Replace your broken demount tip!

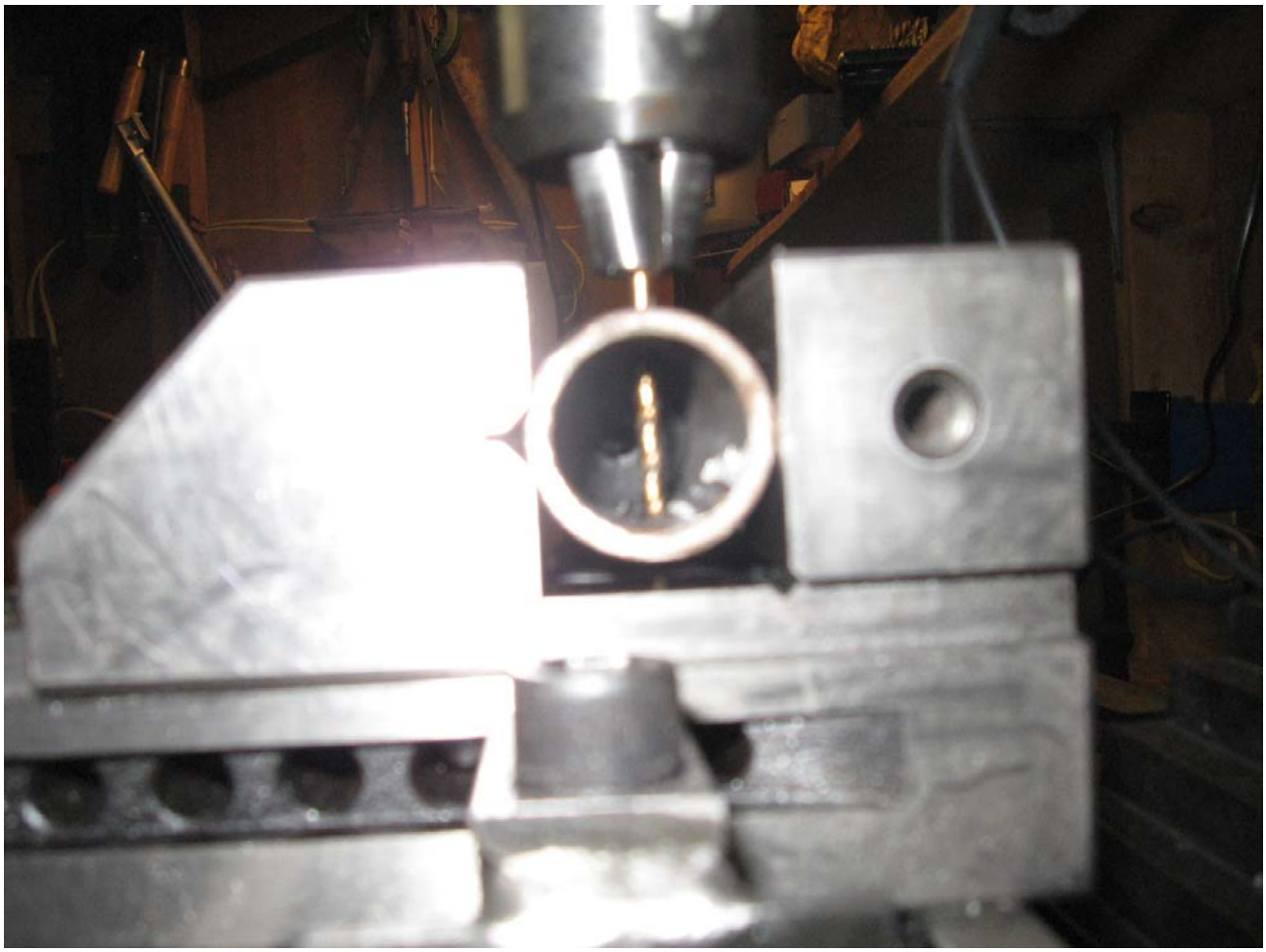
First of all it's best to figure out how it got broke in the first place. The most popular method is to NOT lift the bead of the tire up high enough before you bend the bar over during the demount process. Actually, I think that is the ONLY way to break the tip other then using it on the wall to take out some frustration that your neighbor or neighbor's dog brought on. COLD tires can also damage your tool which means a WARM tire is your tools friend. Leverage can be your tools friend or it can be your tools worse enemy depending on how and where it's applied. (I'm talking about your tire tool for those with naughty minds) From the picture below you can see the weakest point on the demount tip is where it mates to the bar. Take care of your tool and your tool will take care of your rims and your tires.

