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Taurus 3 Ring Saw



Serial # _____ Date of Purchase _____

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WARRANTY INFORMATION

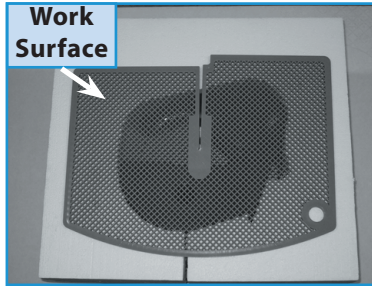
To the original purchaser, this product and all of its component parts* are warranted to be free of defects in material or workmanship. All of these components (other than wear parts), are under warranty for a period of three years from the date of purchase.

*Wear parts include blade, bearings, drive belt, grommets, spotlight, face shield.

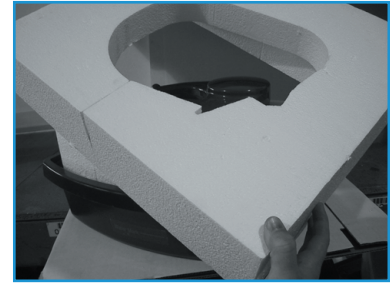
Unpacking Your Machine



Lay box down with logo facing up. Pull the saw out by the tub, the unit will come out as one piece.



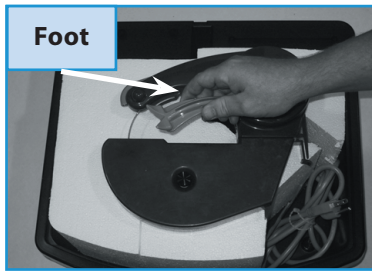
Lift off work surface, resting on top of the foam.



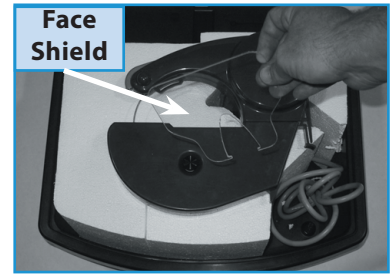
Remove top piece.



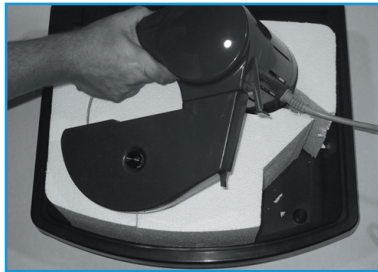
This view shows your saw with all the parts it comes with.



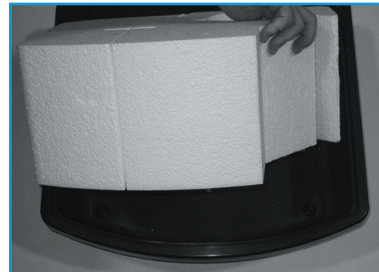
This is the "foot" that also is used with the saw when it's used out of the tub (covered on page 10).



This is your face shield (covered on page 6).



Remove saw body from bottom foam piece.

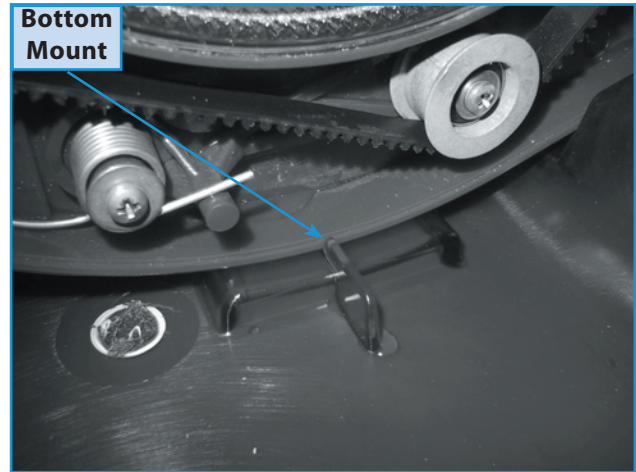


Remove bottom piece.

Installing Machine



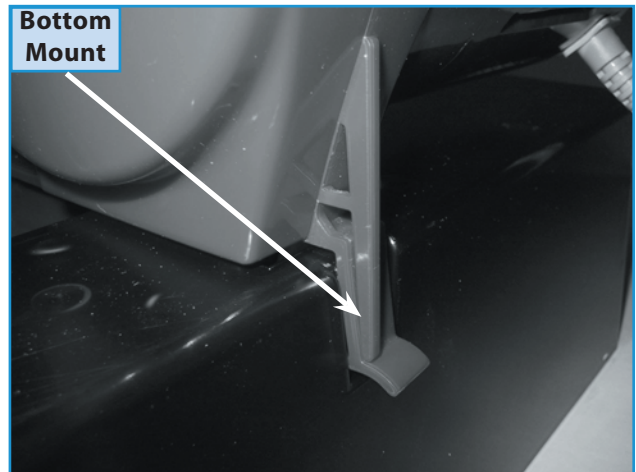
Remove lower door and thumb screw and slide the saw into the groove of the water tub.



Be sure that the saw sits flush with the bottom mount.



Push down and back on the saw until clip engages the water tub.



Clip engaged.

Note: To remove the saw from the water tub, disengage clip by pulling away from the tub then follow the previous steps in reverse order.

