

## Bandsaw Alignment

- General bandsaw information & safety
  - Flat tires vs. crowned (flat are better for large blades and re-sawing)
- Clean the saw
  - Remove loose sawdust
  - Clean the tires on the wheels
  - Make sure the thrust bearings spin freely
- Check that wheels are 'coplanar' to each other
  - Check to be sure the wheels are balanced and straight
  - Without a blade - Use the tracking adjustment and a straight edge to check the wheel alignment. (Mark the contact points on the wheels for further testing)
  - When the wheels are 'coplanar', the straight edge will contact all four points.
  - Measure the difference – this will be the thickness of washers or shims you need to adjust the wheels. Adjust the top wheel on Delta and Taiwanese saws.
  - Install and tension a blade and recheck alignment
- New blades
  - Lot of different blades are available – narrow, wide, fine and coarse tooth, bi-metal and even carbide tipped
  - Check the weld – the blade should be straight and the weld smooth – correct the flaws or replace back of the blade
  - Reverse the blade, install and tension
  - Start the saw and use a stone to 'grind' the high teeth – makes a smoother cut and helps the blade track straighter
  - Round over the corners on the back of the blade. This prevents damage to the thrust bearing and helps make smoother radius cuts
- Tensioning blades – (important for smooth, accurate cuts and reliable saw operation)
  - As a general rule, the wider the blade, the higher the tension
  - Use built-in scales as a starter – scales start reading when the wheel contacts the blade and the spring is compressed. Old springs will give false readings – good reason to remove blade tension when the saw is not in use. Aftermarket springs are available.
  - One quarter inch deflection with moderate pressure of the blade is usually a good setting
  - Do not over tighten the blade. If the spring 'collapses' the saw can be damaged and a poor cut will result
  - Strain gauges are available, but usually not necessary

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- Blade guides
  - Guides are used to keep the blade in alignment during cuts
  - Standard guides are usually metal blocks and they work well for 1/4" and larger blades
  - 'Cool Blocks' are a composite material that works well for narrow blades
  - After market guides (like Carter Guides) employ bearings in place of the blocks
  - To adjust the standard metal blocks
    - Move the blocks and thrust bearings away from the blade
    - Adjust the blade tension
    - Adjust the blade tracking
    - Thrust bearing should be adjusted 1/64" behind the blade
    - The standard blocks should be adjusted .003 - .005 inches away from each side of the blade – wrap a dollar bill around the blade to adjust
    - Adjust the bottom blocks (remove the table for better access to the adjustments) and then the top blocks
  - Cool Blocks should capture the entire blade
  - Follow the manufacturer's instructions for their guides
- Table adjustment
  - Lubricate the trundles
  - Use a combination square, drafting triangle or electronic measuring device (Wixey) to set the 90 degree and 45 degree stops
  - Install the fence and set it vertical to the table and parallel to the miter slot
- General information
  - Be careful – the exposed blade does not have a guard
  - The blades use a 'hook design' that will pull your fingers and hands into the blade and make accidents worse
  - Use a feather-board and push block where possible
  - Keep blades sharp – dull blades produce bad cuts and can burn out the motor