Does your angle cube reading match your W.E ?

Posted by craigpender - 27 Dec 2011 19:39

Hello,

I am a newbie and I am finding that to get a 20 degree setting verified by my angle cube my Wicked edge must be set to 19 degrees on one side and 21 on the other. What do you see on yours? Is this normal?

Thanks

Craig

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Re: Does your angle cube reading match your W.E ?

Posted by ThomasAscher - 18 Mar 2013 22:02

One item not mentioned, which should be, is that the manner in which the vise clamps secure a blade vary depending upon how they are tightened. The WEPS needs an upgrade so it is possible to rotate a knife blade to achieve 90 degrees relative to the base every time. Otherwise, it is all too easy to have a degree or two of variance every time it is clamped into place. It doesn't do much good to use a sharpee or angle cube to set the angle for the stones if it is not possible to control the angle of the knife itself.

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Re: Does your angle cube reading match your W.E ?

Posted by FedWayJohn - 18 Mar 2013 22:14

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edhead35 wrote:

A couple more points.

1. The height of the blade changes the length of the adjacent side of the triangle (Pythagorean triangle), therefore it changes the angle depending on blade height.

2. The size of the holes that mount the square bar with the angle marks will change the angle some. The holes have to be big enough in clearance to accept the cap screws that go through it to the bottom of the vise jaw. This slop in the hole will change the angle, so I make sure when screwing the angle marked bar into the vise, that I center the rod on the screw hole pattern before I tighten them.

There is really no way to make a guided system 100% perfect. On the WEPS you have a set of variables, and on other systems you have their set of variables. ***That is why we use the angle cube, turn the guide rods around to the non dimpled side, and measure each side individually.***
If you see some gross difference like, 3 degrees or something, I would send the unit back for a warranty issue, but Clay has a tolerance he puts his units through in QC before shipment, and I can't see anyone rejecting a unit because of 1 degree of difference.I remember seeing a picture of Wicked Edge putting a Bar in the vise like a knife would be mounted and checking the angle marks for accuracy. During this process there is probably a limit where Clay would have the units rejected.

The bolded text answers one of my big questions after having my WEPS about 5 days and sharpening 2 knives so far. Namely, that I figured out to turn the arms around to the non-dimpled side, because the dimples just weren't producing matching angles on each side. You confirmed that I'm on the right track.

I believe my reply also answers the OP's query about the angle cube. Let's just say that I'm glad I bought it, so I can at least try to get the angles as close as possible.

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Re: Does your angle cube reading match your W.E ?
Posted by R.JeffreyCoates - 19 Mar 2013 00:42

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Just a thought ... zeroing the AC on the base is fine so long as the knife is in the "vice" perpendicular to the base. I have not yet experienced an issue where the knife is not mounted at 90 degrees from the base.

HOWEVER in a situation where the knife is not at 90 degrees ------ if the AC is placed against the blade, then zeroed then placed on the stone against the blade it would give the angle between the stone and blade - thus negating the problem of a knife not mounted perfectly perpendicular to the base.

If one did this for each side of the knife, wouldn't it negate the issue of a knife which is not in the vise at exactly 90 degrees?

I defer to the geometry wizards for a response and I apologize for how awkwardly I worded this post.

I tried to make it more complicated but I couldn't figure out how to do it.

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Re: Does your angle cube reading match your W.E ?
Posted by EatingPie - 18 Apr 2013 15:52

Rather than start a thread, I thought I'd revive a revival...

My angle cube tells me a different angle almost every time I lay the stone against the bevel. I mean, even if I just lift the stone and re-set a second later, I get a slightly different reading. For example, I will see like 25.2 then 25.4, then 25.2, then 25.3, etc. I know the accuracy is +/ 0.1 degree, but is this how it should really behave? And I am holding the stone at the exact same spot every time, so it's not variance on my part.

-Pie

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Re: Does your angle cube reading match your W.E ?

Posted by EamonMcGowan - 18 Apr 2013 16:00

Funny you should bring that up? I thought mine was broken so just ordered a new one. The first day was great and now I'm back to the different readings? I have found that if I readjust the stone (lifting out and in) just slightly and make my corrections very small on the arms (upgraded) that I get better readings?

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Re: Does your angle cube reading match your W.E ?

Posted by ThomasAscher - 18 Apr 2013 16:51

Let me be sure what is being asked here. First, once the angle cube is laid flat on the base and zero'd I find that it will consistently read zero when re-placed in the same location. Now, when the cube is laid against either arm, then moved and replaced, readings can be expected to vary slightly. This is because the position of the cube on the arm can vary, the position of the arm on the knife edge can vary,and finally the pressure of the cube against the arm can vary. There is a slight give, or bending of the knife itself in response to pressure. In summary, a variance of a few tenths of a degree is nothing to be concerned about.