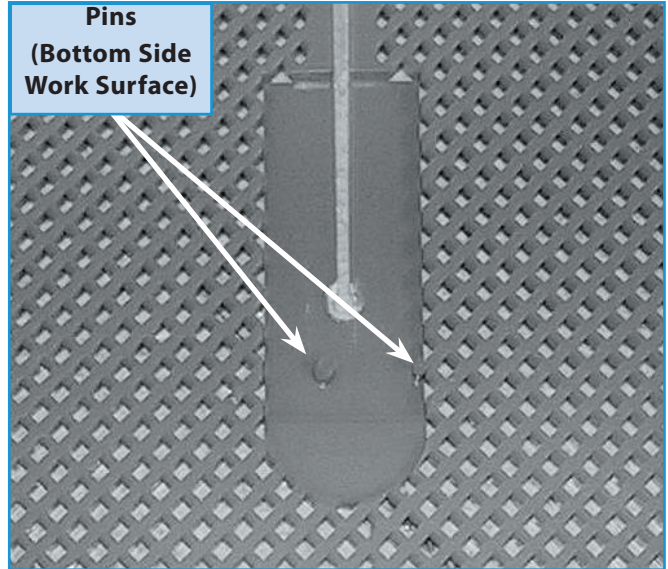
Installing Work Surface



Slide work surface onto water tub.

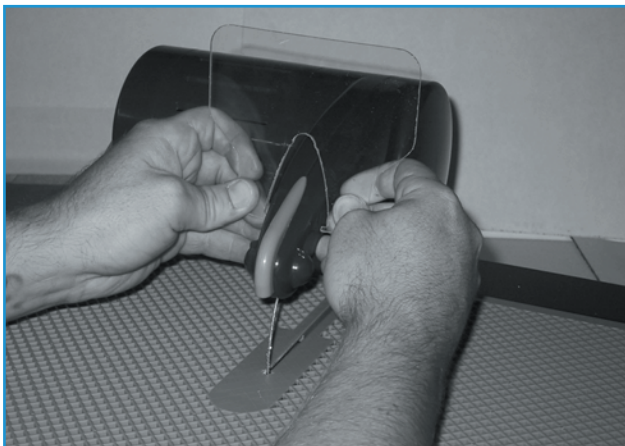


Push down on work surface to make sure that it is seated on the water tub.

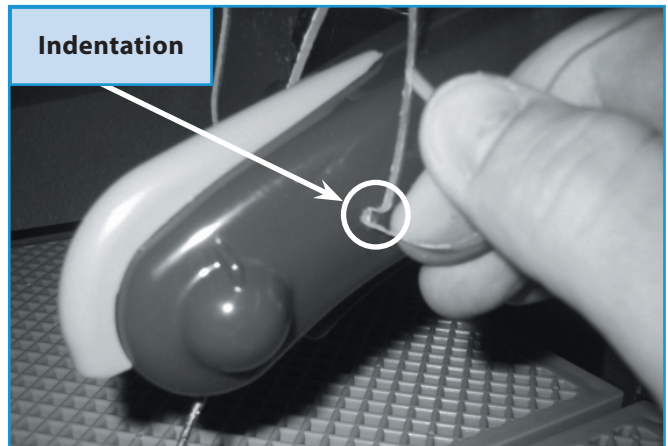


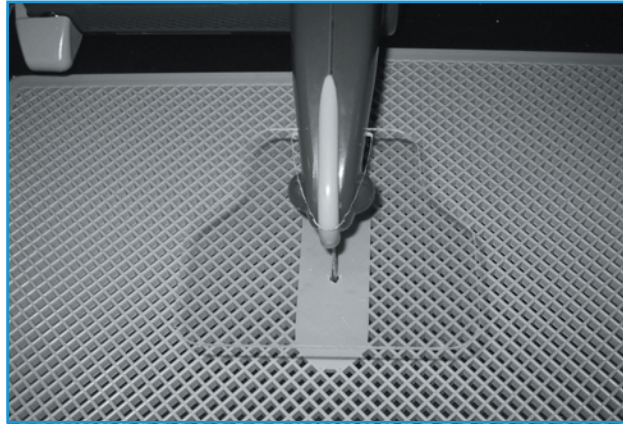
The work surface has two pins on the bottom side that hold the saw in position.

Installing Face Shield



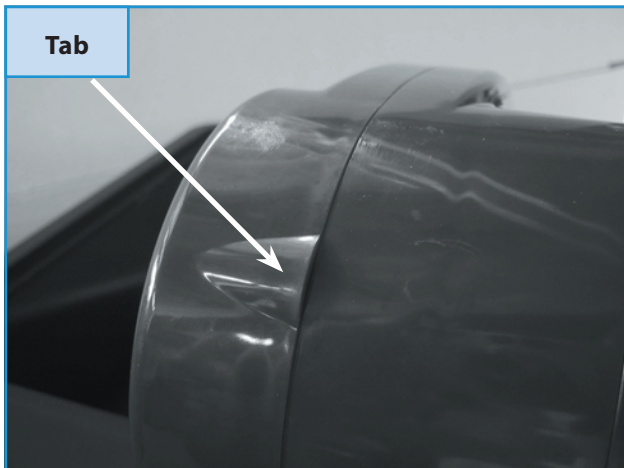
Insert the tabs on the face shield into the indentations on the upper door and the body.





Face shield should look like this. It will flip up out of the way when not needed. Note: the shield needs to come off to remove door.

Remove/Install Upper Door



The rear side of the upper door has a finger tab.



Pull the tab toward you to pop the upper door off.



To put the door on, snap the front part of the upper door on and hold it in position.

