

# X-Country Ski Wax Essentials

## Part I: The Basic Basics of Grip Waxing

By Paul Couture

The following is an introduction for new skiers or those recreational skiers wanting some basic information on preparing and waxing classic cross-country skis — skis designed for the familiar diagonal-stride technique. This guide looks at the application of *grip wax* only. If you are a *freestyle/skate skier* your skis only require glide wax and that is covered in [Ski Wax Essentials Part Two](#). For those familiar with waxing basics but want to take it up a notch you may glean some useful information here but look to [Ski Wax Essentials Part Two](#) for more in depth information on both grip and glide waxing.

### A Note on Grip (Waxless) Skis:

- Grip skis have a permanent scale pattern stamped into the base that provides kick or grip without the need of grip wax.
- As is the case with other types of x-country skis, grip skis should be properly fitted to the user's weight and skiing ability by a knowledgeable person.
- A properly waxed classic ski will outperform a grip ski 9 out of 10 times but sometimes getting the ski properly waxed is tricky.
- Grip skis have their place and many good skiers own a pair to use when: the temperature hovers around 0° C which creates difficult grip waxing conditions; the snow is old and wet or icy and they want to avoid using klister or; they are in a rush to go skiing and their other skis aren't ready.
- If you only ski a few times a season or you are just trying out the sport or buying the first pair of skis for a child then grip skis are a good way to go.
- To improve performance and protect the base from oxidization, grip skis should get a glide wax treatment on the tip and tail sections several times a season. (See: [Ski Wax Essentials Part Two](#))

### The Mystery of Grip Wax

Grip wax can be a difficult concept to grasp. Glide wax makes sense: it's a lubricant that helps the ski to slide along the track or down the hill. But grip wax acts like an adhesive that sticks your ski to the snow for a moment when you shift weight to one ski and this allows you to push down and back off that ski which propels you forward in a glide. As you are gliding you shift weight to the opposite ski and it compresses down to the track and you push down and forward again. String these motions together and add coordinated arm and pole movement and you have an amazing fluid motion that can propel the skier at speed across the snow.

When the track turns up hill the skier must shorten stride but the weight shifting continues in more of a running motion and your grip wax gives just enough stick to ski up until the grade gets too steep.

### Brands and Types of Grip Waxes

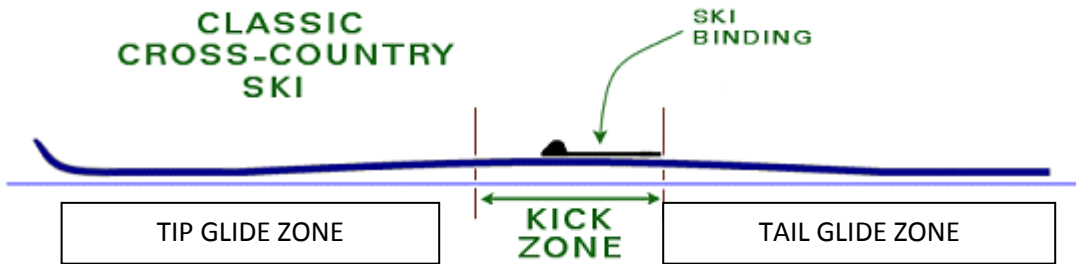
- There are at least eight different brands of waxes on the market - which is the best? No idea but I use **Swix Wax** because it is a quality wax and the most widely available in this area.

