening on a blade that is dull, use the coarse grit stone first, then go to the fine grit stone or stones.

Diamond sharpening stones may be used dry or wet, but wet is recommended. When using them wet, use water, not oil, as a lubricant. Natural Washita stones should be used wet. You may choose to use your stand-alone Washita stone (not attached to the Tri-Stone system) with honing oil as a lubricant. Once you do this, water will no longer work well as a lubricant and you will need to use kerosene or honing oil to keep your stone clean. After each use, dry your sharpening stone. For information on sharpeners, please see www.buckknives.com, Accessories.

a. Types of Sharpeners

• Diamond Stone Sharpeners

A metal or composite base with an outer layer of micron-sized diamonds bonded to a metal surface. Many diamond sharpeners have special surface holes to prevent "filing build-up." Fast-acting and very effective. Use care to avoid excess pressure.

• Natural Stone Sharpeners

Arkansas natural stones are genuine silica "Novaculite", indigenous to Arkansas. They come in different grits and have abrasive properties well suited for knife sharpening.

b. Types of sharpening fluid

Some people recommend sharpening dry and cleaning the sharpener as needed. Our recommendation is to sharpen wet because it keeps the pores of the sharpener clean, dissipates frictional heat and facilitates smooth sharpening action.

• **Diamond Sharpeners:** Can be used wet or dry. If using a diamond sharpener wet, use water or water-based honing oil, not petroleum based oil.

• **Natural Sharpening Stones:** Can be used wet or dry. Water, water-based honing oil or petroleum-based honing oil can be used. Be generous with the honing fluid. Use enough to keep a pool visible on the stone while you are sharpening. When the pool gets murky, pat or lightly wipe up with a rag and add more fluid.

Note: Once you use oil on a natural or aluminum oxide stone, it is difficult to change back to using water. Treat the decision to use oil as a permanent one.

c. Handle a sharpener with care to protect its surface

- Do not drop.
- Protect the surface during use and storage.
- After every use, use a little extra fluid and wipe the sharpener clean and dry.
- Clean sharpening stone periodically to eliminate debris build-up (swarf). Glossy grey streaks indicate debris build-up.
 - If you sharpen with water or water-based honing oil, clean sharpening stone with soapy water.
 - If you sharpen with petroleum-based honing oil, clean sharpening stone with kerosene or more honing oil.
 - Scrub with your finger or a mild brush, such as a used toothbrush.

d. Practice sharpening on a non-valuable knife

Through the process of sharpening, scratches may occur beyond the edge of the blade. If you are new to sharpening, you may wish to practice on an old or inexpensive knife first to get the feel for avoiding unwanted scratches.

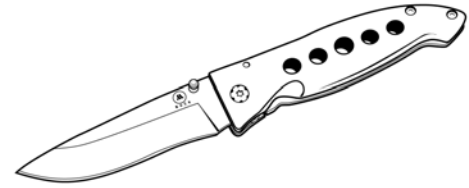
Sharpening Instructions

- Straight blades
- Serrated blades
- Gut hooks
- Fish hooks and small, pointed objects
- Small tools

Sharpening straight blades (non-serrated)



- Inspect your blade condition by holding the knife, edge up, and looking down the length of the blade— Look for nicks or flats spots reflected by light.
- Is the blade nicked or extremely dull? Start with Stage 1, Coarse Grit Stone.
- Is the blade somewhat dull or just needs a touch-up? Start with Stage 2 or Stage 3.



STAGE 1: HEAVY SHARPENING—COARSE GRIT SHARPENER

- For extremely dull blades, inconsistent edge, or nicks/dull spots.

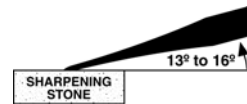
This stage is the “rough cut” to remove inconsistencies in the blade edge and take it from very dull to sharp, but not finished. Buck’s Diamond Sharpening Stone, Model 1327, has coarse 325 grit, suitable for stage 1 sharpening.

a. Sharpening fluid.

- Diamond Sharpeners: Can be used dry or wet. If lubrication is desired, use water or water-based honing oil, not petroleum based oil.
- Natural Sharpening Stones: Can be used dry or wet. Water, water-based honing oil or petroleum-based honing oil can be used (see “Knife Sharpening Notes” for recommendations).

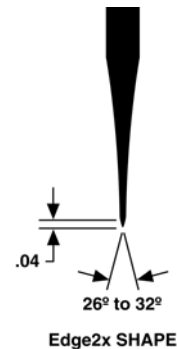
b. Hold the correct grind angle.

Ideally, follow the grind and edge angle as they were when new. Scratches on the blade happen when sharpening. Use them to measure if you’re angled too high or too flat against the stone, or if you’re skipping off the edge of the stone.



