Scandi Grind and rolled edges

Posted by CliffordBegnaud - 11 Jun 2012 16:43

For some time now, I've wanted to get a bushcraft knife with a Scandi grind but was concerned about sharpening this on my WEPS. So, I ordered a cheap Condor Bushlore knife for around $30 to experiment with. I made an extension for the WE vice so that I could achieve a lower angle. I found that the Scandi (Zero ground) on the Condor was about 10 degrees per side, blade thickness about 1/8”. I duplicated the angle as best I could and spent hours re-profiling the edge. The grind was obviously done by hand and was VERY inconsistent and uneven. I progressed through the stones all the way to Chosera 10k. Then I stropped with .5 micron diamond paste on Nano cloth and finally with .05 diamond spray on Kangaroo.

Frankly, I was disappointed with sharpness compared to all of my other knives. Sure, for the non WEPS person the knife would probably be considered amazingly sharp, but we're all a bit obsessive, aren't we?

Here's the problem, as soon as I put the knife to some soft pine to make a feather stick, the edge rolled, BADLY. The steel is 1075 and it's only hardened to about HRC 54. But I didn't think it would roll that easily. I proceeded to put a 12 degree micro bevel on the edge (an extra 2 degrees over the scandi). Same result. The edge rolled immediately. I guess I could go on increasing the angle to try to find where it would quit rolling, but it defeats the purpose of the Scandi Zero Grind.

Here's my question, who has a knife with a Scandi Zero grind, at what angle do you sharpen it and does it hold without rolling?

I would appreciate advice on this subject as well as recommendations on Bushcraft knives, though, my thoughts right now are to buy an Enzo Trapper Kit with 01 tool steel. If you have a Scandi Zero ground knife with 01 steel, I would love to hear more about it, about sharpening it and how the edge holds up under heavy use.

I would also appreciate comments about other steels being ground Scandi Zero. (D2 & most especially S30V)

thanks for your help,

Clifford

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Re: Scandi Grind and rolled edges

Posted by BobNash - 11 Jun 2012 19:19

Hey Cliff -

Welcome to the forum!

How is the sailing this summer? As windy in your neck of the woods as in ours?

I haven't worked on any Scandi grinds yet so can't offer any past experience regarding results on other knives, steels or hardnesses. I know Mark just said he sent one off for sharpening but don't recall if he had worked it on the WE - I'm sure he'll chime in shortly if he has. Hopefully someone out there has some direct experience with this.

Of course by adding that primary edge you lose the Scandi, but that is the general advice I have offered in the past, and what I have done, for non-Scandi knives when this happens.

Another thought I just had though is that you can get a similar result on say - Henckels - if you push them to too fine of an edge, they just won't hold it and will roll while they'll hold it at say 1000 grit. So, I'd be interested in trying out stopping at lower grits to see if it makes any difference or not in this case before working out the angle. I'm unsure what it will do with your knife but I suspect that the steel just can't hold that refined of an edge at that angle and it may last longer at the lower grit.

I'll see if I can get one of the Condor's too, to play with - which model did you pick up?

Take Care

Bob

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Re: Scandi Grind and rolled edges

Posted by CliffordBegnaud - 11 Jun 2012 19:57

Hi Bob,

Good to hear from you. I was looking for you at the Tanner gun show last weekend.

Sailboat racing is mostly on the back burner because I have severe tendinitis in my left elbow. Too bad, it's been very windy. I did get out several times though.

The model I have is the Bushlore, 2nd gen., It's really quite a piece of junk. I'll try bringing it back to a courser grit and see what happens. I wouldn't recommend wasting $33 (at Amazon.com) on one. If you get one, it will never be something you would actually take into the woods and depend upon for anything. I got it just to work out the issues of sharpening a Scandi Zero.

I actually have a very slight convex on the Scandi edge simply because of the small amount of slop between the handles and the rod (yes, I'm using the Subway Straws and have modded the pivots). When you mount the knife high enough in my homebrewed low angle jig, you get more slop because you are working closer to the end of the rod. This has no ill effect on the edge. I could probably prevent that from happening if I was careful enough, it was faster to just let it convex.

Hopefully I'll hear from some other guys that have knives with a Scandi Zero. I would really like to know how the edge holds up at what angle with which steel.

all the best,

Cliff

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Re: Scandi Grind and rolled edges

Posted by BobNash - 12 Jun 2012 12:30

Hey

Sorry to hear about the elbow - that is a shame. Hope the recovery is going well. I guess it has made more time for sharpening, and probably shooting too!

We did our last show for a couple months up in Loveland end of last month. Clay has asked us to represent WE at the Professional Knife Makers Association show in August in Denver and we have that on our calendar - still working out details. We'll be their either way though. That is Aug 10, 11 and 12 at the Crowne Plaza DIA. Good show - lots of good makers mostly from the West - and some really nice collections too. Then we'll have a booth in Las Vegas for the USN gathering Aug 31 and Sept 1, and shows will kick into high gear through next summer again.

I'll avoid the bushlore as a test project, and look for something else instead. Actually have some time in the office to work on that type of stuff.

