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 cbwx34 - 04 Jan 2013 10:34

Great thread,,, I always like ones that make me think and rethink some of these concepts.

Geocyclist wrote:

I do agree it makes since not to burr with 50 or 80's. I did this and have have some chucks (at 10X) I didn't get out. I only saw these after the 1000# and didn't feel like starting over.

Didn't want this point to get overlooked... Raising a burr with the 50/80g stones is counterproductive. These stones are so aggressive, they can actually chip the edge, which then has to be sharpened out.

Good points on all sides! Some sharpeners think if you're trying to create the "perfect" edge,

you should never raise a burr. The final stroke, with the finest stone, should just reach the apex. A zen "catch a fly with chopsticks" thing I suppose.

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

Posted by BrianM1 - 04 Jan 2013 12:18

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cbwx34 wrote:

Geocyclist wrote:

I do agree it makes since not to burr with 50 or 80's. I did this and have have some chucks (at 10X) I didn't get out. I only saw these after the 1000# and didn't feel like starting over.

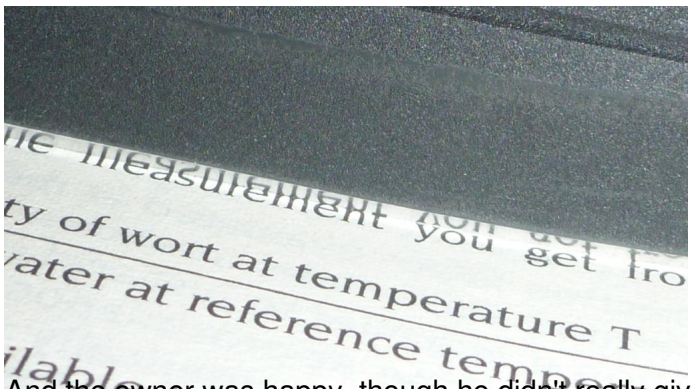
Didn't want this point to get overlooked... Raising a burr with the 50/80g stones is counterproductive. These stones are so aggressive, they can actually chip the edge, which then has to be sharpened out.

Heh, you guys have thought more about this than I though Possible. Thanks all for the posts...

To tangent Slightly, since the above is on that, what's the underlying purpose of the 50/80 stones then? I used them quite a bit on the last knife I worked on (www.amazon.com/Smith-Wesson-CKSUR2-Bulls..Search/dp/B000UUTAQ0) ~ sharpie mark on the OEM bevel and passes with the 1000 showed that the edge wandered left and right.. so with the left stone I hit edge at the heel, bottom of the bevel about 2 inch ahead of that, back to the edge and back to the bottom of the bevel. I tried scrubbing it out with the 100's to get both sides to apex but didn't seem like I was getting anywhere after 20 minutes so I went to the 80. Another 30 minutes passed and the right side was good, but I had issues on the left and went to the 50 for about 10 minutes. I didn't really care if I got all the way, I was just trying to get close. Turned out that I was able to keep the bevels mostly even (tip was slight bigger on the left, which was where I had the most issue).

Anyway, proper time/use for those stones? If I'd had to do that with the 100's, I think I'd STILL be working on the knife.

I did get it looking pretty though:



And the owner was happy, though he didn't really give a crap about the looks... oh well.

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

Posted by Geocyclist - 04 Jan 2013 12:31

Brian,

I think the 50/80 stones are for rapid removal of large material. Lesson learned for me is I won't apex with them for the sake of the edge. I will try to get "close" and stop, then get my burr with the 100#.

I use the 50/80 when I have a lot of metal to re-profile and the steel is hard to cut. I did a re-profile last night on 154 cm. The 100s worked fine and there wasn't too much metal to remove. Other knives I would have been there for ever without the 50/80's.

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

Posted by Geocyclist - 04 Jan 2013 12:38

Another answer to this "why additional passes are needed once a burr is formed" is if the bevel is not equal on both sides.

Maybe I am doing something wrong. On a re-profile I work 1 side until forming a burr, then work the other side. I find the 2nd side will burr slightly, but the bevel is still not cut down all the way the same as the other side. I keep working it down until it looks equal to the other side. After that both sides burr very easily and with a very large burr. Then I do alternating strokes.

How does everyone else re-profile, work 1 side all the way to a burr or work both sides a little at a time?