CORRECT BLADE ANGLE FOR SHARPENING

The angle on a Buck Knife is ground to 13-16 degrees per side (see illustrations). If you hold the knife against the stone to cut evenly across the edge grind, you will produce an edge with a similar angle. If you hold the blade at too high of an angle, the resulting edge will lose some slicing ability (but will stand up better to chopping). A good rule of thumb is to hold the blade so the back of it is about one blade width up from flat on the stone.



- c. Stroke the blade across the sharpener with even control. Too much pressure will crush or remove the grit from a diamond sharpener. It will also force a thicker burr on the edge, which is harder to remove or which can break off, creating new flat spots on the edge. Your stroke can be straight or circular, from “hilt to tip” –or- “tip to hilt,” whichever is more comfortable. With most portable sharpeners, you need to stroke in a straight direction. The blade edge should face in the same direction as you stroke, so you move metal away from the edge. (*Stroking toward the edge will create a thicker burr on the edge, the same as using too much pressure, with the same undesirable results*).



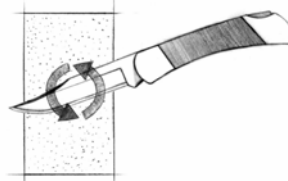
- d. Maintain contact with the sharpener.

When stroking the blade across the sharpener, as you work the length of the edge (from hilt to tip), do not let the tip of the blade skip off the edge, or end, of the sharpener. This results in a rounded tip or unwanted scratches on the side of the blade.

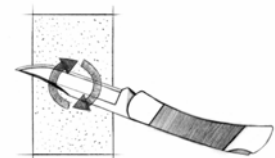
- e. Alternate blade sides.

Do the same number of strokes on each side of the blade. If you do 15-20 strokes on one side, do 15-20 on the other side. Don’t alternate sides with each stroke, or you won’t get a burr. As you feel a burr developing on one side, switch to the other side and check that the burr is making the same progress on the other side.

- f. For circular sharpening, keep the blade on the surface and use an easy, clockwise motion with the edge facing right, until the desired sharpness is achieved. It is ideal to achieve the original factory edge.



- g. Turn the blade over. Use an easy, counter-clockwise motion with the edge facing left. Try to spend the same amount of time on each side.



- h. Work the “nicks” separately.

If there is a nick on the edge, you can work just the area around the nick evenly, side-to-side. Once the nick appears to be gone, go back to working the entire length of the edge.

- i. Inspect the “evenness” of your edge.

The object is to have an even edge on both sides. Move to the next step when you feel the burr from hilt to tip on one side AND you see no nicks or dull spots along the edge.

- j. Prepare for Stage 2

Pat or wipe your knife dry. Be careful—the burr can cut just like a sharpened edge. Move on to Stage 2 for working the edge.

STAGE 2: MEDIUM OR FINAL SHARPENING—FINE GRIT SHARPENER

- For typical dull blades - OR - continuing from Stage 1.

This stage removes rough scratches from Stage 1 . . .

- OR - is an appropriate starting point for blades that are somewhat, but not overly, dull.

Buck's Diamond Sharpening Stone, Model 1328, has fine 750 grit, suitable for Stage 2.

- a. Sharpening fluid.

- Diamond sharpeners: Can be used dry or wet. If lubrication is desired, use water or water-based honing oil, not petroleum based oil.

- Natural Sharpening Stones: Can be used dry or wet. Water, water-based honing oil or petroleum-based honing oil can be used (see "Knife Sharpening Notes" for recommendations).

- b. Sharpen the edge, following the same steps as in Stage 1.

- c. You can achieve a good, sharp edge and finish at this stage without going on to Stage 3.

- To do so, hone with light, single strokes, side-to-side, until you feel no burr on either side

- To fine-tune the edge or smooth "sharpening scratches", skip this step, go to Stage 3.

STAGE 3: FINE SHARPENING—NATURAL STONE

- For slightly dull blades - OR - continuing from step 2.

This step removes any remaining burr and puts a burnish on the blade edge.

Buck's "Arkansas Washita Honing Stone" has fine 600 grit that is suitable for Stage 3.

- a. Sharpening fluid.

Natural sharpening stones can be used dry or wet, but wet is recommended. Water, water-based honing oil or petroleum-based honing oil keeps the pores of the stone clean, dissipates frictional heat and ensures smooth sharpening action. Once you use oil on a natural or aluminum oxide stone, it is difficult to change back to using water. Treat the decision to use oil as a permanent one.

Sharpening will require some clean-up anyway, so be generous with the honing fluid. Use enough to keep a pool visible on the stone while you are sharpening. When the pool gets murky, pat or lightly wipe up with a rag and add more fluid.

