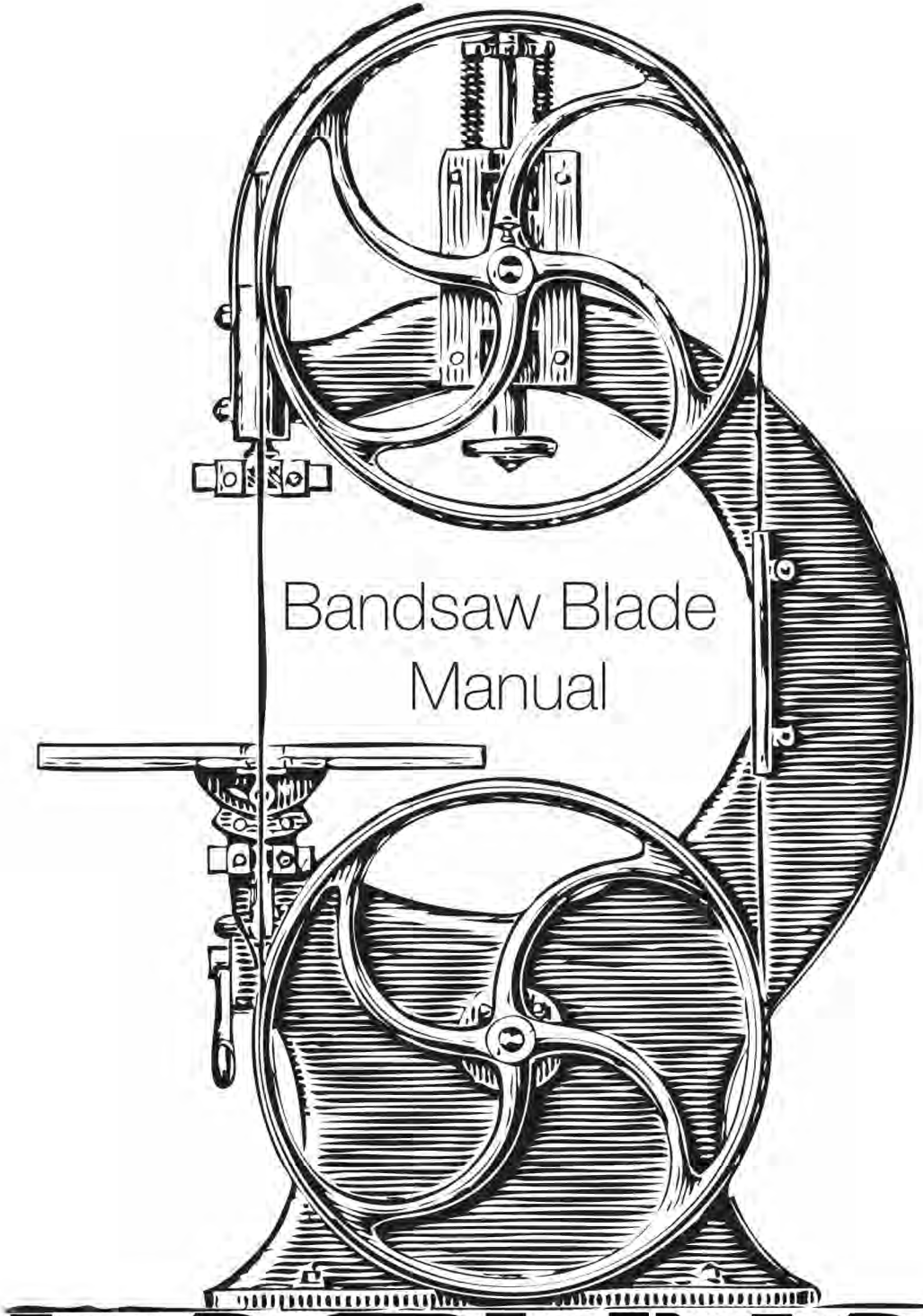
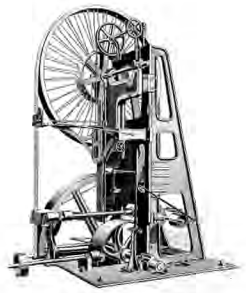


Bandsaw Blade Manual

LAGUNA

A BRIEF BANDSAW HISTORY...



The idea of the bandsaw dates back to at least 1809, when William Newberry received a British patent for the idea, but bandsaws remained impractical because of the blades. No-one could make a bandsaw blade that could withstand the constant flexing until Frenchman A. Perin introduced a viable blade in the early 1860s. Bandsaws quickly became popular in England and the rest of Europe. By the late 1860s the blades had made their way to North America and the first manufactured American bandsaws appeared.

MANUAL CONTENTS

SAFETY FIRST

As with all machinery and tools, there are certain hazards involved with the operation and use. Using it with caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. If you have any questions relative to the installation and operation, do not use the equipment until you have contacted your supplying distributor.

Read carefully before operating:

1. Keep the working area clean and be sure adequate lighting is available.
2. Do not wear loose clothing, gloves, bracelets, necklaces or ornaments. Wear face, eye, respiratory and body protection devices as indicated for the operation or environment.
3. Be sure that the power is disconnected from the machine before tools are serviced or an attachment is to be fitted or removed.
4. Never leave the machine with the power on.
5. Do not use dull, gummy or cracked cutting tools.
6. Be sure that the keys and adjusting wrenches have been removed and all the nuts and bolts are secured.

INTRODUCTION TO BANDSAW BLADES

The selection and use of blades is a very extensive subject, and there have been many books written on the subject. This manual is intended as a general guide and you may find that the principles described can apply to all blades.

LAGUNA TOOLS
Lagunatools.com
1-800-234-1976

ABETTERBLADE
Abetterblade.com
1-866-677-6623

Blade Types

There are 3 basic blade materials used for bandsaw blades:
bi-metal, tipped blades and Carbon steel. All blades have a backing of carbon spring steel and then either hardened teeth or a tip attached.