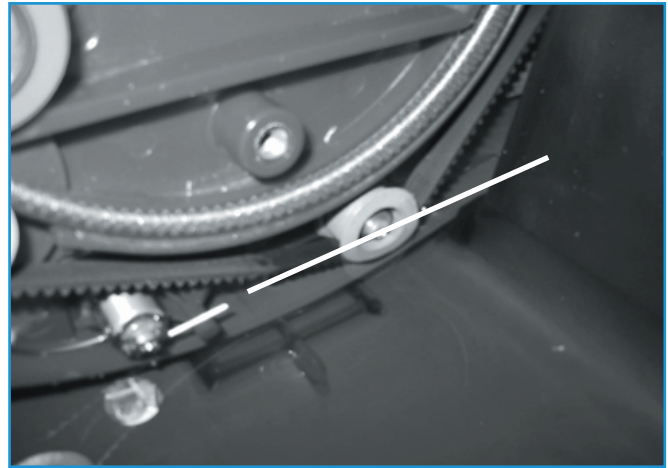


Snap the back portion of the upper door into position.

Water: Level, Conditions and Care



Fill the water up to the watermark on the front of the water tub.



The water should come half way up the bottom blue pulley #4.

Conditions: Water conditions vary from region to region. Areas with “hard water” will have an adverse affect on the saws moving parts, especially the bearings. The best environment for the saw is distilled water. Distilled water is not always the most cost effective way to go but there is another alternative. Add 2 to 3 tablespoons of vinegar to your tap water, further steps can be taken as well, like adding just a few drops of ordinary dishwashing liquid. When the saw is being used for an extended period it is always a good idea to add an ice pack to the water/or change it, to keep it cool. With this saw it is better to use

the ice packs rather than ice cubes as the cubes will float freely throughout the saw and may get jammed in the inner workings. It is not recommended to use any type of antifreeze or coolants.

Care: Always keep the water in your saw cool and clean as possible. It is all right to leave the water in the saw for a few hours of even a day but it is never a good idea to leave the water sitting idle in the saw for long periods. The contents in the water (minerals and debris from cutting), will tend to settle in and around the moving parts and cause rapid wear.

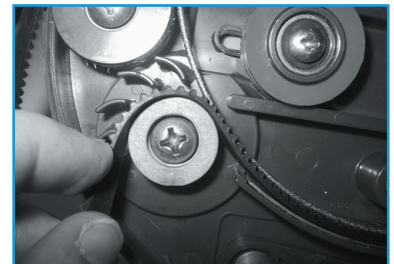
Blade In/Out



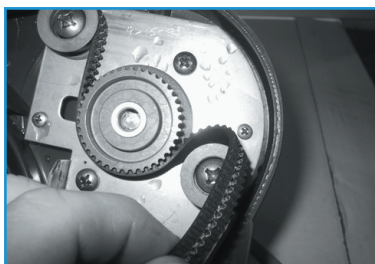
Loosen Groove Grommet #7 and slide it back. When replacing the blade, slide it forward until it makes contact with Groove Grommet #6.



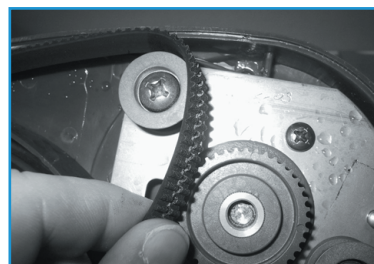
Lift up on tension arm #10 and slide drive belt off of blue pulley #4.



Gently unwrap drive belt from blue pulley #5.



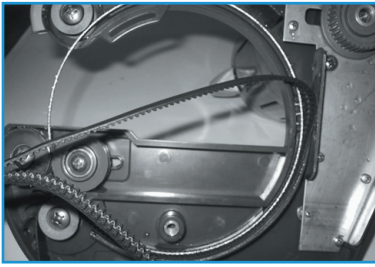
Unwrap drive belt from blue pulley #3.



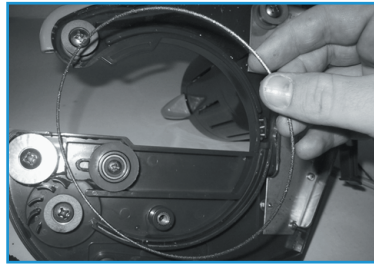
Unwrap belt from blue pulley #2.



Gently unwrap belt from blue pulley #1.

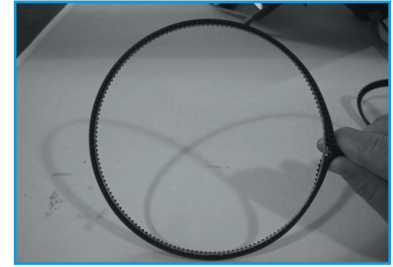


Gently pull drive belt #9 off of the saw.

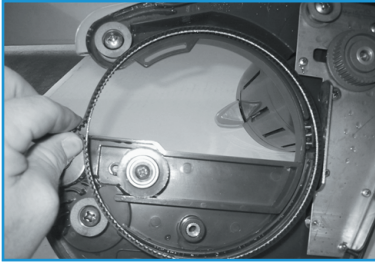


Lift blade out of saw.

TIP: The following steps will make starting the process of replacing the blade much easier.



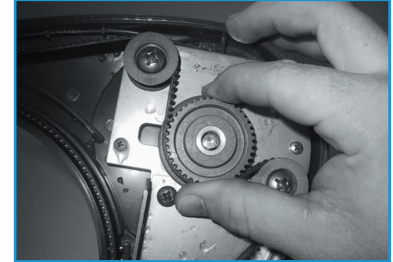
Wrap the drive belt tightly around the blade and pinch with your thumb and forefinger.



While still pinching, Slip the drive belt and blade into position.