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

Posted by xuzme720 - 04 Jan 2013 13:46

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For me, if you can see the difference happening while on one side, I'll go ahead and swap even before I apex and work back and forth, not alternating, just keeping the bevel even, so I don't have to remove more than necessary. Then it's easier to get the burr and keep the bevels even and then work forward through the grits as normal.

I do plan on getting the 50/80's for faster re-profiling when it's needed, but the money is just too tight from the holidays...

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

Posted by PhilipPasteur - 04 Jan 2013 14:06

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Geocyclist wrote:

Another answer to this "why additional passes are needed once a burr is formed" is if the bevel is not equal on both sides.

Maybe I am doing something wrong. On a re-profile I work 1 side until forming a burr, then work the other side. I find the 2nd side will burr slightly, but the bevel is still not cut down all the way the same as the other side. I keep working it down until it looks equal to the other side. After that both sides burr very easily and with a very large burr. Then I do alternating strokes.

How does everyone else re-profile, work 1 side all the way to a burr or work both sides a little at a time?

As I wrote above:

When I reprofile I work both sides alternating with scrubbing strokes until I feel the onset of burr formation. Then I go to sweeping strokes. I try not to get an asymetrical bevel, so I go from side to side checking for a burr often. I can feel even a slight burr, I never go for a big honking burr on both sides, just enough to feel it along the entire edge. In other words I am careful to not overdo it.

I may be able to describe it better, but I guess you missed it the first time around....

So,

When I start to reprofile I mark with a sharpie. I work alternating sides with scrubbing and up and down strokes. You can see when you are getting close to the edge. Usually part of the blade will start to apex before others. I try not to pull a large burr in those areas. I work on the thicker areas individually, always alternating sides as I go. I am always mindful of the Ken Schwartz video where he shows that you can get an asymetrical bevel easily by just grinding one side more than the other, even at the identical angle. So I do what I can to grind the same amount on both sides. When I can get a full length burr on both sides with a few strokes on each side...at this time the bevels should be equal, (as long as you make a conscius effort to remove the same amount of metal from each side as you are reprofiling!!).. Then I make about 10 to 20 strokes on each side with a sweeping motion, just to clean things up. Then I move to my next grit.

The concept to take away is that you should try to work both sides of the blade equally while getting to the apex. If you grind away at one side only and pull a burr, then go to the other side and do the same, you will end up with asymetrical bevels. This makes sense if you remember that while you are grinding away at just one side, you are thinning the edge. When you switch to the other side, it will not take nearly as much grinding to pull a burr.

Phil

PS: Maybe I should clarify alternating as I was using i. I did not mean alternating individual strokes, but alternating sides with multple strokes on each side, just attempting to keep the amount of material removed on each side equal. The idea being symetrical bevels once you apex the entire length of the blade

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

Posted by xuzme720 - 04 Jan 2013 18:11

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When I say re-profile I mean I'm changing the bevel angle. Sometimes it's drastic, sometimes subtle but always only to my own blades unless someone specifically asks.

I follow the same regimen you do, Phil, or at least close. I'm not sure if it's a case of great minds think alike or we have the same level of OCD!

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

Posted by Geocyclist - 06 Jan 2013 02:17

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Phil,

Thanks for the detailed post. I was doing the wrong thing when starting off a re-profile, working 1 side all the way then the other. And it is a slight mess to try to undo the uneven bevel. You confirmed my suspicion that I should have been working both sides evenly.

Your answer is completely clear.

What do you do in this situation? A re-profile of a factory edge, left is 20 deg, right is 22, i.e. the factory bevels are not equal and you want to go to 15? Do you work "equal" scrubbing strokes on each side, knowing that you will get to 15 degrees first on the left and just keep going until the right also gets to 15? Or do you give a few more strokes to the right? Such as scrub 4 on the left, then 5 on the right, repeat...

I am just assuming you would hit 15 degrees first on the left side (20 vs. 22), or I am wrong? Of course it depends on the knife. I am thinking the 22 degree side has more metal to remove ergo more strokes needed vs. the other side.

Do you have a link to the Ken Schwarz video? ===>> Found it. (Post #2149)

www.wickededgeusa.com/index.php?option=c...9&Itemid=63#2149

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

Posted by cbwx34 - 06 Jan 2013 12:46

PhilipPasteur wrote:

The concept to take away is that you should try to work both sides of the blade equally while getting to the apex. If you grind away at one side only and pull a burr, then go to the other side and do the same, you will end up with asymetrical bevels. This makes sense if you remember that while you are grinding away at just one side, you are thinning the edge. When you switch to the other side, it will not take nearly as much grinding to pull a burr.