Carbon steel blades are made from spring steel. After the tooth has been formed the tooth is hardened and ground. This is the standard blade for cutting most woods and its main advantage is price.
It has a reasonable life when cutting woods that are not abrasive.

Bi-metal blades have high-speed steel welded to the spring steel backing, and then the teeth are ground. The advantage of this type of blade is that the teeth are made from very hard material, have a long life and can be used to cut hard materials. The disadvantage is that the blade is more expensive.

Carbide/Stellite tipped blades are made from spring steel and have a tip attached. There are several materials that are used to tip the blade but carbide is the most common and has the advantage of being able to cut abrasive woods with a very long life expectancy.

Cutting speed:
There is no effective way to exactly quantify the speed that any blade will cut through material. The variables that affect the cutting speed are thickness of material being cut, type of material being cut, finish required, machine being used, straight or curved cut, and many others.

As a general rule, the smaller the teeth, the slower the cut, the larger the teeth the faster the cut. An 18tpi blade will cut through material slowly but give a good finish, while a 1.25 tpi blade will cut fast through the job but give a poor finish. There is nothing quite like experience and it is suggested that you should experiment until you settle on the blade tpi that suits you and the type of work that you are doing.

Resaw King

Resaw King Sizes: 3/4", 1", 1 1/4", 2"

The Resaw King is perhaps the world's finest resawing blade. Manufactured with C4 carbide teeth, this blade allows you to cut ultra-smooth, wafer-thin veneers with minimal waste. Woodworkers demanding the best will be impressed.

Design

The carbide tip used in manufacturing the Resaw King is larger than competitors, making it the best-suited carbide blade for re-sharpening. Get up to 5 re-sharpenings from one blade.

Thinner Material

The backing material is thinner than any competitor, making it the highest yielding carbide saw blade in the world.

Highest Quality

We use the same CNC machine to re-sharpen the blade as we use to manufacture the blade. Therefore, a re-sharpened blade performs like a new blade. The diamond grinding wheels are the highest quality obtainable in the world, manufactured in Illinois, USA.

Smoother Cuts

The variable tooth pitch minimizes harmonic vibration, thereby making a smoother cut.

Shear Force

Shear Force Sizies: 1", 5/8"

Made in the USA, the Shear Force blade is compatible with nearly every bandsaw. Manufactured with an ultra-thin .024" backing and alternating 3-4 TPI, it ensures a smoother cut and significantly reduced vibration. If you are looking for a versatile blade with an exceptional precision cut, Shear Force is your blade. This blade is truly unique in every way.

Features:

- Perfect for resawing
- Heavy-duty blade
- Thin kerf reduces waste. .024 Backing
- Made from carbon steel

The Shear Force is a multi-dimensional blade, loved by woodworkers and a favorite for butchers. Its durability will outlast any blade in its class!.

LAGUNA QUICK TIP:

ALWAYS DE-TENSION YOUR BLADES

When you are done cutting for the day, take the tension off your blade. Bandsaw blades, when warmed up from cutting, always stretch, and upon cooling shrink by tens of thousandths of an inch each cooling period. Therefore, blades, when left on the saw, over-tension themselves and leave the memory of the two wheels in the steel of the band, which will cause cracking in the gullet. When you leave the band on your saw under tension, not only do you distort the crown and flatten out the tires (which makes them very hard), but you also place undue stress on your bearings and shafts. Believe it or not, you can, and will damage your wheel geometry sooner or later and considerably shorten bearing life. You are also crushing your tires or V-belts.

Proforce

Proforce Sizes: 1/8", 3/16" 1/4", 3/8" 1/2", 3/4", 1", 1 1/4", 2"

Direct from Sweden, our Proforce blade stock is the finest on the market. You will immediately notice the difference in quality and precision with the new Proforce.

The Proforce is an affordable blade without compromising the cut. Every blade is hand welded on a state-of-the-art welder by one of our skilled professionals. Individually inspected for quality control and backed by a 6-month manufacturer's warranty, the Proforce is the blade of the future. Try the Proforce today and change your woodworking forever!

Made from tempered Swedish silicon steel, the ProForce is a premium bandsaw blade designed for longer life and better performance than traditional carbon steel blades. This line offers a wide range in both blade width and tpi.

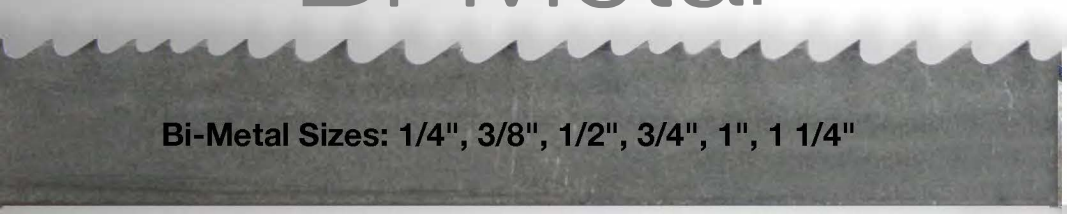
Specifications:

- Swedish silicon steel bandsaw blade
- Slow cutting with a smooth finish
- Amazing resaw capability
- Durable, stays sharp

History Note:

Ancient saws have been dated back over 4,000 years. Handmade from bone the saws would have been dull after a few cuts. All saws were powered by one to six people until the 1860s whe the first powered bandsaws were invented.

Bi-Metal



Bi-Metal Sizes: 1/4", 3/8", 1/2", 3/4", 1", 1 1/4"

Bi-Metal bandsaw blades are made of M42 high speed-steel on the tooth edge and spring steel for backing material. Through a process of electron beam welding and a specific heat treatment the two metals are bonded as one. This process ensures a high-quality durable metal cutting blade.

The M42 tooth edge is extremely hard and offers excellent fatigue resistance, while the spring steel gives the blade flex and durability. It is suitable for cutting various ferrous and nonferrous materials at high speed.

