

SPORTING life

Ski Tuning Guide 2016-2017

Why ski tuning is important?

- ✓ The importance of properly tuned skis can never be overemphasized.
- ✓ A properly tuned ski will turn better, hold on ice, and glide better.
- ✓ Maintaining your ski equipment will inspire confidence and allow athletes to perform to the best of their ability on race day.
- ✓ “Success is where preparation meets opportunity” – Hank Shannon

Sporting Life Services:

Sporting Life offers a variety of professional shop services that promises to prepare and tune all types of race skis at the highest possible quality. Our stores offer services that range from sidewall removal to full race tunes using our Wintersteiger base grinding machines. Sporting Life also offers a Pronto Race service which is basically a season’s pass to our shop, where we will prepare and maintain your race skis for the entire season. If you have any questions in regards to proper ski preparation and tuning or our services, we welcome all ski racing enthusiasts to come by the store to speak to a technician.

RACE SERVICES	DESCRIPTION	PRICE
HAND/RACE TUNE	This service is done entirely by hand and includes: top sheet shaping & sanding, side wall removal & sanding, base and side edge sharpening to customer specs., and a hand wax.	\$75
MERCURY RACE TUNE	This service includes a hand/race tune with a base grind that includes the flattening and blanking of the skis and a final pattern.	\$100
PRONTO RACE TUNES	For an entire season, a race client can enjoy unlimited access to the service shop. Available services include: Hand/Race tune, wax/removal, sidewall removal and shaping. Base repair and grinds can be added for an additional fee.	\$250+



**Take an additional 10% off
the current selling price****

Valid from September 12, 2016 – March 19, 2017.

Cards cannot be replaced or combined with any other offer. One card per customer. Cards have no cash value. Offer not valid on previously purchased merchandise. The Sporting Life VIP Card Membership is subject to terms and conditions set out by Sporting Life. This card entitles you to receive 10% off everything in-store. Offer excludes Canada Goose, Arc'teryx, Icebreaker, Granite, Galt's, Garmin and other electronic devices, bikes, race skis, race boots and race bindings. Cannot be used for Sporting Life Gift Cards and Sporting Life Services. See in store for a full list of exclusions. **10% off goggles, poles, winter helmets, and ski equipment accessories.

SKI TUNING POWERED BY WINTERSTEIGER

ONLINE CODE:
VIPOT2016



What should be in your Tuning Kit?

The following are the items and tools that I believe to be essential in putting together a complete tuning kit of your own.

<p style="text-align: center;">Essentials:</p> <ul style="list-style-type: none"> ✓ Vices (3 piece) ✓ Sturdy Table ✓ Elastics ✓ Towel ✓ <i>Sharp Knife</i> ✓ <i>Cut resistant Gloves</i> ✓ <i>Base Tape/Masking Tape</i> ✓ <i>Fleece Cloth</i> ✓ <i>Ski Straps</i> 	<p style="text-align: center;">Preparation:</p> <ul style="list-style-type: none"> ✓ Panzer File (Body File) ✓ Sidewall remover ✓ Sandpaper (100, 180, 220 grit) ✓ <i>Foam Sanding Block (120 and 220 grit)</i> ✓ <i>Tex Pad</i>
<p style="text-align: center;">Edges:</p> <ul style="list-style-type: none"> ✓ Side Edge File Guide(s) ✓ Small Clamps ✓ Base Bevel File Guide(s) ✓ File(s) ✓ File Brush ✓ Diamond Stones (200-800) ✓ <i>Ceramic Stones</i> ✓ <i>Gummi Stone</i> 	<p style="text-align: center;">Base:</p> <ul style="list-style-type: none"> ✓ Selection of Waxes ✓ Iron ✓ Plastic Scraper ✓ Bronze Brush ✓ Horsehair Brush ✓ <i>Nylon Brush</i> ✓ <i>Steel Brush</i> ✓ <i>Metal Scraper</i> ✓ <i>P-Tex Sticks</i> ✓ <i>Scraper Sharpener</i> ✓ <i>True Bar</i>



Step One: Ski Preparation

All race skis are nowhere near ski or race ready when they are peeled out of the plastic for the first time and need to be prepped prior to tuning. The majority of the ski preparation will occur during the first tune but will need to be maintained and touched up.

