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 - 01 Jan 2013 07:41

BrianM1 wrote:

That begs the question, when is enough?

It's a great question, Brian and the post about sound and feel is spot on but in the end it all comes down to what kind of edge you like.

Some folks like to high polish everything (I find myself in this camp and really have to fight my OCD to not do this on every knife) Others like a really toothy edge and only run their knives to 600-1000 grit. Yet others try to get the edge they like for the task they see that knife doing. The more knives you do, the more you'll figure out what you like for each given blade/steel/task.

Bottom line, there is no right answer to your question. The only absolute is to get to the edge and remove the burr. Once you've done that, it's all preference from there.

Ken

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

Posted by razoredgeknives - 01 Jan 2013 08:49

Hey Brian! Wanted to send this your way.... Hopefully it will help ya with some of your questions as you start out

wickededgeusa.com/index.php?option=com_k...0&Itemid=63#5407

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

Posted by Geocyclist - 01 Jan 2013 17:12

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razoredgeknives wrote:

Hey Brian! Wanted to send this your way.... Hopefully it will help ya with some of your questions as you start out

wickededgeusa.com/index.php?option=com_k...0&Itemid=63#5407

Josh,

I watched both videos, interesting stuff. I would agree it is "possible" to get to the apex without forming a burr. The question is how do you know (other than experience) "how close" to get before actually getting to the burr? The problem would be if you stop way too early, and progress to all stones and not hit the apex you have wasted your time and have to start over. Do you look to leave just a tiny bit of sharpie mark? I would think if you are not at the apex by 400 or 600# you aren't going to make it, the 800# and finer stones won't remove enough metal.

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.

I agree with a re-profile you will take some steel off, and also some length.

If you are a normal to light user stopping and light touch ups should be enough for maintenance. Unless you abuse your knives you shouldn't need to go back to 100# and start over each time. Even if you did, and you keep the same angle the amount of steel removed should be minimal.

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

Posted by PhilipPasteur - 02 Jan 2013 21:35

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Everyone tends to get obsessive about something when they get deeply into Something like sharpening.

I too watched both of the videos...again.

I contend that just because somebody does a video on the Internet, it does not make them an expert!

The steel conservation thing is really a non-starter for most people. You would really need to reprofile a knife LOTS of times over lots of time for it to become significant.

One fallacy in the video is this... apexing at a higher grit takes less steel off of the blade than doing it at a lower grit. Think about it, to get the edge to apex at a given angle at a given edge height, you need to remove the same amount of steel. If you do it at a lower grit, and are careful, it is simply faster.

If you want to take all day to sharpen a blade, listen to what the videos say. If you want to get a knife just as sharp in a lot less time, apex, carefully, at a lower grit, again, carefully and just until you pull a burr on each side along the entire lenght of the blade, then alternate with your higher grits.

Now I don't pretend to know it all, but the logical mis-steps in these videos are pretty easy to see. The steel saved (unless you might be sharpening an antique that will never be used and is irreplaceable) is not worth the extra time you will spend.

IMHO

As a data point, I have never used anything more coarse than the 100 grit stones. When I went off on a bench stone buying frenzy a few years back, I got some very coarse stones. I never use them. Getting those 50 or 80 grit scratches out would be a nitemare for me...

Phil

[quote="Geocyclist" post=8187]**razoredgeknives wrote:**

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

Posted by razoredgeknives - 03 Jan 2013 09:55

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Geocyclist wrote:

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wickededgeusa.com/index.php?option=com_k...0&Itemid=63#5407

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You are absolutely right Geo, I did a knife the other night and it is not practical to apex on anything past the 600 grit stones. I don't think (although I may be wrong) that his point was not to get a burr at all, because then you wouldn't know if it has been truly apexed, but rather to get a burr on the higher grit stones (like 400 or 600 grit stones). Yes, I just would "paint" the edge w/ a black sharpie once in a while and when it was almost gone but I still didn't have a burr, I moved up to my 400 grit and apexed there. Seemed to work well!

