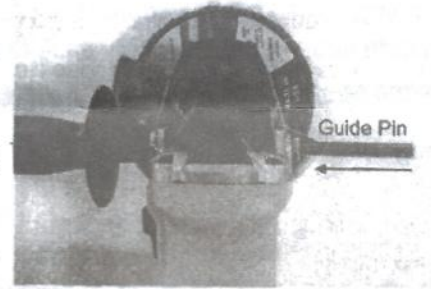


For Models 5000, 5002, 5005 Assembly and Use

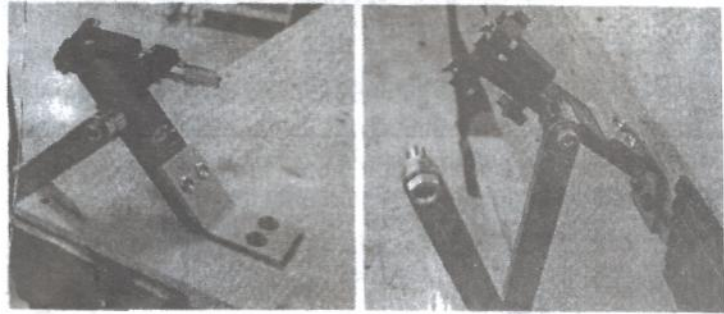
Attaching The Guide Pin To Your Grinder:

With the grinder **unplugged**, choose the guide pin (4 included with the sharpener) that fits your 4" to 5" grinder. With your hands, screw the pin into the threaded hole (handle attachment hole) on the right side of the grinder as far as it will go. Lightly snug the lock nut with a wrench to secure the guide pin in your grinder. Do not over tighten the pin or the lock nut and do not use pliers on your pin. You will risk damaging it resulting in it not moving freely in the pivot bushing.



Mounting The Sharpener:

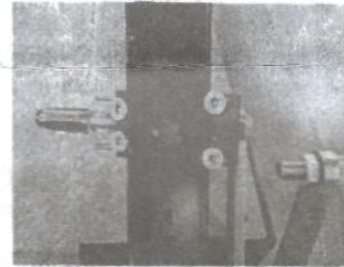
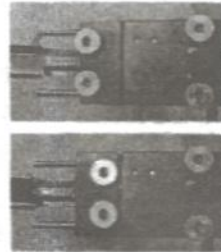
The sharpener can be mounted several different ways: Benchtop – bolted or clamped. Vertical – bolted only. Vise – Clamp in a vise with the angle bracket or without it. There are many ways and places this unit can be mounted depending on your needs. Mounting it to your work trailer for use on the job with a cordless grinder is just one popular method.



Clamp The Blade In The Vise:

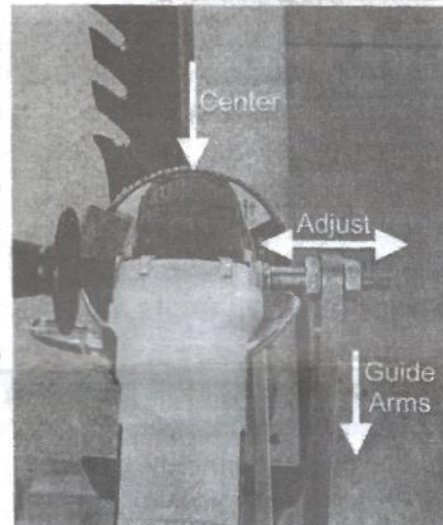
Always clean your blades before sharpening. A blade that is not clean may not mount correctly, creating a bad grind and it may not balance correctly. Open the jaws wide enough to accept your blade by unscrewing the handle. The blade should be held with the 4 clamping pins (flat head screws) in the center of the blade so that it is as straight and square as possible with the edge to be ground facing up and toward the top. **DO NOT OVER TIGHTEN** the blade. Snug is good. Take care to be consistent with the clamping position each time you clamp your blades.

Note: The moving jaw can be turned around to accept smaller blades by completely unscrewing the vise handle, pulling the jaw off of the guide pins, turning it 1/2 turn and replacing the jaw and handle.



Attaching And Adjusting Your Grinder To The Vise:

Make sure the grinder is NOT plugged in for the initial set up. With a blade clamped in the vise, slide the pivot pin (attached to the grinder) into the pivot bushing. The guide arms should be along side of your grinder, **not** out in front. If the guide arms are in front of the grinder the wheel may come in contact with your guide arms. It's worth noting there are reasons to flip the arms away from you which will be discussed later in this manual. If your grinder has a guard, you may have to angle it slightly to make clearance for the guide arms.



With the grinder pivot pin slid all the way into the bushing, rest the grinder wheel on the portion of the blade to be sharpened. Adjust the bushing and lock nut in or out so that the center of the grinding wheel is over the area of the blade to be sharpened and LIGHTLY tighten the lock nut to keep the bushing adjustment in place. You will rarely need to adjust this bushing location unless you drastically change blade sizes.

Sharpening Regular Blades – All Models:

Always wear hearing and eye protection. A 36 to 60 grit flapper wheel is recommended for this application; however a hard disk may be used with care and caution! It is very easy to gouge a blade with a hard disk.