Charactered by narrow kerf, high productivity, and energy savings, it is the latest cutting tool to save raw material and reduce power consumption.

Bi-Metal blades come in various widths, tooth type and tooth per inch. ranging from 1 TPI (Teeth Per Inch) all the way to 18 TPI. Before cutting, you want to make sure you have the correct blade for the job.

Bi-Metal blades are great metal cutting blades. They can be used on horizontal or vertical bandsaws to cut carbon steel, tool steel, aluminum, structural steel, stainless steel, pipes and tubes, die steel, angled/flat stock, and mixed metal applications. Our Bi-Metal blades are of the highest quality, and each is hand inspected before shipment.

Specifications:

- Extremely Durable
- Long Life

Uncoiling Your Blade

When opening the blade, wear gloves and other protective equipment, as the blade is under tension and when released could spring and cause injury.

Teeth direction:
If the teeth are not facing in the correct direction (facing up when fitted to the bandsaw), rotate the blade as below.

1. Lightly place your foot on the bottom of the blade. It is recommended that the blade is placed on material that will not damage the blade teeth (wood or cardboard). Your foot is there to give stability and not to clamp the blade, so do not exert excessive force, or the teeth/band may be damaged. Place your hands as shown, with your thumbs facing out.

2. Twist your wrists so that your thumbs are facing each other. The top part of the blade is now twisted with the teeth facing in the opposite direction.

Note. You may have to over-twist the blade to get the top of the blade to flick over.

3. Remove your foot slowly and shake the blade until the blade band untwists.

Folding A Bandsaw Blade

There is another variation of this that works well with small blades but simply is not possible for larger bandsaw blades, unless you're very big and strong.
This method works the same as the method above, but rather than holding the blade with both hands, grasp the blade at the top while holding the bottom of the blade with your foot (teeth still facing away from you). Grasp the blade with your hand, twisting your arm such that your elbow is facing away from your body.

Step 1: Turn the palm of your hand toward your body about 180 degrees and then continue turning while pushing down on the blade

Steps 2-4: The blade will fold down upon itself into three circles, lying flat on the ground.

Note. Blade is under tension. Safety gloves and goggles must be worn when handling the blade, as the teeth are sharp and could cause injury.

For helpful videos on these topics please visit www.Abetterblade.com

Blade Terminology 1

SET

The amount that the teeth are wider than the thickness of the backing material.

- The larger the set, the larger the saw cut, and the smaller the radius that can be cut. This can also be an advantage if you are cutting a job that has a tendency to nip the blade.
- The smaller the set, the smaller the saw cut, and the larger the radius that can be cut. You waste less wood.

THICKNESS

The thickness of the band "gauge." The thicker the band, the stiffer the blade and the straighter the cut. The thicker the band, the greater the tendency for the blade to break due to stress cracking, and the larger the bandsaw wheels have to be.

PITCH

The distance from the tip of one tooth to the tip of the next tooth. This is usually quoted in teeth per inch (T.P.I.). The larger the tooth, the faster the cut, because the tooth has a large gullet and has a greater capacity to transport large amounts of sawdust through the job. Generally, the larger the tooth, the coarser the cut, and the rougher the surface finish of the cut. But with the Resaw King, you get the advantage of a fast cut and a good surface finish.

- The smaller the tooth, the slower the cut, as the tooth has a small gullet and cannot transport large amounts of sawdust through the job. The smaller the tooth, the finer the cut and the better the surface finish of the cut.
- It is normally recommended that you have 6 to 8 teeth engaged in the cut. This is not a rule, only a general guide. If you have fewer teeth en gaged, there is a possibility that juddering or vibrating will result, as there is a tendency to over-feed the job and for each tooth to take too deep a cut. If fewer teeth are engaged, there is a tendency to overfill the gullets of the tooth with sawdust. Both problems can be overcome to a degree by adjusting the feed rate.
- There are certain indications if a blade has the correct pitch or if the pitch is too fine or too coarse. Some are listed on the next page.

Blade Terminology 2

CORRECT PITCH

Blades cut quickly.

- A minimum amount of heat is created when the blade cuts.
- Minimum feeding pressure is required.
- Minimum horsepower is required.
- The blade makes quality cuts for a long period.

PITCH IS TOO FINE

- The blade cuts slowly.
- There is excessive heat, causing premature breakage or rapid dulling.
- Unnecessarily high feeding pressure is required.
- Unnecessarily high horsepower is required.
- The blade wears excessively.

PITCH THAT IS TOO COARSE

- The blade has a short cutting life.
- The teeth wear excessively.
- The band saw or blade vibrates.

MATERIAL HARDNESS

When choosing the blade with the proper pitch, one factor you should consider is the hardness of the material that is being cut. The harder the material, the finer the pitch that is required. For example, exotic hard woods such as ebony and rosewood require blades with a finer pitch than hard woods such as oak or maple. Soft wood such as pine will quickly clog the blade and decrease its ability to cut. Having a variety of tooth configurations in the same width will most likely give you an acceptable choice for a particular job. The Resaw King will cut most woods, but it must be noted that when cutting woods with a high silicon content or very hard woods such as iron wood, ebony, etc., the blade will dull more quick-ly than when cutting soft woods.

KERF

The width of the saw cut.

The larger the kerf, the smaller the radius that can be cut. But the greater the amount of wood that the blade has to cut and the greater the horsepower that is needed,the blade is doing more work. The greater the kerf, the larger the amount of wood that is being wasted by the cut.