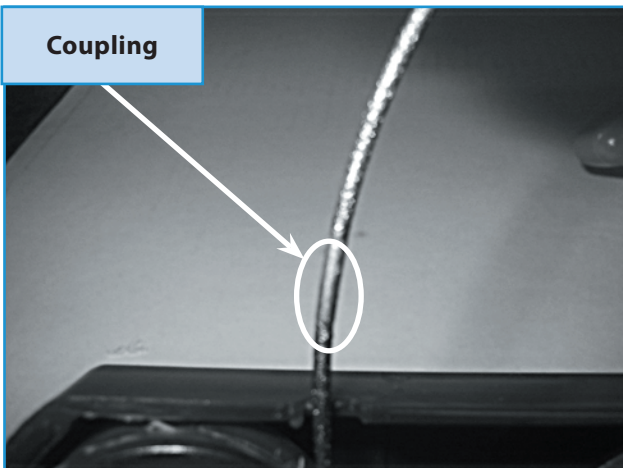


Slip drive belt and blade past blue pulley #5, then wrap the drive belt around it. From this point just follow the previous steps in reverse order.

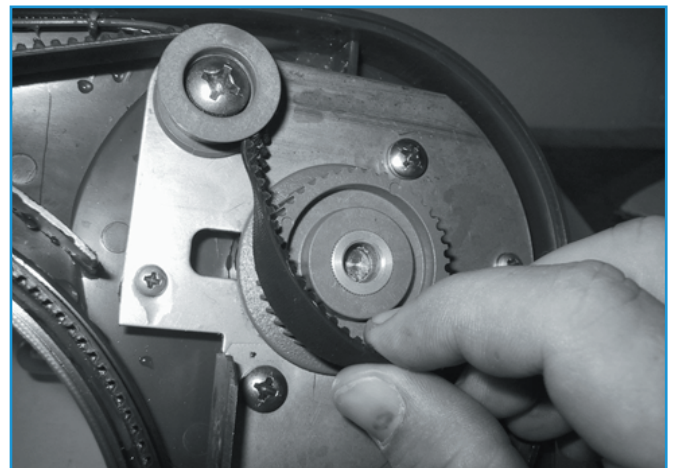


The **GOLDEN RULE** when replacing any parts in the saw is to rotate the drive gear counter-clockwise by hand several times to make sure everything is rotating smoothly.

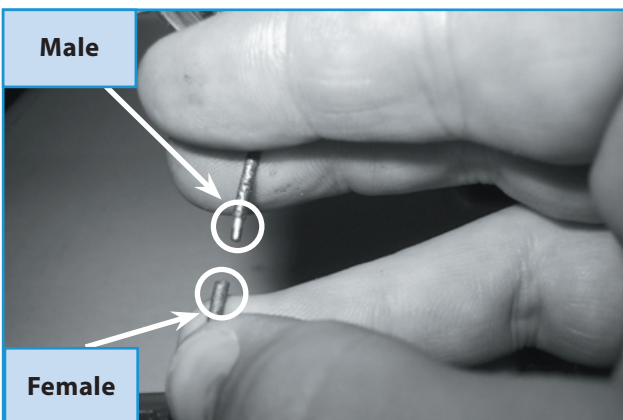
Using the Separating Blade



Find the coupling.



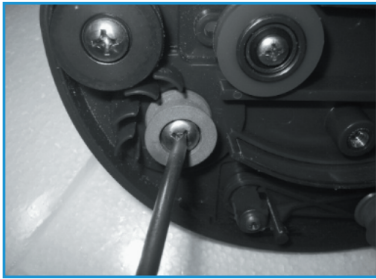
Lift the belt off of the drive pulley #8.



Open the coupling and slide the material with pre-drilled hole through the gap. **NOTE:** When a separating blade is installed, the female side should always face up. Put the blade back together and slip the belt back on the drive pulley #8.

Mega Blade

Because of its more sturdy construction, you may find the MEGA blade more difficult to install. The following will help making the installation much easier.



Remove blue pulley #5.



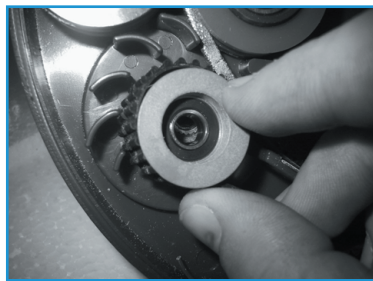
Remove blue pulley #1.



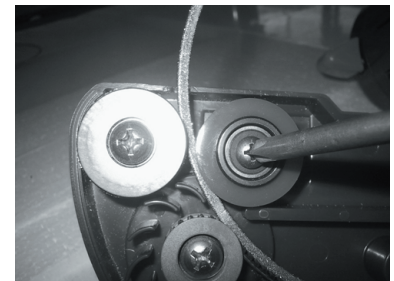
Slide belt and blade into machine using the same method described on page 8.



Wrap drive belt #9 around blue pulley #1 and slip them into position. Insert screw and tighten.



Wrap drive belt #9 around blue pulley #5 and slip them into position. Insert screw and tighten.

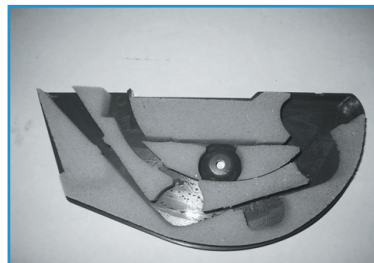


Slide groove grommet #7 until it makes contact with the blade. It will not touch groove grommet #6.

Handheld Saw



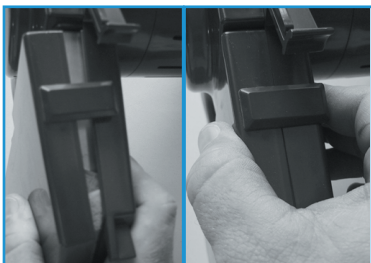
This is the bottom cover that is used on the handheld unit.