- b. Use the same stroking motion as described in Stage 1. Repeat until scratches from the previous grit stone are gone. You should still feel a burr, but it should be smaller/finer.

- c. Once you clean all the scratches off the edge from the previous grit, use light, single strokes side-to-side. Make one stroke from hilt to tip, then turn the knife to the other side and stroke once from hilt to tip.

- d. Repeat this several times until you can't feel any burr on either side of the edge, from hilt to tip. The knife should be razor sharp at this point. If the knife fails to cut as expected, you may need to start again from Stage two. Remember, if you use too much pressure against the stone, you will raise a thick burr instead of removing it.

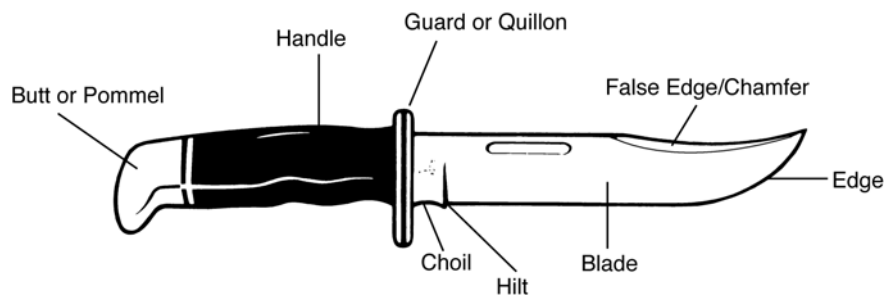


Illustration of knife parts

Sharpening Serrated Blades



Sharpening serrated blades and gut hooks requires a different technique and different style sharpener.

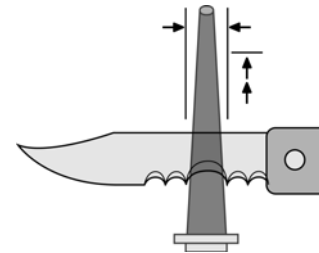
Do not use a flat sharpening stone. Buck's Diamond Taper Sharpener or Diamond Pocket Sharpener is the right tool for this job.

Even a taper sharpener cannot create the same kind of edge that was originally on the knife. This makes it difficult to achieve better than a "serviceable" edge on these features, and that should be your objective—not achieving perfection. Because of their shapes, these features are more easily distorted through sharpening than a blade edge. You may wish to consider sharpening serrations and gut hooks only when dull spots are visible.



Serrations

- Serrations have a grind on one side of the blade only. Sharpen the grind side only.
- Hold the sharpener at the angle that matches the original edge angle.
- Put the pointed, narrow end of the sharpener up against the serration and stroke the sharpener into the serration—away from the edge of the blade, toward the spine. Stop stroking when the width of the taper sharpener gets to the same width as the serration (do not enlarge the width of the serration).
- Rotate (spin) the sharpener as you go for even, consistent sharpening.
- Check progress and continue until you feel a very slight burr.



Sharpening Gut Hooks

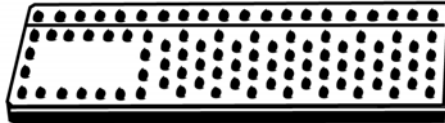
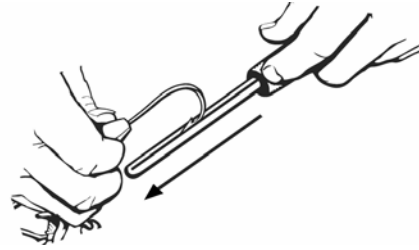
- Unlike serrations, a gut hook is ground on both sides of the blade. Therefore, both sides need to be sharpened. Use the same taper sharpener as for serrations.
- Do not try to fill the entire width of the gut hook with the wide end of the sharpener. This will enlarge the gut hook curve and distort the cutting edge.
- Put the pointed, narrow end of the sharpener up against the open end of the gut hook. The narrow, pointed end of the sharpener should face in toward the thickness of the blade, away from the edge of the gut hook.
- Hold the sharpener at the angle that matches the original gut hook edge angle. This will maintain the correct sharpening angle and prevent you from getting cut by the blade tip. Make sure to hold the same angle when sharpening each side of the gut hook.
- In a forward and sideways motion, stroke the sharpener from one side of the gut hook to the other. Spin the sharpener as you go. As with sharpening a blade edge, the objective is to start at the edge and stroke away from the edge.
- Alternate blade sides. Do the same number of strokes on each side of the blade's gut hook. Keep the number of strokes to a minimum to avoid distorting the gut hook shape.
- Check progress and continue until you feel desired sharpness (very slight burr).
- Once a burr is detected, stroke alternating sides until the burr is removed (just like finishing a straight edge blade).