The term 'prepped' refers to two things: *shaping the top sheet & pulling the sidewall*.

A brand new ski has top sheet material at the tip and tail and a ridge of excess sidewall that needs to be shaped/removed. The aim of a ski prep is to expose the edge along the entire length of the ski so that the file can make full contact with the edge. If the top sheet at the tip and tail has not been shaped, and the sidewall has not been removed, it will be almost impossible to get the edge set to the desired angle.

Prepping a new ski

1. Remove top sheet material at the tip and tail using a Panzer (Body) file.
2. Use sandpaper or the foam sanding blocks to smoothen the newly shaped areas
3. Remove the excess ridge of sidewall material using the sidewall remover (some skis also have a second edge that also needs to be removed)
4. Use finer and finer grit sandpaper to smoothen the entire sidewall
5. Polish and remove scuffs marks using the tex pad

Prepping a used ski

1. Check ski for damage (nicks in top sheet, burrs on edges or holes in the base)
2. Using a knife, cut/remove any slivers of top sheet material protruding from the ski.
3. Use the foam sanding block to smoothen the top sheet as necessary.
4. If necessary, remove any sidewall or second edge using the sidewall remover that might interfere with edge sharpening.
5. If necessary smoothen, clean and polish sidewall using sandpaper and a tex pad.

Pro tips:

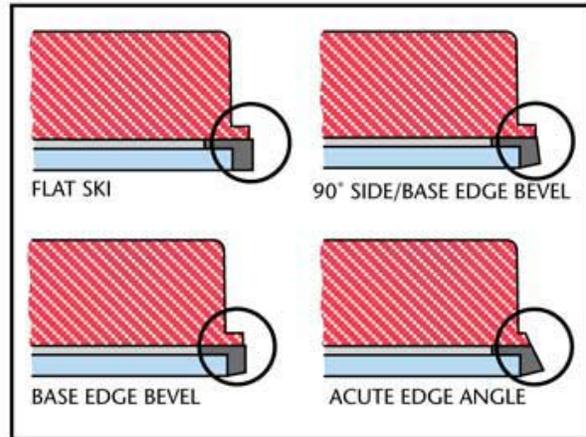
- ✓ Make sure the ski has been inside for at least an hour prior to tuning. This gives the ski time to warm up and to dry off.
- ✓ Pull the sidewall from the furthest point away from the edge and work towards the edge in small strips. Always use two hands and don't push too hard... let the tool do the work!
- ✓ Less is more. Only pull enough sidewall and/or second edge to expose the side edge. The more sidewall left on the ski, the more support/protection the edge has against rocks.
- ✓ Wrap sandpaper around a plastic scraper and/or P-Tex sticks when sanding the sidewall.

Step Two: Sharpening the Edges

Once the ski has been prepped, the side edge and base edge can be sharpened using a combination of files, diamond stones and/or ceramic stones. The object is to set the side and base edge to best suit the athlete and discipline the ski is used for while getting the edge to be razor sharp and smooth.

In ski racing, side edge angles are commonly 86-88 degrees with the low number indicating a more acute angle able to penetrate farther into hard snow. A high edge angle might cause a ski to skid and too low of an angle can cause the ski to knife into the snow and 'rail'.

Beveling the base edge lifts the edges off the snow so they won't engage until the ski is tilted on edge. Too little base edge bevel causes a ski to hook up before the skier is ready and excessive base edge bevel creates instability as the edges are raised too far off the snow.



Choosing Edge Angles:

Junior Racer (U10-14)	Slalom	Giant Slalom	SG
Base Edge Angle	.5 - 1	1	1
Side Edge Angle	87 - 88	87 - 88	88
U16/F.I.S Racer			
Base Edge Angle	.5	.5	.7 - 1
Side Edge Angle	86 - 87	87	87 - 88

The angle ranges listed are variable depending on an athlete's strength and skill level. A high level, technical skier tends to encounter more hard and icy snow conditions and would benefit from a lower side edge angle and a smaller base edge angle. This set up would enable the ski to grip better and make immediate contact with the snow. A less experienced skier might find the same set up to extreme, as it tends to cause the ski to hook too quickly and the edges bite into the snow too much.