Blade Terminology 3

HOOK OR RAKE

The cutting angle or shape of the tooth. The greater the angle, the more aggressive the tooth, and the faster the cut. But the faster the cut, the faster the tooth will blunt, and the poorer the surface finish of the cut. Aggressive blades are suitable for soft woods but will not last when cutting hard woods. The smaller the angle, the less aggressive the tooth, the slower the cut, and the harder the wood that the blade is suitable to cut. Hook teeth have a progressive cutting angle and take the form of a progressive radius. They are used for fast cutting where finish is not important. Rake teeth have a flat cutting angle and are used for fine surface finish of the cut. The Resaw King has a rake tooth form. The tooth and gullet are ground in one continuous process that greatly enhances the performance of the blade, giving a fast cut with a good surface finish to the wood.

GULLET

The area for the sawdust to be transported through the wood. The larger the tooth (pitch), the bigger the gullet.

RAKE ANGLE

The angle from the tip of the tooth back. The greater the angle, the more aggressive the tooth, but the weaker the tooth.

BEAM STRENGTH

This is the ability of the blade to resist bending backwards. The wider the blade, the stronger the beam strength; therefore, a 1" blade has far greater beam strength than a 1/8" blade and will cut straighter and is more suitable for resawing.

TOOL TIP

The cutting edge of the saw tooth.

BLADE BACK

The back of the blade that runs on the back blade guide.

Blade Tensioning

When people ask how to tension a blade, they usually want to know how to make a straight cut and stop a blade from wandering in a cut. Therefore, we will cover the main causes for blade wander and then move onto tensioning.

In order to cut straight with your bandsaw, it is important that you have an understanding of how the bandsaw works. The bandsaw consists of a rigid frame that holds two wheels. The lower wheel is fixed and is driven by a motor. It pulls the blade down and through the wood. The upper wheel is vertically adjustable, usually by a screw. It incorporates a spring, which keeps a constant pressure on the blade and also absorbs any shock that the blade experiences. The ideal situation for a blade is to have the same tension in the area above the job and below the job. This is difficult, as the action of cutting adds a variable into the equation. The bandsaw blade, by its very nature, suffers from a contradiction. It must be flexible to bend around the bandsaw wheels but also stiff enough to resist bending and flexing between the wheels. The bandsaw achieves this by tensioning the blade and thus stretching it. The next complication is that the blade heats up while cutting the wood and expands its length. This allows the blade to become slacker and lose its tension. To overcome this the bandsaw has a compression spring that allows for the expansion and keeps a constant pressure on the blade. The spring will compensate for the expansion in all but the most severe cases, such as cutting very hard thick woods for long periods of time.

Before we tackle blade tensioning, it is worth noting a few causes of blade wander.You might have the blade perfectly tensioned, but the blade still wanders and you could spend a lot of frustrating time adjusting the tension when the cause of the poor cut is not the tension.

Blade Tracking

There has been a lot of discussion on the position that the blade should run on the wheels. One group of people recommends that with large blades you should track the blade so that the teeth hang just over the front edge of the rubber. The second group recommends that all blades, regardless of their size, should run in the center of the wheel.

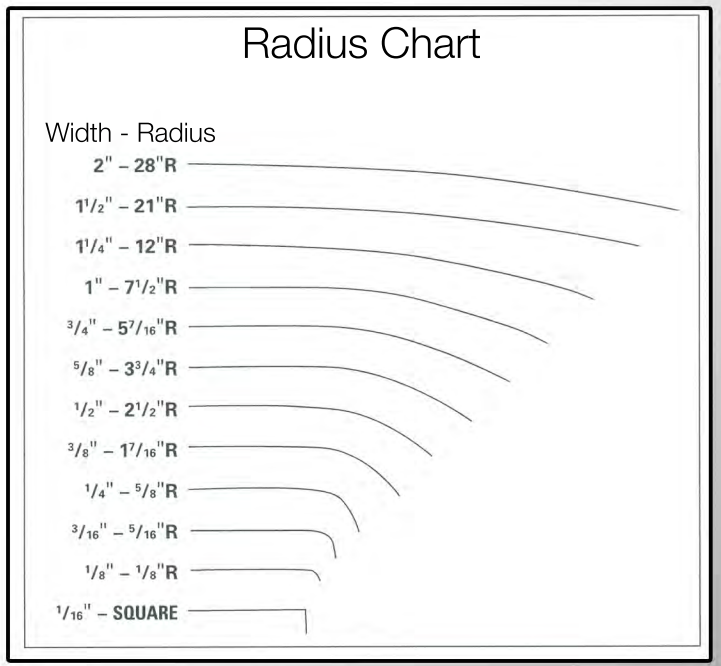
The advantage of running the large blades with the teeth not contacting the rubber of the wheel is that they cannot damage the tire. The disadvantage is that the wheel is crowned and the blade is not tensioned in the center of the band, which gives the blade a tendency to wobble or flutter.

The advantage of running large blades on the center of the wheels is that they are tensioned in the center of the band and have fewer tendencies to wobble and flutter. The disadvantage is that blades with large set on the teeth have a tendency to damage the rubber of the tire. This does not have a great effect on the performance of the band saw, as all blades are running on the center section of the tire, which is not affected.

We recommend that you balance all blades on the center of the wheels for optimum performance and a smoother cut.

Radius Chart

Until you become well acquainted with your saw, it is best to use the contour (radius) chart to determine which size blade to use for a specific application. Radius charts can be found in many woodworking books and magazine articles, as well as on blade boxes. They differ slightly from one another but are good as rough indicators of how tightly a curve can be cut with a particular blade. Each blade, blade set, saw and operator are different, so it is impossible to make a truly accurate chart. A blade can cut continuously without backtracking any curve that has a radius as much as or more than is shown on the chart. For example: a 3/16" blade will cut a circle with a 5/16" radius or a 5/8" diameter. To test if a 3/16" blade would work for a particular curve, place a dime (which is roughly 5/8") over the pattern. The 3/16" blade can cut a curve bigger than the dime but not smaller. You can use everyday items, such as coins or a pencil, to determine which blade to use. A quarter is the size of the tightest cut that can be made with a 1/4" blade. A dime is the size of the tightest curve that can be cut with a 3/16" blade. A pencil eraser is the size of the tightest turn that you can make with a 1/8" blade. After a while, you won't even need an object to size the possible curve of a blade because you will have become familiar with this process. There are options to matching the blade to the smallest curve pattern. If there is only one very tight cut, it may be best to use a turning hole, a relief cut, successive passes or to change the blade.



