

## THE MOUNTAIN JOURNAL

# SKI TUNING FOR THE PERFORMANCE EDGE A TUNING GUIDE FOR THE MOUNTAIN

By **TONY D. CRESPI, TECHNICAL EDITOR**

"You can maximize performance by skiing on a tuned ski," explains veteran PSIA examiner Charlie Rockwell, director of teacher education at Bromley Mountain in Vermont. "Skiing on a tuned ski means you are better able to perform at your highest level."

"Skis are expensive but with a bad tune the experience can be disastrous! In contrast the results of a fresh, quality tune are clearly evident," notes Mike DeSantis, a former World Cup race director and World Cup tuner who presently operates the Precision Tuning Center in Framingham, Mass. He is an industry leader whose contributions involving ski design and tuning are well known within the industry. In fact, DeSantis tuned skis for many top U.S. racers before creating PTC.

"So many skis come from the factory or out of shops improperly set up," explains DeSantis. "This means your skis won't perform as designed. Tuned to factory standards, and with proper on-going maintenance, you can maximize your investment."

"The ski is a tool," emphasizes Warren Witherall, the former head coach at Burke Mountain Academy and world acknowledged authority on ski racing "If you ski on a ski that is untuned, it's like a carpenter with dull tools. A dull knife doesn't cut meat like a sharp knife and a dull ski doesn't cut ice like a sharp ski."

Are your skis properly tuned?

Do they need a tune-up?

Have you ever sliced bread with a dull knife? Just as a sharpened knife can slice food quickly and easily, so can a well-tuned ski slice hard snow with ease, while a poorly tuned or un-tuned ski makes advanced skiing less than ideal. Still, sharp edges tell only part of the tale. A waxed ski turns more easily, pivots more easily and glides more easily.

"I put a 1-degree base angle and 3-degree side edge on every ski leaving our shop," explains DeSantis. "People think a 3-degree edge dulls more quickly but there is no data to support that statement. Most factories are moving to 3-degree side angles. Truly, the set up can make the performance. The problem is finding a top shop that uses the equipment as it is designed. In the long run the results of a quality tune are immediately evident."

Interested in learning more?

See [www.precisiontuningcenter.com](http://www.precisiontuningcenter.com)

Now you know tuning is critical to performance skiing. Still, what should you know to effectively tune your skis? What can you do daily to maintain a well-tuned ski? The good news is that a select number of shops offer outstanding factory tunes. Moreover, with a few home tuning tools, skis can readily be maintained at a high performance standard. The bad news is that not all shops tune skis equally, which is sad but true. The good news is that with a few simple tools you can maintain a quality tune.

## WELCOME TO OUR TUNING CLINIC.

### ESSENTIAL TIPS FOR REAL WORLD TUNING

#### The Skier's Guide To Edge Care

1) Wipe your skis daily after use.

Elite skaters wipe their skate edges regularly. Similarly, wiping your skis minimizes corrosion on the edge and helps remove harmful chemicals and pollutants that can damage the edges and base. Start with a small hand towel in your ski or boot bag, and wipe the skis at the end of the day. Do not leave wet skis in a car or rack. Wipe your expensive skis.

2) Inspect the bases.

Ski bases perform best when free of major gouges. Check your bases. Either fill or have the shop fill any notable gouges. Through a periodic stone grind, have the base kept clear and square.

3) Use a file holder to keep side edges smooth and sharp.

To start, purchase a file holder and diamond stone. Ask the shop for the side edge setting on your ski. If unsure of factory specifications many shops will recommend a 1/2- or 1-degree base bevel and 2- or 3- degree side bevel to maximize edge hold and grip.

#### To start focus solely on side edges

Base edges are filed and polished much less frequently and can typically be addressed by a shop annually. Know that overly filing base edges can change performance dramatically.

Use a diamond stone - a blue stone is nice medium grit - to eliminate the initial dings and marks on the side edge. Use a file holder to keep the stone square, flat, and even against the ski. Gently move the stone on the side edge until burrs are removed, and the edge smooth. To make this easier, you can use ski-break holders to keep the brakes out of the way. Thick rubber bands can work nicely also.