All 5000 Models: Make sure the vise head is in the DOWN position for sharpening regular blades. (More on this later in the manual.)

Holding the grinder body with your right hand, grasp the grinder handle in your left (if you prefer to use the handle). Turn on the grinder and take LIGHT, consistent cuts from front to back using a pushing motion. Take care to keep slight pressure holding the pin tight against the pivot bushing as you grind.

The first time you grind a blade with this jig the blade angle will likely not be the same as the 30 degree grind you are about to put on the blade. It will take a little extra time to "correct" this angle the first time. After that, sharpening a blade should only take a few minutes per side.

If you are seeing "blue" spots on the edge you are going too slow or taking too much material. More light cuts are better than fewer heavy cuts. If your blade is badly nicked or scarred, it helps to watch the backside of the grind (left side) and keep that line straight as opposed to watching the sharp side (right side) for straightness.

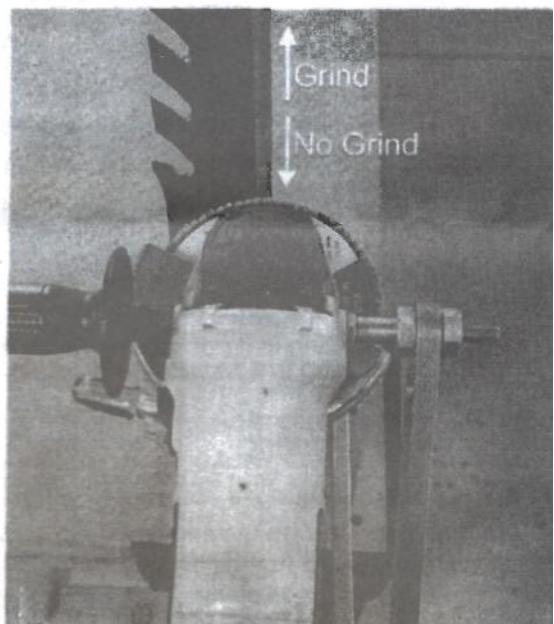
Check for desired edge sharpness as you go. Stop the grinder and "feel" the edge for sharpness with LIGHT finger pressure in an up and down motion. **DO NOT RUN ANY PART OF YOUR HAND OR BODY IN THE SAME DIRECTION AS THE BLADE. YOU WILL CUT WHATEVER COMES IN CONTACT WITH A SHARP BLADE!**

Once you are happy with the grind, hang the grinder down, still attached to the guide arms or slide the grinder out of the bushing, either method is simple and quick.

Loosen the vise handle, remove the blade and turn it to sharpen the other end. Take care to locate your blade in a consistent position each time for each side and each blade.

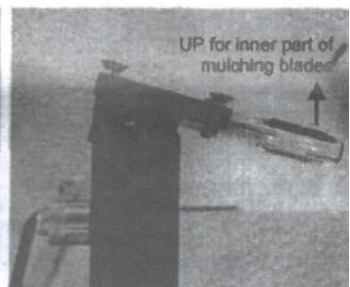
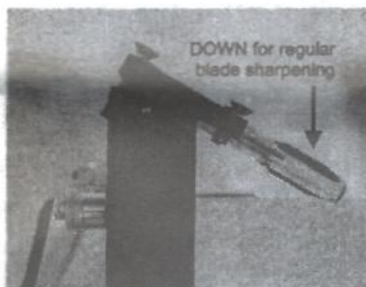
Once you have sharpened both sides of the blade we feel it is important to make sure the blade is balanced. There are several commercial blade balancers available from \$5 to \$200 or more. Some have been known to just use a nail or a screwdriver in the center hole to check balance. Regardless of how you balance your blades it is highly recommended that you do.

If your blade is not in balance, grind additional material off of the heavy end sharpened edge.



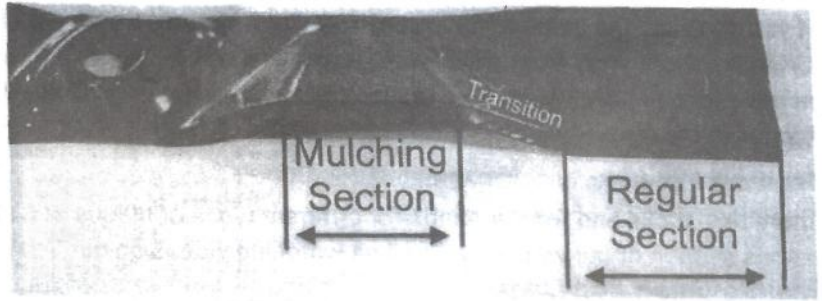
Sharpening A Dual Angle Mulching Blade Model 5000:

The vise head will pivot 15 degrees if you apply up or down pressure to the clamping handle. This feature is for sharpening dual angle mulching blades. All the way DOWN will set your sharpening angle at 30 degrees for sharpening regular straight blades and the ends of mulching blades. All the way UP is for sharpening the inner portion of a mulching blade.



