

Absolute Cheapskate Way To Start Making Knives

Let me start by saying I am a newbie and I don't have all the answers but I can tell you how to have a little fun doing this.

If you absolutely have the fever to make a knife yourself and you are without machines. here is a small list to maybe help. I realize this is not the best materials but it will put a grin on your face if you make just one knife. And it will be serviceable too.

A piece of 5160 steel from a Spring and axle shop. about 1.80 a pound or so. The also have a metal muncher to make it the length you want 7",8", or what ever. sometimes they will give you a drop for zip. get a new flat piece not an old car spring.

Now off to the hardware store(home depot,lowes) and find the strips of oak. 4.00 for a 1/4"x2"x3'.

now find the welding dept and buy a 1/8" brass brazing rod for 1.50.

2 ea 1/8" drill bits 2.00

two files one flat and one half round 7.50

wet dry sand paper 120 grit 2 sheets 1.00

2 sheets 240 another 1.00.

were up to 19.00 bucks. and if anyone is interested I will finish it including heat treat.

oh yea I forgot your own handmade knife PRICELESS!!!

bet you can't make just one.

A few more ideas are rattling around in my head so here we go.

When you get that piece of steel from the spring shop see if you can get the thinnest piece they have, My spring shop has material as thin as .212 and 1 1/2 wide. This is pretty thick for a small blade but it will work. Also for the first blade keep the design simple. 3-3 1/2" long for the blade as you will be using a file to make the flats for the blade. Also a wharnccliffe blade profile is about the easiest to start with because the cutting edge is straight and easier to file in a straight line, keep the handle design smooth and not a lot of fancy finger grooves and guards, its just a thought. A couple of things I forgot to add to the shopping list, a cheap hack saw and a couple of fine tooth blades for it. Also need a C-clamp large enough to use to clamp your blade to a table or bench, if you dont have a c lamp or bench we can get around that to, no problem . this is going to add 10.00 to the total but I bet most of you have some of these things.

You will need an electric hand drill. borrow it if you don't have one, your not going to do any damage to it anyway just drilling a bunch of holes. for the next step I will be taking some picture to explain the next steps. Also much of this information I acquired over the years through magazines and books and just adapted them for that first inexpensive blade.

Here we go, let me make some edits here and get organized

First pic is the shape of blade drawn with a marker. I used a 1/4 drill bit and drilled around the profile. It takes a lot of the hacksaw work out of it.

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pic #2 Screw the blade to a bench or stump or whatever you have and cut out the handle portion only. Remove the material so you can file the handle to shape. Do this first because you won't have any way to screw the blade to the bench if you cut out the entire blade. do the handle work first! Once the handle is to a pretty good shape remove and screw to the bench through the handle and cut out blade.

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Ok I forgot to add the 1/4 inch drill bit to the list so add it.

I drilled all around the profile of the blade. This really makes it easy to use the haksaw to cut out the profile. I just unscrewed from the bench and repositioned as need to cut off the excess for the handle. I drilled the 1/8" holes for the pins in the handle and the 1/4" holes in the handle to allow me to screw to the bench to work on the blade portion. I have the handle filed and added a couple of finger grooves for the heck of it. I am ready to saw the business end now and file the rest of the profile. Next I will file the bevels. Be patient it takes time with the files.



Ok , now I have the knife blank cut out and the edges filed. It is starting to take shape.



I marked the edge of the blade using my 1/4 inch drill bit. Black the edge using a marker or a sharpie. Slide the drill bit point along the edge and it will scribe a line. Turn the blade over and do the other side. You will get two lines about .025 to .030 apart. If the lines are two close re-black and roll the drill bit to move the point up or down accordingly and re-scribe. The lines will be about 1/2 the thickness of a penny apart.

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Next using those handy dandy deck screws fasten to the bench top. Start flat filing the flats. The object is to join the scribed line and the top edge of the blade at the same time. This is going to require a lot of elbow grease and patients. And maybe a few refreshments along the way.

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To help me file flat I was using a marker and filing very slow and trying to keep it flat. The marker will show you the hi spots that you need to bring down.

