Slightly uneven bevels

Posted by Jet B - 25 Aug 2012 00:00

I seem to be getting slightly uneven bevels when I reprofile a knife. I use the sharpy method and remove metal until I'm at the edge but it always seems to remove more from the right side. It is a very slight but noticeable amount.

Just wondering if this is likely due to less than perfectly true mounting or are my angle adjustments off a bit? I do notice that when I set it to say 20 degrees I can see the line on one side but the line is covered on the other but both are firmly in the notch. Am I expecting too much accuracy from the equipment?

I do not have an angle cube, but I always try to measure the angle with my iphone and the ihandy app. It always tells me the angles are around a degree off but I have just assumed the iphone isn't accurate... Maybe it is off though? Could my drilled notch holes be a degree off on one side?

Do I need to splurge and get the new arms and angle cube to be able to set perfectly accurate angles?

I just don't want to remove any more metal from my new Spyderco Tuff trying to make these bevels perfect if I'm fighting an uphill battle and just wasting this valuable metal.

Thanks for any insight.

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Re: Slightly uneven bevels

Posted by AlexDoherty - 25 Aug 2012 01:01

Because only the right side of the clamp is moving the right side angle will be off a little because of the thickness of the knife. The left should be accurate say 20 degrees but you will have to run the right at 21 or 22 to keep the bevels even but how much you have to move it will depend on how thick your knife is. The thicker it is the more you will have to move it. The angle cube helps with this. I hope this helps.

BTW it sounds like the app may be accurate. I've also got to ask how do you like the 3V in the Tuff?

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Re: Slightly uneven bevels
Posted by BrianLedford - 25 Aug 2012 07:39

I am having the same problem. Even with the angle cube mine are still off by a little. I think its because of the slop in the arms. I am going to order a set of the new arms and see if they solve this problem.

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Re: Slightly uneven bevels
Posted by cbwx34 - 25 Aug 2012 08:00

Remember too, that most (many - just about all) knives don't come even to begin with. The bevels may look even, but the center of the edge is off, so the angles are actually different. It's caused by the method they're initially sharpened. So when you put it on the WE, you're sharpening at the same degree per side, but the center is still offset, so now the bevels look uneven. If you look closely, especially at the tip and heel, you can see this. (I'll try and find a pic to post). Especially if you're using the angle gauge to set the angle, chances are, this is the reason.

Once you figure out the offset, make a note, and over time you can correct it. Just sharpen the smaller bevel a little more each time. (Or do it all at once if it bugs you). You can see this demoed in some of Clay's videos.

Precision sharpening shows how imprecise knives really are.

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Re: Slightly uneven bevels
Posted by Jet B - 25 Aug 2012 09:49

AlexDoherty wrote:

Because only the right side of the clamp is moving the right side angle will be off a little because of the thickness of the knife. The left should be accurate say 20 degrees but you will have to run the right at 21 or 22 to keep the bevels even but how much you have to move it will depend on how thick your knife is. The thicker it is the more you will have to move it. The angle cube helps with this. I hope this helps.

BTW it sounds like the app may be accurate. I've also got to ask how do you like the 3V in the Tuff?

This might possibly be the reason. The Tuff is the thickest knife I have sharpened other than my

machete. Maybe that's why the bevel difference is more noticeable. The blade is very thick for its length and would be putting that right side clamp off more and the blade will be off centered a few MM.

The Tuff actually seemed to have a very even and centered grind when I got it, it's only after I re ground it that they look off. Maybe this would have been a better time to learn to sharpen by hand with a loaded strop... Hard lesson to learn on a $270 knife though.

So far I'm impressed with the 3V. It seems to have similar edge retention to S30V but it's very tough and chip resistant. It also seems to take a very sticky sharp edge from stropping. I only tested it out on a recent camping trip so I need more time to really assess it. 3V is hard to really use to its best ability in a folder since its going to excel at chopping and even though the Tuff is built like a tank I'm hesitant to beat on it like a fixed blade. I have done some light chopping and batoning though and the steel was unscathed where other high hardness alloys would likely have chipped.

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Re: Slightly uneven bevels

Posted by cbwx34 - 25 Aug 2012 11:46

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Not the greatest pics... but this knife is factory sharpened. If you look at the bevels, they appear even. But if you look at the pics, you can see, by looking at the tip from the spine side (1st pic.), and where the blade ends and flares out on the edge side (2nd pic.), you can see the uneven sharpening. If you measure the angles on this particular knife, there's about a 2-3 degree difference between sides, yet the bevels appear the same. That's why you just can't look at bevels to tell.

The clamping that Alex mentioned can also be a factor, but if using the angle cube, this is accounted for automatically.

BTW, since the iPhone was mentioned... I did a quick comparison between it and the angle cube I have, and it seemed pretty consistent in the readings... usually within 1/2 a degree.

Hope this helps. Sorry for the not so great shots.

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Re: Slightly uneven bevels
Posted by Jet B - 25 Aug 2012 12:16

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Thanks for the input CB. I think the factory grind was pretty symmetrical when I got it. Its most likely the mounting factors that caused this. I could see something funny right away when the sharpy wasn't being removed the same on both sides even though the bevels looked equal before starting. I guess I should have stopped sooner and researched it. The knife is still sharp though and it's going to be a user so I'll just grind more metal off eventually and even them out. I might try hand convexing it, we will see. I ended up with a pretty fat bevel at the top since I sharpened it too far back from the sweet spot. I did it at B and A.5 is closer to the best even bevel spot.

Live and learn. I will likely have to get the improved arms, I'm just scared to spend the money on them until Clay has perfected the changes more. It seems like there have been constant improvements needed on them.

The last angle cube I bought was grossly innacurate compared to my iPhone so I returned it. I need to find a better one. Problem is, every time I spend money on my knife hobby my wife seems to think she gets to buy a new purse! Haha.

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Re: Slightly uneven bevels
Posted by cbwx34 - 25 Aug 2012 12:46

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Cool. I just thought it was worth mentioning in this thread, especially when others start posting "mine are uneven too", that it may be a factor of the knife... not the sharpener.

Measuring angles with the cube will eliminate the "offset" error, if there is one.

Maybe you can get Clay to mark the box "Medical Supplies" or "Car Parts" or something, so the wife won't no what it's for. 🙂

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Re: Slightly uneven bevels
Posted by Jet B - 30 Aug 2012 13:57

It has all worked out in the end. I convexed my Tuff by hand with some sandpaper and a cheap mousepad. (I really like convex edges, they hold better for hard use).

Before I use my WEPS again to touch up my V edges, I will make sure I have an angle cube at least. Most likely I will pick up the new arms too once they have been tried and tested some more.

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Re: Slightly uneven bevels

Posted by KenBuzbee - 30 Aug 2012 14:17

Jet B wrote:

Problem is, every time I spend money on my knife hobby my wife seems to think she gets to buy a new purse! Haha.

Problem? I do that on purpose to maintain harmony (in our case, it's jewelry, but the concept is the same) In fact, I do it proactively. Kind of a preemptive first strike;)

Ken

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