



Ski tuning 101

SAFETY FIRST

- Always wear gloves and safety glasses if using any power tools**
- Tie long hair up, and make sure it's out of the way**
- Secure long sleeves (buttoned)**
- Secure the binding brake with a retainer before you begin any tuning**
- Wax in a well ventilated area**

Step 1 : Sharpening base edges :

Tools required :

Base edge guide / File / Diamond stones

- Set the ski into the vice, base up, make sure the ski is secure, and elevated enough for the base edge tool to clear the clamping area.
- Base edge tuning is not always required during the race season, but it is essential that the base edge be set to 0.5deg at the start of the race season.
- Using the base edge file guide, insert the file and slide the file with guide from tip to tail using firm / moderate pressure.
- Check the file / guide after each pass, and remove any shavings that are in the file contact area.
- Generally about 10 - 15 passes will set the base angle.
- This is the only tool that you will use that you will have to go from tail to tip on one side of the base.
- Remove the file from the guide and insert a diamond stone into the base edge guide and repeat the process with varying coarseness stones to achieve a mirror finish.
- When using diamond stones, keep them wet to help make them last longer. You can use oil on the edges. I use 50/50 water and rubbing alcohol, keeps the stones lubricated longer, and less messy than oil.

Step 2 : Sharpening the side edges :

Tools required :

Side edge guide / File / Diamond stones / clamp

- This should be done every time you tune the skis
- Set the ski into the vice on it's edge. Secure it in place.

Beginners:

- Set the ski with the base facing you. Ski tip to your left.
- Clamp the file onto the side edge guide, hold the guide with both hands.
- Use firm pressure, slide the guide / file the entire length of the ski in one motion, tip to tail. You will see the shavings coming off the file. Caution: metal slivers hurt.
- Check the edge guide after each pass, to ensure no shavings are lodged onto the tool so they will not be pressed into the base.
- Repeat this motion 10 - 12 times, or until metal shavings are not coming off.
- Remove file and replace with diamond stones. Pass the diamond stones 10 times, each level of grit, in one fluid motion from tip to tail.



Advanced (adults):

- ❑ Set the ski in the vice base facing away from you. Hold the edge guide and file and firmly slide the guide / file full length of ski. Repeat with diamond stones.
- ❑ Check the edge guide after each pass, to ensure no shavings are lodged onto the tool so they will not be pressed into the base.



Tuning note

Files are used to set the base and side angles on new skies. Once the base and side angles are established you only need to use diamond stones for the rest of the season. Files only need to be used if there is damage to the metal edges from rocks / trees.

Quick tuning trick

Use a sharpie (colour of your choice) and cover the entire length of the base / side metal edge. Tune until the sharpie colouring has been removed.

Step 3 : preparing the base :

Tools required :

Brass brush / fabrene (paper towel)

- **It is important to clean the base prior to any wax being applied :**
 - ❑ Set the ski into the vice, base up, make sure the ski is secure, and elevated enough for the iron to pass.
 - ❑ Use a brass brush with moderate pressure, brush the ski from tip to tail in either one full motion or overlapping passes to ensure all surface dirt / debris / file shavings have been removed from the base. Always use the brass brush in the same direction.
 - ❑ Use fabrene, or other suitable towel to remove the excess dirt / debris from the ski, wipe tip to tail, do not use back and forth wiping motion, this will press dirt back into the base pores.

- **Hot wax cleaning (optional) :**

Tools required :

Iron / red wax / plastic scraper / fabrene

- Set your iron to the correct temperature for red wax (cheap warm weather wax)
- Drip wax onto the ski base, starting at the tip.
- Smooth the wax onto the base in steady, slow, but not too slow, from tip to tail.
- Scrape off the wax immediately while it's warm. This will lift and remove additional dirt from the base of the ski. Make sure all the wax has been removed from the ski. Set it aside to cool off.

Step 4 : Applying training / race wax :

Tools required :

Iron / training - race wax / plastic scraper / fabrene / nylon brush

- Race wax is temperature sensitive, when in doubt, always start with the next coldest temperature wax. Warmer wax will be slower. Morning race runs will generally be colder than the afternoon runs.
Except for Timmins, just assume Green wax!
- Set the ski into the vice, base up, make sure the ski is secure, and elevated enough for the iron to pass.
- Visually inspect the base to make sure that there is no debris left on the base.
- Decide what wax your race needs. Each race wax requires a specific iron temperature.
- Make sure the iron surface is clean and set the iron to the correct temperature and wait for it to warm up. Drip wax onto the ski base from tip to tail.
- Smooth the wax onto the base, ensure the wax covers the entire base. A good visual guide is the wax will be visually 'cooling' off behind the iron by about 6" / 150mm.
- Avoid using back and forth motions with the iron. The smoother you can apply the wax the easier it is to remove.
- Set the skis aside and let them cool off. 15 - 20 min. Indoor, or 10 - 15 min. Outdoors.
- Use a sharp, 1/4" / 6mm plastic scraper to remove the wax. Hold the scraper firmly and flat on the base at approximately 45 degrees. Pull the scraper from tip to tail. Use one fluid motion or overlapping scrapes to remove all the excess wax.

- ❑ Once you think all the wax has been removed, run you hand (holding it flat - remember your edges are sharp) smoothly down the ski, if there is any wax left you should feel it.
- ❑ Mr. Miagi, wax on wax off!

Tuning tip :

I can't live without my scraper sharpener.

Tuning warning! :

Bending the scraper in any way while removing wax can and will cause damage to the ski base.

Step 5: Polish the base :

Tools required :

fabrene / nylon brush

- ❑ Set the ski into the vice, base up, make sure the ski is secure
- ❑ Use a nylon brush with moderate pressure, brush the ski from tip to tail in either one full motion or overlapping passes to ensure the best possible polish on the base. Always use the nylon brush in the same direction.
- ❑ Use fabrene, or other suitable towel to remove the excess wax debris from the ski, wipe tip to tail, do not use back and forth wiping motion, this will press wax debris back into the base pores.
- ❑ As a final check, hold the ski up to a light source and look down the full length of the base. The base should be smooth and shiny, the full length of the ski. The factory base sintering (kind of a design in the base, different for each ski manufacturer) should be clearly visible.



Step 6: Remove dried wax from the side wall / side edge, and top of ski :

- ❑ Using a plastic scraper, remove the excess wax that will inevitably have accumulated on the ski.
- ❑ Use a marker to indicate “arrows” or “race edge” on the top of the ski, near the tip. The “arrows” should point together when the skis are beside each other. This can be used as a visual guide for the racers to save this edge for the actual race. This “arrow” indication will ensure their inside edge is at its sharpest come race time.

“Arrows in for race - Arrows out for free ski and course inspection”



Note:

A.B.F.T.T.B.

Always **Be Faster Than The Boys**

Cross sections of different skis