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Trying to keep with the cheapo theme here is our sanding block, A paint stir stick. I first sanded along the area that would be called the plunge. I used the stir stick and 120 grit to clean this area up. Then I started sanding lengthwise plunge to tip until all the rough file marks are gone. This will also make it flat. Use a little soap and water as a lube to keep your sandpaper from loading up. Be sure to wipe the blade down dry when your done or you will have rust tomorrow.



Start sanding the flats and handle area. Don't take out all the imperfections just remove the scale until you get some bare metal. It will add a little character to the finished knife.

Okay the fire is started. I used hedge for a fire in the back yard. We have a fire pit already so here we go. Hedge burns hot and we have a slight breeze that worked in my favor. Here are the things your gonna need to work with the blade. I got the magnet from my boys toy box. I struggled with the tong/cheap issue so here goes. Two pieces of 1/2" square tube 3' long and stuck an old set of pliers in the ends and beat the metal around them to hold together. Here is the quench solution, very top secret but here is a hint. Those are old oil filters from the last oil change on the vehicles.

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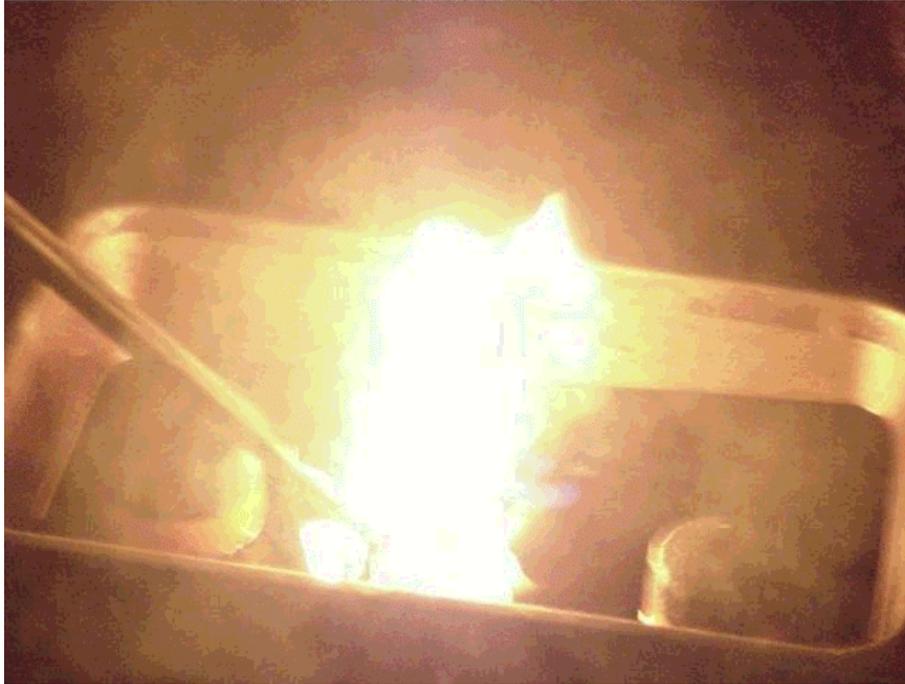
Put that blade in the hot coals. It will take about 10 to 15 minute depending on how many and how hot the coals are. It is your first so pull it out and look at it for a couple of seconds every 2 or three minutes and check it with the magnet on the cutting edge from tip to plunge. If the magnet has a pull on it it is not ready to quench put it back and let it get cherry red. Try not to heat it any longer than is needed by checking every minute or two when you think you are close.

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It is time to quench in the secret oil. Magnet does not stick and the color is sweet and you have drool running down your chin.

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I quenched the blade only putting about 2/3 of the blade in the oil. 2/3 of the cutting edge down and held it there until the flame was gone, about a minute and then slowly placed the rest of the blade in the oil until it was covered and no more smoke.

Now I pull it out and it will be covered black and nasty. I dipped it in a bucket of water to get the temp down so I can hold in my hand.

Now your saying is it really hard? well check it out. Using the file you can run it at about a 30 degree angle with a fairly light touch not too hard and the file will slide off the edge without trying to grab. You will be able to feel it because you have just done a bunch of filing. If it slides off the edge wipe it down with a rag clean off all the oil. You can use soap and water just wipe it down. If the file grabs you need to go back to the fire and do it again.

