

**BASIC MANUAL**

**TOKO<sup>®</sup>**

**Waxing Cross Country Skis for Beginners**

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## Introduction

Cross country skiing is a wonderful sport. The proper application of kick and glide wax and maintenance of equipment only enhances this enjoyment. Ski care should not be an intimidating or complicated subject. Hopefully this manual explains the basics in an informative and easy to understand fashion.

## Wax

Waxing isn't so difficult if the basic concepts are understood. When it comes to kick and glide waxing, there are two things that have to be considered: the snow characteristics (and forecast) as well as the characteristics of the waxes that are available. A person has to simply match them up. The tips and tails of Classic skis and the entire base of skating skis should be glide waxed. The grip (kick) zone of Classic skis should be waxed with grip wax, unless it is a No Wax ski in which case it should be treated with Grip n Glide Wax.

## Glide Waxing

Glide waxes are designed to make the ski glide faster and also refresh the ski base (similar to how moisturizer is healthy for your skin). There are two basic types of glide waxes that Toko makes: rub-on waxes and iron-on waxes. The rub on waxes (Express Wax, Grip N Glide Wax, and HF Paste) are simply rubbed on and polished in, which is an easy application process, but the downside is that they are not as durable as the iron-on waxes. Express Wax and HF Paste are for skating skis (no kick pattern or grip wax zone). They are simply rubbed on and polished in throughout the whole base of the ski.

Iron-on waxes include the System3 Waxes Yellow, Red, and Blue. If a person can make a snowball, then Yellow would be a good wax to use. If the snow is too cold to make a snowball with, then Red would be a better option, and for temperatures below 15F degrees, Blue will work best.

## Ironing Glide Wax

The wax should be held to the base of the iron at a medium setting (around 292 F). The iron should be angled such that the wax drips onto the base of the ski. Run the iron so that the wax drips the length of the ski on both sides of the groove. Then "iron" the base of the ski to melt the wax into the pores of the ski base. The iron should always be kept moving (generally from tip to tail) and the iron base should not be smoking. Always iron in a well ventilated room. If a finger can not be held onto the base of the ski immediately after running the iron over it, then the iron needs to be moved faster or turned down.

## Scraping Glide Wax

After the wax cools, remove it with a sharp plastic scraper (Plexiblade). Hold the scraper in both hands with the wide part perpendicular to the length of the ski. The scraper edge should meet the ski at about a 45 degree angle to get the right amount of "bite". Scrape the skis tip to tail and with only as much pressure as needed. The wax also needs to be removed from the sidewalls and groove. A Toko Groove Pin or Multipurpose scraper is very helpful in removing wax from the sidewalls and groove. When scraping is finished, all visible wax should be removed.

## Brushing

Brushing removes wax from the microstructure of the ski. Removing this wax will make the skis glide faster and also the bases will stay cleaner longer. Dirt on the trail will stick to leftover paraffin slowing the skis down.

## No Wax Skis

Grip N Glide Wax is for "No Wax Skis". The formula is designed not only to make the skis glide faster but also to prevent snow from building up and sticking on the "No Wax" pattern (this can happen when the temperatures are around 32 F). First clean the tread pattern with Wax Remover. Then apply the Grip n Glide wax over the entire ski base. Our new packaging has a spray top which is even easier to use. Simply hold the can 6 inches from the base and make the entire base wet. Let dry and then polish with a paper towel or clean rag.

## Kick Waxing

If you are classic skiing with waxable skis, you will have to apply kick or grip wax. There are two types of kick wax, hard

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wax (stick) and klister. Hard wax comes in small cylindrical tubs that look like very fat crayons. Klister comes in tubes like toothpaste and has the consistency and stickiness of honey. Hard waxes should be used in new snow and klister for old snow that has melted and refrozen. Toko has a very simple offering consisting of 3 grip waxes and 1 klister (Sportline).

## Kick Wax Selection

Snow temperature ranges for the waxes are listed on the containers for all waxes in the Toko line. Even easier though, is to try to make a snowball. If it is easy to make a snowball, then use Toko Sportline Grip Warm, if it is too cold for the snow to stick together, then use Toko Sportline Grip Cold. Toko also makes an XCold version that can be used when air temperatures are below 10 F.