Measuring A Blade

If you need to check the length of a blade, there is a very simple and accurate method as follows.

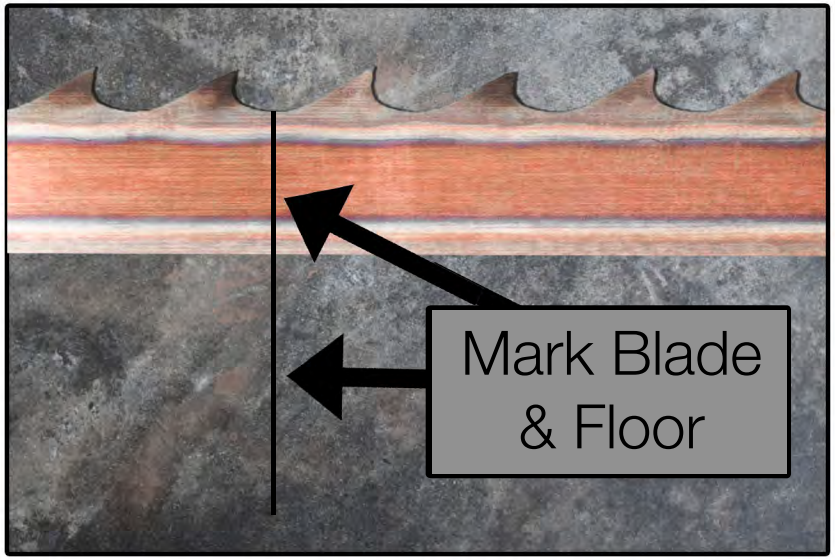
1. Place the blade on the floor with the band off the floor forming a hoop, similar to a catalpa track.

2. Mark the blade and the floor with a permanent marker or something similar.

3. Roll the blade until the mark is back onto the floor.

4. Mark the floor again with the marker.

5. Measure between the two marks. This is the length of the blade.



Blade Wander

The blade can be the cause of blade wander. If there is more pressure on one side of the blade than the other side, the blade will follow the path of least resistance and move over toward the side with less pressure. Typical reasons for the pressure being uneven are:

Dull blade:

This will cause the pressure to build up on the front of the blade and cause it to move back. This will have a tendency to slightly buckle the blade. This buckling reduces the pressure on the front of the blade and makes it relatively slack, causing the blade to wander.

Poor wheel alignment:

This will cause the blade to be fed through the job with a slight twist and cause the pressures to be uneven. This is not common, as most bandsaws come accurately set from the factory, and unless they have been dropped or mistreated it should not be a cause for concern. Up market bandsaws have adjustment for wheel alignment, but this should not be adjusted unless the bandsaw has been accurately checked.

Poorly set guides and or thrust bearings:

The guides are there to provide support to the blade, and if they are set so that they are pushing the blade off its natural path, the blade may wander off track. With the thrust bearing set either too far forward or too far back, the blade will bend either back or forward and change the pressure on the cutting teeth of the blade. If the guides are set too tight, heat is built up in the blade and this will cause the tension to change. It is also not good for the motor or the blade.

Tooth pitch too fine:

If the pitch is too fine, the gullets of the teeth fill with sawdust and stop the blade from cutting efficiently. This will cause excessive heat build up and dull the blade quickly. The blocked gullets also affect the cutting action and this in turn changes the cutting pressures and results in blade wander.

Blade Drift

Each blade has a natural cutting angle (drift). This is the angle that it will cut at, and it may (probably) not be square to the table. If you are using a fence as a guide to cut parallel with, it will have to be set to this cutting angle.

Adjusting the fence for drift:

1. Set the fence parallel with the blade by loosening the clamp screws that hold the aluminum extrusion to the cast iron knuckle. It is not important that it is exact, as you will be readjusting later in the procedure.
2. Using a piece of scrap wood, make a cut while holding the wood against the fence. Stop the cut in the middle of the wood and stop the bandsaw.
3. Look at the position of the back of the blade within the saw cut. The back of the blade should be in the center of the slot, but you will probably find that it is closer to one side.
4. Slightly loosen the clamp screws and adjust the fence to compensate.
5. Repeat 2, 3 & 4 until the blade is centered.

Note. You may have to do several fine adjustments, and it is better to do several small adjustments until you become skilled at the procedure. Once you have mastered the process, it should only take a minute to perform the adjustment.

Note. Each blade has a slightly different drift, and each time you change a blade, you must check and readjust if necessary.
Note: It is worth taking the time to set the fence accurately, as it will save frustration, enhance the performance of your machine, reduce stress on the blade and improve the surface finish of the cut.
Note: Always turn off the band saw when making adjustments to the fence.

There are other factors that will cause the blade to wander and it seems very daunting when you first start to cut with the bandsaw. Do not give up, as once you have mastered the bandsaw you will find that it is one of the most versatile machines in the shop.

Maintenance

There is not very much that needs to be maintained on the blade, but below are a few points that will help you keep your blade in peak cutting performance.

Blade cleaning:

Always clean the blade when you take it off the machine. If you leave it gummy or with wood in the gullets, the blade will rust. Rust is the enemy of the woodworker. When you take the blade off the machine or you are not going to use it for some time, it is recommended that you wax the blade. Have a rag that is impregnated with wax that you pull the blade through backward. The wax will coat the blade and will give a degree of protection against rust.

Blade inspection:

Inspect the blade for cracks, dull teeth, rust and general damage every time you put it on the machine. Never use a dull or damaged blade; they are dangerous. If your blade is dull, have it re-sharpened or replace it.