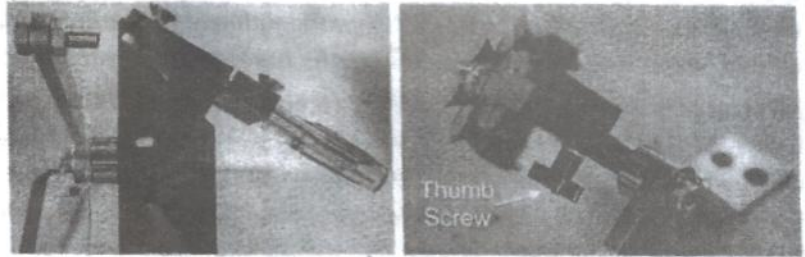
Start by sharpening the end section of your blade like a normal blade. When you are ready to sharpen the inner section of a dual angle mulch blade, move the vise head to the UP position.

Now sharpen the inner section the same as you would the outer section with the head in the UP position. The "transition" section of the blade, between the outer regular section and the inner raised section can be sharpened by going half way up when sharpening the outer regular section and half way down when sharpening the inner raised section.



Angle Adjustment - Model 5005:

Align the bottom corner of the clamp block with the angle you wish to grind on your blade and snug the thumb screw. DO NOT OVER TIGHTEN. It is easiest (and recommended) to adjust your angle without a blade clamped in the vise.



It is possible to grind the mulching section of a mulching blade when set at 15 or 20 degrees however you may need to adjust your pivot bushing left or right to recenter your grinding wheel.

Sharpening Counterclockwise (Left Hand) Blades - All Gen2 Models:

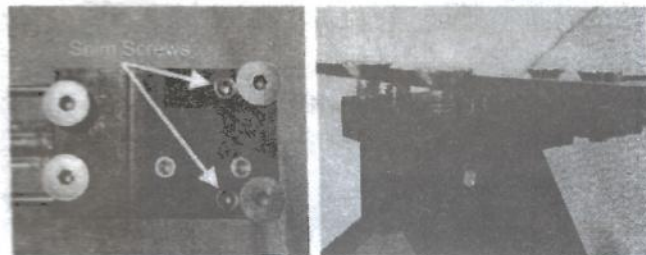
Sharpening a counterclockwise blade is basically the same as sharpening a standard blade except you will be working at the BOTTOM of the jig with the guide arms flipped away from you. Grind with pulling strokes toward the end of the blade (up to down motion) with the same technique you use to sharpen a standard blade.

All 5000 Models: You will want the vise head in the DOWN position as you would for sharpening standard blades.



Using The Shim Screws For Small Grind Angle Adjustment Models 5000 and 5002:

The set screws just below the flat head clamping screws can be turned out to slightly adjust the grind angle of your blade. Each turn will increase the angle about 1.5 degrees on a 2 1/2" wide blade. The flat head clamping screws will need to be adjusted out as well when using the shim screws.



Notes About Grinding Technique:

This manual is meant to be a guide to get you started. The instructions and techniques are proven to work and will get you grinding good edges on your blades. As you get comfortable with the jig and how your grinder works with it, you will develop your own style and techniques that work best for you.

An example of this is using different grinding wheels. Experiment with a hard wheel if you want to take off material faster in order to establish the proper angle of a badly worn blade. However you must understand that taking off material faster can also get you into trouble faster by gouging a blade.

If you don't like the guide arms toward you or they interfere with your hands or a battery pack on a cordless grinder, it's OK to flip them away from you. The jig works just as well like this if you prefer it. However in this configuration be aware that it is possible for your blade or guard to come in contact with the guide arms if the pivot bushing is adjusted too far to the right.

For more tips, tricks and work-arounds for different types of blades and situations you can visit the Frequently Asked Questions section of our website as well as watching videos on our YouTube channel.

Maintenance And Care:

The main body of the vise unit is aluminum and stainless steel and will resist rust. Some early model black guide arms are steel with a black oxide and rust inhibitor coating and will rust if not occasionally attended to. Apply a light coat of oil to prevent rust and keep the pivots working freely. The grinder adapter pin and threaded bushing are steel and should be occasionally applied with a light coat of rust preventative as well. Any light oil is fine.

All pivot points are pre-greased during assembly and pivot bolts are semi-permanently glued in place with thread locker. Should it be necessary to remove any pivot bolts they must be re-assembled using a semi-permanent thread locking glue (red Loctite) in order to work properly. The spring washers should have about $\frac{1}{4}$ turn BACK OUT from full tightness (or $\frac{1}{8}$ turn IN from initial spring washer contact) for proper tension. The pivot for the vise head adjustment is $\frac{1}{8}$ turn BACK OUT from full tightness. This also uses red Loctite.

The blade clamping screws (5/16-18 x 1" flat head) are set at the factory to 0.30" from the top of the vise to the top of the screw head. These screws are held in place with removable thread locker (blue Loctite). Should you need to replace or adjust these screws be sure to always set them at the same height from the vise head to insure your blade are clamped squarely in the jig.



Revised Aug 28, 20