Here's a picture of a broken tip.

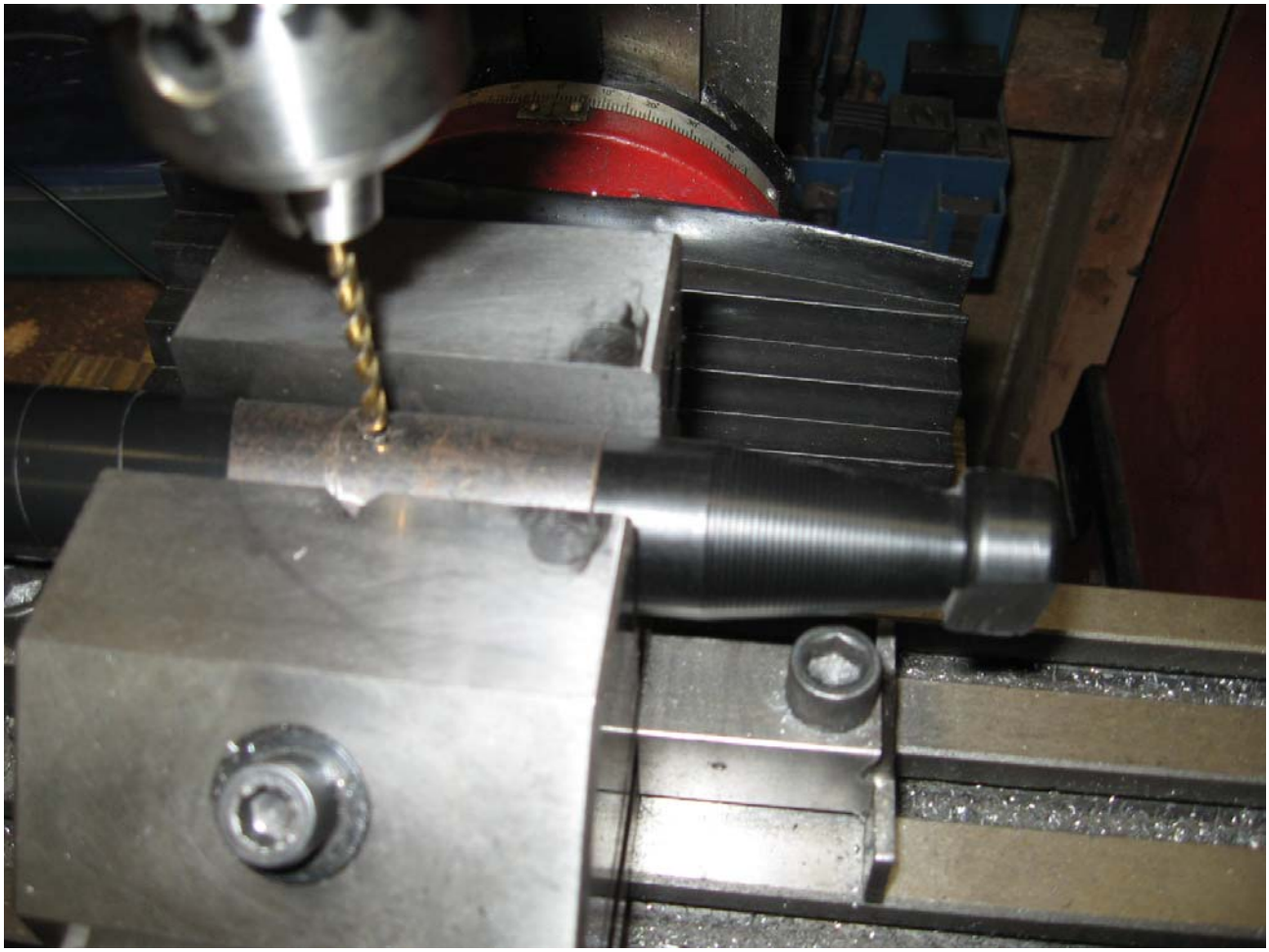
The first step in replacing your demount tip is to knock out the 1/8” compression pin which holds the tip in place. Please don’t try to fit a 3/16” long round object in a 1/8” hole. I use an old jeweler’s file that I broke doing something with it I shouldn’t have. Knock it all the way out and be sure to save the pin. You can now remove the hardened steel rod along with whatever remains are left of the delrin tip.

