

# Ski Maintenance for Ford Sayre BKL Skiers

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## 1. INTRODUCTION

Proper ski maintenance is an important part of being a skier, and includes skills we want to help Ford Sayre skiers and families master. Ski maintenance means learning to select and apply both glide waxes for skating and kick waxes for classical skiing. While the coaches work hard to teach this subject to the children, we expect the parents to help in the process by providing some simple equipment and wax, learning the process themselves, and helping the skier to arrive at practice with properly prepared skis.

The goal of this guide is to introduce the basics of waxing in a simplified manner so that it stays easy and fun, but still effective. Proper maintenance and preparation of the skis will greatly increase your child's enjoyment of skiing and prolong the useful life of a pair skis.

## 2. TOOLS

You may have seen hard-core adult racers carrying around huge wax boxes. Fortunately, for BKL skiing you don't need that much gear. You only need a few simple tools and some basic waxes to wax skis. Many of the tools can be bought at Omer & Bob's, Golf & Ski Warehouse, or a hardware store. They are also available from mail-order ski catalogs.

Here's a list of what you need to work on your skis:

- electric iron
- nylon brush
- thick plastic scraper
- klister spreader/groove scraper
- rags
- base cleaner (wax remover)
- synthetic cork
- propane torch

**Electric Iron:** The least expensive choice for this is to buy an old iron at a yard sale or from a thrift shop. Ideally, it should NOT have any steam holes, but you can use one with holes if that's all you can find. Another choice is to spend more money and buy a Swix or Toko ski iron. You'll use the iron for applying both glide and kick wax.

**Nylon Brush:** You can buy a scrub brush with stiff nylon bristles from a store or buy one specifically made for skiing from O&B's or G&SW. You will use the brush for cleaning glide wax off the bottom of the ski after scraping.

**Thick Plastic Scraper:** These are only available from a ski store or catalog. They are rectangular and about 1/8 inch thick with sharp edges. You'll use this scraper for taking off excess glide wax after you iron it on.

**Klister Spreader:** These come inside the boxes that hold tubes of Swix klister. You should be buying klister, so you'll get one of these as part the deal. You use these both for spreading klister and to clean glide wax out of the groove of the ski.

**Rags:** You'll need these for cleaning wax from skis and tools.

**Citrus Base Cleaner:** The non-heat way to clean off old kick wax is with a citrus solvent available at ski stores or catalogs. Be careful - while environmentally friendly it's still highly flammable.

**Synthetic Cork:** You use the "cork" to smooth out kick wax. These are available at ski stores and in catalogs. The synthetic versions generate more heat through friction, and therefore work faster - and usually better - than natural corks to smooth the kick wax.

**Propane Torch:** Available at hardware stores, the propane torch is used to heat klister for application to or removal from the ski.

**Optional Equipment:** There is some optional equipment that is not absolutely necessary but that you might like to have:

- **Form bench and/or vises:** You need to put the skis someplace to work on them. You can put them across two sawhorses or even the backs of two chairs. To make your life much easier you can buy or build a "form bench" or some buy some ski vises to hold the ski. The ski catalogs have various benches and vises.
- **Heat gun:** At the hardware store you can buy a heat gun for about \$40 (they are sold for stripping paint). They plug into an electric outlet and blow out a stream of very hot air. This is a great tool for heating up klister when you put it on the ski. You also need it to heat up kick wax for cleaning it off the ski. In a pinch you can substitute a hair dryer which will do a less effective but adequate job.

## 3. WAX

We recommend starting with a small collection of glide and kick waxes. SWIX is the brand that is available in local ski stores; other brands may be mail-ordered from ski catalogs.

