



[Drill bit sharpening](#)

Printable View

Page 1 of 2 2 Last

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deereman75

05-13-2012, 02:02 PM

Drill bit sharpening

You may remember many months ago, I asked about sharpening drill bits on a grinder, and I said I had someone to teach me. Well I never did get around to talking to him, but I had watched a few videos. Yesterday, I decided to grab a dull bit, and try sharpening it on the new grinder. All I can say is wow. It cut steel like a new bit. :eek: I have since gone through my assorted dull dormers, some old post drill bits, and a bunch of morse taper bits, sharpened them, and they all cut aluminum like butter. I am for the first time getting curly shavings with a hand drill. It is so easy to do, and takes so little practice, I am shocked more people dont do this. After learning it in 1 bit, I cant believe those drill doctors sell at all. Now I cant wait to set up a bit only grinder. :drool:

vwnotrunning

05-13-2012, 02:24 PM

Re: Drill bit sharpening

As we get older - reflexes and eyesight may not be sufficient to hand sharpen drill bits. I used to be able to hand sharpen them, but lack of practice and father time has me looking for the drill doctor!

deereman75

05-13-2012, 02:33 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **vwnotrunning**

As we get older - reflexes and eyesight may not be sufficient to hand sharpen drill bits. I used to be able to hand sharpen them, but lack of practice and father time has me looking for the drill doctor!

OK now that makes sence. I guess you also get shakey when you get old, and that would not help either. I think I still have another 50+ years before that starts.

Steave

05-13-2012, 03:15 PM

Re: Drill bit sharpening

You'd be surprised how many folks don't resharpen their bits. I have lots of bits I've picked up over the years while on construction jobs. They are laying everywhere, some broke but most just a little dull. I have one box that is dedicated for 1/4" bits only. I have since retired and give them away whenever a family member or neighbor needs one.

I resharpen them by hand also. If they are chipped or burnt I grind that part down while keeping the bit cool as possible in the process. If they just need touching up I do that on a small belt sander using fine 320 grit. Most of the time it only takes a few seconds on each side then I touch off the heel a bit.

We used auger bits also but we sharpen them with a file carefully as to not mess up the screw.

When or if I have to buy a bit its always a good carbide bit. They just do so much better and last longer that a high speed steel (HSS) bit and not to much price difference and you can sharpen them the same way.

Good luck on your resharpening, not all of them will be successful.

deereman75

05-13-2012, 03:18 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **Steave**

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Good luck on your resharpening, not all of them will be successful.

When you said carbide, did you mean titanium? Those last longer, and cost the same. Carbides cost about 10x the price, and a grinder wont sharpen them. Also, what do you mean by grind the heal, havnt heard of that?

Jesse masterson

05-13-2012, 04:03 PM

Were did you learn to sharpen on a grinder I heard it could be done I tried it it was a miserable failure

kenmac

05-13-2012, 04:10 PM

Re: Drill bit sharpening

I worked in a machine shop 1 summer as a young Lad. 1st thing I learned was, how to sharpen a drill bit

bcp

05-13-2012, 04:29 PM

Re: Drill bit sharpening

Three methods:

[ame=http://www.youtube.com/watch?v=GID_kRsWnZk]Drill Bit Sharpening - YouTube[/ame]

[ame=http://www.youtube.com/watch?v=KkDe8latSw0]Sharpening drill bits - YouTube[/ame]

[ame=http://www.youtube.com/watch?v=pW7kGFcM2sc]How to Sharpen Tools : Sharpening a Drill Bit - YouTube[/ame]

More videos are on Youtube.

Bruce

Jesse masterson

05-13-2012, 04:35 PM

Thanks Brice I'll check it out , will save me lots of bucks if I can master it

Steave

05-13-2012, 04:51 PM

Re: Drill bit sharpening

Quote:

Originally Posted by [deereman75](#)

When you said carbide, did you mean titanium? Those last longer, and cost the same. Carbides cost about 10x the price, and a grinder wont sharpen them. Also, what do you mean by grind the heal, havnt heard of that?

You are correct except for the titanium part. I should have said Cobalt instead of Carbide. You can get the cobalt with a titanium coating but I get the uncoated or Bright bits.

On the heel I was referring to probably should have been called the landing. This is the area behind the cutting edge. On a lot of bits you'll see this area cut down slightly to keep the bit from binding.