The inside has a die cut sponge inside to hold water inside. Soak it prior to assembly.



The bottom cover comes with a thumbscrew that will hold it on and keep the water from leaking out prematurely.



Snap the back of the cover in place.



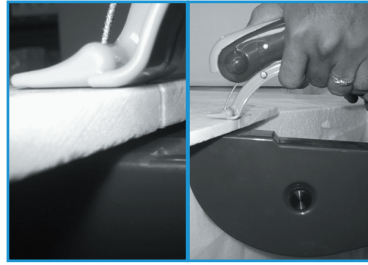
Screw the thumbscrew down snug.



Slide the foot onto the tab on the underside of the nose of the saw.



The foot comes with a Phillips head screw and nut. Put them on loosely.



Slide the foot down until the space between it and the base of the saw is slightly larger than the thickness of the material being cut.



Snug the screw down to secure it in place.



Rest the foot on the material when cutting. Do not hold it above the material.

Note: When cutting, the sponge will hold enough moisture for 5–10 minutes of use, then the cut will start to show powder. **Do Not Keep Cutting!** Add water by squirt bottle through the opening where the blade goes through or re-soak the sponge. Clean the sponge often—especially after use.

Helpful Hints

1. To apply patterns onto your work piece a copying machine is helpful. The print can be sprayed with Scotchgard™ fabric protector, covered with a film of rubber cement, or simply copied onto Mylar® which makes the print waterproof. The print can then be affixed to the material with the use of rubber cement.
2. Although cutting stacked glass can be accomplished better with the Gemini Saw than any other saw, we want to discourage people from thinking this is faster. Blade life is severely hampered by this process and it should not be done unless it is imperative that all the pieces be exactly the same shape. Cutting is actually faster one at a time.
3. Straight lines can be cut by placing a straight edge across the work table and clamping it at the ends. The Ring Saw will give you a straight line at any angle. Diagonal is best.
4. When cutting intricate shapes it is best to begin the cut with the most intricate part and end the cut on the thickest part. This will greatly reduce the chances of the piece breaking.
5. When doing lots of tiny little pieces that would be difficult to pick up and keep track of it is sometimes best to leave them attached to the main piece by a small section that you can break off and grind later.
6. When guiding the saw around a fine point it is usually better to cut past the end of the point on the side and then come back as though you wanted a longer point than you actually need. This will help develop your skill.
7. When you are first starting to cut out shapes do not try to cut right on the line as this will come with a little practice. At first stay away from the exact line by a hair and come back afterwards and lightly grind it with the saw blade.
8. When you want to grind off a bump, go right to the bump and grind it right in the middle and slowly move side to side.

Cutting Other Materials

The Taurus will cut all kinds of materials. These materials will not load the blade, they include but are not limited to tile, gold (which can be refined out of the water bath), silver, brass, bronze, aluminum, stainless steel, copper and plastics such as lucite, plexiglass, composites and all types of stone. The Taurus can be used as a high speed coping saw and will greatly reduce your metal cutting time. Slight loading can occur with aluminum over a period of time. Periodic cutting on a piece of brick will remove it from the blade.

When cutting thin metals it is best to put a backing under the metal so that the burrs created by the saw action will not catch on the work surface. This material can be the kind of cardboard found on the back of a writing pad. Another backing that works well is foam core (white), which can be found at artists supply stores everywhere. The blade of the Taurus will not be effected by any material you choose as a backing because it cuts plastics as well as metals and will not load on these either.

When removing the blade from a cut where you are not separating two pieces so that you must find your way out of a maze it is sometimes a good idea to leave the saw running, as this will help it slip through easier.

A Little About the Saw

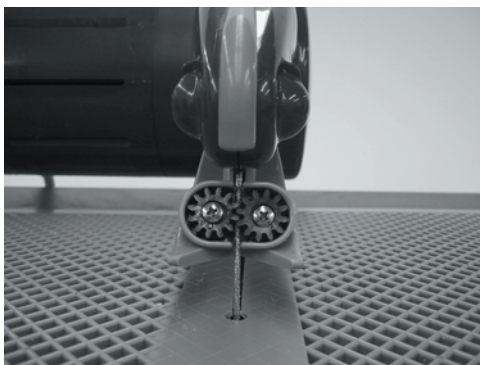
The ring saw is a completely unique machine and its operation is very different than any other machine. For this reason persons who have been using band saws tend to lead the material into the front of the saw blade and rotate the material to make a curved cut. All cuts on the Taurus Ring Saw can be made by moving the material forward, backward, left and right so rotation is not necessary. Diagonal directions are the strongest.

Ice can be used with the Taurus, ice packs or "blue ice" is safer and also lasts much longer. This is useful as cold-water works wonders for blade life and cutting speed, but is not necessary unless the saw is being used for periods of fifteen minutes or more. Sporadic use for one minute or less for example will not build up enough heat to warrant ice.

Coolant is not necessary for the Taurus as it moves enough water through the cut to make it the coolest cutting saw on the market today.

Stabilizer Foot for Taurus 3

The Taurus 3 Ring Saw Blade Stabilizer reduces grommet wear dramatically. It also gives you more control and stability when cutting thicker material. The Stabilizer adjusts easily to accommodate different thickness material. Perfect when using the standard blade, separating blade, mega or slicer blade. The spectacular improvement will be included in all Taurus 3 Ring Saws starting this June at no additional cost. The Stabilizer will fit all previously purchased Taurus 3 Ring Saws without any modifications and will be available at your favorite supplier at a nominal cost.



Frequently Asked Questions

Q: When do I use the Stabilizer Foot?

A: Always use it with the hand held unit. When ever more control is desired in the shaping of thicker materials or for production cutting.