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Re: Does your angle cube reading match your W.E ?

Posted by EatingPie - 18 Apr 2013 18:22

ThomasAscher wrote:

Let me be sure what is being asked here. First, once the angle cube is laid flat on the base and zero'd I find that it will consistently read zero when re-placed in the same location. Now, when the cube is laid

against either arm, then moved and replaced, readings can be expected to vary slightly. This is because the position of the cube on the arm can vary, the position of the arm on the knife edge can vary,and finally the pressure of the cube against the arm can vary. There is a slight give, or bending of the knife itself in response to pressure. In summary, a variance of a few tenths of a degree is nothing to be concerned about.

Thanks for the reply, but I probably wasn't clear enough. I am re-measuring the same bevel just a few seconds later without removing the gauge from the stone.

Here's what I do.

- Place cube on base and zero.

- Place Gauge on Stone*.

- Lay Stone against Bevel**.

- Note Gauge Measurement (say it's 25.2).

- Lift Stone from Bevel

- Lay Stone against Bevel**

- Note Gauge Measurement (now it's 25.4).

- Repeat a few times.

- Remove Gauge from Stone

- Replace Gauge on Base

- Make Post on Wickededge Forum.

It's seldom I get the exact same value twice in succession, but they're all close. Hopefully this is clearer and explains why I'm concerned about accuracy.

Hope that clears it up.

-Pie

* I use another stone to align the gauge vertically so it's the same every time.

** I align the stone so it's in the same place every time. Very light pressure so knife has not shifted.

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Re: Does your angle cube reading match your W.E ?
Posted by cbwx34 - 18 Apr 2013 19:25

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I think that's well within the tolerance of the gauge... but even more important... shouldn't affect the sharpening results.

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Re: Does your angle cube reading match your W.E ?
Posted by Geocyclist - 18 Apr 2013 20:29

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One thing I found makes a difference is to make sure the stone is placed exactly in the same place every time. I line it up even with the edge of the vice. Second, I try to be consistent with how it sits against the blade. I noticed (even more so with strops which are soft) that a very small rocking motion changes the angle. Depending on the knife you have a perfectly straight edge or some curve. I also make sure the gage is "straight" on the stone.

To check the quality/repeatability of your angle gage use something solid, like the kitchen counter top. Place the gage (same spot), remove, turn it 90 degrees, place it back. If you can get repeatable readings here that's as good as it gets, anything less on the WE is probably user variability in how/where it is placed.

My final 2 cents. The diamonds are pretty consistent. Once you set it you are good to go. When changing to other stones or strops, you can also check again with a marker to make sure all is good.

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Re: Does your angle cube reading match your W.E ?
Posted by EatingPie - 18 Apr 2013 22:08

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Geocyclist wrote:

One thing I found makes a difference is to make sure the stone is placed exactly in the same place every time. I line it up even with the edge of the vice. Second, I try to be consistent with how it sits against the blade. I noticed (even more so with strops which are soft) that a very small rocking motion changes the angle. Depending on the knife you have a perfectly straight edge or some curve. I also make sure the gage is "straight" on the stone.

To check the quality/repeatability of your angle gage use something solid, like the kitchen counter top. Place the gage (same spot), remove, turn it 90 degrees, place it back. If you can get repeatable readings here that's as good as it gets, anything less on the WE is probably user variability in how/where it is placed.

My final 2 cents. The diamonds are pretty consistent. Once you set it you are good to go. When changing to other stones or strops, you can also check again with a marker to make sure all is good.

All great advice! I noticed all this pretty early on. The meter is sensitive to pitch and yaw both, so if it's not set the same every time, it's inconsistent. I do almost exactly the same as you (which, of course, is why your advice is great and -- I might add -- you're brilliant too!).

The gauge seems to be most accurate when the *plane of the face is exactly perpendicular* to the base (alternatively, the
corners should all be parallel
to the base).

This makes it a nightmare to measure the forward bevel of Tanto knives. In that case I put the meter on the stone and set it against the bevel. Then, I turn the gauge until the face is perpendicular, using a stone set vertically on the base as a guide. It's not super accurate, and I just use this to get a ballpark angle the first time I align the knife in the vice.

Sounding more and more like I'm on par with experience. Always good to know!

(This sort of raises the question of "how accurate is accurate?" but that's probably for another day and another thread!)

-Pie

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