I'm not sure I totally agree with this. If you have an already symmetric bevel at 20 degrees, and wanted to reprofile it down to 15 deg. and worked on side at a time,,,, if you worked one side until you created a burr, then switched sides, and repeated, you would still have a symmetric bevel on both sides. Since you're working from the bottom of the bevel up to the edge, the "center" never changes.

The opposite holds true if you're wanting to do the opposite... go from 15 to 20 (which sometimes happens if, for example, you want to strengthen the edge. Then you have to pay attention to working both sides an equal amount, because you're working from the edge down, and each stroke is moving the edge "off center". (BTW, all my angle examples are arbitrary).

My experience has been, the bigger issue is that blades are ground asymmetric to begin with. If you sharpen a knife that has no edge, then "working until you create a burr" would put the edge entirely on one side. Unless a machine does it, these knives are sharpened more for "looks",,,, so while I'm sure an effort is made to keep both sides the same, in the end, looking equal is more important than being equal. So the result is, you have a knife with two sides sharpened at different angles, and/or with an offset blade edge.

Take a trip to a knife store, or look at knives you haven't sharpened yet, and it's easy to spot. The bevels may look the same, but look straight down on the blade at the heel, or straight down on the spine at the tip, and you'll see how uneven a lot of knives are.

Then, along comes a sharpener that has the capability of keeping both sides the same, (doesn't even have to be a Wicked Edge), that is reprofiling or even performing a first sharpening, and the problem now presents itself... by "cleaning up" the uneven angles, and/or the edge offset, you now have a knife that looks uneven, though now it is closer to actually being right.

So, you can't say "work both sides the same" because if you do, and the blade has issues to begin with, this won't correct them.

I think the biggest solution is to just pay attention. It is good not to just work one side entirely, but to occasionally switch, especially on a major job, so that you can see what's happening. If one side is becoming larger, then work the opposite so in the end, they're the same. The second part is, you don't have to clean this up in one sharpening. For example, if I sharpen a knife, and in the end, it's a little offset, but now sharp, just make a note of this. The next time you sharpen, maybe work the smaller side a bit more. Eventually, it will even out. The same holds true even for just a sharpening, look at the blade before you start, and if it's offcenter, then work the side that will center it first, to help line everything back up.

A little sidebar... I'm pretty sure the video Ken made, has more to do with a debate on sharpening Japanese blades (some of which are stated to be sharpened at a "70/30" or "80/20" ratio)... whether they're sharpened at the same angle on both sides, with one side more than the other, or if they're sharpened at different angles to achieve the ratio.

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

Posted by PhilipPasteur - 06 Jan 2013 15:19

I'm posting a video I did using a belt grinder. You may wonder why I'm posting this here. The reason is that it is directly relevant to sharpening on a WE.

Some people feel that sharpening asymmetric edges require having a different angle on each side. NOT so!

When sharpening asymmetric bevels on the WE, you can set the angle on both sides at the same angle and just abrade on one side more than the other. I hope this provokes some interesting discussion.

This is the quote from Ken in the post where he linked his video. The point being, in the context of this discussion is, if you grind one side of a blade more than the other, even at the same angle, you will end up with an asymmetrical set of bevels. This will hold just as true when using the WEPS on a folding knive or the belt grinder on a sword.

If this is acceptable, obviously just don't worry about it. If it is important, one needs to develop a set of techniques to prevent this effect.

Similarly, regardless of reducing or increasing the bevel, if one is not careful and concentrates on pulling a full length large burr only on one side before grinding the other, they will likely end up with asymmetry. The centering of the edge of the edge will change. I had it happen to me personally quite a few times before I changed my tactics. If you want to test this, pull a full stong burr on one side of your blade, count strokes. Go to the other side to pull a burr, count strokes. I think you will discover that you require far fewer strokes on the second side, Take a close look at your bevels.

I would be very interested to hear what you find. What I think you will find, having done this, is that you take less than half the number of strokes to get your burr on the second side, and that you will see a distinct asymmetry

If I am doing a knife for a customer, I don't get the luxury of leaving a sharp knife with unequal bevels until the next time (though I have done this on some of my own knives...). There likely will not be a next time... It makes me be more attentive to not letting it happen at all. I described what works for me, in the least amount of time.

I am sure others have methods that are just as effective. I would love to hear about them too!

Phil

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