Assuming the blade is hard after your file test, we need to draw some of the hardness out of it so we don't have a brittle edge and point. Files are very brittle and the edge of your knife is just as hard right now. Preheat your kitchen oven to 375 - 400 degrees. Place your knife on the rack now and bake for 45 minutes. Now let it cool to room temp and bake again for another 45 minutes at 375-400. BTW the reason we clean off all the oil from the blade is so you don't smoke the house up. After this you are ready to clean up your blade. So get to sanding and get ready to put the handles on this baby.

I placed the knife on the handle and cut two pieces for the slabs. place the knife near the top edge so you don't have a lot of filing on at least one edge.

I have the brass pin material cut and ready for the next step. Drilling the holes for our pin material.

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I put all three pins in and marked the outline of the knife on the slab of oak.

I also decide now where the front of the slab will be when I epoxy and pin to the knife. Bad pic, I will make a better one but I think you can see the desired look with the black line on the blade. I mark on the wood the start and finish of that line and then draw an arc to join the lines.

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Left hand slab has been filed and sanded at the front where we won't be able to do a lot of forming after they are epoxied to the blade.



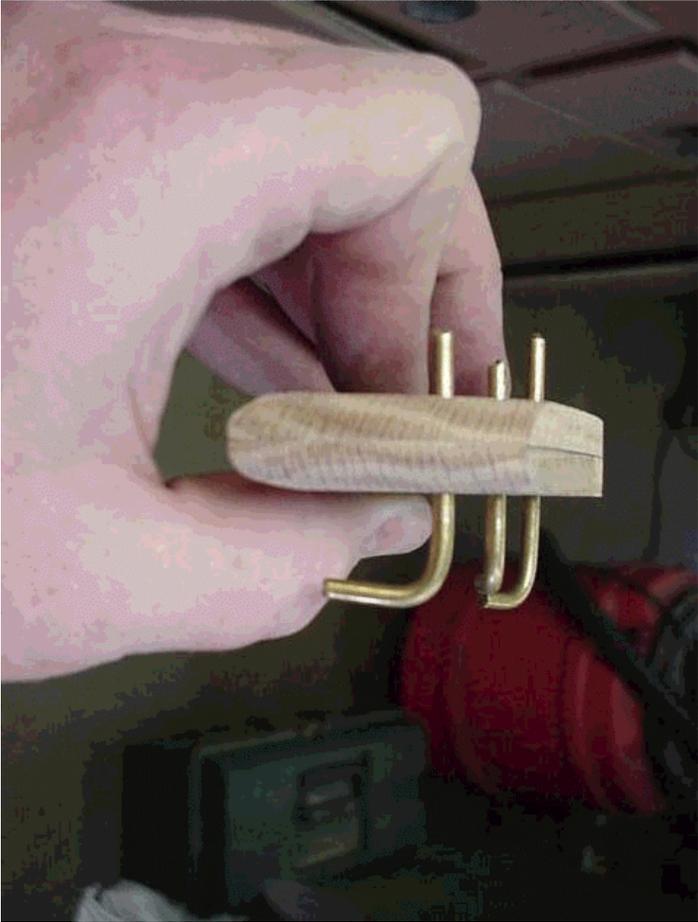
Now pencil the shape of the left slab to the right. Mainly the front area.



Check to see if left slab is good and flat and flush to the metal. If you need to, flatten on sand paper and the Kitchen counter top. Formica is usually pretty flat

Match up the slabs and file and sand until you get a mirror images of left and right slab. Again I am only referring to the front edge. Check them on the knife

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At this point if you have nice flat slabs and no gaps between the slab and the metal you are ready to cut some pin material just enough to stick out past the slab on each side. Degrease the blade good where you are going to place the slabs. Dish soap and hot water with an old toothbrush then rinse real good and wipe dry. Hit it with the hair dryer for a few minutes if you want to make sure it is completely dry.

I cut the pin material and sanded the rough edges off so they go through the wood without causing splinters when I tap them through. I used clear epoxy and covered the interior of the slabs, and placed them on the knife and drove the pins in the holes. I wrapped the whole thing with 4 fat rubber bands and let it dry. Wipe as much epoxy off the area wear the slab meets the flat of the blade near the front.

Here is the finished knife.



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