Blade storage:

Store the blade so that the teeth are not damaged and will not cause you injury. One method is to store each blade on a hook with the teeth against a wall. Nail cardboard or a wood sheet onto the wall so that the teeth are protected from damage, and if you brush against the blade, it will not cause injury.

Maintenance 2

Tire maintenance:

One of the major concerns is the cleanliness of the machine, the tires in particular. As the saw cuts, some sawdust lands on the tires. As the wheel rotates, the sawdust becomes compressed on the tire. This is especially true for woods such as pine. The compressed saw dust could have negative effects such as vibration and short blade life and could cause the blade to drift.

Most band saws have a brush that contacts the lower wheel and helps to prevent buildup. You should inspect the tires regularly to check that buildup is not happening, especially the lower wheel. The tires are made of rubber and wear just like car tires. They wear in the middle, which causes a concavity in the tire. The deformation makes it hard to track the blades, and for this reason it is important to maintain the original shape of the tire.

The best way to clean the tire surface and maintain the original shape is to sand it with sandpaper. The old tire surface often hardens and glazes over and should be redressed occasionally. This can be done by sanding the wheel with 100-grit sandpaper. Ideally, this should be done with the wheel rotating. This will take off a little of the rubber and expose new rubber, which is desirable.

The top wheel should also be dressed occasionally. This presents a problem, as it is not powered and only rotates when a blade is fitted. To sand the top wheel, rotate it with an external power source such as an electric drill with a 1/4" sanding drum. Get into the habit of regular inspection of your machine tires for cracks in the rubber, dirt/sawdust buildup, tire glaze, crown radius correct, wheels running true and wheel balance.

Drive belt inspection:

If your machine has a drive belt, you should check it at regular intervals, as the drive belt is one of the major causes for band saw vibration. If the belt is cracked or glazed, replace it. It is better to replace it before it breaks rather than to have it break in the middle of a job. A damaged drive belt will cause vibration, and when it breaks, it could hit your blade and damage it.

Maintenance 3

Blade guide inspection:

Your blade guides need to be inspected every time you use the machine. If they are damaged or set incorrectly, they could cause damage to your blade and may break it. Blade guides do a lot of work and will not last forever; ensure that yours are in prime condition.

Rounding the back of the blade:

With most guide systems, it is recommended that the back of the blade be rounded with a stone. If your machine is fitted with ceramic guides, this is not imperative, as the ceramic will round the back of the blade as it is used. However, if you decide that you want to round the back of the blade, below is a procedure.

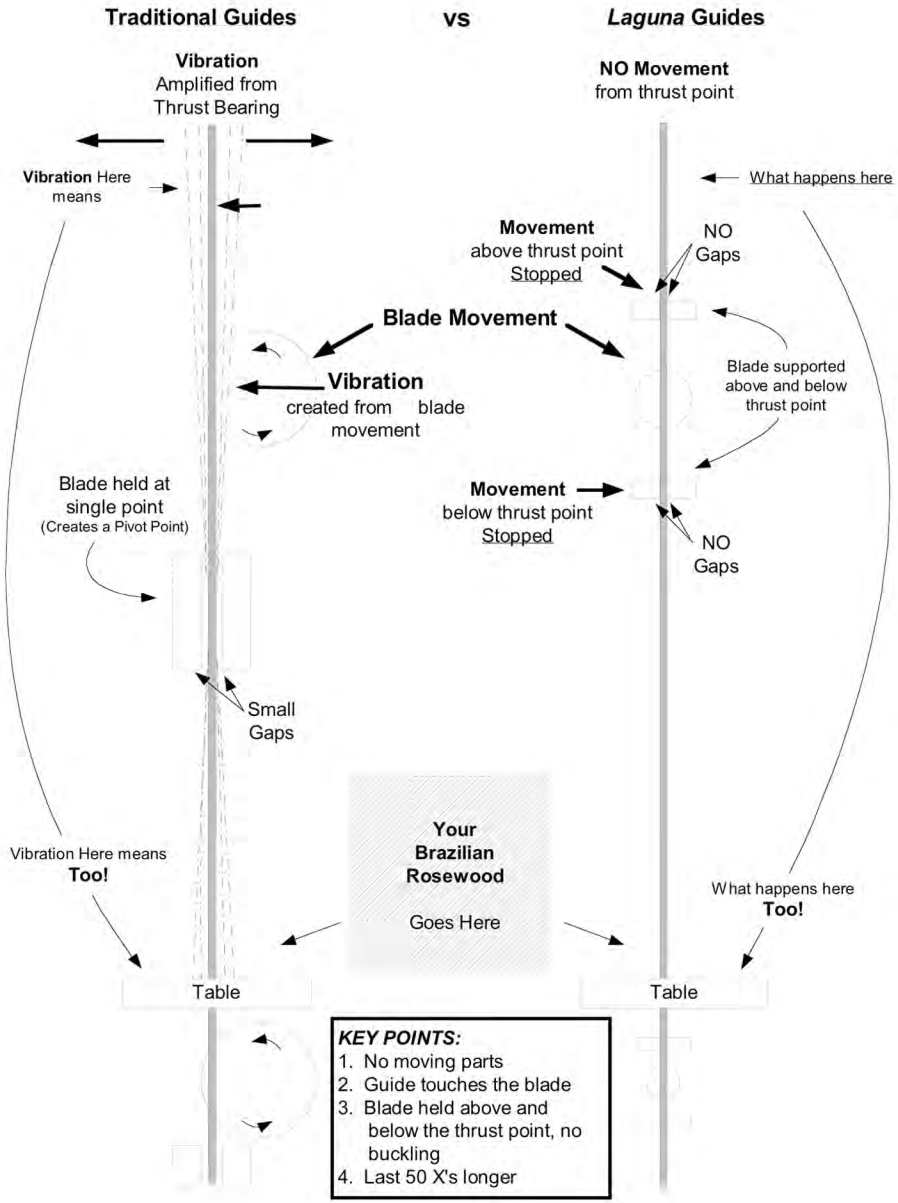
A round blade back creates smooth interaction between the thrust bearing and the blade. If the blade rotates slightly, there is no sharp blade corner to dig into the thrust bearing; also, the rounding process smoothes the weld. A blade with a round back makes smother turns because the round back has smooth interaction with saw kerfs.