I probably didn't describe it very well and neither does this paragraph below I got from Bosch tutorial describing different parts of a bit:

Minor cutting edge (land, heel): The flutes are equipped with two heels. They are very sharp and contribute additional cutting work on the side walls of the drilled hole. The quality of the wall around the drilled hole depends largely on their structure. Drill bits for wood sometimes come without any heels. This improves drill bit guidance.

Yes you can sharpen the Cobalt bit same as HSS they are just harder steel.

Carbide tipped bits are what we used for masonry drilling with a hammer drill.

Steave

05-13-2012, 05:01 PM

Re: Drill bit sharpening

I just watched the video's posted by "bcp" the 3rd video showed the expert talking about the heel so I guess it is called the heel. I guess we better listen to the expert on this one, he looks as if he knows what he's doing and talking about.:)

deereman75

05-13-2012, 05:10 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **Steave** »

I just watched the video's posted by "bcp" the 3rd video showed the expert talking about the heel so I guess it is called the heel. I guess we better listen to the expert on this one, he looks as if he knows what he's doing and talking about.:)

Ok That kind of clears it up a bit, I will have to watch the video. Also, dormer and a few others actually make carbide tipped twist drills for things like cast iron and stainless. I can see them being good for that, but with how much normal dormer bits cost, I dont even want to know the price of those.

Steave

05-13-2012, 05:27 PM

Re: Drill bit sharpening

I get mine from a local industrial supply house but I have ordered them from McMaster-Carr. If I've got several things to order it kind of offsets the shipping cost. Also the price of gas to drive into town is about the same as shipping cost.

crash325

05-13-2012, 05:34 PM

Re: Drill bit sharpening

Wren use to make a nice little drill sharpener and am pretty sure they still do. Use to be around \$35. More now???

For sharpening Carbide there is a "Green Wheel", made by Norton, good chance made by many others as well.

Diamond wheels are great as they do not cup or channel out. Last almost forever if not abused. Best used wet. If you can find one an old lapidary grinder is designed for wet grinding. Real cheap for a wet wheel is a arbor with remote motor. Make a water shield out of an old coffee can.

I do pretty good on larger (3/8" up) drills just by eyeball. Smaller usually just by a 6 pack. In a pinch will sharpen them, but its kind of iffy.

Have Fun :)

cmyoung2

05-13-2012, 06:26 PM

Re: Drill bit sharpening

Started a similar thread a while back. I ended up with both a grinder and a drill doc. Like them both, grinder for bigger bits (I can see:thumbsup:) drill doc for the smaller ones= 5/16" and less. It also can sharpen spade bits. If I had to choose one, it would be the grinder. I do plan to get a finer wheel and learn to sharpen chisels ect. Grinder has a lot of other uses too.

grnspot110

05-13-2012, 07:40 PM

Re: Drill bit sharpening

Personally, I prefer to use a 1" wide belt sander with a backing plate. It doesn't heat the bits nearly as bad as a grinding wheel! ~~ grnspot

Grateful11

05-13-2012, 08:10 PM

Re: Drill bit sharpening

I was taught how to sharpen drill bits by a Master Tool & Die Maker 30 years ago. Don't do it much anymore but I haven't forgotten it yet. The one video where the guy said he likes a course wheel, that's ok for a chipped drill but that's way too course for my liking if doing a minor touchup. I also disagree with hand action of rolling back up to the cutting edge. I was taught one fluid motion from the cutting edge and swing down and out slightly with a small amount of hand twist to get the proper amount of relief on the heel. It's really hard to explain without showing someone.

Someone mentioned sharpening a Cobalt drill. If you do you also need to learn how to split the point. A Cobalt drill has a much thicker web than a std. High Speed drill.

nwngunner

05-13-2012, 09:17 PM

Re: Drill bit sharpening

You can sharpen carbide drills, just have to have a drill sharpener to do it. Tool and drill grinder set for just those make things much easier.

undercut

05-14-2012, 01:10 AM

Re: Drill bit sharpening

Interesting thread. I'm going to have to give sharpening some of my dull bits a try!

Oaktree

05-14-2012, 11:48 AM

Re: Drill bit sharpening

Quote:

Originally Posted by **Jesse masterson**

Were did you learn to sharpen on a grinder I heard it could be done I tried it it was a miserable failure

Same here. Just couldn't get the hang of it, just ended up making them worse.
Picked up a drill dr. at a yard sale for \$25, much better.

