

## **PREPARING & WAXING CROSS-COUNTRY SKIS**

By Mike Stern

If you are feeling a bit daunted about knowing how to wax your skis, here are some easy steps to follow for glide waxing your skis and adding grip wax. This guide is intended for novice and recreational skiers who want to achieve a bit more out of their waxes. I've used this method for a number of years and found it works well even over long distances. Using these techniques, I've never run out of grip wax skiing long distance events like the Birkebeiner. I may have run out of grip because I've been tired and not been transferring my weight properly, but when I've checked my skis at the end I found that I still had wax or klister remaining.

As a quick reminder on waxable classic skis, there are two areas where you need to apply waxes. Grip wax is applied to the area under your foot from near the base of the heel to about 30 cm in front of the binding. The distance will vary from one set of skis to another depending on the camber of the ski, your weight and your skiing ability. The tip & tail portions of the ski are treated with glide wax. Skate skis are easier in that you only need to apply glide wax to the entire base of the ski.

I am often asked how often you need to apply glide wax. Well it depends on several factors but my rough rule of thumb is every 50 – 80 km under normal conditions. This distance, of course, can be much less if the snow is very abrasive or the temperature changes a lot or if you are preparing for a loppet or race.

I strongly recommend sanding the grip area & ironing in a base binder wax if you plan to go out on longer skis of 15 - 20 km or more. This method helps bind the grip waxes to the base. However, if you only plan to do short skis of a few km then these steps can be left out.

Remember, you want to get out & spend your time skiing not waxing. Also, I have not found it necessary to use the really expensive glide & grip waxes for recreational skiing. If you get into more serious racing then that is a different matter.

A very useful reference is the Swix Waxing Guide for Skating & Classic Skiing. This is available free of charge at some ski retail outlets. A list of the tools & materials needed is included in the appendix at the end.

### 1. Prepare the Grip Area (Classic skis only)

- Use a good scraper to remove any old grip wax that remains.
- Scrape from the tip towards the tail
- Soak the end of an old rag in some base cleaner and rub it over the grip area to remove the rest of the grip wax or klister. If it is really stubborn soak a piece of Fibretex in some base cleaner & rub vigorously. (A flat nylon scotch pad from a supermarket will do instead).
- Remember to remove any grip wax or Klister from the groove in the base
- Avoid getting the base cleaner over the glide area of the ski
- When dry take a piece of fine sand paper (e.g. 80 - 100 grit) & lightly sand over the grip area in a longitudinal direction
- The grip area is now ready to receive the grip waxes

### 2. Prepare the Glide Area

- Use a **sharp** plastic scraper to remove any summer protective glide wax that you may have applied. (You did remember to put it on last season to prevent the bases from drying out.)
- For classic skis scrape from the centre out & for skate skis scrape from the tip towards the tail
- Wipe off the surplus wax with a lint free cloth such as Fibrelene or a sheet of used fabric softener such as "Bounce"
- Take a bronze brush or a piece of Fibretex and make 5 or 6 passes over the glide area of the ski to clean & prepare the base to accept the new glide wax
- **It is not necessary to use base cleaner to remove the old glide wax**
- On classic skis use masking tape to separate the glide area from the grip area.

### 3. Apply Hot Glide Wax

- Select a glide wax in the temperature range you require
- Use a special waxing iron. Note: old clothing irons are not recommended because the temperature settings may not be accurate & you can burn the base of the skis.
- Set the iron to a low temperature. (Some glide waxes have the temperature settings on the package). You will know if the iron is too hot if the wax starts to smoke. Conversely, if the temperature is too low the wax will not melt easily
- Drip the wax onto the glide area of the ski on either side of the groove
- Iron the wax in using light pressure & keep the iron moving from tip to tail to avoid damaging the base. Three passes is usually sufficient.
- Avoid getting glide wax onto the sanded grip area

#### 4. Remove the Glide Wax

- Take a groove scraper & first remove all the wax from the groove or grooves
- Wait 10 – 20 minutes for the skis to cool
- Run the scraper along each edge of the ski to remove the wax from the edges
- Using the plastic scraper & applying even steady pressure, scrape off the wax moving from tip to tail for skate skis & from the centre out on classic skis.
- Wipe the ski clean with a lint free cloth as before



#### 5. Condition the Glide Area

- Take the bronze brush & brush the glide area lengthways from tip to tail about 20 times. This removes the surplus wax & will give better glide
- Then take a nylon brush & brushing lengthways 20 – 30 times polish the ski so that you can see the structure in the base. (Only noticeable in dark coloured bases).

#### 6. Apply Base Binder Wax to Grip Area (Classic skis only)

- Clean the iron with a rag dipped in base cleaner to remove the glide wax. (Make sure the iron is off when you do this).
- Take some base binder grip wax & crayon a thin layer onto the sanded grip area. Then cork it well in so that the entire grip area is covered with a thin even layer.
- Set the iron temperature to 110° & iron in the base binder over the grip area or warm the area with a heat gun. The heat gives a better bond between the wax & the base.
- It is not necessary to apply a thick layer of base binder
- Avoid getting the wax into the groove

#### 7. Apply Hard Grip Waxes (Classic skis only)

It is better to apply a series of thin even layers than a few thick layers. Two methods are described.

##### 7.1 Traditional Method

- Apply the wax of the day in a series of thin layers. The number of layers required depends on the type of wax, the nature of the snow & the distance you plan to ski.

