Rigotti Knives and Chatter

Posted by wickededge - 27 Jul 2012 09:00

Robert sent me a Rigotti which was giving him a lot of chatter while sharpening. I worked on it for several hours with the diamond stones, ceramics and strops but couldn't get rid of the chatter. Under the 60x loupe I could easily see a very ragged edge which was also easily discernible with a sharpness tester. No matter how long I worked, how gentle I was etc..., the edge remained ragged. The diamonds and hard ceramics were pulling chunks off the very edge. This morning I got my 800# and 1000# Choseras wet and went to work. In three minutes I had a perfect, chatter-free edge that looks great at 60x. The next step is to look at it under higher magnification and then test it out on the reeds. I wish I'd photographed it before switching to the Choseras so everyone could see the difference. I'll report back with photos and more results as I progress...

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Re: Rigotti Knives and Chatter

Posted by wickededge - 27 Jul 2012 21:54

I used the 23/21 degree profile and checked the edge with a 60x loupe throughout. It was very easy to see where the metal was coming off in chunks with the diamond and ceramic stones. It was interesting that effect always occurred within the same 1" range of the blade - the blade on either side of that one inch section didn't experience any of the micro-chipping. I could clearly see that I was reaching the edge with each grit and watched hunks of metal continue to peel off. The Choseras cleaned up the chipping right away.

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Re: Rigotti Knives and Chatter

Posted by wickededge - 30 Jul 2012 09:32

After the .25 Kangaroo strops, I went on to sharpen the knife on the 5000# and 10000# Chosera Stones. I was surprised to find the edge a little ragged afterward though it was still wonderfully sharp:

Zoom

After sharpening the Rigotti on the 10000# Chosera Stones I went back to the .25um Diamond on Kangaroo strops and got a very nice result:

Zoom

I lowered the angle significantly before stropping the knife to prevent any convex shaping, which worked out really well but didn't clean up the knife edge as much as I'd like so the next step will probably be to strop the knife again a few degrees wider per side.

At this point, the knife is so sharp that its weight alone is almost too much pressure on the reed and I have to pull back a little to only take a single fiber.

I decided to widen the angle by two degrees per side and re-strop the knife with the .25um Diamond on Leather Strops:

Zoom

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Re: Rigotti Knives and Chatter

Posted by cbwx34 - 30 Jul 2012 10:15

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wickededge wrote:

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I decided to widen the angle by two degrees per side and re-strop the knife with the .25um Diamond on Leather Strops:

Hate to do this (again) but could you be a little more specific? "lowered significantly" doesn't say much. And I'm really interested in the "widen the angle by two degrees...". do you mean 2 degrees above what you sharpened it at?

Thanks!

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Re: Rigotti Knives and Chatter
Posted by wickededge - 30 Jul 2012 10:39

Ah yes, details.
I had sharpened the blade at 23/21 degrees. In that last round of experiments I lowered the angle to 20/18 degrees which worked out pretty well but didn't get quite to the edge enough to clean it up so I widened it back out to 22/20 degrees which seemed to work well without too much convexing of the edge.

cbwx34 wrote:

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Thanks!

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Re: Rigotti Knives and Chatter
Posted by cbwx34 - 30 Jul 2012 11:10

Thanks mucho!!

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Re: Rigotti Knives and Chatter
Posted by Rhautbois1 - 31 Jul 2012 11:43

Mark - it seems the Rigotti's are made with a brittle steel. Some of my older Rigottt's will sharpen with diamond stones but the newer ones simply won't. The knife Clay sharpened was the worst of the bunch - I called it my 'chatter-baby'. Many oboists however use the knives and it was critical to find a solution.

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Re: Rigotti Knives and Chatter

Posted by wickededge - 15 Aug 2012 17:37

Did some more work on these knives today and took pictures at 800x:

I sharpened the knife with the following progression: 2k/3k and 5k/10k Choseras followed by the 1um Diamond and Leather Strops.

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Re: Rigotti Knives and Chatter

Posted by Rhautbois1 - 23 Aug 2012 23:42

Clay - I was delayed getting out of town and was very excited to see the package from WE - just arrived this afternoon.

I took a look at the blades and tried them out this evening. They are absolutely fantastic!!

My one concern is how they would respond to the steel. As we discussed - I used a steel often to reset the burrs as the cane dulls the edge immediately. I am very happy to report that there was no problem with resetting the burr on the steel. Was very concerned that the steel would cause chattering - but thankfully - no.

Last night I started two new reeds and they gave me quite a bit of trouble. With the knives you sharpened they shaped right up with very additional little work. There is a saying that three secrets of a good reed are 1) a sharp knife 2) a sharp knife and 3) a sharp knife.

Thanks so much for taking the time with these knives. Can't wait for my Chosera's to arrive!

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Re: Rigotti Knives and Chatter

Posted by wickededge - 24 Aug 2012 10:17

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I'm glad to hear it! I think you'll love the Choseras.

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