BlacknTan

05-14-2012, 11:58 AM

Re: Drill bit sharpening

When I started my trade as a Diemaker in 1968, this was one of the first things I learned. My mentor gave me a big box of dull drills, and after i wolfed down my lunch, I'd go to the grinder and practice. Once one realizes that tools cut metal by a wedging action, and understand the clearance is needed everywhere, it becomes a pretty simple task. I could sharpen very small drills by hand also, until Father Time took his inevitable toll... But, I can still get the job done. It's like riding a bike, once one learns properly, you never forget!

Learn the fundamentals and practice. Like any manual skill, there's not much more to it than that.

Steave

05-14-2012, 12:05 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **Oaktree**

Same here. Just couldn't get the hang of it, just ended up making them worse.
Picked up a drill dr. at a yard sale for \$25, much better.

Boss man purchased a drill doctor. I think it was the best one available at the time but we could never get the hang of it, not sure what we were doing wrong or if maybe something else was wrong?:confused: A lot of folks have them and love them. I'll probably just keep on sharpening. As I said earlier it don't always work so just chunk it in the scape box.

lostcause

05-14-2012, 12:57 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **Steave**

You'd be surprised how many folks don't resharpen their bits. I have lots of bits I've picked up over the years while on construction jobs. They are laying everywhere, some broke but most just a little dull.

for most cases the simple answer is economics. small bits are very cheap and labor isn't cheap anymore. larger bits are certainly worthwhile to resharpen, but i'd bet that anyone in business wouldn't sharpen bits under 3/8", or maybe even larger, especially if you are out on a jobsite. if you are in a shop that has an apprentice, or floor sweeper, or other low-end job, you can always task that person to resharpen bits when there is nothing else needed, but otherwise you probably don't want an employee sharpening bits while the expensive machine that uses those bits sits idle.

Steave

05-14-2012, 01:12 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **lostcause**

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Yea, you're right. Thanks to the throw aways I have enough bits to supply me and family & friends. I worked at a small family owned shop and we shared info similar to this Forum except about other topics. You're right we wouldn't take time during the day to sharpen bits but after hours we'd piddle around with different stuff.

crazyal

05-14-2012, 01:21 PM

Re: Drill bit sharpening

I use to do them by hand on a grinder. Now I use the drill doctor. I was taught by necessity as a kid. Either I learned to sharpen bits or I wasn't going to be able to repair my atvs or dirt bikes. You quickly learn to compare good bits with ones you sharpened to figure out what you did wrong. You also experiment with angles.

With the DD I can look at the bit once done and know right off if I've done it correctly. Also the DD gets the angles correct every time. You would be amazed how far off you can get when you sharpen a bit over and over again.

Steave

05-14-2012, 03:00 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **deereman75**

You may remember many months ago, I asked about sharpening drill bits on a grinder, and I said I had someone to teach me. Well I never did get around to talking to him, but I had watched a few videos. Yesterday, I decided to grab a dull bit, and try sharpening it on the new grinder. All I can say is wow. It cut steel like a new bit. :eek: I have since gone through my assorted dull dormers, some old post drill bits, and a bunch of morse taper bits, sharpened them, and they all cut aluminum like butter. I am for the first time getting curly shavings with a hand drill. It is so easy to do, and takes so little practice, I am shocked more people dont do this. After learning it in 1 bit, I cant believe those drill doctors sell at all. Now I cant wait to set up a bit only grinder. :drool:

When you set up your bit only grinder are you going with a regular grinder or are you going with the slow wheel and water bath? I've always wanted a water bath slow wheel grinder. Think they're mostly for chisels and tools of that nature but still have considered one.

Oaktree

05-14-2012, 03:23 PM

Re: Drill bit sharpening

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Boss man purchased a drill doctor. I think it was the best one available at the time but we could never get the hang of it, not sure what we were doing wrong or if maybe something else was wrong?:confused: A lot of folks have them and love them. I'll probably just keep on sharpening. As I said earlier it don't always work so just chunk it in the scape box.

Guy I bought mine from called it Dr. Kevorkian...apparently he killed enough bits in it. I got the hang of the DD pretty quick, even without the manual. YMMV I guess.

deereman75

05-14-2012, 06:12 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **Steave**

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I have an old belt drive grinder, I am going to tune up, and put on 8 inch norton 3x wheels. Cut faster, last longer, and run cooler. Eventually, I want to get an 18 inch wet stone, but nor for a while. After I set up the bit grinder, I will probably build a 12 inch grinder. Also, at school today, the metal shop teacher (a tool and die maker) showed me the right angles, and some other advise. He said except for the angle, everything else was perfect. Not bad for learning how to yesterday.

