Diamond &Ceramic Plates - Microscope progression

Posted by jendeindustries - 12 Feb 2012 06:15

People have been asking about jumps to the Shapton and Chosera stones from the WEPS 800/1K diamond plates and 1200/1600 ceramic plates. Most of what I've written up to this date evolves around the stock 600 as the leaping off point, as it is the highest grit in the package when you purchase your WEPS.

The micron chart used to compare the WEPS, Shaptons and Chosera stones is a very loose guide at best - it only compares abrasive sizes, and does not reveal the maximum results each medium can achieve due to the vast number of combinations of technique, types of scratches, abrasive breakdown, effects of the binder, etc..

So, I've compiled a microscope progression of the 100, 200, 400, 600, 800, 1K diamond plates and the stock 1200/1600 ceramic plates on a knife using my Veho 400.

I will be adding the full Chosera and Shapton Progressions in the next couple of weeks.

It is my hope that this will help visually explain the differences between the choices available for the WEPS.

You can see the Stock diamond and ceramic progression here .

Keep in mind that I am a perfectionist

Enjoy!

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Re: Diamond &Ceramic Plates - Microscope progression

Posted by jendeindustries - 25 Feb 2012 19:25

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mark76 wrote:

A couple more posts and we are all ready to start our professional sharpening businesses.

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Re: Diamond &Ceramic Plates - Microscope progression

Posted by razoredgeknives - 26 Feb 2012 09:00

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jendeindustries wrote:

Josh - You've got a really tough problem.
Unfortunately, I'm not sure what the root of it is without seeing the actual edge.

The good news is that from the sound of things, it looks like the sharpening aspect is working since you were able to get it sharp.
Often times on razors you still see scratches without any magnification, but they won't necessarily hinder the overall performance.

The fact that you aren't getting rid of the scratches with 700+ strokes with the 14 micron paste leads me to believe that it is the razor and/or the steel quality. Sometimes during the factory hollow grinding, the scratches may run really deep - so deep that getting them out completely is not worth the amount of metal removal needed. Sometimes that stainless steel is pretty hard - Gold Dollar Razors are notoriously poorly made, but can be fruitless to abrade with only the lightest touch.

At this point I would try using a little more pressure on the strops.

A USB scope would definitely help in diagnosing the problem. I always recommend the Veho 400 since it is pretty inexpensive and if a bunch of guys have the same scope, we can all see what we're talking about.

Yeah, I'll have to get the Veho and post some pics... Thanks so much!

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Re: Diamond &Ceramic Plates - Microscope progression

Posted by razoredgeknives - 26 Feb 2012 09:09

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wickededge wrote:

razoredgeknives wrote:

Hey Tom, 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? Thanks for your help!

In reading this, a question comes to mind about contamination on the strops. I'm guessing you keep them pretty well protected, but if they've picked up metal filing and/or sloughed of diamonds, they could easily dig big scratches.

Yeah, I keep them stored properly and everything the way you do... I actually put new leather (cowhide) on the strops and re-pasted them because I was worried about it. Good thinking though... Another way I know that it isn't cross-contaminated is because with each paste/stone progression I was changing the direction of my strokes like you do/recommend. I could not erase all of the scratches going the opposite way. Thanks Clay!

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Re: Diamond &Ceramic Plates - Microscope progression

Posted by razoredgeknives - 11 Mar 2012 13:24

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For those (in the future) who may be reading this thread and wonder what the results of what we have been talking about (what's happening at the very edge under a microscope with the stock stones and strop pastes) you can check this thread out... Tom was so kind to have done this little experiment!

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Re: Diamond &Ceramic Plates - Microscope progression

Posted by ElPasoTom - 11 Apr 2012 08:09

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This microscope progression study was great! It was the final piece that drove me to order the WEPS and a full set of Chosera stones.

It looked like amazing things were happening with the metal when the water stones went to work. I probably would have bought Shaptons as well but they aren't mounted to the paddles yet, and as someone new to sharpening I wanted to keep it simple for now.

Thanks agan for posting this.

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Re: Diamond &Ceramic Plates - Microscope progression
Posted by jendeindustries - 11 Apr 2012 17:52

Thanks, Tom! I'm glad it helped (and that someone actually reads my blog!)

With the water stones, there is a completely different approach as to what is happening from what the diamond plates are meant to do.

The door is beginning to open up with the WEPS that shows just how many combinations of fun there are to be had!

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Re: Diamond &Ceramic Plates - Microscope progression
Posted by wickededge - 11 Apr 2012 18:10

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jendeindustries wrote:

Thanks, Tom! I'm glad it helped (and that someone actually reads my blog!)

With the water stones, there is a completely different approach as to what is happening from what the diamond plates are meant to do.

The door is beginning to open up with the WEPS that shows just how many combinations of fun there are to be had!

and for those of you just tuning in, check out the strops thread that's been burning up the fiber optics: A theory of how the WE diamond pastes work
On this thread, we jump around from the diamonds, ceramics and lots of strops of different abrasives and substrates and, just for fun, threw in the 5k and 10k Choseras plus some new goodies from Ken, totally mind blowing and exciting! I had a great time with the last series and learned a lot about the different strops and Choseras as well as developing a new (on top of my already high) appreciation for the waterstones.

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