Progression: 100# to Micro-Fine Stones

Posted by wickededge - 14 Aug 2012 16:32

I've been getting used to my new ZT0560 and am now tinkering with the edge. I've carried it for about 3 weeks with the factory edge, using it for small tasks. It was never very sharp when I got it, just barely shaved but did cut boxes and things well enough.

Today I mounted it up and set about equalizing the bevels. It was pretty far off, a difference of over 4 degrees from one side to the other. I set it at a precise 19 degrees per side and got after it with the 50# and 80# stones. After the 80#, it shaved roughly and slashed double walled cardboard nicely. I then stropped it with the 14um strops which made it shave more smoothly and still cut the cardboard aggressively. I did 23x 36" long cuts through the cardboard before the blade started getting hot and snagging.

After that little test, I straightened the edge with the 100# stones before progressing directly on to the Micro-Fine stones. Now the edge is extremely aggressive, shaves smoothly and slashes through copy paper, even push cuts it easily. It's not a mirror finish, but has a nice bright look and some wicked micro-teeth. I'll try to get some pictures taken tomorrow and will post them.

I wanted to see what skipping some stones would do and I'm pleased with the results. I'm hoping others will fiddle around with different progressions, omitting various grits and doing some tests. I think some things to study are a rough finish with some stropping to clean it up a little, a super polished bevel with a toothier micro-bevel and a toothy bevel and polished micro-bevel. I'm specifically interested in edges customize for specific tasks e.g. cutting veggies, opening boxes, cutting rope etc....

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Re: Progression: 100# to Micro-Fine Stones

Posted by wickededge - 15 Aug 2012 10:58

A couple quick tests after the 15um CBN and Balsa strops:

Shaving - effective but not as easy as after the 14um Diamond and Leather Strops

Copy Paper - easily slashes through, cuts curves and push cuts well

Off to attack some boxes ☺

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Re: Progression: 100# to Micro-Fine Stones
Posted by wickededge - 15 Aug 2012 11:11

Just completed 80 cuts, 24" long without the blade getting hot. It's no longer shaving nor going through the copy paper easily, but still, 80 cuts through double wall cardboard is pretty impressive, especially for such a thick blade. So far, I'm liking the 15um edge.

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Re: Progression: 100# to Micro-Fine Stones
Posted by razoredgeknives - 15 Aug 2012 11:17

Thanks! Keep us posted! loving the new pictures from your microscope!

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Re: Progression: 100# to Micro-Fine Stones
Posted by wickededge - 15 Aug 2012 11:41

A couple of observations so far:

1. I focused on rake angle during the whole process and found that it made a significant impact on performance. The first rake angle I tried was too extreme and required me to hold the knife at a funny angle while slashing through the cardboard. I modified the angle to 30 degrees from perpendicular (easily verified via microscope) and found a tremendous improvement.
2. The cardboard was touch on the blade and the 15um CBN and Balsa strops weren't able to restore the edge to shaving sharp. I had to go back to the Micro-Fines to get it done and even then it took a while to get rid of the little flat spot on the edge of the edge which made me wish I hadn't lapped the brown stones. I think I'll want to test a set where I do lap the white stones but leave the brown ones alone so they can be more aggressive.

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Re: Progression: 100# to Micro-Fine Stones
Posted by mark76 - 15 Aug 2012 12:47

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razoredgeknives wrote:

loving the new pictures from your microscope!

+1 !

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Re: Progression: 100# to Micro-Fine Stones

Posted by wickededge - 15 Aug 2012 13:52

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Clearly I can't help tinkering... I wasn't satisfied with the edge restored using the Micro-Fine stones and 15um CBN and Balsa strops after cutting all that cardboard; it just wasn't sharp enough for me. I decided to go a different route and picked up my 400#/600# diamond stones and sharpened it with those. Immediately there was huge improvement. My stones are extremely well worn in so even at 600# the edge is very refined. I jumped from there to the Super Fine Ceramic stones which really cleaned it up and then on to the 14/10 Diamond and Leather Strops and then for the heck of it, .75um CBN on Balsa strops. Now the blade is extremely sharp! Here is a picture of the edge:

I like this image because you can see the old scratches as well as the tiny ones from the strops.

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