lostcause

05-14-2012, 09:26 PM

Re: Drill bit sharpening

i think the knowledge and experience of how to sharpen a bit is invaluable to learn, but probably becoming increasingly useless in practical application. everything we do in life becomes more automated as the years go by. the only time things are done "old school" are tasks done for ourselves, and not ones done in daily production. picture a contractor telling his guys to use hammers and not nailers. how about using hot rivets instead of bolts? time is money, and old school just won't cut it anymore in the production world. i believe the same to be true of drill sharpeners. machines are consistent and accurate, where people aren't - no matter how much they argue otherwise.

at the same time, i believe it is always important to understand the basic mechanics behind the operation of any tool. this helps when understanding why something isn't working the way it should, or when you need to do something and you don't have access to the hardware that does the task. i work in a field that is predominately computer controlled now, but i believe that all people who learn should understand how it works when done without a computer. this makes the operator better able to understand the hows and whys that the machine takes care of automatically.

deereman75

05-14-2012, 09:32 PM

Re: Drill bit sharpening

Quote:

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For my use, I would rather sharpen them with a grinder I have, then buy a tool that can only sharpen bits. If I had to sharpen like 50 bits a day, then I can see getting a sharpener. I agree that if I was a pro shop, I would likely have a sharpener.

undercut

05-16-2012, 12:13 AM

Re: Drill bit sharpening

Without fail, every time one of those Drill Drs goes on sale, I seriously consider it until I figure out how much I would save if I sharpened rather than buy a new bit. Don't go through many drill bits. Makes me wonder what I'm missing!

not2old

05-16-2012, 01:06 AM

Re: Drill bit sharpening

I worked in a machine shop as a kid, and learned how to sharpen drill bits there. I have a Drill Doctor, but rarely use it unless I'm drilling stainless and need lots of well sharpened bits. The Drill Doctor does do a better job, and those bits will drill a more accurately sized hole. You will also have better luck with a less than perfectly sharpened bit if you use a pilot hole and keep enlargening it to the finished size.

Steave

05-16-2012, 10:14 AM

Re: Drill bit sharpening

Quote:

Originally Posted by **undercut**

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As far as saving money on resharpenting it would take a while to justify the price of a DD. I don't use a DD but do sharpen my bits. It only takes a couple of seconds to touch it up on a sander and using a sharp bit makes a LOT of difference. I pittle around with old farm plows and end up using a hand drill so need those bits sharp. I've used bits in my drill press that couldn't be used in a hand drill (to dull). So I guess it comes down to making it easier to work with is my reason for sharpening and I'm kinda cheap ..uh.. thrifty..)

undercut

05-16-2012, 01:41 PM

Re: Drill bit sharpening

Well, there certainly quite a few resources available on how to manually sharpen bits. I'll have to give it try at some point. Broke the tip of one my hss bits. Maybe I'll give it go on that one.

deereman75

05-16-2012, 04:41 PM

Re: Drill bit sharpening

Well today in wood shop, there was a brad point bit missing the point. The teacher said he would normally pitch it. In about 3 mins on the baldor bench grinder, I turned it into a razor sharp twist bit. Turned a piece of scrap into a \$15 bit. I am getting good at this.

tglass

05-16-2012, 05:49 PM

Re: Drill bit sharpening

Have a Drill Doctor and quite honestly after reading all the threads, and trying to sharpen them by hand...it's easy to sharpen one by hand if you listen and learn the correct way. If you don't want to learn buy the DD and you can spend time sharpening bits when I'll be sitting in the couch. I'm glad someone on this forum taught me how to do this.

Shield Arc

05-16-2012, 06:29 PM

Re: Drill bit sharpening

Quote:

Originally Posted by **deereman75**

I am getting good at this.

Good for you!:thumbsup: I'd guess less than 1 % of the people I've worked with over the years could sharpen a drill bit by hand.:rolleyes:

KYErik

05-18-2012, 11:31 AM

Re: Drill bit sharpening

I like my DD. I feel that it gets the two cutting edges a little more even than I can get them by hand on the grinder and it is more of a "no brainer"/less thinking/less eyestrain than grinder sharpening.

Broken bits require time on the grander for reshaping (the DD can't do this).

My DD was frustrating me a few months ago- I was getting "negative relief" (sounds frustrating huh?). It was taking more off the cutting edge than it was off the area behind it (so the cutting edge wouldn't touch the metal). It turned out that my set up jig depth adjustment had slowly worked its way loose. I readjusted it and everything started working well again.