## Application and Removal of Hard Wax

The hard wax should be rubbed on in the kick zone (the area in the middle of the ski usually about 1-1.5 feet in front of the foot to the back of the heel). Apply the wax such that the whole base within the kick zone is covered. Then “cork in” the wax by aggressively rubbing a cork on the wax to heat it up, smooth it out, and make it more durable. It is generally a good idea to bring other options of waxes with on a ski as conditions can change. (Toko Sportline Grip Kit works very well). After skiing, the hard wax can be easily scraped off with a Multipurpose scraper.

## Klister Selection

Klister selection is much like hard wax except often times the snow will be too icy to make a snowball. If the snow is wet and slushy or if it is icy, then Sportline Universal Klister should be used.

## Application of Klister

Klister is required when the snow is extremely wet or icy. Many people dislike using klister as it can be messy and sticky, but the application and removal of klister doesn't have to be a difficult process. Before applying, heat the klister tube up, so it softens. This can be done by a blowtorch or a heat gun. The method I recommend for people just wanting to apply klister and not win any races, is to use the defrost on a car or some other heater. If the klister tube is near a heat source for around 5 minutes, it should be plenty soft. Klister tubes can be finicky much like the old toothpaste tubes whereby if a person squeezes from the middle, they are taking the chance of the product coming out of either end. With klister, this is a bad proposition as it is sticky and difficult to remove from textiles. Because of this, take care to always squeeze from the back and to squeeze softly. Apply the klister about 1 mm thick throughout the kick zone. Smooth out the klister onto the ski with a thumb or a multipurpose scraper.

## Removal of Klister

Removal of klister is actually an easy process. Toko GelClean is a revolutionary product that should be used. The gel should be squeezed out onto the applicator top. The gel then should be worked into the klister with the applicator top until there is one consistency on the ski (about 30 seconds). Toko Base Tex (kind of resembles paper towel) can then be used to wipe the mixture easily off the ski. Another application of GelClean may be needed.

## General Ski Care and Maintenance

General ski care and maintenance is a subject often overlooked as we buy skis for the enjoyment of skiing, not to maintain them. However, proper maintenance can not only make skis last longer, but will also enhance the skiing experience. When transporting or storing skis, use ski ties (or ski holders) to keep your skis in order. This will not only keep skis from falling all over the place, but will also prevent the bases from rubbing together and creating scratches sideways to the direction of travel.

When heating glide wax into the ski base, use a wax iron. A wax iron is made specifically for this purpose and should enable the waxer to prevent damage to the ski base. A wax iron allows for the safe waxing of skis much like a quality frying pan with a thick base allows a person to fry eggs without burning them. Also a wax iron has an accurate thermostat which keeps the temperature of the iron base constant. The Toko WaxCat Iron is an excellent option.

When scraping glide wax from the ski base, a sharp plexiglass scraper should be used. A dull scraper forces the waxer to

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push down hard and will eventually lead to a convex or concave ski base. A flat ski base not only glides faster, but also handles better too. The Toko Plexisharpener is an excellent tool that allows for quick and easy sharpening of plexiglass scrapers.

Ski vises can be used to hold the skis when wax is being applied. This will allow the waxer to do a far cleaner (and easier!) job than otherwise. The Toko Repair Fix is an excellent and simple vise to accommodate basic waxing. Optimally a profile wax bench such as the Toko Serviceboy can also be used. This bench not only holds the ski in place, but also supports the ski under the whole base so the bases stay flat and application and removal of waxes is far easier.

Hopefully this guide helps your understanding of basic ski care and maintenance. With a little effort in this area, equipment can last longer and perform better, and skiing can be even more enjoyable. Toko is proud to be a world leader in this specialty.

## Summary Overview:

### Glide Waxing

- Clean base
- Drip wax onto base or rub on wax
- Iron wax into base (if dripped on) or polish if rubbed on. If rubbed and polished, you're done!
- Cool for 30 minutes
- Scrape
- Brush

### Grip Waxing

- Rub Grip wax on
- Cork
- Repeat for 2 to 3 layers



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