Look forward to hearing if the coarser grit makes any difference in blade life. Tom had mentioned something similar to me regarding going up to 30k on Shaptons - that some knives just won't handle it. Maybe he or Ken will chime in on your question too

Best,

Bob

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Re: Scandi Grind and rolled edges

Posted by BobNash - 12 Jun 2012 12:55

CliffordBegnaud wrote:

I made an extension for the WE vice so that I could achieve a lower angle.

PS - do you have a photo of your vise extension?

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Re: Scandi Grind and rolled edges
Posted by CliffordBegnaud - 12 Jun 2012 13:31

BobNash wrote:

CliffordBegnaud wrote:

I made an extension for the WE vice so that I could achieve a lower angle.

PS - do you have a photo of your vise extension?

Bob, I'll make a video in the next day or so of my setup.

We plan to attend the Denver Custom Knife Show part of the event in Aug. Cya there.

Cliff

here is a link to the Denver Custom Knife show for those not familiar with it:

www.proknifemakers.com/2010showpage.htm

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Re: Scandi Grind and rolled edges
Posted by mark76 - 12 Jun 2012 15:55

Hi Clifford,

I know neither the Condor, nor 1075 steel. However, 10 degrees is a very acute angle and requires an above-average steel to hold up.

I have a Wilkinson Woodlore (aka Ray Mears knife). I think it is made of O1 steel. According to my goniometer it has a grind of 13 degrees per side. I haven’t done any battoning with it, but it holds up well under normal use.

I indeed sent this knife off to an accomplished free-hand sharpener. Partly that is because of the 13 degrees, which the WEPS has some trouble with, although I'd get my way around that. The main reason is that the knife has a very wide bevel (almost 0.5") that has exactly the same width all over the blade. And it seems, at least to me, very difficult to maintain exactly the same bevel width over the entire blade length with the WEPS.

It is a bit similar to a normal primary edge. If you want the edge to be the same width over the entire length of the blade, you need to take some care and use, e.g., the Sharpie trick. However, a normal primary edge is less than 1 mm wide, whereas this knife has an edge more than 10 times as wide. That makes even small deviations much more visible. I know this is only an aesthetic issue, but with this knife aesthetics are important for me.

How did you deal with this? I'd also love to see a picture of the blade.

Sharpening up to a lower grit might indeed help. If you look at the grit comparison chart, you'll see that the 30K Shaptons are equivalent to about 0.5 micron. That is, if you sharpen properly, the edge of the edge will be about 0.5 + 0.5 = 1 micron wide. (Easy to visualize: if it is less than 0.5 micron per side, one good scrub of the Shaptons will create scratches that effectively remove all steel.) At 1000 grit the edge will be about 7 + 7 = 14 micron wide. That is still pretty narrow, but it might make a difference.

And good luck with the tenditis. I had one a few months ago. Ask your doctor to inject some corticosteroids directly into the joint. Sounds a lot worse than it is and it cured my tenditis almost instantly. (And yes, mods, this is on topic, since this injury prevented me from using the WEPS ;)

Take care,

Mark

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Re: Scandi Grind and rolled edges
Posted by wickededge - 12 Jun 2012 16:21

Hey, you're a MOD!

mark76 wrote:

Hi Clifford,

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Take care,

Mark

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Re: Scandi Grind and rolled edges
Posted by mark76 - 12 Jun 2012 16:36

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wickededge wrote:

Hey, you're a MOD!

Oh

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Re: Scandi Grind and rolled edges
Posted by CliffordBegnaud - 13 Jun 2012 08:01

I re-sharpened back to 1000 grit at 12 degrees, it rolled.

I re-profiled the edge to 15 degrees, sharpened to 600 grit choseras, it rolled.

I'll continue the experiment to see just what it takes for this 1075 steel to hold an edge.

I know you want to see the knife, but I've tried so many different things on it that the blade is a mess and I'm embarrassed to show it. This is no longer a knife, it's an experimental piece of steel.

I complained about how awful this knife is and I may have been overly harsh because I do like the shape of the blade and the length at 4.25" seems ideal for a bushcraft knife. The cutting edge comes all the way back to within 1/16" of the handle. I know that many bushcraft knives are shorter than 4" but the extra length is great for batoning and I don't think finer work will suffer from this length. If I were to make a bushcraft knife, or commission one, I think I would go with a little less drop to the point so it would work better for skinning, thus making it a more all around knife.

The knife also comes with a decent sheath, that alone is worth $20. The handle shape, well, it's not bad. If this had 01 tool steel that was 5/32" thick and cost $50 instead of $33 it would be a great bargain, IF and only if they could get the hardending and tempering done right. You would still spend a lot of time re-profiling the edge because at the factory it's done by hand on a sander. My big gripe with this knife is the steel. Maybe it's me and the way I'm sharpening it that is the problem, but I've sharpened Japanese kitchen knives on my WEPS at 10-12 degrees and the results are exceptional (easily HHT 5). It's amazing what you can do with great steel.

There are pics of the Condor Bushlore knife on their website: www.condortk.com/productsdetail.php?prodid=11

and there are video reviews on youtube.

Mark, my wife had the injections in her elbow and her description scared me off. She is tuff as nails and has the highest pain threshold of anyone I know. I may yet give in and get the injections because recover is very, very slow and it's interfering with using my WEPS. There are knives that need sharpening!

all the best,

Cliff

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