Johnp33

05-18-2012, 11:42 AM

Re: Drill bit sharpening

I worked at a truck dealership, and I collected all the drill bits others threw out because they were dull. I have a drawer full of bits, it always amazed me that most people did not want to know the right way to sharpen a bit.

You also can sharpen a drill bit flatter to drill really hard material.

Just a thought!

crazyal

05-18-2012, 08:41 PM

Re: Drill bit sharpening

What finally pushed me over the edge was when I was doing an engine swap in a dump truck. There was lots of 1/2" drilling to be done and the steel was something harder than mild steel. The best solution seemed to be start off with an 1/8", then a 1/4", a 3/8" and then the 1/2" Cobalt bit. Even using cutting fluid I could drill about two holes before the bits started to dull. After about 4 holes the bits had to be sharpened as any further attempts to drill with them would overheat the metal.

The dump truck is a 2 1/2 ton so when I was working on it I wasn't close to the house (where the grinder is). After repeatedly walking back and forth to sharpen the bits I finally unbolted the grinder from the stand and made a temp mount on the front bumper, it worked but not great. Before moving the grinder I tried using a 4 1/2" grinder but that was too difficult. That night I bought a DD so I can bring it to the work and leave the grinder on the stand.

Now the grinder rarely gets used. If I break a bit I'll use it to shape the bit.



Drill bit sharpening

Printable View

Page 2 of 2 << First 1

[Show 40 post\(s\) from this thread on one page](#)

dbug101

10-04-2012, 09:28 AM

Re: Drill bit sharpening

I guess I am a sell out I learned how to hand sharpen bits in high school. I took machine tool for 3 years but since I have gotten a little older and wiser haha I tried the DD but could never get good results I guess I was asking for more than it could deliver so I went to Grizzly.com and bought a semi professional bit sharpener. I own a fab business so I go through quite a few bits and was getting tired of hand sharpening 1/2" and smaller bits. This thing in principal was similar to a DD but much better and cost quite a bit more to me it was money WELL spent just my 2 cents worth

Artisan

10-04-2012, 09:42 AM

Re: Drill bit sharpening

Quote:

Originally Posted by [bcp](#)

Three methods:

[ame=http://www.youtube.com/watch?v=GID_kRsWnZk]Drill Bit Sharpening - YouTube[/ame]

[ame=http://www.youtube.com/watch?v=KkDe8IatSw0]Sharpening drill bits - YouTube[/ame]

[ame=http://www.youtube.com/watch?v=pW7kGFcM2sc]How to Sharpen Tools : Sharpening a Drill Bit - YouTube[/ame]

More videos are on Youtube.

Bruce

Hmmm, Lemme see if I can fix the links...what the heck is [A ME /?

[How to Sharpen Tools : Sharpening a Drill Bit - YouTube](#)

[Sharpening drill bits - YouTube](#)

[Twist Drill Sharpening - YouTube](#)

Shield Arc

10-04-2012, 10:43 AM

Re: Drill bit sharpening

If that first guy sharpened any of my drill bits like that, I'd smack him!:punch:

Biff32

10-07-2012, 05:43 PM

Re: Drill bit sharpening

Hey, let's not be too hasty about the Drill Doctor. I have one and find it to be a simple and easy way to sharpen a bit up through 3/4". You do have to be very careful that you index the drill bit carefully before you start grinding. However, properly set, the Doctor does a good job of giving you a symmetric drill point that will cut equally on each edge. Sometimes the Doctor doesn't give as aggressive a cutting edge as I want and in those cases I revert to free hand grinding on the bench grinder.

If you don't index the bit carefully, the Doctor will give you something that looks a lot like a pencil point though!

tglass

10-10-2012, 06:48 PM

Re: Drill bit sharpening

Both ways do, but which one shows you are really are a craftsman? And which is quicker, cheaper, when learning the skill at no cost? I've bought these expensive bits...etc that last longer, but I get more life out of the cheap ones hand ground now that I know how to sharpen them correctly. Really

easy to do once you learn how to. Take some spare time to learn it and it will pay off shortly. And when you close the shop or shed doors you will smile.

Kyle_in_Tex

10-10-2012, 09:06 PM

Re: Drill bit sharpening

Like I said before, DD is OK if your doing fab work. If your drilling 2.5" deep in 316 stainless with an 1/8" drill, you ain't doing it with a doctored drill. Each person has a different tolerance zone.

tglass

10-15-2012, 06:35 PM

Re: Drill bit sharpening

Has anyone got a version of this I can print out and send to my brother. He does not have a computer and will not get one, but asked me to show him how easy it can be. And about one thousand miles seperate us.