Q: Does the Stabilizer Foot adjust?

A: Yes, it slides up and down to accommodate different thickness materials.

Q: Does the Stabilizer Foot interfere with the light on the Taurus 3?

A: No it does not interfere. You will still be able to see very well.

Q: Can the Stabilizer Foot be used on other Taurus models?

A: It can only be used on with the Taurus 3.

Q: Does the Stabilizer Foot come in different colors?

A: It only comes in gray.

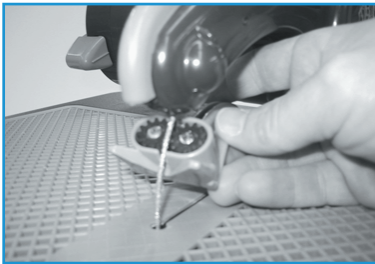
Q: Is the Stabilizer Foot available for people who already own a Taurus 3?

A: Yes, it is available and will require no modification.

Q: Where is the Stabilizer Foot available?

A: You can purchase it at your local supplier or distributor.

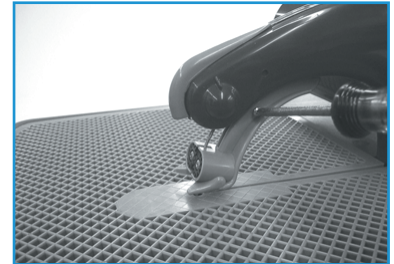
Stabilizer Foot Installation



Push Stabilizer Foot against the blade and roll it down at an angle into position.



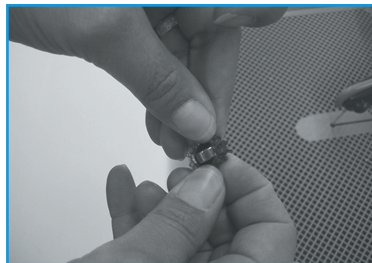
Rotate the Stabilizer Foot up into the mount on the saw.



Insert screw through Stabilizer Foot, position as needed and tighten screw down.



To replace red grommets, remove mounting screws.



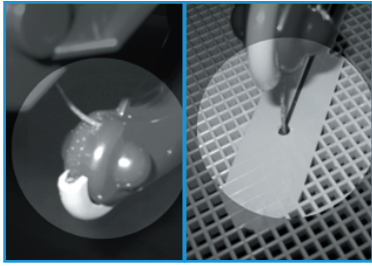
Peel the red grommet off of the bearing.



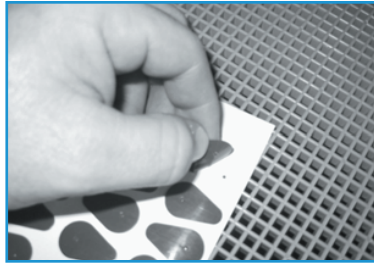
Snap new grommet and reinstall in reverse order.

Taurus Hole Reducers

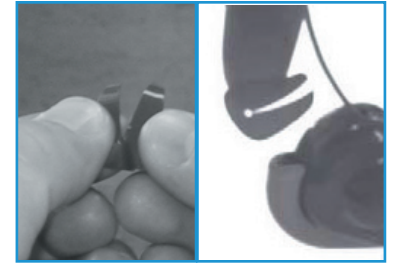
The Taurus hole reducers come on a sheet and are useful on both the underside of the saw, where the blade exits, for water reduction and on the work surface for inhibiting debris from entering moving parts.



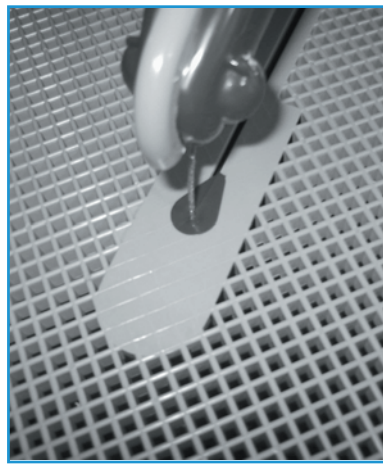
Before applying the hole reducer, clean the areas around the blade thoroughly and dry completely.



To apply, peel a hole reducer off of the sheet.



Open the slit and wrap the hole reducer around the blade.



Note: when applying the hole reducer to the underside of the saw it is best to make it overlap.

The Magnificent 7 Blades of the Taurus 3

What Are They All About?

There are seven blades available for the Taurus 3 ring saws and there are often questions arising as to what they are for, how long they last, and how to use them. Below is a summary of each of the blades and their many uses.

There are universal truths that hold true for all of the blades:

- 1) All blades cut the same materials: glass, tile, stone, shell, nonferrous metals, hard plastics such as acrylic and lexan, and anything that has a similar density to these materials.
- 2) All blades use the same belt and grommets. Blades are interchangeable with the same belt and grommets and do not need to be changed unless they are excessively worn.
- 3) Always let the blade do the cutting. Forcing the blade through the material in a hurry will not only cause a slower cut but can also shorten the blade life. There is an optimum speed for each blade in each material (defined as that point at which you get maximum cutting speed for minimal pressure); you can feel it while you are cutting. Sensitivity to this optimum speed can help you enjoy an extremely long blade life.

The Magnificent Seven Serious Blades

When describing blade abilities, it is wise not to confuse the stated maximum thickness for each blade with the ability of a blade to cut a greater thickness of a certain material once in a while vs. using the saw to cut that thickness all the time. For this description, we will refer to blade capacity in normal use. When we speak of blade shape, we describe a cross section, which is like snipping off a piece of the blade and looking directly at its end.