**If you are new to tuning, consider a tuning video or tuning lesson. As an educational tool, both [www.alpineskituning.com](http://www.alpineskituning.com) and [www.precisiontuningcenter.com](http://www.precisiontuningcenter.com) offer general information on tuning, which can be of educational value to skiers of all abilities.**

If the edges are dull you may need to use a file to restore sharpness. Mark the edges with black magic marker and work tip to tail as you gradually remove the magic marker. Purchase a file from a ski tuning supplier as ski edges are harder than most hardware files. A small ski shop file can quickly restore sharpness. Following filing use that diamond stone to polish the edge.

4) Wax

Waxing protects the base and allows a ski to glide and turn more easily. Many racers and pros hot wax their skis. But, if the use of a hot iron seems worrisome consider rub on paste waxes. In fact, some waxes can be applied with an applicator in a liquid state. The Wax Wizard from inventor Ray Yusi safely and quickly "melts" a wax into the base using friction. The skier simply buffs a paste wax onto the base and polishes the base with the Wax Wizard. The friction melts the wax into the base without an iron. Waxing protects the base and maintains easy gliding and turning qualities.

"This a step forward," notes DeSantis. "Hot waxing can hurt skis unless you know what you are doing. This can really protect a ski. It fights abrasion."

#### SUMMARY FOR GENERAL MAINTENANCE

1) Wipe your skis daily.

2) Prepare side edges with a diamond inside edge holder.

• Use a diamond stone to remove burrs.

• Use a file to sharpen the edge.

• Use the diamond stone to polish.

3) Wax.

#### Ski Tuning Sharpening Tools

For those interested in tuning and general maintenance the good news is that a variety of effective tools are readily available through several mountain shops or through on-line distributors. In fact, with a few basic tools it is relatively simply to maintain a well-tuned ski.

Fundamentally, those interested in tuning will benefit from a file and diamond stone holder. These can vary from a basic plastic holder with a variable side edge setting such as the FK Variable Sharpener from Reliable Racing ([www.reliableracing.com](http://www.reliableracing.com)), which sells with a file for approximately \$30, to the SKS Racing Combo II from FK Tools ([www.fktools-us.com](http://www.fktools-us.com)) for approximately \$90 which includes a carbide steel bit for highly precise side-edge tuning and which includes small wheels to avoid filings from impacting the base. Finally, several manufacturers, including FK/SKS Tools and Sun Valley Tools sell metal side edge holders. All vary slightly in accuracy but can serve as invaluable tools for tuning. Web sites include the following:

Reliable Racing: [www.reliableracing.com](http://www.reliableracing.com)

FK Tools: [www.fktools-us.com](http://www.fktools-us.com)

Sun Valley Ski Tools: [www.svst.com](http://www.svst.com)

The Race Place: [www.The-raceplace.com](http://www.The-raceplace.com)

Tognar Tool Works: [www.tognar.com](http://www.tognar.com)

Ski Sharp Products (Wax Wizard):  
[www.alpineskituning.com](http://www.alpineskituning.com)

Truly, with a few simple tools, and with a small kit including basic tools a skier can maximize performance.

#### Basic Tuning Tools:

1) Side Edge Holder

2) Diamond Stones (Blue is versatile)

3) File

4) Wax

Consider creating a small tuning kit for your needs.

#### Closing Thoughts

Just a little maintenance, consistently, goes a long way. Literally a rag, a diamond stone, a plastic side edge guide, and paste wax can serve as foundation tools.

If you are new to tuning, consider a tuning video or tuning lesson. As an educational tool, both [www.alpineskituning.com](http://www.alpineskituning.com) and [www.precisiontuningcenter.com](http://www.precisiontuningcenter.com) offer general information on tuning, which can be of educational value to skiers of all abilities.

**Maximize your investment.**

**Be Aware**

**Ski With Care.**

Technical Editor Tony Crespi has served as both a Ski School Supervisor and Development Team Coach. A frequent contributor to publications throughout snow country, his column and instructional pointers are published throughout the season.

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