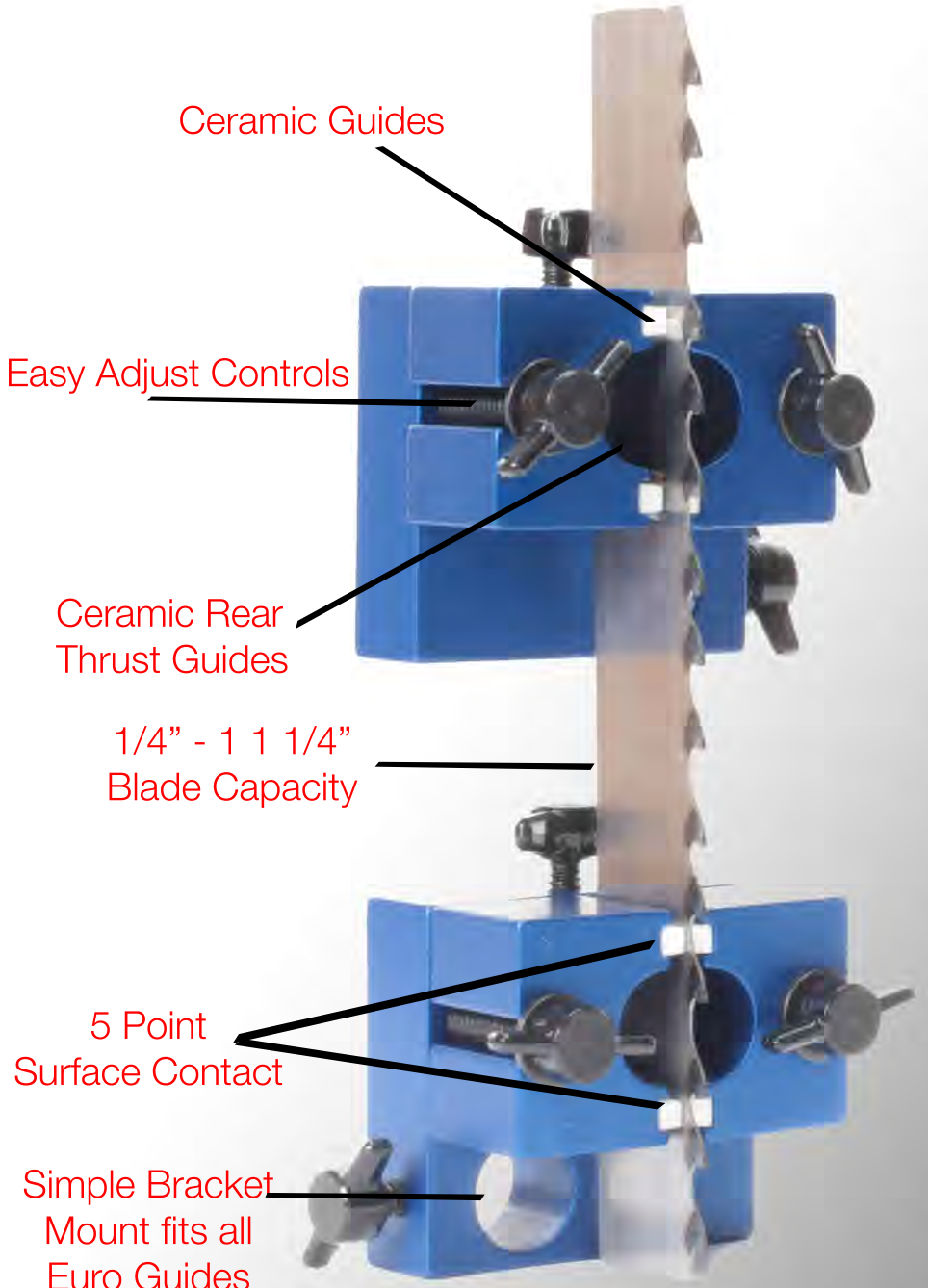
After the guides have been adjusted, hold the stone against the back corner of the blade for about a minute. Wear safety glasses when rounding the blade. Then, do the same thing on the opposite corner.

Next, slowly move the stone to round the back. Do not exert excessive pressure, as it will move the blade forward. Be careful that the inside of the machine is free of sawdust; it is unlikely, but sparks could start a fire. On small blades such as a 1/4" blade, the pressure on the back of the blade may bring the blade forward off the front of the side guides. Therefore, be careful not to put too much pressure on the stone. When doing this, it is also important that the upper guides are positioned right above the stone.

The blade has teeth, and extreme caution must be exercised, as your hands will be very close to them.

The Laguna Bandsaw Guide System achieves its superior stability utilizing 10 points of contact, 4 more than traditional guide systems. The ceramic material disipates heat from the blade for longer life. The Laguna Guide is a revolutionary blade-guide system (several patents) that is designed to give you many years of superior high-quality bandsawing. Most blade-guide systems are designed to support the blade on the side as well as either above or below the side guides to support the back of the blade. This forces the blade to twist as pressure from the wood being cut is transferred to the back of the blade guide.





(Pictured with Resaw King Blade)

Adjusting Blade Guides

Note: Only adjust the blade guides after blade tracking has been completed.

Adjust the blade guides so that there is one thickness of paper (0.003") between the back blade guide and the back of the blade. The guide is there to support the blade, and if it is not adjusted correctly, it could cause premature blade breakage. If the back guide is too far forward, the guide will take excessive strain and bend the blade. If it is too far back, the blade will bend, leading to blade breakage and/or a poor cut. Adjust the side guides (both top and bottom) by bringing one guide up to the blade so that it just touches it and lock in position. Check that the side guides are parallel to the blade. If they are not parallel, they will twist the blade and cause a bad cut and or early blade breakage.

