

## **Basic Steps for Effective Ski Tuning**

### **Step One**

Before you start to tune the skis, look at the sidewall, and the top sheet condition. There should not be any nicks or deep marks on the top edge, sidewalls as during a turn not only the edge runs in the snow, but also the sidewalls, the corner edge, and the top sheet will be dragging in the snow. If these surfaces are rough, they will interfere with the ski and slow it down. Use a file, or sandpaper to smooth out these surfaces.

### **Step Two**

Securely place the ski in the vice. The brakes should be clearly out of the way for both the work on the base and the work on the sidewall. Look at the base for any gouges. Use a P-tex candle to fill the base. When dripping the P-tex into the grooves, ensure that you do not drip carbon (black deposit on the hot candle) onto the base. Constantly keep the flame clean by dripping "dirty" p-tex onto an extra metal scraper. Let the P-tex cool, then scrape using a sharp metal scraper to level the repair with the base. A "body file" may also be used for this purpose.

### **Step Three**

Use a straight edge to check how flat the bases are. The base should be flat. If it is not, wrap the #100 sandpaper around the flat block and sand with even strokes until the base becomes flat. It is important that while you are doing this, you keep checking with the straight edge to see how much sanding is really needed. Remember that while you are doing this process you also texture the base! Once the base is flat, use the brass brush to clean the base, this will also cut the extra fibers that are left from the sandpaper. Use the Fibertex (wrapped around the flat block) and the brass brush again and again: The more you brush and Fibertex a ski the faster the ski will get! It is very important for an entry-level athlete to have skis which are flat, or which have a slight bevel. This will facilitate turning. If skis are checked with a true bar occasionally, then convex or concave (railed) skis will not interfere with skill development.

### **Step Four**

To make the ski turn easier and to eliminate the "grabby" feeling that sometimes occurs, you will need to bevel the base edge. To do this, take your role of 1/2 inch masking tape and wrap 2 or 3 layer thickness around a file. Place the file almost across the ski - 90 degrees (NOTE: not 45 or 60 degrees). The file should be perpendicular to the edge. It is important that you do one edge at a time. Please note: Depending upon the location of the tape on the ski, it will change the angle of the bevel. A good trick is to mark the edge with a felt pen so that you can see how much edge you are taking off. When finished check again with a straight edge.

### **Step Five**

Place the skis securely on the side in the vice, with the base facing away from you. To bevel and sharpen the side edge, take your file guide with the file tightly clamped on it

and with consistent strokes begin to file. It is best to pull the file towards you, rather than push the file away from you.

If the skis are new and the edges are at 90 degrees, to do the first initial filing, replace the normal file with the body file. Once the edge has been taken down, finish with the regular file and an 88/92 degree file guide.

## **Step Six**

Once you have achieved the sharpness that you want, use the polishing stone to smooth the edge off, and also to take the burrs off the edge. Edges should be progressively sharper as you go from the tip towards the middle and same from the tail towards the middle of the ski. To de-tune you can use a soft stone, or emery cloth.

## **Step Seven**

Once you have cleaned off all the filings and excess it is time to wax. To ensure that you "hit" the wax it is important to consider the snow temperature, the air temperature and finally the humidity of the air. It is very often that the snow temperature and the air temperature will be very different. When waxing, ensure that the iron is not too hot and loosen off the vices to allow the skis to expand with the heating of the bases. The wax should puddle on the base just behind the iron, but should not smoke. Allow skis to cool completely before scraping (approx 20 min).

## **Step Eight**

Once you have scraped the skis, texture the wax using the horsehair brush. Ensure that all excess wax has been removed from the sidewall, edges, tip and tail of the ski to ensure smooth running. Place plastic between the skis before taping or strapping.

## **Recommended tools for tuning**

Ski tuning vices that can hold the ski firmly (buy them at the store or make your own)

Elastic for holding the brakes

Fibertex

Horsehair brush

P-tex candles

Silicon sand paper (#100 #150 #200)

Metal scraper

Plastic scraper

File cleaner

Body file

Chrome files

File Guide (2 degrees offset)

Masking tape (1/2 inch wide)

Diamond stone (or finishing stone)

Iron (flat surface only; do not use mom's iron!)

Wax (0/-6 is most commonly necessary)