- All grip waxes are made for a particular temperature range and snow conditions: Using **Swix Wax** as an example:
  - *Swix V20 Green*  $-10^{\circ}\text{C}$  to  $-18^{\circ}\text{C}$ ; (a cold grip wax)
  - *Swix V30 Blue*  $-5^{\circ}\text{C}$  to  $-12^{\circ}\text{C}$ ;
  - *Swix V40 Blue Extra*  $-3^{\circ}\text{C}$  to  $-8^{\circ}\text{C}$ ;
  - *Swix V60 Red*  $+3^{\circ}\text{C}$  to  $-1^{\circ}\text{C}$  (a warm grip wax).
- Currently **Swix** sells eight different grip waxes in the "V" series\* but if you are just starting out in the sport these four should be your first waxes.
- The temperature range refers to air temperature in the shade but not wind chill.
- Most waxes will also mention different temperature ranges for different snow conditions such as: old, transformed, fresh, or something similar. The only one you need to heed is the temperature range for fresh or falling snow.
- A small thermometer is helpful when selecting your "wax of the day."
- The temperature ranges for the wax are a guide not rigid categories.

### The Kick Zone

- The *kick zone* also called the *grip zone* or the *wax pocket* is the base section on a classic ski that gets the grip wax treatment.
- As a general guide the wax pocket starts at the heel of the binding and extends forward approximately 8-12 inches/20-30 cm beyond the toe of the binding. The kick zone does not extend behind the heel.
- The actual length of the kick zone depends on the length and stiffness of the ski, the weight of the skier, and the ability or technique of the skier. *As long as you were fitted properly when you purchased your skis* you don't have to be too concerned if the kick zone you wax is out by a few centimetres up or down. However, if the stiffness of your skis are not correctly matched to your weight the skis are unlikely to perform properly whatever wax treatment you apply.
- It's a good idea to mark the kick zone on the top or side walls of your skis with a marker pen.

\* Like other wax brands SWIX makes two categories of grip waxes. The "V" series is for recreational skiers, the "VR" series is a fluorinated wax and is intended for racers and sport skiers. "VR" waxes give better glide and provide a wider performance range especially in humid conditions. The "VR" waxes cost twice as much as the regular wax but do they give twice the performance? Probably not but there are occasions where the difference is noticeable.



### Applying the Grip Wax

- If you have out-of-the-box new skis or you have just scraped and cleaned your wax pocket with solvent or *base cleaner*, you should lightly roughen up the kick zone with 100 grade sandpaper. Use the sandpaper with a linear stroke up and down the wax pocket not across the base. **DO NOT SAND THE GLIDE ZONES!**
- Before the new wax goes on wipe the kick zone carefully to ensure it's free from dirt, old wax and solvent. If you used solvent cleaner allow at least 15 minutes to dry before applying new wax.
- If your skis still have wax from the previous days skiing you can get by with adding several new layers of wax over the old wax.
- If you're starting with a bare skis it is best to apply 4 to 6 coats in thin layers not 2 or 3 thick coats.
- Whatever the temperature your first two layers should be a mid-range wax, *Swix V30 Blue* in my case.
- Peel some of the wrapping off the wax tin and "crayon" a few lines of wax down each side of the groove in the kick zone. Avoid getting grip wax on the glide sections of your ski (tip and tail). Put some wax in the groove but not too much.
- Take your cork and vigorously rub the base to spread and smooth the wax in the kick zone – the rubbing or corking creates heat which helps soften and spread the wax. (Your hand in a leather glove can serve as a cork in a pinch.)
- Some people don't smooth in the last layer of grip wax thinking this will give them better grip. It doesn't.
- You're done so go ski.

### Grip Waxing Tips

- You can add new layers of grip wax over old wax but ski performance will fall off as old layers build up and the wax accumulates dirt and debris.
- Clean the base by scrapping off most of the old wax. Scrapping is easier on a cold ski. To remove all the old wax apply a solvent or wax remover with a paper towel.
- It's easier to apply grip wax if the wax is cold and the ski warm (room temp). Experienced skiers often keep their grip waxes in the freezer and apply several coats at home then drive to the trail head, check snow temperature and apply the last two or three layers to match conditions.
- When in doubt about what wax of the day will work *always start with the colder wax option.*