Standard Blade — Stained-glass patterns and all-around multi-purpose cutting blade. Its action is omni-directional. This is to say that it cuts the same speed and kerf (the swath left by the blade) in any direction. This blade was the first blade to be put on saws and makes pattern cutting very easy because the user does not have to turn the piece while cutting but rather can simply move it in any direction.

Blade Shape: Round; .072" dia. (note— $\frac{1}{16}$ " equals .063" and 1mm equals .0394"). Grit is aggressive.

Material Thickness Capacity: $\frac{3}{8}$ ", normal use is $\frac{1}{8}$ " art glass, $\frac{1}{4}$ " soft wall tile.

What to Avoid: Do not use for ceramic tile, $\frac{3}{8}$ " fused glass pieces, or thick material in general.

Average Blade Life: 40–60 hours

Separating Blade — This blade is the same as above but it comes apart for cutting out the center of a pattern without using an entrance cut. You must first drill a hole; consult your DVD for hole drilling instructions.

Blade Shape: Round; .072" dia. (note— $\frac{1}{16}$ " equals .063" and 1mm equals .0394"). Grit is aggressive.

Material Thickness Capacity: $\frac{3}{8}$ ", normal use is $\frac{1}{8}$ " art glass, $\frac{1}{4}$ " soft wall tile.

What to Avoid: Do not use for ceramic tile, $\frac{3}{8}$ " fused glass pieces, or thick material in general.

Average Blade Life: 40–60 hours

Mega Blade — This heavy duty blade is hungry for whatever you can feed it. It is almost unbreakable, so it is great for class settings. It has an opinion about which way it likes to cut because of its shape which is basically teardrop. The round part of the tear drop faces outward and the pointed part faces inward. This means it cuts faster when pulling material toward yourself and slower when pushing material away and slowest when moving sideways. Its kerf is the same as a standard blade when pushing and pulling, but it leaves a wide swath sideways. That said, you can cut whatever you can fit into the mouth of the saw. The shape allows for creative shaping. Cutting action is omni-directional in thin material like stained glass but more forward and backward cutting for thicker harder materials. Grit is aggressive; leaves a smooth edge.

Blade Shape: Teardrop; .072" wide (at the front) x .15" deep (front to back), back edge tapers to a point. Grit is aggressive

Material Thickness Capacity: $\frac{3}{4}$ ", normal use is fused glass, stained glass, ceramic tile, or stone. You may have to remove the stabilizer foot to use the full $\frac{3}{4}$ " capacity.

What to Avoid: Do not cut thin dichroic glass as it will chip easily, demonstrate to students its action prior to letting them use it, explaining the tear drop shape and its unique action.

Average Blade Life: 50–100 hours

Taurus 3 Ring Saw

Slicer Blade — This is our thinnest blade and only cuts forward and backward. It can grind slightly left and right, but take your time and it will turn on a dime or smaller. Its action is just like that of a band saw but infinitely better in that you rotate the material into the blade as you are cutting but you can in the middle of the cut without binding and head off in any direction either backwards or forwards. This blade was developed for slicing material quickly with a thin kerf (.040/1mm) and it is the blade we recommend for use with the Super Slicer (a jig for slicing pattern bars and rods into thin repeatable wafers). Also, it has finer diamond grit, so the cut is even smoother than all the other blades except for the dichro blade. Use this blade with the heavy-duty flocked belt to avoid splitting. This blade can turn on a dime and do very intricate designs once you get used to it. Glass fusers love it.

Blade Shape: Flat; .040" wide x .15" deep (front to back). Grit is fine.

Material Thickness Capacity: ¾", normal use is for slicing thin wafers in rods and pattern bars, and scroll cutting of fused glass up to ¾" thickness.

Average Blade Life: 50–100 hours

Slim Blade — Originally developed for the Taurus I thru II.2, this blade is a thinner version of the standard blade. It has the same dimension as a standard or separating blade from front to back but is thinner as you look at it straight on. For this reason it is just as strong as a standard blade but can cut quicker front to back and leaves a slightly smaller kerf, (.062"). It cuts the same as a standard blade left to right and its action is omni-directional.

Blade Shape: Oval; .062" wide x .072" deep (front to back). Grit is aggressive

Material Thickness Capacity: ¾", normal use is ½" art glass, ¼" wall tile.

What to Avoid: Do not use for ceramic tile, ¾" fused glass pieces, or thick material in general.

Average Blade Life: 40–60 hours

Dichroic Blade — This is the slim blade but coated it in super-fine grit so that it does not chip even the thinnest of dichroic glass. Its cut is super quick and leaves the smoothest edge of all of the blades; allows the use of lower firing temperatures in the manufacture of jewelry and the like. Neat, crisp edges add a note of professionalism with this blade. Its action is omni-directional.

Blade Shape: Oval .058" wide x .072" (front to back). Grit is super-fine.

Material Thickness Capacity: ¼", normal use is thinner than normal dichroic or iridized glass.

What to Avoid: Do not use for ceramic tile, ¼" fused glass pieces, or thick material in general.

Average Blade Life: 40–60 hours

Speed Blade — Sometimes known as the inverted Mega blade, this is a mega inside out and made thinner. The result is a teardrop-shaped blade that is almost unbreakable with the round part on the inside and the point on the outside. Its thinner profile makes it our fastest, most aggressive blade yet. When pushing forward into this blade, material glides through the thickest, toughest materials with ease. It comes with a flocked drive belt that can handle its aggressive nature. Its action is omni-directional in stained glass or soft wall tile and forward and backward for thicker or harder materials. When pushing or pulling the material through with this blade, it has a thinner kerf than a standard, Mega, or slim blade.

Blade Shape: Teardrop; .055" wide (at the back) x .15" deep (front to back), front edge tapers to a point. Grit is aggressive.

