Linkage play--your technique for consistency?

Posted by dgriff - 25 Feb 2012 14:28

Not mentioned much, if ever, is the effect of axial arm/paddle play and linkage play on the angle. Using the Angle Cube one can see fully a 1.5° angle change on my WEPS depending on how one holds the paddle.

The variation is the sum of the paddle and linkage play when you push the paddle in or pull the paddle out at the bottom. I think the best method is to push in, because it takes less effort, and if you relax your concentration, your hands will naturally fall inward.

When I want to check the nominal angle symmetry during setup--knife edge centered--I let the paddle drop all the way down so the link snuggles into the paddle's concave recess. This becomes my nominal angle, but likely not the exact angle depending on how I handle the handle....

How do others *handle* this? (no pun intended)

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Re: Linkage play--your technique for consistency?

Posted by CrimsonTideShooter - 27 Mar 2012 21:03

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wickededge wrote:

CrimsonTideShooter wrote:

Just for the record, the left side of the blade always seems to have a slightly lower angle than the right. It's been that way on every single knife I've done, despite me making sure it's within 1 degree of being centered using an angle cube.

So to be clear, if you set both sides to 20 degrees and place the angle cube on the stone after zeroing it on the base, you get different readings even though you've verified that the knife itself is vertical? If that's the case, we have some troubleshooting to do...

I haven't measured the angles on the stones yet. I honestly don't think it's the system, I think the way I hold the knife while tightening the clamp makes it cant to the left ever so slighty. I've measured it on the handle, and I'm always off about .5 degrees.

I'll try and make a YT vid to explain what I'm talking about, but I truly do think it's something that I'm doing.

By the way, I got my new angle arms in, and on the third knife I did I got a hair whittling edge. I LOVE it! So much less hectic than the EP. Oh yeah, somehow with the new arms my rounding of the tip issue is gone as well. My tips are like little needle points now.

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Re: Linkage play--your technique for consistency?

Posted by PhilipPasteur - 27 Mar 2012 21:04

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Whenever I get a difference in the bevel it is on the left side looking towards the tip. I am right handed. When I have looked at my technique, I almost always ...make that always start to grind for a burr on the right side. When I was not paying attention and depending on how much I was changing the bevel angle.. I ended up grinding the heck out of the right side bevel to get a burr. Then I would switch to the left side and it would take many fewer strokes to get a goog burr.

Think about it, I was taking a bunch more metal off of the right side. Then I would go through my progression. Get a good edge, but the bevels are not equal.

Lately I have been grinding a bit on the right side, switching to the left, then back an even number of strokes, or close, until I get a good burr on both sides. I don't see the difference in the bevel width neraly as much, if at all now.

I would really love for somone to tell me how they get a good reading with the cube on Full flat ground or hollow ground blades with no good reference surface to put the cube on ???

The handle won't get it, there is not always a fixed relationship between the handle and the center line of the blade. How about rounde handles, those with a taper, what surface would I use to measure with the cube??

Just what I have seen.. I always love to be corrected if it helps me get better.

Phil

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Re: Linkage play--your technique for consistency?
Posted by PhilipPasteur - 27 Mar 2012 21:11

Maybe if you had machined carbon fiber that was perfectly aligned with the blade center...and if using a folder, there was perfect alignment with the frame and no slop in the pivot..

I think a perfect set of circumstances that does not often occur... I don't think that I can depend on it anyway!

Phil

CrimsonTideShooter wrote:

Couldn't you just use the knife handle as a flat to measure with the cube?

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Re: Linkage play--your technique for consistency?
Posted by PhilipPasteur - 27 Mar 2012 21:20

Clay,

I guess I am being a bit repetitious

But how do I know that the blade is really vertical in the clamp. I can eyeball it... but that is about it.

Phil

you get different readings even though you've verified that the knife itself is vertical? If that's the case, we have some troubleshooting to do...

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Re: Linkage play--your technique for consistency?
Posted by wickededge - 27 Mar 2012 21:48

PhilipPasteur wrote:

Clay,

I guess I am being a bit repetitious

But how do I know that the blade is really vertical in the clamp. I can eyeball it... but that is about it.

Phil

you get different readings even though you've verified that the knife itself is vertical? If that's the case, we have some troubleshooting to do...

