# Experiments with reprofiling Emerson grinds

Posted by WayneReimer - 26 Aug 2012 17:46

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Although I have a bunch of Emerson knives, I've never been a fan of chisel grinds. While they have certain advantages, they also have disadvantages that for me have always been an irritation. Even their "V" grinds are not true "V' grinds in the conventional sense, having more in common with chisel grinds than the conventional "V" grinds others used.

After getting quite comfortable with the WE Field and sport, having sharpened over 100 knives now, I thought I would experiment a bit, and try some things on an Emerson.

The one I chose for a testbed is an Emerson Gentleman Jim. It's a "V" grind blade, with a micro bevel of around 30 degrees on the front, and about 15 on the back. Effectively not much different than their chisel grind, just sharpened as a micro bevel.

I've been sharpening this knife as I would a full chisel grind; 30 degrees on the front, and once I've reached 1000 grit, I knock the burr off the back side with a 1000 grit stone at around 15-16 degrees, then strop.

It gives a great, very sharp and very durable edge, but it still cuts like a chisel which is not what I prefer. So...today was the day.

First, do I re-profile it as a symmetrical or asymmetrical edge? Again, advantages and disadvantages to both. I chose asymmetrical.

To avoid completely revising the front, I decided to stay at 30 degrees. I wanted a solid, sharp and most importantly durable edge. I figured setting the back to 18 degrees might be an expedient solution, and perhaps a workable one too, with a 48 degree inclusive edge.

I ran through the stones from 100 grit to 1000 grit, with 100 passes per side. At 1000 grit, I added an extra 50 strokes per side...for good luck?? I guess that's as good a reason as any.

I then started to strop; 100 strokes per side 5 micron, 3.5 micron, 1 micron diamond spray, then plain leather.

I was left with a very nicely polished edge, but taking it off the WE, my "finger test" said "this isn't very sharp..."

This is a clear demonstration that the long relied on "fingertip test" is not worth much. I always keep last years phone book for testing edges, as I'm sure many of you do. I cut out a couple of pages, fully expecting the knife would not cut well at all.

How wrong could I be? Turns out I was about as wrong as possible. This edge is FAR sharper than it has ever been. Effortless hair shaving, cutting 1/8 in. ribbons of phone book paper, sliicing paper thin slices from a ripe tomato...straight slices, not the angled ones that you get with a chisel edge.

I have a bunch of short lengths of rope and paracord, so I started push cutting paracord. I ent through about 3 feet of it, then tried the tomato again. the same thin slices from it were no problem.

I think this edge is going to be quite durable, and it looks great. I'll keep everyone posted on how it stands up

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## Re: Experiments with reprofiling Emerson grinds

Posted by BassLakeDan - 26 Aug 2012 22:55

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**WayneReimer wrote:**

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I think what you might be saying is that testing a knife for sharpness in a reliable way can tell you a lot.. there is valuable information to be gained in assessing your sharpening methods when you start asking How Sharp Is It, and you are able to find the real and reliable answers to that question. If you are interested in blade testing on the hobby level you might want to drop by : http://www.howsharpisit.com/

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## Re: Experiments with reprofiling Emerson grinds

Posted by wickededge - 26 Aug 2012 23:22

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BLD - I'm about halfway through reading the new site. It looks terrific. Thank you for sharing with with everyone here. I can't wait to build one and add it to the testing I'm doing.

**BassLakeDan wrote:**

**WayneReimer wrote:**

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## Re: Experiments with reprofiling Emerson grinds

Posted by BassLakeDan - 27 Aug 2012 17:13

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**wickededge wrote:**

BLD - I'm about halfway through reading the new site. It looks terrific. Thank you for sharing with with everyone here. I can't wait to build one and add it to the testing I'm doing.

Well, Clay there are two ways to skin the cat, as you know. One is to do actual mechanical tests on the blade like CATRA and "the Jig hobby project".. the other way is to do what you are up to with the 800x scope, that is, just *look* at the apex and see what you can see.. actually your way has a lot to recommend it.

Of course the whole subject (of sharpness testing) can be argued/ explained/ discussed on and on/ for many days and many pages in a forum, and we certainly do not want to get near that right now, but one thing that your optical system can *not* do is return to you numbers, except for the reference scale nano-meters numbers. If you have a mechanical tester that returns numbers then you can get output like this from our latest excel spread number crunchers. Who knows if they mean anything, but they are sure fun to look at: http://www.howsharpisit.com/Elmax_ZT0560_Map.pdf

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## Re: Experiments with reprofiling Emerson grinds
Posted by wickededge - 28 Aug 2012 09:11

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Agreed. I think the two methods taken together may yield some interesting information.

**BassLakeDan wrote:**

**wickededge wrote:**

BLD - I'm about halfway through reading the new site. It looks terrific. Thank you for sharing with with everyone here. I can't wait to build one and add it to the testing I'm doing.

Well, Clay there are two ways to skin the cat, as you know. One is to do actual mechanical tests on the blade like CATRA and "the Jig hobby project".. the other way is to do what you are up to with the 800x scope, that is, just *look* at the apex and see what you can see.. actually your way has a lot to recommend it.

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## Re: Experiments with reprofiling Emerson grinds
Posted by WayneReimer - 17 Sep 2012 01:51

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Just an update on the reprofiled edge and how it's held up. In the past three weeks, I've carried this Emerson roughly 75% of the time as an EDC knife.

In that time, it's been treated to the same sores of things my knives get daily...carboard, zipties, a little mild pruning of some shrubs, scraping a couple of stickers off my garage door, etc.

The edge settled into a "working edge" ( not sharp enough to consistently ribbon phone book paper, but capable if done slowly. Would cut meats, raw and cooked, nicely...vegatables as well,

including ripe tomatoes. would not shave arm hair effectively.

Overall, not dull enough to break out the WE, but not as sharp as it had been. Once selttled into that degree of sharpness, it seemed to hold it without significant change for a full week. I was able to restore it back to full sharpness with 50 passes of the 5 micron strop.

This configuration is marginally more difficult to sharpen than the "Emerson Chisel". It's working edge is, however, sharper overall. I have not put it back on the WE for stone work yet,however I will apply stones the next time, likely a few passess with the 1000 grit and then stropping. OVerall, I like it quite well.

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