Step Two: Sharpening the Edges

Step by step:

1. After laying the ski flat onto of the vices, begin by sharpening or setting the base edge with a base bevel guide and a file. Be careful not to press too hard otherwise you might set the base edge to the wrong angle. While someone can always increase the base edge angle, it is impossible to make a base edge angle smaller. To decrease the base edge angle the ski needs to be ground flat and reset to the desired angle. The base angle is set/sharp once you can pull your base edge sharpening tool along the entire length of the ski without removing any material.
2. Apply two strips of base tape along the base of the ski as close to, but not covering, the edge.
3. Position the ski in the vices so that the base of the ski faces away from you. This allows you to hold and use a file guide more securely. This technique minimizes slipping with the file and injuries, such as cuts.
4. Using the appropriate file guide and a file, begin to sharpen the side edge. Ensure the file is firmly secured to the file guide with two small clamps. Always use two hands and pull the file along the edge in short fluid motions moving from left to right (this technique might be reversed if you're left handed). Repeat until edge is sharp to the touch (can the edge shave a bit of fingernail off?).
5. Lightly and gently run a diamond stone or ceramic stone on a slight angle along the base edge of the ski. This helps to clean up and smoothen the edge by removing burrs on the base edge.
6. Using a diamond stone and a file guide, lightly run the diamond stone back and forth along the entire length of the ski until the entire edge is smooth and burr free. If once you have done this the edge no longer feels sharp, go back to step 3.

Pro Tips:

- ✓ The combined value of the side edge and base edge angles tells you how aggressive you're set up is. The lower the combine angle, the more aggressive the set up.
- ✓ If you see white streaks on your file when sharpening, it means the file is making contact with the sidewall and you need to remove more sidewall!
- ✓ Mark the side edge or base edge with a sharpie to help you see how much edge or what part of the edge you're removing.
- ✓ Speed skis don't need to be as sharp as tech skis (SL & GS), use a gummi stone to slightly detune the tips and tails of a super g ski. This helps the skis not hook up too early!
- ✓ Using your finger nail, check the base edge for a 'hanger'. This is a microscopic ridge of side edge that builds up when filing. Remove the hanger using a diamond or ceramic stone.

Step Three: Waxing & Brushing

The final step is crucial to making skis go fast! Before any training day or race day, it is imperative that the bases be hydrated by using wax. It's important to use the correct type of wax otherwise you might hinder the gliding performance of the skis. After waxing, all that is left to do is carefully and thoroughly scrape off all the excess wax and use several different types of brushes to clean and polish the base.

Selecting the right wax depends on many factors such as snow type, snow temperature, and air temperature and air humidity. Choosing between hydro-carbon, high fluorinated waxes, low fluorinated waxes and additives can be confusing. The best method is to choose a brand of waxing products and stay loyal to that company. Most wax companies explain their waxing system very well, so it will become easier to choose and mix the right combinations to match the conditions.

Key points to remember:

1. Highly fluorinated waxes are the best and the most expensive.
2. Low fluorinated waxes work well in all conditions (best in very cold, dry conditions)
3. Hydrocarbon waxes are inexpensive and very good for training and travel waxing.

Step by Step:

Pro Tips:

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| <ol style="list-style-type: none">1. Secure skis base up into ski vices and remove base/masking tape from the base.2. It is important to clean the base prior to waxing. Remove any wax residue using a plastic scraper and bronze brush. If the ski is really dirty (glacier or spring skiing) hot scrape the skis using training wax.3. Choose wax and set iron to correct temperature.4. Using the iron, drip a bead of wax down the middle of the ski. Spread the wax with the iron and ensure entire base gets covered.5. Scrape wax off the edges, sidewalls, and bindings.6. Once cool (1 hour min.), scrape the skis from tip to tail with a plastic scraper.7. Brush the skis in the following order: Steel, Bronze, Nylon and Horsehair.8. Strap the skis together! | <ul style="list-style-type: none">✓ Take your time while waxing but always keep the iron moving.✓ Use base tape or masking tape to protect your sidewall and bindings from the excess dripping wax.✓ Keep your scraper clean and make sure it does not have any nick that might damage the base.✓ You can initially brush both ways but always do your finishing strokes from tip to tail.✓ On speed skis, lightly run the scraper down the entire length of the ski from tip to tail after brushing.✓ On speed skis, always use lots of wax to prevent the base from being damaged by the iron. |
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