You could use a square, one side placed on your base and the other against your blade (this will only work if your blade extends beyond the blue base.) You can also use the angle cube if you set each side the same and then put a stone against the blade with the angle cube on the other side of the stone. If the reading is the same on each side, you should be very close. The bevels of the blade might throw it off very slightly, in which case you could move the collars out to 30 degrees on each side so that the stones are resting on the very apex of the blade and not the bevels. There might be some kind of plumb to be fashioned as well which would tell you if the knife is true vertical, but that would only work of the base were absolutely level. I'll think on some other methods for determining if the knife is vertical.

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Re: Linkage play--your technique for consistency?

Posted by Jet B - 27 Mar 2012 22:14

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Most of my knives are Spyderco full flat ground blades so I'm always having to eyeball if they are vertical or not.

I also just lay the stones up against the blade and measure the angles. I had bought an angle cube but it seemed grossly inaccurate so I'm just using my level app on my Iphone which I'm sure isn't very accurate either. Most times, the two sides read as much as 1-1.5 degrees different but I have just been attributing it to the Iphones accelerometer being less than perfect. The sloppy linkage in my arms doesn't help and my eyes play tricks on me when I try to eyeball if the blade is sitting perfectly vertical in there with the foam tape... The joys of knife OCD. I really wish there was a simpler way to always insure a vertical clamping of FFG or convex blades. My Fallkniven F1 acts the same as a FFG with it's convex shape.

I'm probably going to send my arms in to get modded for the linkage play Clay. I couldn't find washers thin enough and when I just used a machine screw and nut it was either too tight or still had some play. Do I just pop them in a courier envelope and mail it to your address on the website contact info? Do I need to include a letter or anything?

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Re: Linkage play--your technique for consistency?
Posted by wickededge - 27 Mar 2012 22:36

You can just send them in a flat rate box with your return address info and we'll take care of it. I'm guessing you've used the double sided foam tape to help center your blades. If you're filling the empty spaces equally on both sides of the knife, the blade should be vertical in the clamp.

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Re: Linkage play--your technique for consistency?
Posted by Jet B - 27 Mar 2012 22:54

Yeah, thanks clay. I'll send them in soon. I do use the foam tape, so I think I'm getting the knives vertical, it just sometimes takes a bit because the tape I'm using gets squished pretty flat every time so I put new stuff on every time. In any case, I am getting them blazing sharp so I can't complain.

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Re: Linkage play--your technique for consistency?
Posted by wickededge - 27 Mar 2012 23:09

Glad to hear it. I'll be testing out some o-ring material when it comes in this week and I'll be sure to post results.

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Re: Linkage play--your technique for consistency?
Posted by PhilipPasteur - 28 Mar 2012 08:18

Jet B wrote:

I also just lay the stones up against the blade and measure the angles. I had bought an angle cube but it seemed grossly inaccurate ... my eyes play tricks on me when I try to eyeball if the blade is sitting perfectly vertical in there with the foam tape... The joys of knife OCD. I really wish there was a simpler way to always insure a vertical clamping of FFG or convex blades. My Fallkniven F1 acts the same as a FFG with it's convex shape.

I wonder if the angle cubes suffer from QC issues? Mine seems pretty good. I can zero it on the quartz base set up my angles on the arms with the stone resting on the blade, then return it to where I zeroed it and it is at zero. If I re-measure the arms ... and have the stones contacting the blade at the same point, it will measure the same angles that I set originally. One thing I have to do is to use the same side of the

cube for all measurements, or it seems to be off. I have checked the angles as close as I could with a hand held 8" protractor and the cube is right on as far as I can see with the graduations on the protractor (obviuosly not to the hundredth of a dregree that the cube measures).

I have the same problem with eyeballing the position of the blade in the clamp. I have several convex and a few double edge knives along with a bunch of Full Flat Ground (FFG) blades. They are all a bit of a guess. I read what Clay said about a square. If you checked both sides of the blade against the square, at least it would give a better visual reference for getting the blade vertical. The problem is still that you don't have a flat surface on the knife that you can use to butt against the square to make the adjustment. That is the same issue with the angle cube, though I suppose you could (as with the square) measure both sides with the cube as close to flat against the blade as you can get. If the angles are the same, the blade should be held in the clamp pretty darn straight.

BTW, I should be getting my modified arms from WE today or tomorrow. I decided to buy an additional set of arms and have them modded. The cost was nominal, and I have not had to be without my sharpener at all.

Once I get them I plan to try them with the Holymolar subway straw bushing idea and will post back on what I see.

Phil

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