PhilipPasteur wrote:

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I will have to respectfully disagree w/ you Phil. While I agree that just because someone does a video it doesn't make them an expert, I believe that the steel conservation issue is a big one - even for beginners. I know this from experience... when I started out sharpening knives, I would sharpen everything I could get my hands on, and because I liked my knives razor sharp all the time, I would do it frequently... even my nicer knife ($200+). Because I didn't understand steel conservation properly, I ground away way too much steel... much more than I needed to. This was because I was under the wrong impression that you needed to form a burr with the lower grits 100-200 and form one at each stone on up through the progress.

To me, it makes perfect sense that this method would remove less steel... The reason being because If I am not actually grinding steel away from the edge itself (i.e. before I apex the edge) and do not remove any steel until later in the process, then I will be conserving steel. This vs. forming a burr at 100 grit and each stone thereafter... if you do this then you will be removing steel from the actual edge at each stone vs. just your higher grit stones. Another thing as a beginner on the WEPS was that I did not understand the proper pressure I was to use, and would really bear down on the lower grit stones and form a huge burr. I just thought these videos were helpful for the beginner to give them a proper perspective on conserving their steel, especially when they start trying to do higher end knives... sure, when you are doing a $40-50 cold steel it doesn't matter too much, but when you get into $1-2-or 300 knives, it starts to be more of an issue.

If you want to take all day to sharpen a blade, listen to what the videos say. If you want to get a knife just as sharp in a lot less time, apex, carefully, at a lower grit, again, carefully and just until you pull a burr on each side along the entire lenght of the blade, then alternate with your higher grits.

It doesn't take all day... I just did one the other day and it took about the same amount of time, you just have to take a little more care at that transition point to make sure that everything goes smoothly. Now, do I always wait until the 400-600 grit to apex? No... but that is my goal at least, especially on my own knives =)

Now I don't pretend to know it all, but the logical mis-steps in these videos are pretty easy to see. The steel saved (unless you might be sharpening an antique that will never be used and is irreplaceable) is not worth the extra time you will spend.

As I stated before, in most cases you are right, but it doesn't take that much time. As a matter of fact, most people don't get the WEPS for the speed, they get it for the precision and sharpness factor. If I wanted speed I would use my belt sander (which a good bit of the time, I do use actually lol)

[/quote]As a data point, I have never used anything more coarse than the 100 grit stones. When I went off on a bench stone buying frenzy a few years back, I got some very coarse stones. I never use them. Getting those 50 or 80 grit scratches out would be a nitemare for me...[/quote]

See, this principle also applies to the 100-200 grit stones as well... although the scratches aren't as deep, they are deeper than the 400-600 grit ones. So you are disagreeing with me that if you apexed at the 50 grit stones it would remove more steel than if you apexed at the 200 grit?

Hehe, love discussing this! Please don't take anything I wrote the wrong way... mean it all in good discussion =)

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

Posted by coryschnaufer - 03 Jan 2013 14:05

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I'll pitch my two cents in with Phil I just don't see a problem with using your 100 stones. Yes you are going to possibly take away a little more material BUT we all have a wicked edge and we ALL keep our notes of sharpening angles so you only have to form a bur once on your knife the entire time you own it for kitchen knives which is where this conversation started. You sharpen them at 40 inclusive and the next time you sharpen you go back to 40 inclusive and knock it out. Why is there a need to raise a bur if you already know your at the edge? Sharpie it and roll out.

Now if you are sharpening a $300 knife that is a different beast all together. Then your going to tape the spine and cover the pivot area and do all sorts of stuff to make sure you take care of that knife because it is expensive. If your already taking your time and doing all of that you can use your higher grit stones

to form a bur or you can pay closer attention on your lowers.

On that same note if your sharpening your knife so much that you are wearing it down then you should:

A: Do better maintenance between sharpenings

B: Find the right tool for the job if your damaging your knife blade that much (or use a better steel)

C: Try using a convexed edge it lasts longer

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

Posted by PhilipPasteur - 03 Jan 2013 14:38

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If you are in to steel coservation, that is great. I simply don't care about it. I have knives that are 40 years old and have been sharpened countless times, they still work just fine. I even have a couple that, in my ignorance, I pulled a full flat grind...by hand, from the spine to the edge, and did that more than once..