### **What Glide Wax Do I Need?**

You only need a simple set of paraffin (hydrocarbon) glide waxes - eg, the Swix CH series:

- CH 4 green: below 14° F (optional)
- CH 6 blue: 10-21° F
- CH 7 violet: 18-28° F
- CH 8 red: 25-34° F
- CH 10 yellow: 32-50° F

### **What Kick Wax Do I Need?**

A simple set of hard waxes:

- V05 green: 5-18° F
- V20 blue: 14-28° F
- V30 extra blue: 19-30° F
- V50 violet: 32° F
- V55 special red: 32-34° F
- V60 red/silver: 32-38° F

and a few klisters:

- K10 blue ice klister: -4-30° F
- K30 red wet snow klister: 34-68° F
- K22 universal klister: 27-50° F

## 4. HOW TO GLIDE WAX

### *Why glide wax?*

Glide waxing is very important to have a fast and enjoyable ski. You don't need to glide wax every time you ski, but it should be done frequently (once per season is NOT acceptable). It is very hard to learn proper skate technique on a ski that drags on the snow instead of gliding freely.

### *Which Skis Need Glide Wax?*

Some skiers have two pairs of skis, one for skating and one for classic. Many BKL skiers have a pair of "combi" skis. All of these skis need to have glide wax applied. The only difference is where you put the glide wax. For your classical skis or when preparing your combi skis for classical, you only glide wax the tips and tails of the ski. For skate skis or preparing your combi skis for skating you glide wax the whole ski.

### *Classical Glide Wax Area*

For classical skiing you only apply glide wax to the tip and tail sections of the base. The tail is the region from where the heel of the boot hits the ski to the back end of the ski. The tip region starts about a boot length in front of the binding and goes to the front end of the ski.

### *Skate Glide Wax Area*

For skate skis, glide wax the entire length of the ski base.

### *How To Glide Wax*

Based on predicted air temperature range, select the appropriate wax from your set. (When in doubt choose too cold a wax rather than too warm.)

- press the bar of wax against your warm electric iron
- as the wax softens, crayon it onto the base of the ski - covering the parts of the ski base you want to wax
- move the iron over the wax like you were ironing a shirt
- iron until the wax is liquid, but always keep the iron moving!
- let cool for at least 30 minutes (or shorter if you can put the ski outside to cool)
- scrape off the wax with plastic scraper
- clean out the groove with the klister spreader
- brush with nylon brush from tip to tail

Only turn the iron warm enough to melt the wax, and don't let the wax smoke. Also, always keep the iron moving. Too much heat will damage the base of the ski. The bigger and thicker the iron the more steady the heat will be.

## 5. HOW TO KICK WAX

Kick waxing can seem like a mysterious and complicated process, but it really is quite simple. You only need to make two determinations to pick the right wax. Is it new or old snow? What is the air temperature? Old (transformed) snow gets klister and new snow gets hard wax. The temperature determines which color of wax to use. (Generally the colors from cold to warm go green, blue, purple, red, yellow.)

To reiterate, here is how you choose between hard wax and klister. Hard wax is used for powdery snow that hasn't "transformed" from snow crystals (sharp) into little ice balls (dull). After the snow has thawed and frozen a few times it is transformed and you need to use klister. Artificial snow starts out transformed so you usually need klister for it.

### ***Where Do I Put Kick Wax?***

Unlike glide wax, you only apply kick wax "under the foot:" from the end of your heel forward an equal distance in front of your binding. Too much kick wax can be really slow so it's best to start with too short a wax job and lengthen it if you don't get good kick. So at first you might want to start in the middle of your foot and go forward to just a few inches in front of your binding.

### ***How Do I Put On Hard Wax?***

Hard wax looks like a very fat short crayon, and you put it on just like using a crayon. There are several brands of wax, with Swix V waxes probably being the easiest to start with. They have several colors of wax which are meant for different temperature ranges. Choosing the right wax usually is just as simple as looking at the outside air temperature and picking the appropriate wax based on the numbers found on the side of wax stick. Start with a colder wax if in doubt and then add a warmer wax if the first choice proves too slippery.

Use a synthetic cork to smooth the hard wax. You want maximum surface area so polish vigorously until the wax is smooth and shiny. Thin layers are easier to smooth, and multiple thin layers stay on the ski better than fewer thick layers.