Bring the opposing guide up to the blade, and using a piece of paper as a feeler gauge (0.003"), adjust and lock in position. Rotate by hand at least one complete revolution of the blade to check that the blade runs smoothly through the guides.

Adjust the back blade guide so that it just touches the back of the blade and lock in position.

Bandsaw Tips

Using the band saw

Although the band saw is usually associated with cutting curves, a variety of straight cuts are easily made with the saw. In fact, it is often used to rip wood because it is much safer than a radial arm saw and also has a smaller saw cut, so it wastes less wood. This becomes very important when using expensive wood where wastage must be kept to a minimum. The cut is safer because the force of the cut is straight down on the table; the work cannot be pulled back or kicked back, which sometimes happens with table or radial arm saws.
The band saw can also cut very thick stock, which the radial arm or table saw cannot do. The disadvantage of cutting with the band saw is that the surface finish of the cut is not normally as good as with the table or radial arm saw. This has been overcome to a great degree by using the Resaw King tipped blade.

Resawing

Resawing is the process of cutting a board along its width. The band saw is perhaps the most creative tool in the shop because of its ability to cut thick or thin, straight or curved. The ability to cut thick stock such as resawing, making veneers, book matching or cutting flitches from small logs has great appeal to woodworkers. These capabilities greatly enhance the woodworker's design ability with out the need for additional equipment. When a board is resawed and the two pieces are lying next to each other, you will note that they are mirror images of each other. When these two boards are glued together, it is called book matching.

Note- It is unsafe to cut wood that is unsupported by the table and should never be attempted. This is especially important to note when-cutting round logs.

Troubleshooting

Please call us if you have more questions:
1-800-234-1976

Problem	Cause	Corrective action
Poor cut finish.	1. Damaged tooth.	1. Have the blade re-sharpened or replace it.
	2. Guides not set correctly.	2. Reset guides.
	3. Fence not set correctly.	3. Reset fence.
	4. Wheels not true.	4. Reset wheels coplanar.
	5. Tires damaged.	5. Repair or replace tires.
Blade wanders in cut.	1. Incorrect blade tension.	1. Re-tension blade.
	2. Dull blade.	2. Re-sharpen or replace blade.
	3. Fence not adjusted for drift.	3. Adjust fence.
Blade judders.	1. Insufficient teeth engaged in the work piece.	1. Change the blade to a blade with more T.P.I. or reduce the feed rate.
Blade vibrates.	2. Incorrect blade tension.	2. Re-tension the blade.
	3. Tires impregnated with wood.	3. Clean tires.
	4. Tires not round.	4. Replace tires or sand them round.
	5. Insufficient teeth engaged in the work piece.	5. Change the blade to a blade with more T.P.I. or reduce the feed rate.
Blade wobbles.	1. Incorrect blade tension.	1. Re-tension the blade.
Blade cracked in gullet.	1. Blade too thick for the diameter of the wheels.	1. Change the blade to one with a thinner band.
	2. Blade overheating.	2. Remove the cause of the overheating.
	3. Blade over tensioned.	3. Re-tension the blade.
	4. Blade dull.	4. Re-sharpen blade or replace blade.
Band saw slows during a cut.	1. Loose drive belt.	1. Tighten the drive belt.
	2. Dull teeth.	2. Re-sharpen blade.
	3. Gullet packed with sawdust.	3. Change blade for one with bigger gullets.
	4. Pitch buildup.	4. Remove the pitch.
	5. Blade twisted in the cut.	5. Remove reason for the blade twist.
	6. Guides not parallel with blade.	6. Reset guides.
Blade cracked at back.	1. Blade too thick for the diameter of the wheels.	1. Change the blade to one with a thinner band.
	2. Blade over tensioned.	2. Re-tension the blade.
	3. Blade twisted in the saw cut.	3. Remove cause of twist.
	4. Back of blade guide set too far back from the back of the blade.	4. Reset back blade guide.
Blade breaks.	1. Poor weld.	1. Re-weld blade.
	2. Blade too thick for the diameter of the wheels.	2. Change the blade to one with a thinner band.
	3. Blade over tensioned.	3. Re-tension the blade.
	4. Blade twisted in the saw cut.	4. Remove cause of twist.
	5. Back of blade guide set too far back from the back of the blade.	5. Reset back blade guide.
Blade gets hot.	1. Overdriving the blade.	1. Reduce feed rate.
	2. Side pressure on the blade.	2. Remove the cause of the side pressure.
	3. Blade twisted in the saw cut.	3. Remove cause of twist.
	4. Pitch buildup.	4. Remove the pitch.
	5. Blade dull.	5. Have the blade re-sharpened or replace the blade.
	6. Guides too tight or set incorrectly or twisting the blade.	6. Reset guides.
	7. Blade over tensioned	7. Re-tension blade.
	8. Blade not centered in cut.	8. Reset fence.
Blade dulls quickly.	1. Cutting abrasive wood.	1. Re-sharpen blade.
	2. Incorrect blade for the job.	2. Change the blade to the correct one for the job.
Blade will not track.	1. Wheels not coplanar.	1. Reset wheels.
	2. Bad weld.	2. Re-weld blade.
	3. Tires damaged or worn.	3. Repair, replace or re dress tires.
Clicking noise when bandsaw runs.	1. Bad weld.	1. Return blade to supplier for re-welding.
	2. Blade fluttering.	2. Re-tension blade.
Excessive feeding pressure required.	1. Dull blade.	1. Re-sharpen or replace the blade.
	2. Gullet packed with sawdust.	2. Change blade for one with bigger gullets.
	3. Pitch buildup.	3. Remove the pitch.
	4. Blade twisted in the cut.	4. Remove reason for the blade twist.