If you can remove the remaining delrin from inside the bar without throwing your tool through the wall and reciting every curse word you know, then you're a better person then me. I use an 3/8" extension and a plastic hammer to avoid rounding off the end of my extension. If you hate your tools then go ahead and use a steel hammer and beat the &@%$ out of your 3/8" extension. It really isn't that hard to knock it down inside the bar but you do need to knock it down at least 2" in order to make room for the new tip.

The next picture is a bit blurry but it's too much trouble to do it all over again so it will have to do. It's kind of hard to tell from the picture but the hole is offset from the center of the bar by 3/32". This is an important piece of information that you'll need to rememberand mark. You should mark the smaller side of the offset as this will be the side the notch on the 5/16" steel rod will face. Next you'll need a drill press and a vise to do this next step properly. Basically you need to line both holes up so the 1/8" drill bit will pass through with out binding. NOTE I stated a 1/8" inch drill bit for a 1/8" hole. If you use a larger bit you will FUBAR your tire tool. The easiest way to line the drill bit up with the holes is to slip both holes over the drill bit and then lock the tool in the vise tightly. Check for binding by lowering and raising the drill bit in and out of both holes.

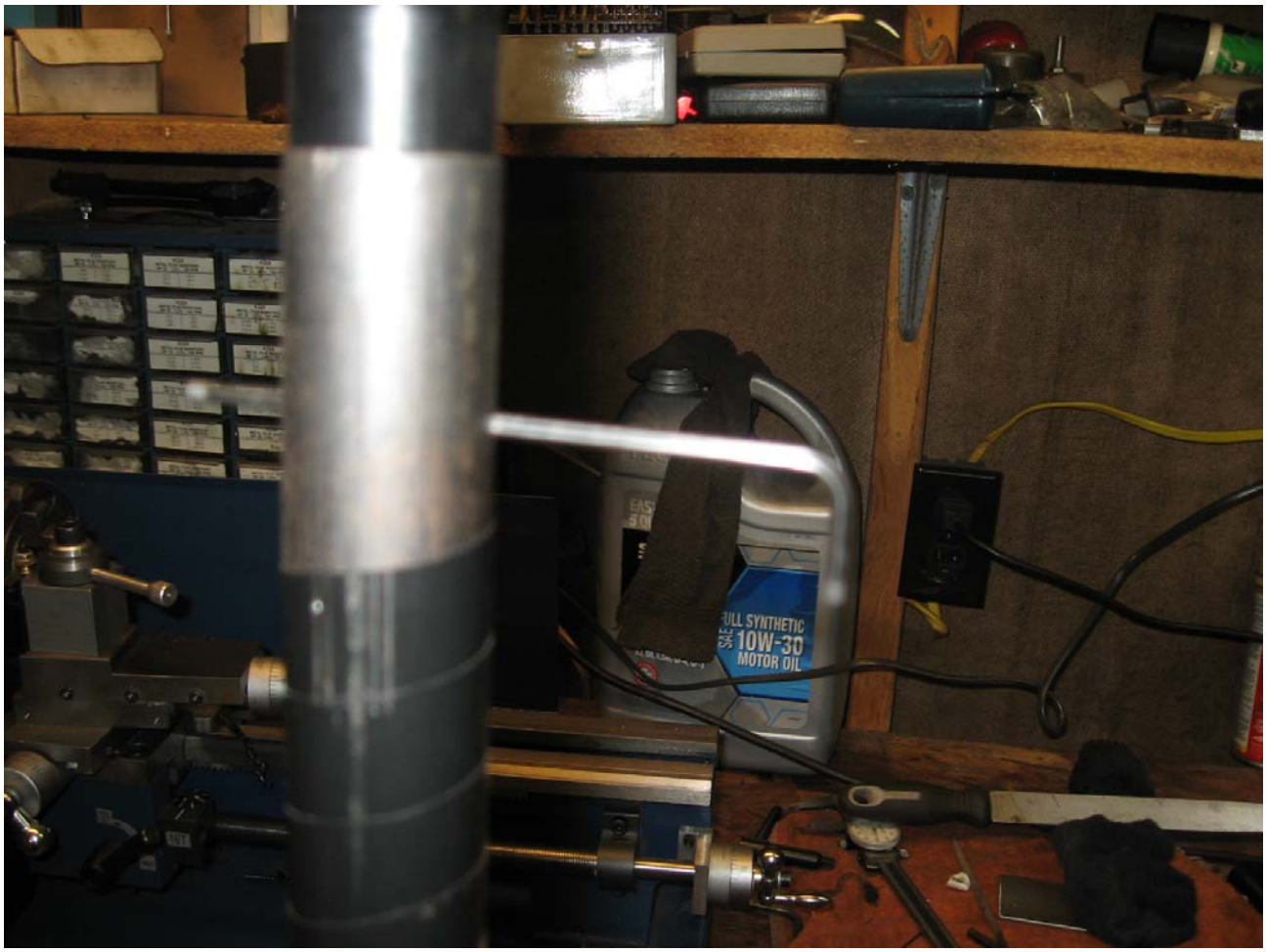


Go ahead and insert the NEW delrin tip in the end of the bar. You might need to tap the tip lightly with a PLASTIC hammer until it's flush with the end of the bar. Did I say lock the bar in the vise TIGHTLEY. Once the delrin tip is flush with the end of the bar you can drill your hole using a 1/8" drill bit making sure you go all the way through both side of the bar. You can now remove the bar from the vise.