### ***How Do I Put On Klister?***

Klister comes in a tube like toothpaste and has the consistency (and stickiness) of honey. Picking the right klister works the same way as picking the right hard wax. Many beginner skiers are terribly afraid of klister, but with patience, practice, and the right tools it is easy to handle. The reward is that it can provide the best kick and glide of any wax when properly applied. It is easiest to apply indoors, but can be done outside (especially in warm weather).

Use a propane torch or heat gun to heat the tube of klister by holding the tube by one end and waving the other end around in the heat. Be careful.

Now squeeze a little klister onto the bottom of the ski. The best approach is to put little chevrons (diagonal lines) on each side of the groove. The closer you put the chevrons the more wax you get and the farther apart the less. Start out putting them far apart (at least an inch) because in most conditions a THIN layer of klister is all you need.

Once you have the klister squeezed onto the ski put the cap back on the klister tube. Don't skip this step. Otherwise klister will leak out onto whatever you put the tube down on and you will have a mess on your hands. (It's a good idea to put the tube in a ziploc bag when storing it for longer periods of time.)

Having secured your klister tube in a safe place, you can use your torch or heat gun to soften the klister. If using a torch, wave it quickly over the wax on the ski. You only need a very low heat to do this - the klister doesn't have to become entirely liquid, just soft enough for spreading. Use a klister spreader (or your thumb!) to spread out the klister with long smooth strokes. The goal is to get a thin but consistent layer of wax on the bottom of the ski.

Be sure to let the skis cool to the outside temperature. If you put the skis down on the snow while the klister is still warm it will ice up and you will do a face plant when you start to ski.

If the snow is fairly fine-grained (especially freshly made man-made snow) you may want to cover the klister with hard wax. This prevents ice building up in the klister. After the ski has completely cooled you can crayon hard wax right over the klister (it isn't easy but it can be done). Cork the hard wax smooth with an old cork, being careful not to pull the klister through the hard wax. This will keep the klister from icing up and grabbing on the fine-grained snow.

### ***How Do I Remove Klister?***

You can use the same klister job for multiple days if the conditions don't change, but at some point you'll want to get it off. First, you can heat up the klister with your heat gun or torch. Try to scrape off as much as you can with the klister spreader and grab the blobs of klister with a rag. You can continue to heat the klister and wipe it off with more rags.

If you are putting on hard wax after cleaning off the klister you don't have to worry about getting it all off. A little sticky residue will help hold the hard wax on the ski. If you are switching to all glide wax for skating then you will want to do a "clean wax" on the ski (see below).

An alternative way to remove klister from the bases is with a wax cleaner. This method is less preferable because it strips the base and leaves a residue of cleaner, making it more difficult for your next kick wax job to adhere to the base of your ski. Wax cleaners are now citric acid based (environmentally friendly) and will dissolve the wax and let you scrub it off with a rag. The wax cleaner is also handy for getting klister off the sides and tops of the skis. You can also use it to clean off your boots, floor, and any other place that klister ends up by accident. Please note: although it smells like orange juice this cleaner is still flammable. Be careful!

## **6. CLEAN WAX**

The "clean wax" process which is used to remove dirt, old kick wax, and wax cleaner from the ski base. After clean waxing, you can apply the right wax for enjoyable skiing.

- iron in a soft (warm temp) wax
- scrape off the wax with plastic scraper while the wax is still warm/liquid
- clean out the groove with the klister spreader
- brush with nylon brush from tip to tail

As you can see this is the same as regular waxing except that you scrape the wax off right away. The liquid wax will float the dirt off the ski base and the dirt will be scraped away.

## **7. NEW SKIS**

Before skiing on new skis, they should be glide waxed several times (for combi skis, wax the entire base as if for skating). Start with a warm (eg CH10) glide wax, scrape and brush. Repeat a couple of times, getting progressively colder with the glide wax (eg CH8, then CH6).