They still have blade integrity and cut stuff very well. So I guess the question I have is, at what point does this "probelm" become significant? My answer is, in most cases, it never will.

The bigger point I was trying to make is that you will not conserve steel by getting a burr, or hitting your apex with finer grits. It is a matter of geometry. Given a fixed blade thickness and edge height, and stone angle, you need to remove exactly the same amount of material to pull a burr no matter what abrasive that you use to get there. Granted, you could possibly overdo it faster with coarser grits if you aren't paying attention. At this level of sharpening hopefully you are paying attention. As one progresses through the grits, the aim is not to remove significant amounts of metal, but to remove scratches and to refine the edge. If you are not getting to the edge with half of your progression, it simply will take more strokes to get the same edge refinement.

The only way I can see for this not to be true is if one goes way to far with the coarse stones...way to far!

A lesson we can take from this discussion, and the thing that started this thread, is that you do not need to pull a burr at each grit. The fact that one would feel that this was required and continue to grind away at the blade needlessly is something that I would like to help prevent.

I use the WEPS the way I learned from Clay and the other good folks around this forum. After this discussion, last night, I went and got out my Spyderco paramilitary 2 that I have sharpened with the WEPS. I fist reprofiled it to 18 degrees about 2 plus years ago. I have touched it up probably a dozen times. I took out another PM2 that is in the box, never sharpened. You cannot tell the difference in the blades by eye. It would take a micrometer to measure the differences, and then I am not sure that this would not be as much due to production tolerances than the amount of steel I have removed. At this rate, I figure it could be 10 years before I can see the difference... Maybe this illustrates why I am not feeling any urgency to conserve steel. It also illustrates why I simply don't think that not apexing with lower grits will save any *significant* amount of steel to begin with.

You are right, this is simply a discussion. There is plenty of room for everybody's thoughts and opinions.

I just like using facts and figures (geometry) if possible.

BTW, you are also right about the belt grinder. My little Kalamzoo see lots more metal removal than my WEPS. Cheap sharpening for hire always gets done there.

Phil

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

Posted by xuzme720 - 03 Jan 2013 16:29

I'm thinking the difference of opinions here is differences in thinking. Pulling a burr at low grits results in a larger burr which results in more steel being removed...which seems right but still pretty insignificant unless you're doing it each and every time you sharpen, then I can see how that will quickly get out of hand. In that case, yeah I would be worried about steel conservation.

Does that make sense?

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

Posted by PhilipPasteur - 04 Jan 2013 09:10

I said thanks xuzme720, but I think maybe if I explain my method it would be easier to understand my scepticism on the metal conservation theory. 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 guess this results in the minimal amount of metal removal, but this is not the goal for me. The goal is to get a known apex along the entire lenght of the edge while keeping the bevels symetrical... in the fewest number of strokes. Of course technique is important. pulling a huge burr is a waste of time..and steel. Likewise is trying to pull a burr with each grit.

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

Posted by xuzme720 - 04 Jan 2013 10:15

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I understood what you meant, since that is how I sharpen as well. If not identical techniques, they are very similar. I am still in the experimental stage as well so I also try other techniques as time allows, of course. In this way I can see what works best for me and my setup. So far, what seems to work best, and since we are talking about steel conservation, is apexing (pulling that first burr) with the lowest grit I start with. [For me it's the 100's if it's a new, or new to my WEPS, since I don't have the 60/80 stones. 600/800 if it's trashed touch up and 1000/1200 for normal touch ups that have no major problems. Usually it's just stropping though for upkeep and only going to the stones for those times that the strops don't/can't take care of the edge.] Once the first burr is consistent along the length, then it's on to the higher grits with alternating strokes to both remove the scratches from the stone before and remove the burr as we go. Progress through the grits as needed and strop at the end. I'm also watching the edge for refinement as the grits progress. This is what works for me and it does not seem to be removing a huge amount of metal even after a few rounds on the beater testbed Gerber that I have reprofilled a few times. You cant even tell any change in the blade shape. I'm sure if I continue for a few years with this testing on the same knife I can get significant steel reduction in the blade, but for normal wear and tear, unless you're abusing the blade daily, I do not see it as an issue.

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