Stock stone/strop progression (Lots of Pics!!)

Posted by razoredgeknives - 20 Feb 2012 19:36

Hey guys, quick question... I can't seem to find any info to this effect... when going through the process of sharpening a straight razor I have found that the jump between the 1k stock diamond to the 14m pasted strops is too large... after 500 strokes per side w/ the 14m strop it has not removed any of the scratches. Which leads me to my question, what is the logical progression if I am sticking with all stock stones/strops (i.e. no chosera/shapton stones)? I just ordered the 1200/1600 ceramic stones as an "in-between" before I go to the 14m strops. Any suggestions or should I be good?

According to the grit chart in the sticky, it would actually be a step back going from the 1k to the 14m pasted strop (as the 1k is supposed to be 7m).

Thanks for your help!

** Updated **

I compiled this as a reference for those of you who are interested in the progression photos but not all the discussion in between. I left my original OP above so you can see the problem I was having.

Tom's series (pg. 1 - scroll down)

Tom from Jende industries does a series of photos trying to re-create the problem I was having (which he does successfully). In this series he jumps between the 1k stock diamond stones to the 14m WE pasted strops. H**e found that the jump between the 1k stock diamond stones to the 14m strops is too large of a leap.** After 600-800 passes/side, and after adjusting the angle to where he was only hitting the very edge of the edge w/ the strops, he finally made some progress.

Clay's Series (pg. 2-6)

Pg. 3 – Clay does a series of photos going from the 10k chosera stones polishing all the way down to

.125m on CBN strops (final photo post # 2025). Pg. 4 - After having a nice mirror polish on the edge, he backs out to the 3.5m pasted strops to check out the scratch pattern left by that paste, and then goes even further out to the 5m pasted strops, which were really effective. On Pg. 6 Clay goes to the following progression: 10>14>10>5>3.5>1>.5>.25>1 microns. He did this while changing directions with each different grit so you could really see what each grit is doing… This was an excellent series!

Clay's Series (pg. 7-9)

Here clay conducts an edge progression with all stock stones on Aus 8 steel, starting with 100 grit and going all the way up. He actually re-starts the progression in post #2059 (pg. 14 after taking a little detour (i.e. jumping straight from the 600 grit stock to the 14m paste). He re-starts it with the 600 grit and, on Pg. 9, goes up through the stock ceramics (1200/1600) and then jumps to the 14m pasted strops from there. He goes all the way down to the 3.5m pasted strops. This does seem like much softer steel then we are used to, however (keep this in mind).

Another one of Clay's series (different thread) - You can check out this other thread started by Mark76 , in which Clay shows photos of an edge at 510x while playing around with lapping films, strops, and paste vs. spray. Excellent info! See what happens to your edge w/ each subsequent grit!

Stone Comparison (pg. 11) – new stones vs. broke in stones

A picture (by Holymolar) similar to **Clay's microscope setup** on how to consistently recapture the same exact spot on an edge when sharpening (Pg. 14 , post # 2185).

My Series =) (pg. 16 , post # 2409) – I progressed up from the 5k/10k choseras all the way to .5m Hand American sprayed leather strops. I post my observations here.

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Re: Stock stone/strop progression

Posted by wickededge - 13 Mar 2012 17:13

Have I got a progression for you guys! I don't know that it proves or disproves anything, but it was a blast to do and will give us all a lot to talk about. Krystina Muller from Sharper than New sent in a Global

boning knife that a customer of hers had sent in. It had originally been sent to Sur la Table for sharpening which was done on a Chef's Choice machine (I don't know the model.) Here are some before pictures, on by regular SLR and the other by microscope:

And for the finished product:

Next I'll start the progression images.

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Re: Stock stone/strop progression

Posted by wickededge - 13 Mar 2012 17:19

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I decided to use the Chosera stones to remake the edge. My goal in doing so was to have as highly refined an edge as I could get (and my Shaptons are at home) because I wanted to take the edge to a super polish and then step backward with the strops so we could see the individual scratches from each grit really well. I set the angle at 15° per side and began sharpening the knife with the 400 grit Chosera, progressing through each grit all the way to the 10k Chosera. I didn't stop to photo each grit, waiting instead until I got all the way through. Here is the knife edge at 10k:

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Re: Stock stone/strop progression

Posted by wickededge - 13 Mar 2012 17:31

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Next I wanted to see what the effect of plain leather would be so I used some horse butt strops, top grain out, moistened with distilled water:

I decided to look at split grain leather too, so I used a set of strops, also horse butt, but the split grain side:

Interesting...

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:34

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Things got even more interesting at the next phase. I wanted to use a more gentle abrasive so I could get to the super polish more quickly, so I chose 1 micron boron carbide from Hand American for the next phase:

You can see the flattening of the ridges. The polish came up quickly and I had to put a polarizing filter on the scope.

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:36

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You can see the effect that Tom so often describes displayed very well here: the deeper scratches are revealed as the bevel gets more polished. They've been hiding in all the refraction from the many surfaces of the previous grits.

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:39

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Next I went to .5 micron chromium oxide, also from Hand American:

The polishing continues, ridges continuing to flatten out. We're getting closer to the valley floors.

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:42

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In the previous two images, the immediate convex shaping of the edge is apparent. I didn't use very many strokes overall with each grit and yet the shape change was rapid. Note the little sedge or grass shaped scratch at the bottom of the bevel toward the right edge of the image - this little scratch stays with us for quite some time and serves as a useful reference point when comparing scratches. There are also two deep, parallel scratches in the middle that we can track.

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:44

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Next up was the quarter micron diamond spray, also from Hand American:

I've been alternating stroke directions to make the new scratches easier to see.

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Re: Stock stone/strop progression
Posted by wickededge - 13 Mar 2012 17:46

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Next came the .125 CBN spray from Ken at Precise Sharpening:

It gets confusing here, scratches running everywhere, don't seem to be making much improvement.

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Re: Stock stone/strop progression

Posted by wickededge - 13 Mar 2012 17:49

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I decided to check out plain leather again, first top grain horse butt, moistened with distilled water:

and then top grain horse butt dry:

hmmm.....

At least our little sedge (or chicken foot) shaped scratch is getting more shallow.

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