- For example, for the basic Swix range of waxes I use one layer for every 3 – 5 km and for the more expensive Swix VR waxes & Toko waxes I use one layer for every 8 – 10 km under normal snow conditions.
- Crayon each layer of wax in evenly to within a 2cm of each end of the grip area
- Cork the wax well in so that it covers the entire grip area
- Apply the next layers in the same way, as required

## 7.2 Alternative or Pyramid Method

This method is recommended by some of Canada's top waxing experts. They also recommend that each time you ski you remove **all** the old grip wax then sandpaper the grip area again & re-apply the grip wax. (You have to decide how much time you want to spend waxing versus skiing).

- Apply between 4 – 10 layers in a pyramid shape
- Crayon on the first layer to the end of the grip zone & cork to get a smooth even layer
- Crayon on the second layer but bring it in to within 1 cm of the ends of the first layer & cork as before
- Apply additional layers each time bringing it in a cm from the ends of the previous layer, so that the last layer will just extend to either side of the apex of the ski.

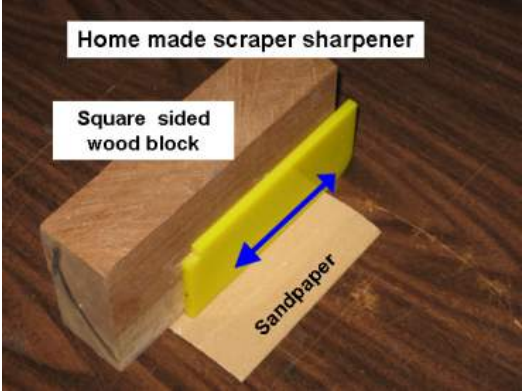
## Some tips on Using Grip Waxes

Not sure, what temperature wax to apply? Here are a few tips:

- Some waxes have two temperature ranges on them. One is for new snow i.e. that is snow that is usually less than 24 hours old & is usually indicated by the whiter more fluffy snowflake symbol. The other temperature range is for old or transformed snow & is usually indicated by a darker more solid snowflake symbol.
- Be aware of what the temperature range on the wax indicates, e.g. on Swix waxes it means air temperature in the shade while Toko waxes use snow temperatures.
- You can put colder waxes on top of warmer waxes. Think about it. If you plan to ski for several hours and the temperature is expected to warm up. Apply the warm waxes first and then the colder waxes on top appropriate for when you start. I often mix two waxes together in the same layer when transitioning from one wax to another.
- The ski tracks are usually slicker than the surrounding snow & may require a warmer wax than the snow temperature indicates.
- When out skiing always take a few extra grip waxes plus a cork & scraper with you. Take at least one warmer wax & one cooler wax than the wax you have started out on.

## APPENDIX I

### SOME DO'S & DON'TS

- **Don't** use an old clothing iron to apply waxes unless you want to damage your bases.
  - **Do** keep your plastic scrapers **sharp**. (A simple sharpener can be made by holding the scraper up against a small square-sided block of wood which is placed on a piece of 80 – 100 grit sandpaper. Then move the scraper from side to side across the sandpaper, at the same time keeping it flush against the block of wood). I recommend sharpening the scraper at least every other time you prepare a pair of skis.
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- **Do** use a base binder for your grip waxes if planning to ski more than a few km.
  - In more abrasive snow conditions **do** use a very **thin** layer of base Klister ironed on instead of the base binder. Then freeze the ski outside for 15 minutes & apply layers of hard grip wax on top. In very abrasive or icy conditions, a layer of ordinary Klister may have to be applied instead of the hard grip waxes. To avoid sticking when you start off, cover the Klister with a layer of grip wax.
  - **Do** wear old clothes & or an apron to protect your clothes from hot wax stains when preparing your skis.
  - **Do** place tubes of Klister inside a zip-lock plastic bag in case they leak.
  - **Don't** leave your skis unprotected during the summer months. **Do** iron on a layer of soft (warm) glide wax to the glide areas of the ski. **Don't** remove it until ready to use the skis next season.

**APPENDIX II**

**RECOMMENDED LIST OF ITEMS NEEDED TO CARRY OUT YOUR OWN GLIDE & GRIP WAXING**

ITEM	SUBSTITUTE	USE
Base cleaner		Cleaning old wax from grip area
Lint free cloth e.g. Fiberlene	Used fabric softener sheets e.g. "Bounce"	Cleaning skis, wiping off excess glide wax etc.
Fibertex Pads	Flat nylon Pan scourers e.g. "Scotch Pads"	Preparing base of ski for glide wax
Synthetic Cork		Applying hard grip waxes
Thick Plastic scraper		Removing excess glide wax
Groove Scrapers		Removing excess glide wax from grooves
Scraper sharpener	80 – 100 grit sandpaper & wood block	Sharpening scrapers
Bronze Brush	Combination bronze/nylon brush	Preparing glide areas before & after wax application
Nylon Brush	Combination bronze/nylon brush	Final conditioning of glide area of ski after waxing
Fine Sandpaper (80 - 100 grit)		Roughing up grip area for base binder
Waxing Iron		Applying glide wax & base binder
Waxing form/frame	Clamps & table/workbench	Hold skis firmly for removal & application of waxes
Base Binder		Helps grip waxes adhere to ski
Grip waxes		Helps ski go uphill in normal conditions
Klister		Used alone or with grip waxes in icy or abrasive conditions
Glide waxes		Improves glide of ski

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