Your new delrin tip will come with a shiny new 5/16” hardened steel rod which will be notched on one end. Note that on the opposite end of the notch there is a black mark that is on the same side as the notch. The black mark is there for a reason as it denotes the notched side of the steel rod. The notched side of the steel rod should be facing the same side as the mark on your tire tool that you were supposed to remember and mark in a previous step. Tap in your 5/16” rod, notch first leaving about a 1/2” out like the picture below. If the black mark is not parallel with the hole that passes through the bar then use some pliers to line it up before you tap it in the rest of the way. Tap it slowly until there is about a 1/16” of an inch protruding through the end of the delrin tip.

Now insert a small allen wrench or something similar in the hole to finish lining up the notch in the 5/16” hardened rod with the hole you drilled through the delrin bobbin. This will also help clean out any delrin shavings that are left in the hole which will make it easier to line things up. You should be able to see clearly all the way through the hole. If you can’t see clearly through the hole then the notch isn’t lined up properly and it needs to be adjusted using the small allen wrench or by tapping the 5/16” rod down a wee bit. Wee bit means 1/32” or less not all the way down inside the bobbin. Driving the 5/16” rod down to far inside the delrin bobbin would be another FUBAR. Go slow and you’ll be fine.



You can now drive the 1/8” compression pin all the way in using your metal hammer. Yes I said you can use your metal hammer now. Drive it flush with the surface of the bar and your FINISHED.

Here is the finished product. Note the orientation of the black mark on the top of the 5/16” hardened steel rod in relation to the 1/8” hole that is offset slightly to the left. This is really a simple process as long as you take your time and think about what your doing before you do it. Also notice that the 5/16” hardened steel rod is raised slightly above the end of the bobbin.