Any point to addidtional passes once a burr....

Posted by BrianM1 - 30 Dec 2012 16:12

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is established?

I've done 10 knives now (all kitchen, only one of any quality), am quite happy with the results I'm getting. But I started noticing that once I get a burr with the 100 paddles, it only takes a couple swipes with the 200~600 to raise the burr again. Is there any benefit to doing more than the absolute minimum?

And my vise is now "scuffed" in on the right side. Oh-well, used is used. Guess I should have shimmed up that boning knife.

I love shaving off little curly cues from paper with these knives. No newspaper or phone books here, but normal printer paper easily push-cut on the knives in the vise after the 1000 grit plates.

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Re: Any point to addidtional passes once a burr....

Posted by KenBuzbee - 30 Dec 2012 17:01

If you're apexing (burr formed) you're fine. The only reason to go further is to remove more, deeper scratches, on the way to a cleaner bevel (polished)

Ken

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Re: Any point to addidtional passes once a burr....

Posted by Mikedoh - 30 Dec 2012 17:05

To my understanding, no need to raise a burr after that. What you are wanting to do after you've apexed (raised a burr on both sides) the edge, is to refine it with your finer grit stones. You are smoothing/polishing the edge as if going thru finer grades of sand paper when working with wood. You

are getting rid of/ reducing the scratches left by the previous stones.

Hope that helps

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Re: Any point to addidtional passes once a burr....

Posted by blacksheep25 - 30 Dec 2012 17:51

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No, and to take it one step further: I try to stop short of raising a burr, in order to conserve as much blade life as possible.

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Re: Any point to addidtional passes once a burr....

Posted by BrianM1 - 30 Dec 2012 18:23

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Very good, thanks. Kinda hard to Not raise a burr with the 400, I think it was there after 1 pass. Hadn't considered blade life.. but I'm sure less material is being removed with the WEPS than my dad removed with stones, and the worn knives they had were hand-me-downs from Their parents.

I have a few of my Father-in-laws pocket knives that I'm going to work on next. I'm going to focus more on how the finished product looks with these, so I'll pay more attention to scratch removal. I honestly wasn't worried about the form/looks with my kitchen knives, just the function.

Thanks again though...

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Re: Any point to addidtional passes once a burr....

Posted by Geocyclist - 30 Dec 2012 22:59

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Brian,

Yes, there are special cases where more strokes after raising the burr is required. This happened yesterday to me. I had a burr along the entire edge, but one section still did not have the angle (profile) as the rest of the edge. I kept working on scrubbing strokes on this one area to get the bevel to look the same all the way down the edge.

My progression is:

With lowest grit stone I plan to use (50, 80 or 100), raise a burr 1 side with scrubbing strokes (and be satisfied with the bevel)

Use edge leading strokes opposite side to remove burr and then scrubbing strokes to raise burr other side.

Remove burr from 2nd side.

Start with alternating strokes (same stone), reducing pressure to refine edge.

Go through all other stones, alternating strokes (not raising a burr any more).

Check edge every other stone or so stone with angle cube and loupe to make sure nothing has changed. (at first I wasn't tightening my screws enough).

I found I was forming a burr with the 200 stones, especially if I did 2 strokes per side. I lightened my pressure and this mostly eliminated the burr. From 600 I don't really notice a burr.

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Re: Any point to addidtional passes once a burr....

Posted by PhilipPasteur - 30 Dec 2012 23:14

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Once you put a burr on both sides, you will **always alternate** strokes with the finer grits. You may pull a small burr after each stroke, but not enough to matter, as you will remove it with the alternating stroke. As your grits get finer, the tiny burr after each stroke will be reduced in size. When you get to your finest stones, finish with very... very light strokes. Then strop very lightly... if you have strops. This runs counter to some of the thoughts about stiction changing the edge, but it works very well for me. Of course you don't want to over strop, but experience will teach you when enough is enough.

If you can feel a burr after alternating extremely light strokes with your finest stones... you have a few choices. First, work on your technique, get some finer stones... or use one of the burr removal techniques.. Use a high density felt block or soft wood and draw the knife through it a few times until the burr is gone.

With very light alternating strokes to finish, I really can't normally "feel" a burr after the 600 grit diamonds. I am pretty sensitive to this and can reliably feel this kind of difference in edge symmetry (micro burr..)even with hand stropping with 1 micron CBN on leather.

I also have never been able to get an edge at all by trying to stop before I pull a burr. I have read lots of folks that say they can. I don't know how. At some point, when you sharpen to the edge of the edge, as

you have to do to get something sharp, you will, at some point, end up with some kind of (even if only micro) burr, until you remove it with subsequent sharpening/polishing/stropping.

Phil

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Re: Any point to addidtional passes once a burr....

Posted by BrianM1 - 31 Dec 2012 08:09

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Geocyclist wrote:

...at first I wasn't tightening my screws enough.

Heh, glad to know I'm not alone here. I've had the arms come loose twice. I even put on some blue Loctite in hopes that would firm up the screws, but to no avail (the clearance is too sloppy). I'm going to try some Teflon tape to see if that'll fill in the space some and give the screws a little more holding power.

PhilipPasteur wrote:

Once you put a burr on both sides, you will **always alternate** strokes with the finer grits.

Okay, that, right there, is the piece of information I've been missing. The last videos I watched were from Smokeeater908 (or something along that line) and he did scrubbing strokes right through all the diamond plates. I followed because it's stupidly easy for a nooB to replicate that, switching to (very slow) alternating strokes on only the last of the 800 and the 1000 ~ which are the final plates I own.

I did reduce pressure about 1000-fold between the first set of knives and the 2nd set, with outstanding results. I'm using such little pressure that some strokes kinda skip on and off the blade. I'm not sure how I could go any lighter on the pressure... though time/experience will certainly show me. ☺

So, today I'm doing 4 pocket knives. I'll get the burr and set the profile, then switch to alternating strokes with every other plate. That begs the question, when is enough? Is that where visual inspection comes in, to make sure all the scratches are uniform in size/depth? Might need to get on ordering that loupe...

Thanks again... you folks are the anti-thesis of most forums I visit (helpful instead of snarky).

Brian

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Re: Any point to addidtional passes once a burr....

Posted by cbwx34 - 31 Dec 2012 09:08

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Visual is good, but one thing that hasn't been mentioned in a while, is if you pay attention to both sound and feel, you'll get clues when to switch. It took me a while to pick this up, but as you switch stones, moving to a finer grit, the stone, after X number of strokes, will make a distinct change, both in feel (almost feels like they're not cutting, even though of course they are) and in sound, it will get "quieter". Once you detect this, you'll find it's pretty easy to tell. I say "after X", because it varies with the steel and grit level you're at,,,, sometimes after 10-20 strokes, sometimes it might be 30+.

As you move to stropping, visually and the finish you're "after" is probably the best.

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Re: Any point to addidtional passes once a burr....

Posted by Geocyclist - 31 Dec 2012 11:32

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Good point Curtis. When I "feel" that the current stone has changed in feel and sound I try even harder to lighten the pressure and do 5-10 more strokes then move on.

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