Material Thickness Capacity: ¾", normal use is fused glass, stained glass, ceramic tile and stone. Note: you will have to remove the stabilizer foot to use the full ¾" capacity.

What to Avoid: Do not cut thin dichroic glass as it will chip easily. Demonstrate to students its action prior to letting them use it, explaining the tear drop shape and its uniqueness.

Average Blade Life: 50–100 hours

Taurus I, II and II.2

These saws can use four of the previously mentioned blades. These will have different part numbers because the grommets on them are different. Please note the chart below for reference numbers. The description and action of these blades is the same for all saws.

Standard Blade (Part# 1039)

Separating Blade (Part# 1041)

Slim Blade (Part# 1040)

Dichro Blade (Part# 1038)

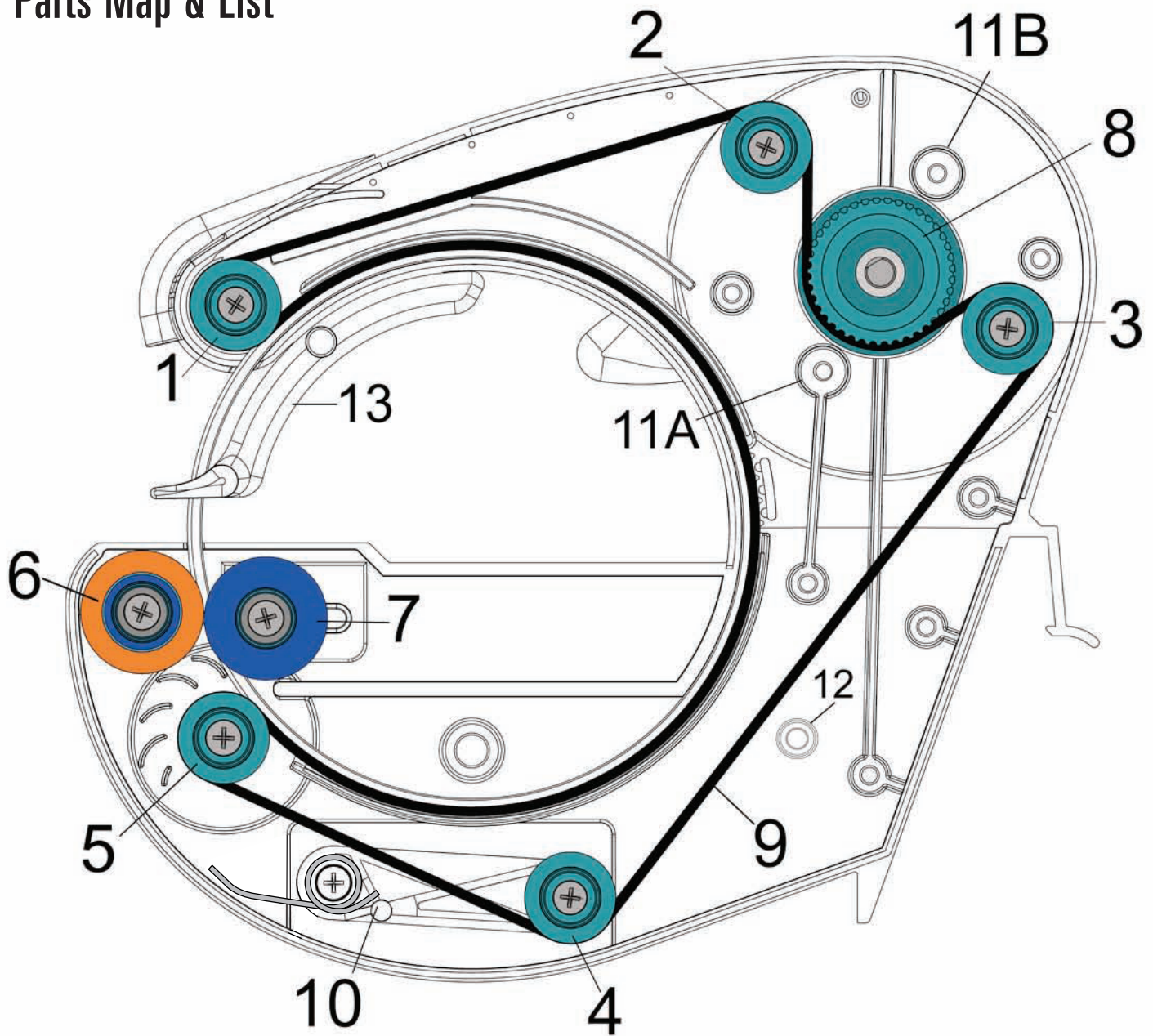
Taurus 3 Extras

Slicer Blade & Belt Kit (Part# 1051)

Speed Blade and Belt Kit (Part# 1052)

Flocked Belt (Part# 0108)—Made especially for slicer blade and speed blade, this belt is probably overkill for all other blades and it costs a little more. It has a Kevlar® flocking or is criss-crossed with webbing that holds the rubber together so that it can't easily split.

Parts Map & List



- 1. Blue Pulley Assembly #1067
- 2. Blue Pulley Assembly #1067
- 3. Blue Pulley Assembly #1067
- 4. Blue Pulley Assembly #1036
- 5. Blue Pulley Assembly #1067
- 6. Orange Groove Grommet Assembly #1070
- 7. Orange Groove Grommet Assembly #1070
- 8. Drive Pulley #0035
- 9. Drive Belt #0070
- 10. Tension Arm #1031
- 11. Gear #1034
- 12. Gear #1034
- 13. Foot Assembly Stabilizer #1034

*Note: Orange Groove Grommet pairs should always face in opposite directions as shown on diagram above.