Sharpening Fish Hooks and Small, Pointed Objects

Sharpening fish hooks and other small, pointed objects also requires a different technique and different style sharpener. Do not use a flat sharpening stone. Buck's portable sharpeners have a straight-line "fish hook groove" that is the right tool.

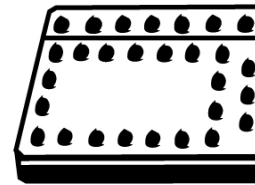
- Place the fish hook in the groove, with the point in the same direction you will stroke.
- Hold the fish hook in the groove and stroke it to the end of the groove.
- Because you are working with a small, thin object, exercise restraint:
 - Check progress frequently—a few strokes may be all you need.
 - Do not use pressure when stroking.
- The fish hook groove can be used to sharpen other fine point objects (darts, needles, etc.).



Sharpening Very Small Tools

For very small tools, a sharpener with an uninterrupted surface works best. Most of Buck's sharpening stones have a Micro-Tool Sharpening Pad™ with an uninterrupted surface that is preferable for small objects.

- Within the pad's surface, use the same sharpening techniques described above for sharpening straight blades.
- Because you are working with a small tool, exercise restraint:
 - Do not use pressure when stroking the sharpener.
 - Alternate sides often (perhaps with each stroke), or you may wear away part of the tool.
 - Check your progress frequently—take small steps.



How to Keep Your Blade Sharp

- Sharpen regularly
 - Regular sharpening may involve only fine-tuning the edge, but infrequent sharpening may require much more work to restore the edge.
 - Maintain the edge
 - Dress (sharpen) the edge as soon as you notice it's not working as well as it should.
 - If you attend to the edge soon enough, a few single strokes side-to-side should bring the edge back to sharp. After several re-dresses, though, you may have changed the shape (bevel) of the edge and may need to go back to Stage 1 or Stage 2 sharpening.
 - Which sharpener do you need to use?

It depends on the condition of the edge. If it just needs a re-dress, then a fine grit stone should be fine (should be the last sharpener you used—Stage 2 or 3). If the edge has dulled, you may need to go back to Stage 2 sharpening. If it has rounded significantly, you may need to go back to Stage 1.
 - Keep your sharpener where you use your knives. (*shop, tackle box, kitchen*)

You will be more inclined to re-dress a dulled edge as soon as you notice it if there is a sharpener handy.
- Cut materials appropriate for the knife.
 - If it's a chef's knife, cut through food only, and cut on a non-dulling surface (like a nylon cutting board).
 - Even if it's a work knife, it is probably not designed to cut through fence wire or other hard materials. Use common sense to avoid injury, or damage to your knife.
- Use your knife for its intended activities

Buck knives are designed for cutting and piercing. They are not designed to be thrown, pounded, hammered, twisted, pried or used with electronics. These actions may result in broken blades, other damage or injury.
- Use care in storing knives
 - Store knives neatly and protect the edge. Keep kitchen knives in a storage block or on a magnet. Keep fixed-blade knives and tools in their sheaths when not in use. For long-term storage, it is better to keep them out of their sheaths to avoid tarnishing.
 - Throwing knives in a drawer or laying them around loose tends to dull the edges.
 - Stainless steel can be stored for a long period of time and maintain its edge. Non-stainless steel is more prone to corrosion and will lose its edge if left for long periods. Buck Knives uses stainless steel for all its blades, but not all knife companies do.

Buck Knives Sharpening Service

If you would like us to sharpen your knife for you, we will do it for \$6.95 per knife. Return shipping is included.

How to send your knife in for sharpening:

1. Provide your contact information

Write a note to us indicating that you would like us to sharpen your knife. Include your name, address, phone number and e-mail address.

2. Include your payment

Enclose a check or money order made out to Buck Knives for \$6.95.

3. Wrap your knife

For safety and protection of your knife, please put it in the sheath if you have one. If not, please wrap your knife (cardboard works well) so that it is protected during shipping and the point does not cut through the packaging (particularly for fixed blade knives). After we have worked on your knife, we will return it in your sheath (or in a cardboard sleeve if no sheath was sent).

4. Package your knife

Packaging your knife in a box is preferred, but a padded envelope may also work, provided your knife is not too heavy or too bulky. Please put some packing around the knife so it does not roll around inside your package.

5. Send your knife to us

We recommend that you insure your parcel and send it trackable by certified receipt. This will help protect you against possibility of loss or damage to your knife. Note that knife loss, including shipping to and from the Buck factory, is not covered by our warranty. Send your parcel to:

Buck Knives
Customer Service
660 S. Lochsa Street
Post Falls, ID 83854
(800) 326-2825, x184