- If your skis begin to clump - snow sticking to the bottom - your wax is too warm or too thick or both. Remove the snow clumps and scrape off some of the wax with a scrapper. Test the skis. If it still clumps add a layer of colder wax.
- If your skis have poor grip add two layers of the wax of the day and test. Still no grip add a layer of warmer wax.
- It's a good idea to carry grip wax, a cork and scraper with you on the trail especially if you plan to be out for 3 - 4 hours. Pay attention to the weather forecast. Wax can wear off and temperature and humidity can change and being able to rewax on the trail can mean the difference between a slog and a fun ski home.
- Don't obsess about wax! Some skiers love to experiment with mixing different brands and types of waxes others could care less. For most of us the point of the exercise is to enjoy the skiing and not to be a techno-geek wax wizard.
- Don't hesitate to ask other skiers what wax they are using – it's one of the best ways to learn.
- A good ski shop with knowledgeable staff is always a great resource.
- The best way to improve your skiing experience is to take a lesson from a qualified x-country ski instructor. You can get some good waxing tips along with improving your technique.

### Products & Equipment

- For an occasional classic skier or someone who is just beginning to get interested in waxing you will *need at the very minimum a basic collection of waxes, a cork and scrapper*. Swix sells the **Swix Tour Pack** which contains three grip waxes, a synthetic cork and a scrapper. It's a good deal and it is available locally.
- There are a number of "Universal Waxes" (grip & glide) in liquid and aerosol form that promise easy application and to work in a wide range of temperatures and snow conditions. My experience is that such products don't work very well and they wear off quickly. That said there are many new wax-type products coming on the market that I am not aware of and there might be some real gems among.
- Solvents or ski base cleaners are essential for removing old grip wax. Any type of paint thinner or brush cleaner will work on wax but the fumes are nasty and can be dangerous in an enclosed space. There are citrus-based wax removers that work great but are expensive. Do not use wax cleaner/remover on the glide section of the ski and **DO NOT USE PAINT OR FURNITURE STRIPPERS ON YOUR SKIS!**
- For more information on equipment and products see the guide for experienced skiers.

### X-Country Ski Products & Services

I have purchased products and services from the following retailers and they have good reputations in the x-country ski community.

Doug Christie's Ski & Cycle Works (in Gatineau Park)

148 Old Chelsea Road,

Chelsea, QC J9B 1J3

(819) 827-5340

## Fresh Air Experience

1291 Wellington Street  
Ottawa, ON K1Y 3A8  
Tel: (613) 729-3002 Toll Free: 1-877-722-3002

## Mountain Equipment Co-op (Not always the most knowledgeable staff available)

366 Richmond Road, Ottawa, ON. 613-729-2700  
(Also 3 MEC stores in Montreal area)

## Norway Nordic Inc

127 Rue Sainte-Anne  
Sainte-Anne-De-Bellevue, QC H9X 1M3, Canada Phone: (514) 457-9131  
Web: [www.norwaynordic.com](http://www.norwaynordic.com)

## Total Cyclery (A good basic inventory for recreational x-country skiers)

241 Pitt Street, Cornwall K6J 3P8  
613-938-8585

## X-Country Ski Instructions

### Tanya Deeks

CANSI Level One Ski Instructor  
NCCP X-Country Community Coach  
[Tricoachtanya@gmail.com](mailto:Tricoachtanya@gmail.com)  
613-360-2088  
[Unleashthebeast.org](http://Unleashthebeast.org)

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About the Author: Paul Couture has more than 30 years of x-country ski and ski waxing experience. He has skied and prepped skis at Canmore Nordic Centre (AB), Whistler Olympic Park, Sovereign Lake Nordic Centre and Silver Star (BC) and more locally in Gatineau Park, the Laurentians and the Chic-Choc Mountains. He has taken the opportunity to learn from a number of professional wax technicians; he has put on waxing clinics and has waxed skis for racers in national and international competitions. He is married to Tanya Deeks.

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